LSDM Peer Review

Expert Panel Report

Department of State Development, Infrastructure, Local Government and Planning

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Version 2

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The findings in this report have been formed on the above basis.

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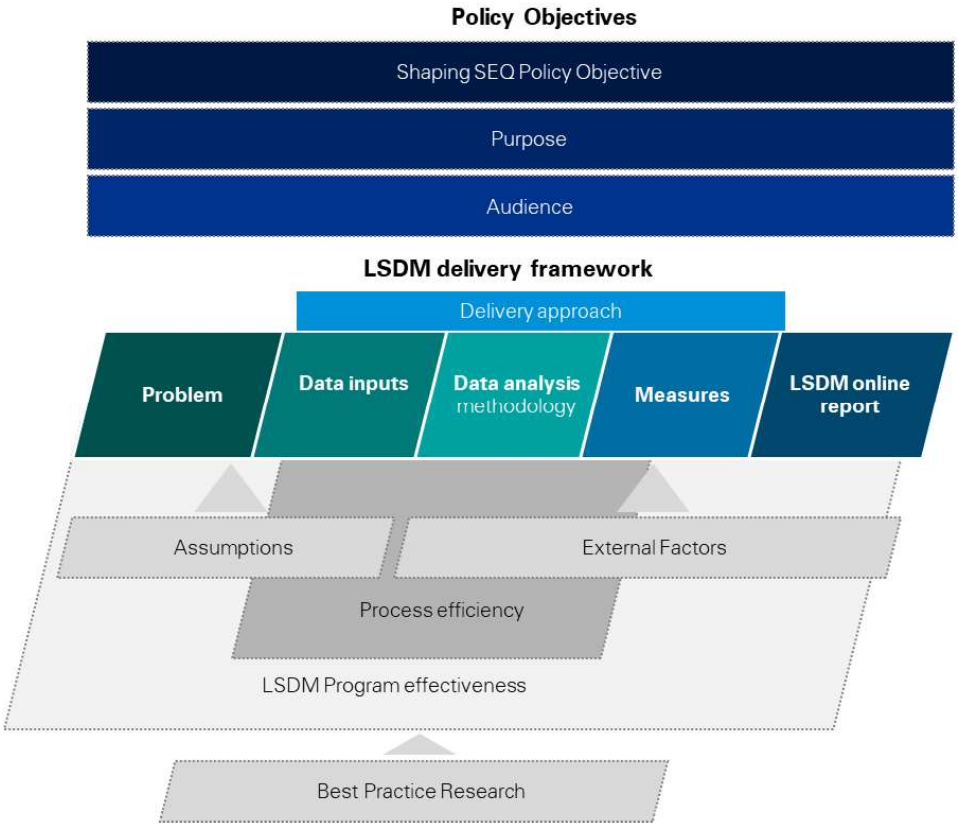
Summary of findings

The LSDM Peer Review has been guided by the program logic framework outlined below. A summary of Panel findings on each element of this framework has been provided in this section.



The recommendations of the Panel (also summarised in this section) have been guided by the evaluation principles below:

- **Timeliness** | The recommendation aims to improve the expedience of information being made available to stakeholders to ensure it is timely and relevant.
- **Transparency** | The recommendation improves the ability of stakeholders to engage with and understand the approach used to develop the LSDM and understand how insights are drawn from data analysis.
- **Accountability** | The recommendation improves clarity in the responsibilities associated with governance and handling of data and the consideration and action regarding LSDM insights.
- **Confidence** | The recommendation improves stakeholder confidence around the overall outcome, process and implications of analysis undertaken for the LSDM.
- **Value** | The recommendation improves the value derived from the LSDM by stakeholders relative to the effort and resources used to develop the LSDM.

- **Purpose-limited** | The recommendation improves the alignment between data that is collected and the purpose that it is intended to be used. This aligns with a wider data principle that data collected for one specified purpose should not be used for a new, incompatible purpose.

The Peer Review recommendations have been framed against the program logic (section 3.2) and include reference to the evaluation principles (section 3.1).

The Panel has included an analysis of the value and complexity to support DSDILGP in the prioritisation of the recommendations. A lead entity for delivery (e.g. DSDILGP) has been suggested as well as the time required to implement to assist in developing an implementation program. The scale used for each of these attributes is detailed below in Table 1.

Table 1: Recommendations scale

		Scale		
Value	the worth realised following the delivery of the recommendation.	High	Moderate	Low
Complexity	the level of complexity associated with the delivery of the recommendation.	High	Moderate	Low
Time required to implement	duration to deliver the recommendation. Any changes would be reflected in the subsequent publication of the LSDM.	Short *Less than 6 months*	Moderate *6 -18 months*	Long *More than 18 months*

Source: KPMG,2021

Problem statement

The problem statement establishes the issue or problem that the program will address. It should be both targeted and specific, as well as understandable by, and clear to stakeholders. To effectively measure whether the program is effectively addressing the problem at any given point in time, a clear problem statement is crucial.

Panel Findings

The Panel has identified that measuring and monitoring land supply is still necessary, in line with *ShapingSEQ* and any regional planning policy directions into the future. All stakeholders saw great value in the program and its capacity to better understand the land requirement to support projected population and employment growth in SEQ. The LSDM should continue as a land supply monitoring tool. Section 5 Measures considers how the LSDM can provide greater value and be responsive to external factors.

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
1.1	Problem	Refine and elevate the call-out of the problem statement that is the driver for the continued investment in a land supply monitor (i.e. SEQ is a high-growth region with strong fundamentals for further growth.) The regional plan identifies the criticality for a monitoring function to track the long-term supply of land to meet this growth.	Purpose-limited	High	Low	DSDILGP	Short

Purpose

The purpose is a declarative statement that summarises the specific focus and goals of the LSDM Report. It provides the reader with an accurate, concrete understanding of what the document will cover and what they can gain from reading it. The purpose provides the direction and coordination to ensure the remainder of the document delivers on the purpose statement. A clear and agreed purpose ensures there is no misunderstanding in the scope of the report.

Panel Findings

The Panel identified that the purpose of the LSDM is twofold: to monitor land supply levels relative to SEQ Regional Plan guidance and to utilise these findings to inform State and local government land supply actions.

With this in mind, the Panel notes that there is opportunity to strengthen the purpose statement to communicate the purpose of the LSDM more clearly. The Panel has also identified that a clearer and more tangible link to actions resulting from LSDM Peer Review Report findings should be embedded within the LSDM's purpose.

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
2.1	Purpose	Draft a purpose statement and include it upfront in the LSDM report to clearly outline the role of the LSDM and maintain consistent stakeholder expectations (i.e. the provision of a longitudinal evidence base to measure and monitor land supply across the region and inform timely and appropriate policy responses at the regional and sub-regional level).	Purpose-limited	High	Low	DSDILGP	Short

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
2.2	Purpose	Detail the limitations (high level) of the report upfront to outline items out of scope for the LSDM to maintain consistent stakeholder expectations. This will assist in establishing consistent stakeholder expectations.	Purpose-limited	High	Low	DSDILGP	Short

Audience

A clear and agreed audience is important. The intended audience and purpose must be aligned. A clear connection between purpose and audience aims to ensure the full value of the report is realised and that all stakeholders' expectations are managed. Further, the defined audience will inform how the report is presented – that is, the report should be presented in a way that the intended audience will understand, thus achieving the intended purpose.

Panel Findings

The Panel has identified the current audiences of the LSDM as the State Government, local government, utility providers and industry.

As the report is a monitoring mechanism for *ShapingSEQ*, a state regional planning policy, the DSDILGP and the SEQ Regional Planning Committee are the primary audiences for the LSDM.

The SEQ local governments are a primary audience for the LSDM. Local government is a necessary and valued stakeholder as part of the LSDM process and has a pivotal role in regional planning in SEQ.

Similarly, given the important role that utility providers play in delivering land supply in SEQ, utility providers are considered a primary audience.

Industry is a primary audience for the LSDM. While industry is not responsible for planning approvals, they are critical to facilitating land supply and have a primary role in responding to demand for housing and employment lands. Industry are acutely impacted by land supply decisions, have real time insights around market dynamics and have a wealth of knowledge relating to the delivery of development for residential and commercial purposes.

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
3.1	Audience	Detail the intended audiences (DSDILGP, local government, utility providers and industry) of the LSDM and outline the acknowledged needs / intended value of the LSDM to these users (i.e. focus of industry on realistic supply; the focus of the DSDILGP on Shaping SEQ measures that matter; the focus of local government on the appropriateness of zoned ultimate capacity/ realistic supply; as well as a wider context of guiding future infrastructure planning, funding and financing priorities). This recommendation is linked to the data consumer profiles outlined in recommendation 5.5. This focus is also intended to inform the continual improvement of the LSDM Report to ensure maximum value is realised by these stakeholder groups.	Purpose limited Value	High	Low	DSDILGP	Short

Measures

The measures of the LSDM should directly address the purpose and deliver on the problem statement. The first consideration is whether the measures - the outcomes of the LSDM program - address the purpose and deliver on the problem statement. Secondly, the measures are produced by obtaining data as an input which is then transformed through the application of assumptions generated through a process of data analysis. The second consideration, therefore, is whether the data inputs and approach to analysis are effective.

Problem	**Data**	**Data Analysis**
Do the measures address the problem?	Is the approach to data collection effective?	Is the approach to data cleansing, transforming, and modelling (methodology) effective?

A summary of the performance characteristics of each measure is provided below:

Measures	Purpose *To measure*	Timeliness	Confidence	Transparency	Value	Methodology	Frequency of data updates [1]
Planned dwelling supply	Supply	Lagging	Low	Unclear	High	Complex	Inconsistent [2]
Approved supply	Supply	Lagging	Moderate	Visible	High	Simple	Annually
Planned industrial land supply/take-up	Supply	Lagging	Low	Unclear	Moderate	Complex	Annually
Planned industrial employment supply	Supply	Lagging	Low	Unclear	Moderate	Complex	Annually

[1] 'Frequency of data updates' refers to the frequency of data published in the LSDM report not the frequency of publication of these data sources.
[2] Across local governments updated data is inconsistently provided to DSDILGP.

Measures	Purpose *To measure*	Timeliness	Confidence	Transparency	Value	Methodology	Frequency of data updates [1]
Dwelling density	Supply	**Lagging**	**Moderate**	**Visible**	**High**	**Simple**	**Annually**
Changes in housing type	Demand	**Lagging**	**Moderate**	**Limited**	**Moderate**	**Simple**	**Annually**
Sales and Price	Demand	**Lagging**	**Moderate**	**Visible**	**Low**	**Simple**	**Annually**
Dwelling growth	Demand	**Lagging**	**Moderate**	**Visible**	**High**	**Simple**	**Annually**
Market Factors	Demand	**Lagging**	**Moderate**	**Visible**	**High**	**Simple**	**Annually**

Panel Findings – Planned dwelling supply

The Panel has identified planned dwelling supply measure is a core measure of the LSDM and is considered important by all stakeholders. The measure could be improved through standardising the methods used for data cleansing, transforming, and modelling to be more transparent in the approach used to calculate the measure. In addition there is an opportunity to report dwelling supply by dwelling type which may assist in identifying an overreliance on certain dwelling types (e.g. high-rise attached dwellings).

Panel Findings – Approved dwelling supply

The Panel has identified approved dwelling supply measure is a core measure of the LSDM. The understanding of the measure could be improved through clearly noting the lag times between data collection and publishing, and outline the impact on the trend information (limited for long term, more impactful if utilising for short term).

Panel Findings – Planned industrial supply

The Panel has identified that the measure should continue to be refined undertaking a validation process for planned industrial land, and the continuation of research to deliver more diverse land types. While much of the focus is on residential measures in the LSDM, the value of planning for economic and employment growth should be elevated to equal priority and integrated into strategic planning for industry growth in SEQ (i.e. State Development).

Panel Findings – Planned industrial employment supply

The Panel has identified planned industrial employment supply valuable in ensuring future economic opportunity across the region. The measure could be improved through greater transparency in the desired outcome and why a focus on MEAIs has been used. While much of the focus is on residential measures in the LSDM, the value of planning for economic and employment growth should be elevated to equal priority and integrated into strategic planning industry growth in SEQ (i.e State Development).

Panel Findings – Changes in dwelling density

The Panel has identified that the changes in dwelling density measure delivers against the LSDM's purpose, to measure and monitor land supply to inform action by State and local governments to ensure sufficient land supply in SEQ. There is opportunity to strengthen the value and confidence of the measure by value and timeliness of the measure could be improved by drawing upon more timely datasets in the calculation.

Panel Findings – Changes in housing type

Overall, the Panel has identified that the changes in housing type measure delivers against the LSDM's purpose, to measure and monitor land supply to inform action by State and local governments to ensure sufficient land supply in SEQ. There is opportunity to strengthen the value and confidence of the measure by ensuring consistency in terminology and alignment to local government planning schemes and to reflect the diversity of markets.

Panel Findings – Sales and price

Overall, the Panel has identified that the changes in the sales and price measure delivers against the LSDM's purpose, to measure and monitor land supply to inform action by State and local governments to ensure sufficient land supply in SEQ. There is opportunity to strengthen the value of the measure by considering benchmarks against other areas within SEQ, or other jurisdictions and regularly updating the measure and drawing on different industry datasets.

Panel Findings – Dwelling growth

Overall, the Panel has identified that the Dwelling Growth measure delivers against the LSDM's purpose, to measure and monitor land supply to inform action by State and local governments to ensure sufficient land supply in SEQ. There is opportunity to strengthen the value and confidence of the measure by delivering reporting more frequently.

Panel Findings- Market Factors

Overall, the Panel has identified that the market factors report is very useful and considered of value by all stakeholders. Further strengthening could occur with additional information associated with underlying demand factors, plus a comparative view of data.

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
4.1	Measures - all	Engage with industry to inform the generation of a draft development pipeline. This will identify each point in the delivery of a dwelling from land designation to final delivery and how the region's land supply regime is performing against this. It will also articulate how the region's land supply regime is performing to ensure sufficient capacity at each stage of the pipeline. This will provide a means of benchmarking the efficiency of land supply approvals and available supply at the regional and sub-regional level as well as identifying steps in supply delivery not currently presented in the LSDM.	Value Confidence	High	Low	DSDILGP	Moderate

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
4.2	Measures - all	Engage with a communications specialist to improve communication of the methodology (Technical Notes). This may involve the inclusion of worked examples and clearer rationales for differing methodologies and the use of specific datasets.	Transparency Value	High	Moderate	DSDILGP	Short
4.3	Measures - all	Undertake a detailed assurance exercise on input data sourced from Local Government and utility providers (which was beyond the scope of this review) to ensure they are of suitable quality and format to inform the LSDM.	Confidence Transparency	High	Moderate	DSDILGP	Moderate
4.4	Measures - all	Report the LSDM growth measures relative to population growth rather than in absolute terms to enable a reference point for the measure and assessment of the performance of supply relative to demand.	Transparency Confidence Value	High	Low	DSDILGP	Short
4.5	Measures - all	Undertake a case study to test the transformation of raw data to understand the impact of assumptions on the final measures in the LSDM. Consider including sensitivities relating to raw data accuracy, future growth scenarios and market shocks.	Confidence Transparency	High	Moderate	DSDILGP	Moderate
4.6	Measures - Addressing variances across the region	Identification of critical pressure points for each local government along the development pipeline (as identified in recommendation 4.1) and inclusion in LSDM reporting. This will enable informed engagement between State Government, Local Government, utility providers and industry to understand the drivers and temporal impact of these pressures.	Value Confidence	High	Low	DSDILGP in consultation with industry, utility providers and local government	Moderate

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
4.7	Planned industrial land supply/take-up and planned industrial employment supply	Undertake engagement with industry, utility providers and local government stakeholders to understand, validate and test potential improvements to industrial land supply estimates (as a subset of employment land supply) to improve the value of the industrial land measures and the transparency of methodology to stakeholders.	Value Confidence Transparency	Moderate	Moderate	DSDILGP in consultation with local government	Moderate
4.8	Planned industrial land supply/take-up and planned industrial employment supply	Work with industry, utility providers and local governments to develop methodologies that calculate a wider array of employment land use types (beyond just industrial). This will enable the wider assessment of employment land supply across the region in line with the direction of Shaping SEQ.	Value	High	High	DSDILGP in consultation with local government	Long
4.9	Planned dwelling supply and approved supply	Undertake annual engagement with industry to test and unpack the key assumptions informing planned realistic supply (both expansion and any future estimation of realistic consolidation supply) in local government areas experiencing land supply development pressure.	Transparency Value Confidence	High	Moderate	DSDILGP in consultation with industry	Moderate
4.10	Planned dwelling supply and approved supply	Undertake annual engagement with local government (jointly with industry and utility providers where appropriate) to test and unpack key assumptions informing planned realistic supply in each local government area, with a view to progressing to consistent definitions and applications across all local governments in SEQ.	Transparency Value Confidence	High	Moderate	DSDILGP in consultation with local government	Moderate

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
4.11	Planned dwelling supply and approved supply	Consider the utilisation of scenario-based forecasts for land demand when estimating years of supply. These could provide a high, medium and low estimate of demand for land (i.e. the draw-down of approved, unallocated lots), based upon the current approaches using the average annual expected future growth (planned dwelling supply) and average annual recent historical growth (approved supply), and two sensitivity scenarios informed by the state of lead indicators in the market factors reporting.	Confidence Value	High	Moderate	DSDILGP	Short
4.12	Measures - market factors	Include sub-regional commentary and findings on key market factor indicators for which data is available at a local government level. This will assist in identifying potential leading indicators of anticipated demand increase or decline in key sub-markets across the region.	Value Confidence	High	Moderate	DSDILGP	Moderate
4.13	Measures - market factors	Inclusion of additional leading indicators in the market factors reporting (i.e. off-the-plan sales) to provide further lead time on the need for a potential response to anticipated supply draw-down.	Timeliness Value Confidence	High	Low	DSDILGP in consultation with industry	Short

Data

This section provides insights related to the quality, governance, and management of data (scope element 2 – Section 1.2) utilised to deliver the LSDM report. The capabilities required to leverage data and deliver insights have been grouped across people, process and technology outlined: below:

People	Process	Technology
Data governance, data operations and knowledge management	Data ingestion and integration, data management, reporting and performance management	Systems and platforms, data storage, architecture and infrastructure

Panel Findings

The Panel has identified a need to uplift data governance and management capabilities and practices within the Department to provide further confidence to data consumers about the quality, integrity, and ultimately trust in data, information, and insights delivered in the LDSM report.

This includes but is not limited to the development of a data strategy, governance, and operating model within the Department for (but potentially not limited to) the purposes of maturing data governance and management capabilities and practices. This would uplift data literacy and establish better ways of working with data. In doing so this would see DSDILGP. This involves enhancing the business glossary, data dictionary, and data specifications, as well as introducing more contemporary technology and tools, and data service delivery approaches. This will support a more modern and flexible delivery of the LSDM information, insights, and visualisations to data consumers.

There is also an opportunity to work with data provisioners to uplift their data governance and management capabilities and practices to provide further confidence over the quality and integrity of data provisioned to the Department, and including introducing assurance over the end-to-end process.

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
5.1	Data – People	Develop a set of principles for how data is to be governed end-to-end. This will provide local government and industry guidance on how data is governed and incorporated into the LSDM.	Value Confidence Accountability	High	Moderate	DSDILGP in consultation with local government	Moderate
5.2	Data – People	Enhance the business glossary, data dictionary, and data specifications to ensure there is enough detail, noting the nuances for how certain data sets and measures are to be interpreted in the report. This will include details related to how the data was transformed to ultimately produce the outputs and insights provided in the LSDM, considering audiences with varied technical capabilities. Recommendations 5.3, 4.6 & 4.7 are related to this and cover training for users as well as validation engagement with local government and industry.	Value Confidence Transparency	High	High	DSDILGP in consultation with local government	Moderate
5.3	Data – People	Leverage existing forums or establish a new forum focused on ensuring data is managed and custodians for datasets are clearly defined and understood. It is recommended that these forums also be utilised to provide training to new and existing contributors as appropriate to ensure all contributors have clarity on the inputs required, the intended use of their inputs and associated implications.	Value Confidence Transparency	High	High	DSDILGP in consultation with local government	Moderate
5.4	Data – People	Formalise data privacy and security policies to ensure effective controls are in place to mitigate privacy and security risks and provide assurance to the providers of sensitive data on its management and intended use.	Transparency	High	Low	DSDILGP	Short

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
5.5	Data – People	Formalise a set of data consumer profiles to inform the key questions the report is designed to answer, focusing on the data's relevance and reliability to the consumer.	Transparency Value	High	Low	DSDILGP	Short
5.6	Data – Process	Improve integration and automate the ingestion of consistent external datasets such as Australian Bureau of Statistics (ABS) data, rather than doing this manually and semi-regularly, meaning there's limited transparency over whether the data is up to date.	Transparency Timeliness Confidence	High	Moderate	DSDILGP	Moderate
5.7	Data – Process	Leverage the current principles used to track and communicate changes during the iterative review phase of creating the LSDM and apply those to each of the components of the data handling process. Establish data logging to provide an audit trail to help users to understand when data is added, modified, or deleted during the data collection, transformation, and modelling phases.	Transparency Confidence	High	Low	DSDILGP	Short

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
5.8	Data-Technology	Explore technology options to mature the current delivery process by uplifting people or process driven activities that support the governance, management, and/ or delivery of data. Alternatives could include: A single analytics platform that provides an end-to-end solution covering collection, integration, transformation, modelling and delivery of insights. Multiple tactical solutions to improve certain pain points related to data collection, transformation, preparation, and delivery processes. The DSDILGP team have been exploring alternate technology options that would fit in this category, such as PowerBI. Uplift in technology processing is considered a critical early step to the further exploration of a regional planning model.	Confidence Value	High	High	DSDILGP	Long
5.9	Data-Technology	Deliver continual evaluation and exploration of different reporting delivery approaches, such as reporting frequency, to best meet the user decision-making cycles and align with data collection and LSDM reporting cycles. This will include the more frequent update of measures where data availability permits.	Timeliness Value Confidence	High	Moderate	DSDILGP	Short

Delivery approach

The delivery approach of the LSDM comprises the development of each annual report, through data collection, analysis, report drafting and stakeholder revisions. This is an extensive process that relies on synthesising stakeholder inputs in an efficient and timely manner. To maximise the quantum of impact from the number of resources invested, the delivery approach should reflect contemporary best practice and respond to stakeholder feedback. Technology solutions can act as enablers to this process, improving efficiency by lowering the resource and time burden from stakeholders while improving the quality of the inputs that DSDILGP receives.

Panel Findings

The Panel has identified the delivery approach of the LSDM is highly collaborative and is driven by the effort and commitment of State and local government officers. It is necessary to preserve this strength of the LSDM. Given the increasing complexity and need to deliver the evaluation principles - accuracy, timeliness, transparency, confidence and value – there is an opportunity to improve the delivery process by leveraging technology.

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
6.1	Delivery	Explore technology options to uplift people- or process-driven activities that support the governance, management or delivery of data to increase confidence in the current delivery process.	Value Confidence Transparency	High	Moderate	DSDILGP	Moderate
6.2	Delivery	Document the delivery approach at a high level (i.e. simplified process diagram) to illustrate the development timeframes for the LSDM and the role of each stakeholder group. This will transparently communicate the complexity of the LSDM and the cause of data lags in its development.	Transparency	High	Low	DSDILGP	Short

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
6.3	Delivery	Engage with the RPC as well as related local government stakeholder groups to discuss preferred options for the progression of a regional planning model. The scoping for these options will detail the value proposition realised from investing in a model, road map for delivery and stakeholder roles to establish early alignment across the members of the RPC and related local government stakeholder groups.	Value Accountability	High	Moderate	DSDILGP	Moderate

Visualisation

Information can only provide value to its intended audience if it is presented in a way that the audience can understand and use. The value that local government, industry and utility provider stakeholders receive from the LSDM hinges on how the information is presented. Data visualisation enables trends and insights to be easily identified. Graphs, infographics and maps are common methods of visualising data, all of which are currently utilised by the LSDM.

Panel Findings

The Panel has identified the current communication of the report insights (through visualisation) are not sufficient to deliver the desired value to LSDM audiences. There are a number of opportunities to enhance the communication of the information in the LSDM in line with contemporary best practice.

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
7.1	Visualisation	Improve the legibility of the online report to facilitate improved transparency of the existing information and communicate the information in a more digestible format. This will improve the understanding of the content by users.	Value Confidence Transparency	High	Low	DSDILGP	Short
7.2	Visualisation	Improve the presentation of data to include a range of formats (infographics, non-technical graphs, ability for comparison within SEQ LGAs) to provide greater value to stakeholders by meeting a range of audience needs.	Value Confidence Transparency	High	Low	DSDILGP	Short

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
7.3	Visualisation	Increase the usefulness of the LSDM by adding elements (such as an interactive dashboard, videos, interactive spatial mapping, development pipeline diagram, worked examples in the technical notes) that deliver more value to users.	Value Confidence Transparency	High	Moderate	DSDILGP	Moderate

Best Practice Research

Continual improvement is a key principle of the Growth Monitoring Program, under which the LSDM sits. As such, the formalised way that continual improvement is embodied in the delivery and content of the LSDM is through Best Practice Research. Targeted research into topics and areas is conducted and published alongside the results of the LSDM, every year. Best Practice Research intends to develop a better understanding of a given topic and commonly either share the increase in understanding with stakeholders or apply improvements to the LSDM based on the research. The desired benefits of using Best Practice Research are increases in the maturity of the LSDM and improvements in its usefulness and value.

Panel Findings

The Panel has identified that the delivery of Best Practice Research is not the primary purpose of the LSDM. Nevertheless, it offers a valuable contribution to the continual improvement of land supply and development monitoring. It should also be acknowledged that the primary use of the Best Practice Research relates to the preparation of the LSDM and has limited impact outside the LSDM.

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
8.1	Best Practice Research	Confirm the targeted audience (e.g. local governments, a subset of local governments, industry etc.) at the outset of each best practice research report and ensure that appropriately targeted resources (training, implementation resources etc.) are also budgeted into BPR planning to maximise value.	Value	Moderate	Moderate	DSDILGP	Moderate

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
8.2	Best Practice Research	Confirm the (desired) outcome and intended benefits of each best practice research topic and confirm these with targeted audiences prior to commencement. This will assist in identifying and addressing any barriers to implementation and benefit realisation from the outset.	Value	Moderate	Low	DSDILGP	Short
8.3	Best Practice Research	Publish Best Practice Research as a standalone publication to 'lighten' the LSDM with clear linkages to LSDM where it has informed a change in methodology or finding.	Value Transparency	High	Low	DSDILGP	Short
8.4	Best Practice Research	Relevant best practice methods should be reflected in the guidance material for the creation of local planning assumptions datasets (e.g. for LGIPs and Netserv Plans) to ensure consistency across local planning datasets.	Value	High	High	DSDILGP	Moderate

Governance, regional planning and action

Governance is the organising frame that allows discrete investments, stakeholders and strategic intent to be drawn together in an environment of authority, accountability, stewardship and leadership. It is the framework of rules, relationships and procedures by which an entity is directed, controlled and held to account, and whereby authority within the entity is exercised and maintained. Governance can range from informal to formal arrangements.

A governance model is important to establish an agreed, fair, and beneficial arrangement to enable stakeholders to effectively deliver common outcomes.

Panel Findings

The LSDM has the potential to be a powerful mechanism to strengthen SEQ regional planning responses in a more dynamic way to trigger responses to external market forces, however this would need to reflect an evolution of its current role and function.

Equally, any consideration of a wider role for the LSDM would need to be integrated with the governance for the delivery of the SEQ Regional Plan and be cognisant of the roles of the Regional Planning Committee, Housing Supply Expert Panel and other existing forums to facilitate collaboration on key planning matters (i.e. GAT including their Land Supply Advisory Group, local government working groups etc.).

While recommendations for the more formal integration of the LSDM into wider regional planning governance falls outside of the scope of the current study, it is the view of the Panel that there is an opportunity here to provide greater clarity on the core function of the LSDM as well as to address stakeholder feedback around the need for greater connectivity from the LSDM to implementation.

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
9.1	Governance, regional planning and action	Establish a pathway/feedback loop for clear communication back to industry around the actions taken by the State Government in response to the findings of the LSDM to clearly articulate the value and implications of the monitoring function.	Value Confidence Transparency Accountability	High	Moderate	DSDILGP in consultation with industry.	Moderate
9.2	Governance, regional planning and action	Enhance the role played by HSEP in providing directions around potential actions for consideration in response to the findings of the LSDM. This will strengthen the impact and transparency of actions informed by the LSDM.	Value Confidence Transparency Accountability	High	Moderate	DSDILGP	Moderate
9.3	Governance, regional planning and action	Identify/establish the triggers across each stage of the development pipeline that would warrant the need for policy intervention by local or state government. These should be based on the outcomes of the LSDM so that there is transparency in how the LSDM leads to action. This will require an understanding of the outcomes from the LSDM and how they relate to the development pipeline which would inform the nature and timing of responses for consideration.	Value Confidence Transparency Accountability	High	Moderate	DSDILGP / Local Government	Moderate
9.4	Governance, regional planning and action	Provide HSEP the opportunity to brief the RPC on the implications of the LSDM Report findings to enhance the integration of the LSDM finding with regional planning considerations.	Value Accountability	Moderate	Moderate	DSDILGP	Moderate

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
9.5	Governance, regional planning and action	Include a summary of the actions undertaken by the State Government (e.g. establishing GAT) to demonstrate activity from the previous years' LSDM report findings, increasing the transparency of actions informed by the LSDM.	Accountability	Moderate	Low	DSDILGP	Short

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1 Introduction

1.1 Purpose of this report

On 3rd March 2021, the Deputy Premier of Queensland committed to undertaking a peer review of the Land Supply and Development Monitoring Report (LSDM) and invited relevant stakeholders to contribute to the development of a review's brief. It was generally agreed across stakeholders that a trans-disciplinary and independent panel of reviewers, supported by a suitably qualified lead consultant, would be best placed to lead the peer review.

KPMG was engaged to undertake a peer review of the South East Queensland Land Supply and Development Monitoring (LSDM) Report to review the approach used to generate the report. The purpose of the Peer Review is to identify improvements that can be implemented in the delivery of the LSDM Report with a focus on better fulfilling its key purpose. This scope included an external peer review identified as necessary to ensure impartiality in undertaking the review and maintain confidence in the LSDM Report moving forward. The external Peer Review was identified as necessary to meet industry and stakeholder expectations with respect to the independence, rigour and timing of the Peer Review.

The purpose of the Peer Review is to identify improvements that can be implemented in the delivery of the LSDM Report with a focus on better fulfilling its key purposes

This report documents the findings from KPMG's Peer Review of the LSDM. This report expands on the Interim Report (November 2021) which identified preliminary observations and opportunities for improvement categorised into focus areas. These interim observations provided an initial view of where the Panel consider there are opportunities for the Department to strengthen program outcomes for the LSDM Report. An overview of the timeline for the delivery can be seen in Figure 1.

Figure 1: LSDM Peer Review delivery

Source: KPMG, 2021.

This report is informed by consultation activities with DSDILGP, SEQ local governments, utility providers and industry bodies and provides a fulsome review of stakeholder insights, findings, focus areas and recommendations. The following section outlines the high-level stages of delivery for the LSDM Peer Review.

1.2 Review scope

The scope of the Peer Review was to evaluate the LSDM's objectives and processes (including data collection, analysis and report presentation) and provide insight and recommendations to DSDILGP. The findings of the Peer Review will inform the Government's approach to future LSDM reports, including the consideration of any changes to data, methods and reporting. This review has collated feedback from all key stakeholders (Appendix A), with the focus being on systematic improvements that could improve the delivery of the LSDM regarding program effectiveness, process efficiency and stakeholder engagement.

The Scope was first drafted by DSDILGP with input from key stakeholders. The Scope was reviewed, refined and confirmed by the LSDM Expert Panel, independent from DSDILGP.

The following were the key elements for the scope of the Peer Review:

1. **Purpose of the report and intended audiences:** The review was aimed at determining who the intended audience for the report is and whether the LSDM achieves its intended purpose and meets the needs of the audience.
2. **Data quality, governance and management:** The review explored the methods underpinning the LSDM and was aimed at identifying any opportunities for improvement, including whether the current scope of data in the report was fit-for-purpose, and meets the needs of the data and information consumers. In addition, the Peer Review was aimed at identifying opportunities to improve the process of data provisioning and analysis as well as the data governance and management frameworks that support these processes.
3. **Reporting timeframe:** The review explored whether there are any opportunities for alternative reporting timeframes that would deliver greater value to stakeholders.
4. **Report presentation:** The review explored opportunities to improve the structure and presentation of the LSDM, and if there are any other resourcing implications.

The sourcing of new data, updating of data sets and updating of models (including modelling outputs) were agreed out of scope of this Peer Review.

1.3 Report structure

The structure of this report is based on the program logic which has guided the Peer Review. The program logic framework is detailed in section 3.2. This report is structured as follows:

- Section 2 describes the LSDM, providing context on its development in terms of market and environmental factors and planning drivers.
- Section 3 outlines the Peer Review approach including principles, program logic, inputs (including stakeholder consultation) and limitations.
- Sections 4-7 evaluate the program component of the LSDM, including problem (Section 4) purpose (Section 5), audience (Section 6), and measures and market factors (Section 7).
- Sections 8-11 evaluate the process component of the LSDM, including data (Section 8), delivery approach (Section 9), visualisation (Section 10) and Best Practice Research (Section 11).
- Section 12 discusses governance and regional planning matter linked to the LSDM.

  Sections 4 -12 have been developed using a consistent structure, as follows:

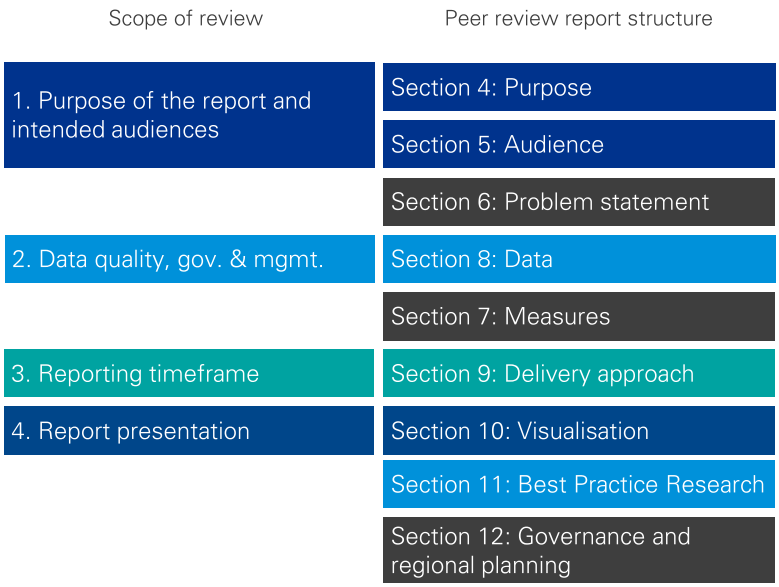
  - LSDM Report 2021 presents the existing context for the relevant section, as contained in the latest LSDM report and other relevant DSDILGP materials (such as *ShapingSEQ*).

- DSDILGP consultation discusses information and further context provided by the Growth Monitoring Program (GMP) team, including the intended purpose of elements of the LSDM.
- Local government, utility providers and industry consultation provide an overview of feedback collected throughout interviews with key stakeholders.
- Survey results present quantitative findings from a survey that key stakeholders completed.
- Summary of consultation themes synthesises and draws out the main themes from all consultation activities.
- Discussion of consultation themes explores the implications of themes that appeared in consultation.
- Recommendations provide clear and specific actions for DSDILGP to consider.

- Section 13 provides a summary of the Peer Review along with consolidated recommendations and rationale for their inclusion.

The structure of the body of the report (Sections 4-12) aligns with the scope as visualised below.

Figure 2: Alignment between report scope and structure



Source: KPMG, 2021.

2 Context

2.1 *ShapingSEQ* Policy Direction

Between 2016 and 2041 the population of South East Queensland (SEQ) is expected to grow from 3.5 million to 5.4 million. Such significant population growth requires new housing – to the order of approximately 30,000 new dwellings each year across SEQ's 12 local government areas (LGAs), and with it, substantial development infrastructure and employment opportunities. [3]

Having long recognised the need for coordinated regional planning, especially in the context of such significant population growth, the Queensland Government with the support of key stakeholders released the South East Queensland Regional Plan 2017*(ShapingSEQ*) (the 'Plan'). The Plan aimed to sustainably accommodate SEQ's forecast population growth and ensure all residents' prosperity and liveability. To achieve this outcome, the Plan recognises there was a need to ensure adequate land supply and development in SEQ, and due to this, three deliverables, including the Land Development and Monitoring Report, were developed.

ShapingSEQ sets out the basis for the annual monitoring of land supply and development in SEQ, as follows:

> The Queensland Government will monitor land supply and development annually, with the first report of the SEQ Growth Monitoring Program to be released in 2018. The core measures for the reporting are the Grow 'measures that matter' (Table 2).
>
> Research will be undertaken, including specialist advice, into the practicality, cost and benefits to government decision-making of regularly, consistently and reliably reporting on significant other indicators proposed by submissions on the draft *ShapingSEQ*.
>
> *ShapingSEQ*, 2017, p173

ShapingSEQ also prescribes how the measures are to be reported and defines what adequate land supply and development in SEQ looks like – a 'preferred future' for SEQ for each measure, as in Table 2.

[3] Noosa, Sunshine Coast, Moreton Bay, Somerset, Lockyer Valley, Toowoomba (urban extent), Scenic Rim, Ipswich, Logan, Gold Coast, Redland and Brisbane.

Table 2: *ShapingSEQ* Table 22: Measures that matter (Grow measures only)

Measure	Level of reporting detail	Reporting timeframe and source	SEQ's preferred future
Years of supply To ensure adequate land supply of all types to avoid placing upward pressure on prices.	State reporting on an LGA and region-wide basis for residential consolidation and expansion and employment (by land use type)	Annually: • Best available land supply databases • Queensland Treasury approvals data (residential lots and multiple dwellings only)	Minimum 15 years zoned and able to be serviced, of each land use type in each LGA Minimum 4 years approved
Dwelling growth To monitor consolidation and expansion dwelling types activity against dwelling supply benchmarks.	State reporting on an LGA and region-wide basis	Annually: • ABS building approvals • Net dwelling growth where available (various sources)	Consolidation: 60% Expansion: 40%
Housing type To monitor housing diversity.	State reporting on the type of dwellings being delivered on an LGA and region-wide basis	Annually: • ABS Building approvals Five-yearly: • ABS Census	Diversity: increase Detached houses: decrease Middle (attached dwellings up to three stories): increase High-rise: increase
Housing density To monitor efficient land use.	State reporting of lot sizes and overall dwelling density being delivered on an LGA and region-wide basis	Annually: • Queensland Treasury lot size data Five-yearly: • ABS Census mesh block data	Median lot size: decrease Mean population-weighted dwelling density: increase

Source: Queensland Government, 2017.

The LSDM Report represents the Queensland Government's approach to monitoring and publishing land supply and development annually as laid out in *ShapingSEQ*. As noted above, it is one of three of the Growth Monitoring Program's (GMP's) core deliverables, along with the updating of the Measures that Matter dashboard and the SEQ Housing Supply Expert Panel (HSEP).

2.2 Overview of LSDM Report 2018-2021

The LSDM Report has been produced by the GMP team within the Regional and Spatial Planning group in DSDILGP, annually since 2018. The report is published on the Queensland Government's website in an interactive format.

There was no regional monitoring tool for land supply and development in SEQ before the release of *ShapingSEQ*, providing the basis for *ShapingSEQ* to provide direction for the development of an annual monitoring report – the LSDM. The first LSDM report in 2018 represented considerable growth in the maturity of both regional planning governance and the Queensland Government's work in the land supply and development space.

In subsequent editions of the LSDM Report, in line with the GMP's principle of continual improvement, changes have been applied to the LSDM based on stakeholder feedback, DSDILGP learnings, Best Practice Research and a natural evolution in reporting maturity. These changes have impacted multiple aspects of the LSDM, including the process, analysis and reporting/presentation. Throughout stakeholder consultation, there was widespread recognition of improvements in the LSDM over time. This recognition was frequently accompanied by an appreciation of the work and collaborative efforts of the GMP team.

Over the four years since the LSDM's inception, changing supply and demand conditions and trends have provided additional challenges for the LSDM in its ability to satisfy stakeholders' desired purposes and uses. In particular, increased market volatility and the sudden and widespread impacts of COVID-19 pose challenges to the delivery and timeliness of the LSDM.

2.3 Summary of the LSDM Peer Review Interim Report

As part of this Peer Review, an Interim Report providing preliminary observations and focus areas for improvement was released alongside the 2021 LSDM Report. Figure 1illustrates how the interim report fits into the delivery of the LSDM Peer Review.

The Interim Report outlined the purpose, scope, program logic and principles of the Peer Review. It also highlighted some of the major themes that were identified through consultation as well as areas that form opportunities for further exploration in this final report. Appendix A contains the Interim Report in its entirety.

3 Evaluation approach

The Peer Review has been designed to be outcomes focussed, considering both progress to date and opportunities for continual improvement. It uses a combination of quantitative and qualitative analysis to detail stakeholder views, consider key success factors and identify barriers to delivery. This approach has been structured around a program logic framework and drawn on a series of evaluation principles to inform subsequent recommendations.

3.1 Evaluation principles

Principles have been identified by the Panel to guide the Peer Review. These principles align with the reflections of stakeholders through the review and are designed to provide a frame of reference when considering the development of recommendations in the draft report. The principles are:

- **Timeliness** | The recommendation aims to improve the expedience of information being made available to stakeholders to ensure it is timely and relevant.
- **Transparency** | The recommendation improves the ability of stakeholders to engage with and understand the approach used to develop the LSDM and understand how insights are drawn from data analysis.
- **Accountability** | The recommendation improves clarity in the responsibilities associated with governance and handling of data and the consideration and action regarding LSDM insights.
- **Confidence** | The recommendation improves stakeholder confidence around the overall outcome, process and implications of analysis undertaken for the LSDM.
- **Value** | The recommendation improves the value derived from the LSDM by stakeholders relative to the effort and resources used to develop the LSDM.
- **Purpose-limited** | The recommendation improves the alignment between data that is collected and the purpose that it is intended to be used. This aligns with a wider data principle that data collected for one specified purpose should not be used for a new, incompatible purpose.

3.2 Program logic - a framework approach to the Peer Review

A program logic framework was developed to provide a systematic and comprehensive approach for the Peer Review that ensures completeness of evaluation (in breadth and depth). A program logic framework was used to explore the factors associated with a given output and determine the relationship between the stated problem, development and delivery of the output, and intended outcomes. The components of the program logic have been inferred from the LSDM Report as well as via consultation with DSDILGP and stakeholders. As illustrated in Figure 3, the LSDM program logic consists of the policy objectives and LSDM delivery framework.

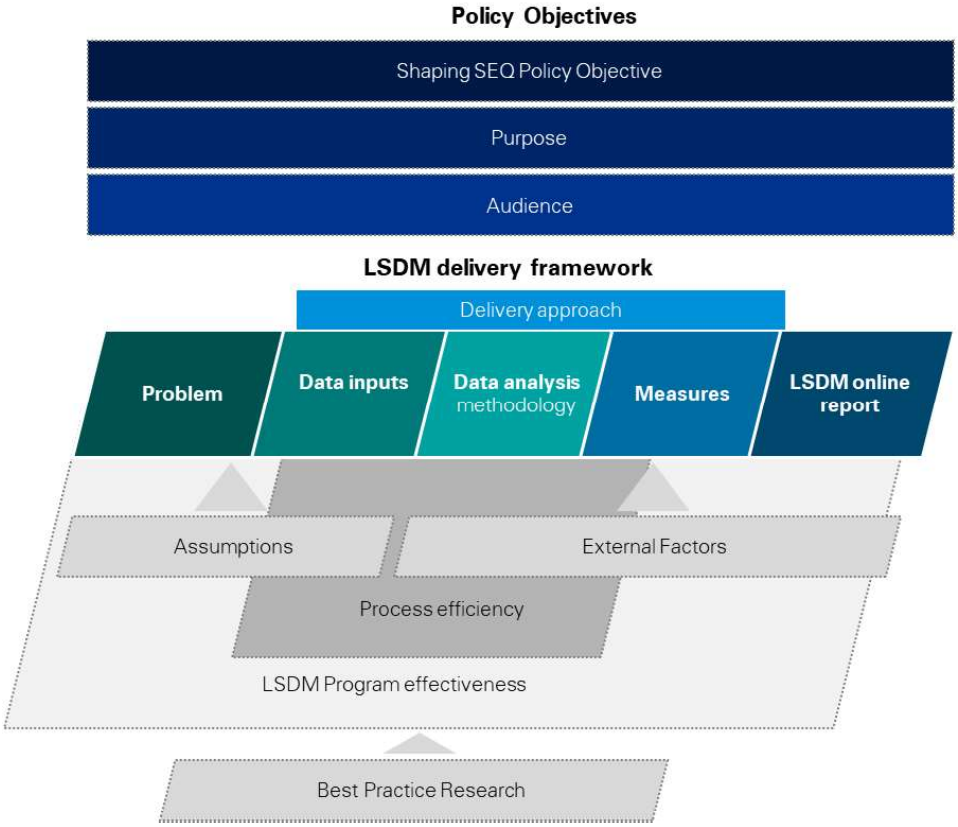
The policy objectives include the policy direction, purpose and audience, and detail the overarching drivers of the LSDM.

The LSDM delivery framework includes the problem statement, data, analysis, insights, outcomes and overall delivery approach. These elements consider the process that occurs to deliver the LSDM report.

The measures that matter and the online report include key components of output produced by the LSDM.

If the LSDM is working effectively, there should be alignment across all components in the process. That is, outcomes should adequately address the policy and problem statements (that is, the drivers and purpose) in efficient ways that meet the audience's requirements.

Figure 3: LSDM program logic



Source: KPMG, 2021.

As summarised above in Figure 3 and detailed in Section 1.3, this report follows a structure that is informed by the program logic. Specifically, purpose, audience, problem and outcomes are evaluated first in Sections 4-7 given that they inform the overarching program. This is followed by an evaluation of the data, analysis, insights, delivery approach and best practice in Sections 8-11 which investigates the detail of the process undertaken to deliver the LSDM report. The Peer Review also considers governance and the regional planning framework which are explored in Section 12 as a complementary components to the program logic framework.

3.3 Consultation

KPMG undertook an extensive and iterative data-gathering process with DSDILGP to understand the components of the LSDM. KPMG also conducted a series of individual interviews with stakeholders to gather their perspectives on the LSDM. Stakeholders represented local governments, utility providers and industry bodies. They were also invited to complete a survey that provided complementary quantitative insights. These inputs have informed this review's findings and recommendations.

21 interviews were undertaken with representatives from four industry bodies, 12 local governments, two utility providers, one Queensland government agency, and the Housing Supply Expert Panel. Appendix A provides a list of stakeholders which were consulted. Each interview was approximately

one hour with representatives from a variety of levels and technical disciplines within each organisation. The interviews sought to extract deep insights from stakeholders on the LSDM objectives and process, including data collection and report preparation. The consultation sought stakeholder views regarding:

- Purpose of the report and audiences
- Impact of key measures
- Report outputs to support analysis and decision-making
- Process and governance of data provision
- Data sources, collection, and integration.

An online survey was issued to the complete stakeholder list and was open for four weeks between 5 October 2021 and 1 November 2021, running in conjunction with the face-to-face stakeholder interviews. The survey questions sought to elicit stakeholders' views on the effectiveness of specific aspects of the LSDM and to identify areas for improvement. The survey provided a consistent approach to collecting feedback and enables quantitative insights to be drawn. A full list of the survey questions and results is provided in Appendix D.

The survey was issued to individuals within 21 stakeholder organisations and 23 individuals responded. While anonymous for the respondent, the survey asked respondents to identify their organisation – in doing so, responses could be weighted such that multiple respondents from the same organisation did not skew the results.

This combined consultation approach – interview and online survey – offered stakeholders an opportunity to invest in the evaluation and contribute their knowledge and insights in greater detail. This report has collated findings from all stakeholders to draw out commonalities and differences between and within stakeholder groups, with a focus on systematic improvements that could deliver on the LSDM's purpose and outcomes. The findings from the consultation have formed part of the evidence base for the Peer Review of the LSDM.

3.4 Approach to recommendations

The Peer Review recommendations have been framed against the program logic (section 3.2) and include reference to the evaluation principles (Section 3.1).

The Panel has included an analysis of the value and complexity to support DSDILGP in the prioritisation of the recommendations. A lead entity for delivery (e.g. DSDILGP) has been suggested as well as the time required to implement to assist in developing an implementation program. The scale used for each of these attributes is detailed below in Table 3.

Table 3: Recommendations scale

		Scale		
Value	the worth realised following the delivery of the recommendation.	High	Moderate	Low
Complexity	the level of complexity associated with the delivery of the recommendation.	High	Moderate	Low
Time required to implement	duration to deliver the recommendation. Any changes would be reflected in the subsequent publication of the LSDM.	Short *Less than 6 months*	Moderate *6 -18 months*	Long *More than 18 months*

Source: KPMG,2021

3.5 Limitations

The Peer Review, including this final report and the Panel's views and recommendations, is predominately based on a comprehensive and targeted consultation of the GMP team and other key stakeholders.

Time

The Peer Review is constrained by the limited amount of time available for its completion; while the Panel had extensive opportunity to gather information through consultation with DSDILGP and stakeholders, the complexity and sheer quantity of detail of the LSDM means it was and is not possible to fully investigate every nuance of the LSDM – especially concerning data analysis.

In addition, the lines of inquiry that informed consultation were broad and only a limited amount of time was available to interview stakeholders (one hour per stakeholder). Nonetheless, the team was provided with a great range of views and information that assisted in determining important recommendations to progress the utility of the LSDM.

Limitations around data accuracy

In undertaking this analysis, KPMG drew on consultation and survey results in addition to the materials presented in the LSDM. The Peer Review has not observed input data or the approach to the transformation of the input data by local governments (i.e., Start to end analysis). This would require interrogation of each data set and internal local government processes for data management.

Despite these limitations, on balance, this review through multiple methods of consultation has collected information that is sufficient to inform well-considered reflections and recommendations on the two main domains of this review – LSDM program effectiveness and process efficiency.

Wider consultation

Other users of the LSDM, such as the community, tertiary education providers and Queensland Government agencies outside of DSDILGP[4] were not consulted, and as such their views do not inform the Panel's positions or recommendations.

Survey responses

The respondents of the survey represented most key stakeholders – all key stakeholders except for UDIA, Gold Coast Water, Logan Water, Redland Water, QGSO and DSDILGP. However, representatives from UDIA and QGSO were interviewed in consultation so while their perspectives of the LSDM were not captured by the survey results, their feedback is incorporated in the stakeholder consultation discussions.

In most cases, only one survey response was completed for a given stakeholder; this Peer Review assumes that aggregated results for each stakeholder group are generally representative of the group's position. Survey insights are also presented alongside takeaways from stakeholder interviews, to ensure alignment and consistency of views captured.

[4] Note: QGSO were consulted due to their role as providing inputs to the LSDM.

4 Problem statement

The problem statement establishes the issue or problem that the program will address. It should be both targeted and specific, as well as understandable by, and clear to stakeholders. To effectively measure whether the program is effectively addressing the problem at any given point in time, a clear problem statement is crucial.

4.1 *ShapingSEQ*

The LSDM was developed to address an identified need to measure and monitor land supply, as outlined in *ShapingSEQ*. Therefore, the problem statement of the LSDM at 2017 when *ShapingSEQ* was being prepared is *land supply and development in SEQ is not being consistently monitored, leading to a potential risk of land supply shortage.*

> *ShapingSEQ* identified that land supply in SEQ was not being consistently monitored. The region was projected to experience significant population growth. The 'Grow' goal of *ShapingSEQ* identifies that there is a need to provide "adequate land supply for the projected population and employment growth over the next 25 years" as well as identifying "where and how to provide housing"(p38). Ensuring adequate land supply to meet this growth is the focus of the *Growth Monitoring Program*. According to ShapingSEQ, "to better inform this monitoring program, the department will work with key stakeholders…to develop a broader and more consistent methodology for measuring lad supply and to better monitor development" (p172).
>
> The *Keeping SEQ on Track* category of the *ShapingSEQ* Program, outlined that DSDILGP will "scope, fund and deliver a monitoring program to support the implementation of *ShapingSEQ* and future reviews" including establishing and reporting annually on the SEQ Growth Monitoring Program with the first report to be delivered in 2018. *ShapingSEQ* also noted that "measures that matter [are] to be updated when available (no more than annually)" (p163).
>
> *ShapingSEQ*, 2017, p38, p172 & p163

The LSDM over the last four years has highlighted the importance of measuring and monitoring land supply in SEQ to ensure projected population growth is supported by suitable employment and housing.

> "It is important we continue to monitor the SEQ region's land supply and development activity to ensure we have adequate land in the right locations to maintain SEQ's enviable lifestyle and unique characteristics. This will ensure we have the right infrastructure, housing and jobs in the right location in the years ahead and for current and future generations. The LSDM Report continues to show that land supply in SEQ is on track, but there are some areas facing short-term land supply challenges."
>
> LSDM Report, 2021, Introduction

ShapingSEQ identified population projections, employment projections, and the infrastructure and housing required to support this growth. It acknowledged that there is a need to increase the amount of housing and land supply in SEQ to meet the projected increase in population.

To adequately meet the projected growth and address the land supply shortfall, measurement of land supply is required as a first step. The need to measure land supply still exists and will continue to

persist as long as there is a risk of future land supply shortfall and/or the State desires confirmation of such a shortfall or lack thereof.

4.2 DSDILGP consultation

Consultation with DSDILGP revealed that the LSDM's core function is to address the problem statement by measuring land supply. There is a clear link from the LSDM's core function back to the policy direction laid out in *ShapingSEQ* as monitoring land supply is a required deliverable of the Growth Management Program. DSDILGP has been directed to monitor land supply and will continue to do so.

4.3 Local government, utility providers and industry consultation

Key themes that were identified during consultation with local government, industry and utilities included:

- **The LSDM has value and addresses a need:** Consultation highlighted that all stakeholders see value in the LSDM and agree that the LSDM plays an important role in measuring and monitoring land supply. All stakeholders recognised the need for the LSDM to fulfil the monitoring requirements of *ShapingSEQ* and enable planning for the future of SEQ.
- **Significant foundational work has been done:** There was an acknowledgement by industry stakeholders that a significant body of work has already been undertaken by the GMP and the LSDM represents this work. However, there is an opportunity to consider how the LSDM can continually improve to monitor land supply in SEQ, particularly for employment land across the region, but also for residential land in areas under the most growth pressure.
- **Volatility in land supply over time:** Some stakeholder groups have acknowledged that the current economic climate has increased the volatility of land supply, with some LGAs seeing unprecedented growth and demand for housing. There was an acknowledgement that the volatility in land supply has been increasing and the LSDM does not currently enable timely monitoring and responses.
- **Confidence is required:** Industry, in particular, have highlighted the criticality of being able to have confidence in a 'single point of truth' on land supply that can inform engagement around the timing and priority of planning and investment decisions.

4.3.1 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
LSDM plays an important role in measuring and monitoring land supply	✓	✓	✓	✓
DSDILGP has done extensive work to get the LSDM to the level of maturity it is at		✓	✓	✓
Land supply has become increasingly volatile		✓	✓	✓
There is an opportunity to improve how the LSDM measures land supply in SEQ	✓	✓	✓	✓

4.4 Discussion of consultation themes

The following discussion of consultation themes draws together stakeholder perspectives from both interviews and survey findings. The discussion of these themes informs the recommendations.

The problem still stands: there is still a need for land supply monitoring

The LSDM is still addressing the problem to which it was designed to respond: a need to understand the land required to support the projected population and employment growth in SEQ. There is still a need to continue measuring and monitoring land supply in SEQ until 2041 as laid out in *ShapingSEQ*, to provide visibility of any projected land supply shortfall.

Nevertheless, consultation revealed that stakeholders questioned whether the land supply measurement offered by the LSDM is accurate. This tension has arisen from stakeholder groups holding different perceptions of how land supply should be defined. Industry generally believes that a measure of land supply should represent the amount of land that can realistically be developed, whereas some local governments believe it should represent the "ultimate development" of land. Further, utility providers define land supply as land which can be serviced (connected to utility infrastructure/networks). These perceptions have influenced views on their broader assessment of the accuracy, timeliness and value of the LSDM.

Market conditions have changed: the LSDM now needs to respond to increased volatility

The same pressures from when *ShapingSEQ* was released are still relevant, given the region's continued strong population growth. For example, in the last two years, there have been significant increases in building approvals, house prices, housing finance and residential construction. [5] This has been triggered by COVID-19 and government action undertaken to manage the pandemic (e.g. lockdowns) and economic stimulus actions (e.g. home builder).

There will continue to be market shocks or external factors that impact land supply into the future. As such, there is a need for further recognition of a breadth of preferences (and in some cases changing preferences) to consider the implication of these changes. These implications need to be considered as a further output/feedback loop from the LSDM to the regional plan and policy actions in place to deal with growth pressures. A Regional Planning Model would be a suitable tool to understand the impact of changing market conditions as it would enable the modelling of alternate scenarios. As such, there is a need to ensure the findings of the LSDM are sufficient to inform responses to changing and uncertain market dynamics (see Section 7.13).

Panel Findings

The Panel has identified that measuring and monitoring land supply is still necessary, in line with ShapingSEQ and any regional planning policy directions into the future. All stakeholders saw great value in the program and its capacity to better understand the land requirement to support projected population and employment growth in SEQ. The LSDM should continue as a land supply monitoring tool. Section 5 Measures considers how the LSDM can provide greater value and be responsive to external factors.

[5] Market Factors Report, 2021, p20

4.5 Recommendations

The Peer Review has identified the following opportunities:

Table 4: Problem statement recommendations

	Section	Recommendation	Responsibility
1.1	Problem	Refine and elevate the call-out of the problem statement that is the driver for the continued investment in a land supply monitor (i.e. SEQ is a high-growth region with strong fundamentals for further growth.) The regional plan identifies the criticality for a monitoring function to track the long-term supply of land to meet this growth.	DSDILGP

5 Purpose

The purpose is a declarative statement that summarises the specific focus and goals of the LSDM Report. It provides the reader with an accurate, concrete understanding of what the document will cover and what they can gain from reading it. The purpose provides the direction and coordination to ensure the remainder of the document delivers on the purpose statement. A clear and agreed purpose ensures there is no misunderstanding in the scope of the report.

5.1 LSDM Report 2021

The purpose of the LSDM is outlined in the LSDM 2021 Report as follows:

> "The primary objective of the [LSDM] report is to continue to work progressively towards a shared understanding for land supply and development activity data in SEQ and to better inform infrastructure planning and land supply planning and policy as part of the GMP. The long-term benefits of improved planning and policy are:
>
> - being able to afford somewhere to live
> - having access to employment and other services
> - continuing to enjoy the unique SEQ lifestyle.
>
> This established and ongoing monitoring program will streamline future regional plan reviews and provide the robust evidence to inform future policy decisions."
>
> *LSDM Report, 2021, Introduction*

5.2 DSDILGP consultation

Consultation with DSDILGP identified the following as the purpose of the LSDM Report.

> The LSDM **measures and monitors land supply availability in SEQ** to directly report on the Measures that Matter, as well as **capturing long term development trends**, providing support to local governments to inform future updates to local government and utility provider databases as well as to support data collection and analysis methodologies through **Best Practice Research**, inform utility providers and local government **decision making** around land supply, infrastructure planning and funding, and provide a tool / evidence base for the State to discuss growth and change with all stakeholders.
>
> [emphasis added by KMPG]

The core elements of this purpose statement include:

- Measures and monitors land supply availability in SEQ;
- Capturing development trends;
- Best Practice Research; and
- Inform decision making around land supply.

These core elements of the purpose were tested with stakeholders through consultation and the survey. During consultation with DSDILGP, the purpose was expanded to include the following:

- Provide support to local governments to inform future updates to local government and utility provider databases;
- Support improvements to data collection and analysis methodologies through Best Practice Research;
- Inform utility providers and local government decision making around land supply, infrastructure planning and funding; and
- Provide a tool/evidence base for the State to discuss growth and change with all stakeholders and provide confidence around the rigour of the methodologies applied.

5.3 Local government, utility providers and industry consultation

Key themes that were identified during consultation by local government, industry and utilities include:

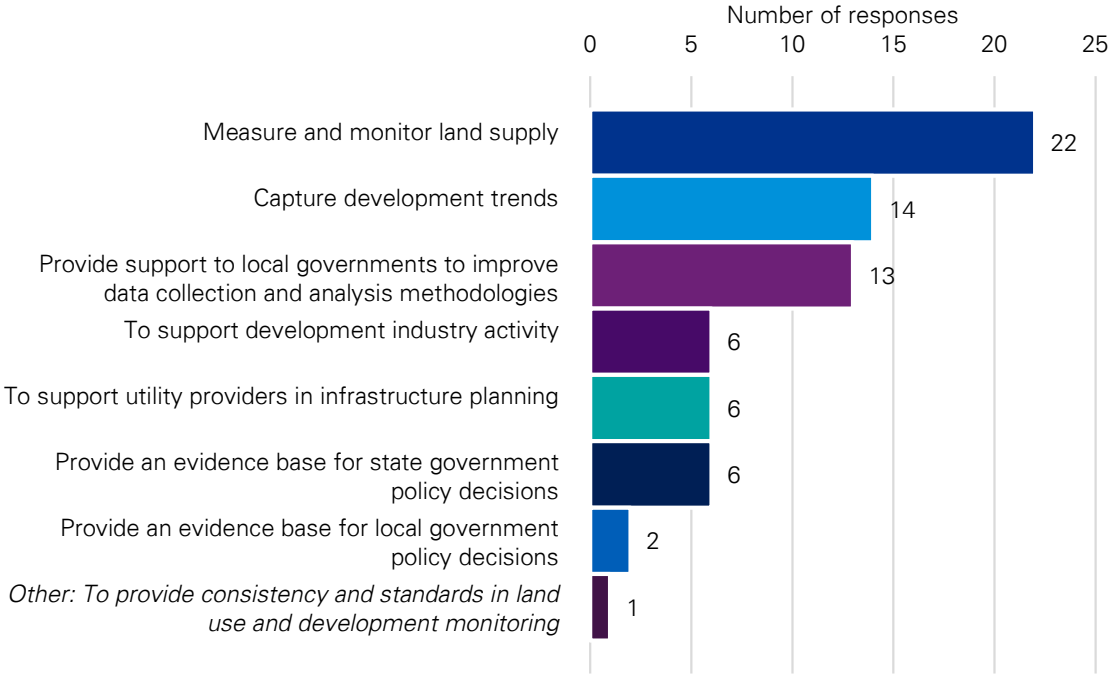
- **Reporting mechanism for *ShapingSEQ*:** There is a general understanding and support for the LSDM as a monitoring mechanism for *ShapingSEQ*. However, some industry stakeholders did not agree that the LSDM directly reported on *ShapingSEQ*.
- **Monitoring relative to action*:*** There were contrasting perspectives regarding whether the purpose of the LSDM should be just to monitor and provide a consistent view of the state of land supply across the region, or whether it should also be more formally linked to thresholds under which intervention in the market should be made by planning authorities to assist in facilitating supply. At times, the stakeholders' understanding of the LSDM's purpose was unclear, often noting the purpose was to monitor but also stating there should be action based on the LSDM Report. It can be inferred that the purpose should be expanded from currently being used to monitor but also extended to provide direction for action. Industry stakeholders primarily believe that the purpose of the LSDM is to report on, measure and monitor land supply in SEQ, but also noted the current purpose should be expanded (detailed further below).
- **A desire for action by the State Government:** It was acknowledged that the purpose or delivery of the LSDM is generally supported, the lack of action based on this information was considered to be an immediate challenge. Stakeholders across industry and local government highlighted that there should be an agreed protocol based on identified and agreed markers for action. Many stakeholders indicated that there were unaware of the State actions that emanated directly from the findings in the LSDM Report. Industry representatives were primarily of the view that the purpose of the LSDM should extend to be more tightly linked to areas for action.
- **Limited connection to local government action**: Local government stakeholders identified that due to concerns around the comparative merit of the LSDM to their own data sets (see Section 7 for detailed analysis), the LSDM is not a primary input to local government planning decision making.
- **Best Practice Research:** Most utility providers have a view that Best Practice Research is a critical component of the purpose. Some local government stakeholders identified that the Best Practice Research is an important component of the work of the GMP but questioned whether the LSDM was the best vehicle for the publication of this information. Some industry stakeholders have highlighted that there is a long list of research that they would like to see included, that to date, has not been addressed. Local government and industry stakeholders also highlighted the challenge of transitioning LSDM's Best Practice Research into action.
- There was very limited discussion and no clear views on 'development trends' as part of the purpose statement.

5.3.1 Survey results

As seen in Figure 4, the majority of respondents to the survey (22 out of 23 respondents) identified that the purpose of the LSDM is to measure and monitor land supply.

Over half of the respondents also identified the purpose is to capture development trends and provide evidence of the State Government's policy decisions and actions. There were only a small number of respondents that identified a purpose statement of the LSDM that relates to local governments and utility providers.

Figure 4: Responses to Survey Question 3 "In your view, what is the purpose of the LSDM?" (top three)



Source: KPMG, Survey of LSDM stakeholders, 2021

There was significant overlap in the top three responses by industry, utilities and local government. The top three purposes as identified by industry, utilities and local government are outlined below:

Table 5: Summary of Report Purposes as identified in survey responses

Industry	Local government	Utility providers
Measure and monitor land supply	Measure and monitor land supply	Measure and monitor land supply
Provide an evidence base for State Government policy decisions	Provide an evidence base for State Government policy decisions	Capture development trends
Capture development trends	Capture development trends	Provide an evidence base for State Government policy decisions

5.3.2 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
A need to deliver *ShapingSEQ* Policy	✓	✓	✓	✓
Used to inform State Government decision making		✓	✓	✓
Used to inform local government decision making	✓			
A need for clearly defined thresholds for action		✓		✓
To capture development trends	✓	✓		✓

5.4 Discussion of consultation themes

The following discussion of consultation themes draws together the perspectives of each stakeholder group and the survey findings. These findings have been used to inform the recommendations.

To measure and monitor land supply in SEQ

The core component of the purpose 'to measure and monitor land supply in SEQ' was agreed upon by all stakeholder groups. It was highlighted by consultation there was value in continuing to measure and monitor land supply in SEQ.

Based on stakeholder consultation this analysis has identified -to measure and monitor land supply in SEQ - is the primary purpose of the LSDM.

Capturing development trends

DSDILGP considered that capturing development trends forms part of the purpose of the LSDM. Industry highlighted that the LSDM should effectively capture and communicate development trends in a way that is meaningful for audiences.

Analysis of the measures (Section 7) has identified that development trends are an important input into determining land supply, but do not form part of the LSDM purpose. Perhaps the purpose statement should consider 'capturing long term trends in the demand for land supply'.

Role of Best Practice Research

DSDILGP considered Best Practice Research to form part of the purpose of the LSDM. DSDILGP's ongoing commitment to the improvement of LSDM methodology through the delivery of Best Practice Research was acknowledged by most stakeholders as a strength of the LSDM. This was evidenced by the close working relationship between utility providers, local government and DSDILGP in developing Best Practice Research topics.

Analysis as part of this Peer Review has identified that Best Practice Research is not part of the purpose of the LSDM but is rather a tool for the delivery of continual improvement.

Delivery of *ShapingSEQ* Policy

ShapingSEQ, as detailed in Section 4.1, established the desired growth allocation pattern to accommodate expected dwelling and employment growth in SEQ to 2041. *ShapingSEQ* details dwelling supply benchmarks and employment planning baselines for each LGA.

As outlined in the purpose of the LSDM 2021, the LSDM was established to measure these policy objectives.

Analysis as part of this Peer Review has identified that LSDM meets the requirements outlined in *ShapingSEQ*.

To inform monitoring or action

The consultation highlighted a divergence in views on whether the LSDM function should predominately be to monitor and provide a consistent view on the state of land supply across the region, or whether it should be more formally linked to thresholds under which intervention in the market is made by planning authorities to accelerate supply. DSDILGP consultation highlighted that LSDM's estimate of supply is intended to inform evidence-based decision making under the land supply framework identified in *ShapingSEQ*. While the LSDM measures against the identified 'measures that matter', the LSDM is not perceived by industry and local government stakeholders as clearly informing evidence-based decision making.

Industry representatives were primarily of the view that the role should extend to be more tightly linked to areas for action.

Consultation through this Peer Review has identified that the LSDM should be informing action/decision making both at the State Government level. In addition, it is the Panel's view that the information from the LSDM should also inform action/decision making at the Local Government level too.

State Government action

Stakeholders identified the LSDM provides an evidence base to inform State Government policy decisions. It was not clear to local government and industry stakeholders how the outcomes of the LSDM inform policy actions, investment priorities and the resource allocation required to respond to LSDM observations. DSDILGP highlighted that, fundamentally, the purpose of the LSDM is to inform local government and utility provider planning. The role of the State is to support this by providing Best Practice Research and supporting regional planning through the LSDM.

Notwithstanding that few of the stakeholders acknowledged the actions taken as a direct link to the LSDM outcomes, the State Government has initiated a range of actions in response to growth pressures. In addition, several councils have taken action to advance strategic planning and land release to support growth objectives due to the LSDM. Examples of State Government actions taken include:

- Establishment of the Growth Areas Team (GAT) within the DSDILGP;
- Development of the first GAT Pilot at Caboolture West;
- Funding of catalytic infrastructure through the Building Acceleration Fund for Southern Redland Bay; and
- Funding of catalytic infrastructure through the Building Acceleration Fund for Greater Flagstone, and Ripley Valley.

This Peer Review has identified that the actions undertaken by the State Government as a result of the LSDM need to be more transparent to all stakeholders. The process to inform the threshold for action should be formalised to provide greater certainty and transparency.

Local government action

A strong view from local government consultations was that the LSDM should focus on insights that influence regional level planning decisions delivered by the State. Some of these local government stakeholders highlighted that LSDM should not be linked to local government actions. This view was on the basis that this level of decision making was best served by more granular planning tools and analysis. Overall, there has been limited use of the LSDM by local governments.

DSDILGP held the view that the purpose is to guide and inform utility and local government planning, with the intention for methodologies to translate to local government processes. There was also a view from DSDILGP that the LSDM, through Best Practice Research, could build local government knowledge bases.

There was little discussion around the role of the LSDM in informing local government action amongst industry stakeholders. However, it was noted that local governments should be tracking and measuring land supply data.

The Peer Review has identified that the LSDM should play a role in local government decision making, as a source of confirmation for local government understandings and regional benchmarking. The local government as a user of the LSDM is detailed further in Audience (Section 6). This will require improvement to the useability of the document, primarily detailed in Section 10.

Panel Findings

The Panel identified that the purpose of the LSDM is twofold: to monitor land supply levels relative to SEQ Regional Plan guidance and to utilise these findings to inform State and local government land supply actions.

With this in mind, the Panel notes that there is opportunity to strengthen the purpose statement to communicate the purpose of the LSDM more clearly. The Panel has also identified that a clearer and more tangible link to actions resulting from LSDM Peer Review Report findings should be embedded within the LSDM's purpose.

5.5 Recommendations

The Peer Review has identified the following opportunities regarding the LSDM's Purpose:

Table 6: Purpose recommendations

	Section	Recommendation	Responsibility
2.1	Purpose	Draft a purpose statement and include it upfront in the LSDM report to clearly outline the role of the LSDM and maintain consistent stakeholder expectations (i.e. the provision of a longitudinal evidence base to measure and monitor land supply across the region and inform timely and appropriate policy responses at the regional and sub-regional level).	DSDILGP
2.2	Purpose	Detail the limitations (high level) of the report upfront to outline items out of scope for the LSDM to maintain consistent stakeholder expectations. This will assist in establishing consistent stakeholder expectations.	DSDILGP

6 Audience

A clear and agreed audience is important and the intended audience and intended purpose must be aligned. A clear connection between purpose and audience aims to ensure the full value of the report is realised and that all stakeholders' expectations are managed. Further, the defined audience will inform how the report is presented – that is, the report should be presented in a way that the intended audience will understand, thus achieving the intended purpose.

6.1 LSDM Report 2021

The LSDM 2021 Report does not specify the intended audience for the report.

> Audience is not defined in the LSDM Report.
>
> LSDM Report, 2021

6.2 DSDILGP consultation

Consultation with DSDILGP identified that there are many users of the LSDM, as presented in Figure 5. These audiences include DSDILGP, other Queensland Government agencies, SEQ local governments, utility providers, industry and the community.

Figure 5: LSDM potential audiences

Source: KPMG, 2021.

DSDILGP identified the primary audience of the LSDM as DSDILGP, SEQ local governments and utility providers. The secondary audiences identified include the wider State Government, industry and the community.

DSDILGP also indicated that the intended audience of future LSDM reports may expand or change, particularly regarding stakeholder needs or intended use.

6.3 Local government, utility providers and industry consultation

Key themes that were identified during consultation with local government, industry and utilities included:

- **DSDILGP as the primary audience:** Although DSDILGP's intended audience was broad as noted in Figure 2, stakeholders did not share this opinion. Across stakeholders – local government, industry and utility providers – there was a shared belief that DSDILGP was the intended audience of the LSDM in the first instance. However, stakeholders typically did not view themselves as the primary audience. For example, Local government tended to perceive that the LSDM was intended to be mainly used by DSDILGP and industry. Industry tended not to hold the view that they were the predominant target audience of the LSDM. As such, the consultation highlighted that stakeholders' views around the audience of the LSDM did not align with DSDILGP's.
- **LSDM does not capture the heterogeneity between local governments:** A common theme across many lines of consultation inquiry was that local governments were very cognisant of material differences between LGAs but that this was not recognised or addressed in the LSDM. Numerous factors – including population size, density and characteristics, land supply, demand and growth and council resources, capacity and capability – differ substantially across the 12 SEQ LGAs – and it was acknowledged that these characteristics can either have a material difference or no substantial difference on land supply, depending on growth trends and prospects. Specifically, lower growth LGAs believed that the LSDM offered them less value than it did to larger LGAs. As such, smaller councils tended to rate the LSDM as less useful and believe that larger LGAs were the priority audience.
- **Local governments do not use the LSDM for decision making:** local governments indicated that they generally do not use the LSDM to inform decision-making. They did however note that they use the LSDM as a benchmarking tool to compare their LGA to others in SEQ.
- **Link to State Government decision-making:** As noted in Section 5: Purpose, a strong message back from local government consultations was that the LSDM should focus on insights that influence State / regional level planning decisions and not be linked to local government actions. This view was on the basis that this local government level of decision making was best served by more granular planning tools and analysis, not the LSDM.

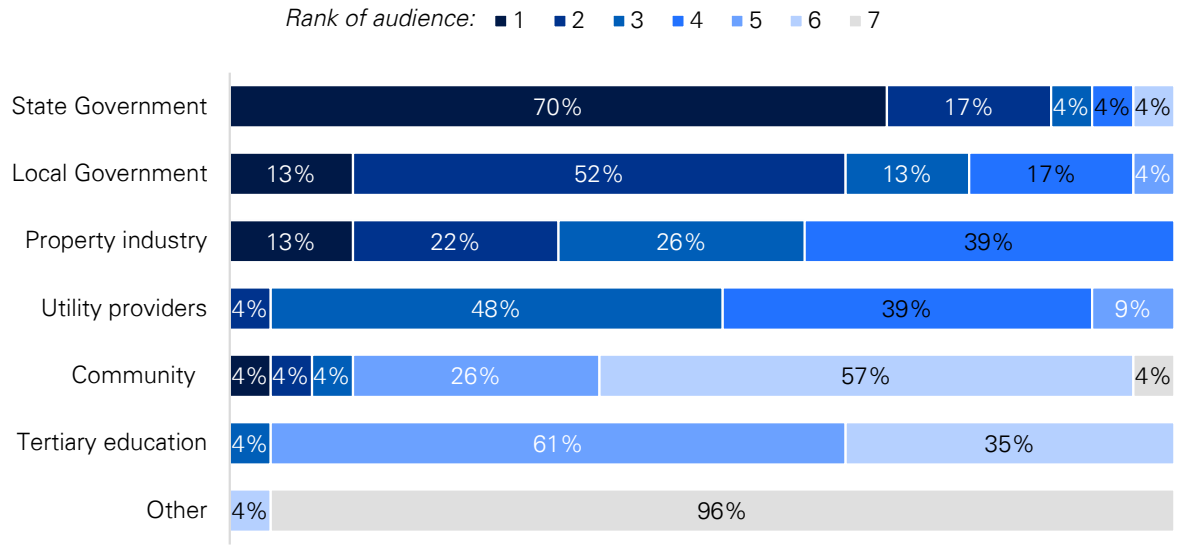
6.3.1 Survey results

The survey results were consistent with consultations findings. The survey results highlight that there is no consensus among stakeholders on the LSDM's primary audience, with each stakeholder group tending to indicate that they believe another stakeholder group is the key audience Figure 6 presents stakeholder responses regarding the LSDM audience. Only one respondent (local government) identified the stakeholder group that they belonged to as the primary audience.

The majority of stakeholders (16 out of 23 respondents) identified the State Government as the primary audience of the LSDM. However, more than half (12) of respondents identified local government as their second choice for the primary audience. Stakeholders overall believed tertiary education and the community to be the least likely primary audiences for the LSDM. Two

respondents included media and developers as potential audiences for the LSDM, although these were ranked 6th and 7th, respectively.

Figure 6: Responses to Survey Question 6 "In your view, who is the primary audience for the LSDM?"



Note: Respondents were given the option to identify if they used a specific stakeholder to represent "Other". One such response was "Media", ranked 6. Another was "Developers", ranked 7.

Source: KPMG survey of stakeholders, 2021.

Respondents' views of the purpose of the LSDM are strongly correlated with their views of the audience. Most respondents that identified the purpose as *Measure and monitor land supply* also identified the State Government as the primary audience. Both respondents that identified the purpose as '*Provide an evidence base for State Government policy* decisions' also identified the audience as the State Government.

Purpose		**Audience**
19 respondents identified the purpose as *Measure and monitor land supply* as their first preferences	→	14 of these 19 respondents identified the audience as the *State Government*
2 respondents identified the purpose as *Provide an evidence base for State Government policy decisions* as their first preferences	→	Both respondents identified the audience as the *State Government*

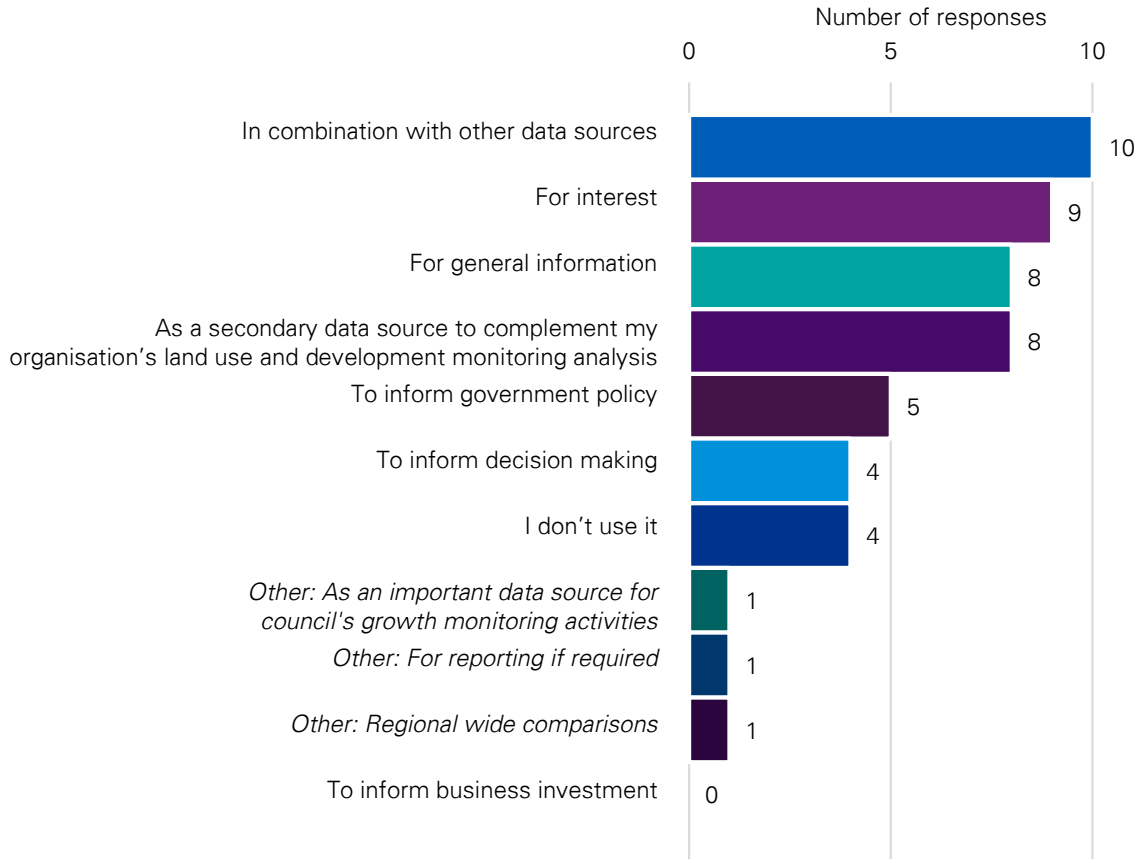
Overall, the survey identifies that stakeholder perceived *measuring and monitoring land supply* as primarily a State Government responsibility.

While local government, utility providers and industry did not identify themselves as a primary audience, all groups indicated that they access the LSDM. Figure 7 presents the survey results regarding LSDM usage. Most commonly, respondents declared that they used the LSDM to complement other data or analysis, or for general information and interest. A few respondents

indicated that they use the LSDM to inform government policy and decision-making. There were no significant differences between stakeholder groups.

From Figure 7, it is evident that LSDM does not serve a clear purpose for local government, utility providers and industry. It is used for a range of purposes and has varying levels of reliance.

Figure 7: Responses to Survey Question 4 "How do you use the LSDM?"



Source: KPMG survey of stakeholders, 2021.

6.3.2 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
Unclear primary audience		✓	✓	✓
State Government as the primary audience	✓	✓	✓	✓
Local government as the primary audience	✓			
Not used a point of truth for land supply		✓	✓	✓
Link to decision-making	✓	✓	✓	✓

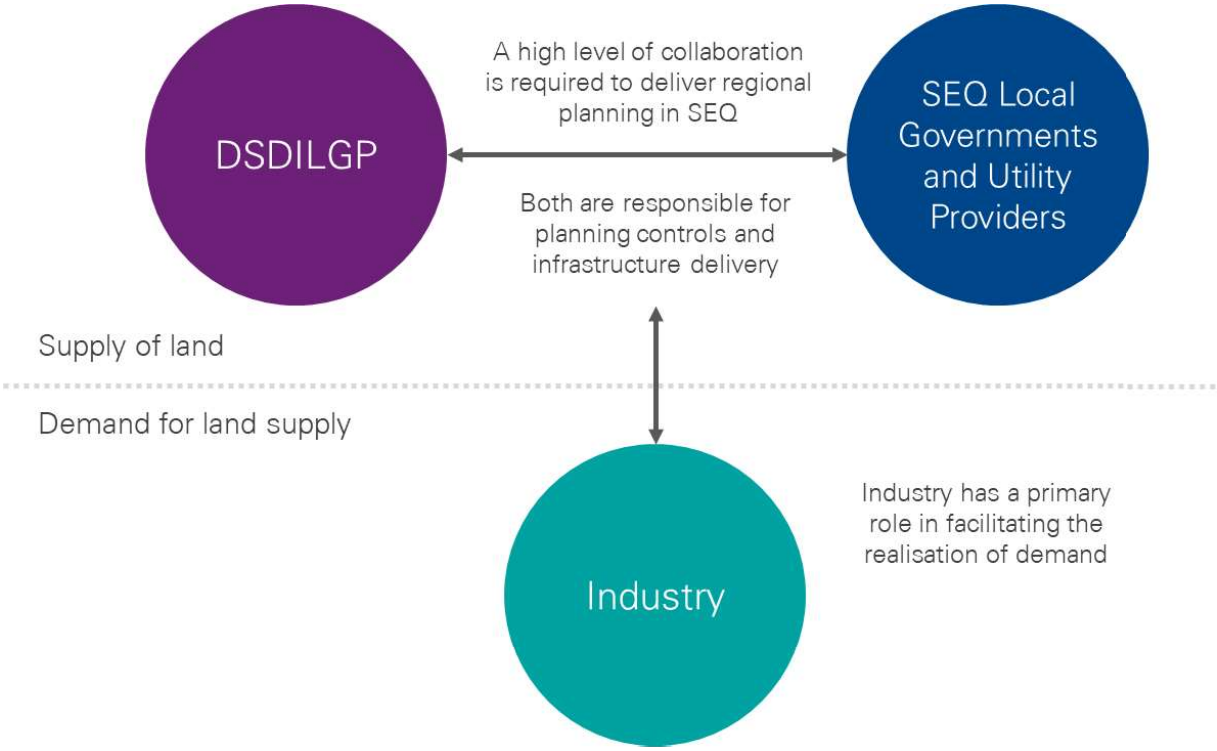
6.4 Discussion of consultation themes

The following discussion of consultation themes draws together stakeholder perspectives from both interviews and survey findings. The discussion of these themes informs the recommendations.

Three primary audiences

Considering the *ShapingSEQ* policy direction, both State and local government should be the primary audiences of the LSDM. Industry is also a key audience given its role in responding to the demand for land through the facilitation of development, as illustrated in Figure 8.

Figure 8: Ecosystem for land supply in SEQ



Source: KPMG, 2021.

DSDILGP

DSDILGP is responsible for the preparation, implementation and review of *ShapingSEQ*, the primary source document for the LSDM purpose.

DSDILGP leads and works with other State Government agencies, local governments and key stakeholders in the implementation of *ShapingSEQ*. *ShapingSEQ* assigned the Department the responsibility for running the Growth Monitoring Program and managing the monitoring, evaluation and reporting framework for *ShapingSEQ*. Accordingly, DSDILGP releases the LSDM annually which outlines the region's progress against *ShapingSEQ* over time.

As DSDILGP is responsible for the delivery of *ShapingSEQ* and the Growth Monitoring Program, analysis as part of this Peer Review has identified they are one component of the primary audience of the LSDM. This view that DSDILGP is a primary audience view was reflected by all stakeholders.

The governance structures and key groups supporting the delivery of *ShapingSEQ* and the Growth Monitoring Program are considered in Section 12.

Local government

While no SEQ local governments identified themselves as a primary audience of the LSDM, they play a significant role in delivering *ShapingSEQ*. They are key partners in planning in SEQ, ensuring all local planning initiatives are working to achieve common regional goals. Each local government is required to ensure its planning scheme delivers *ShapingSEQ* and is not inconsistent with the SEQ regulatory provisions detailed in *Planning Regulation 2017*. The LSDM is a monitoring mechanism for these processes and, as such, should be both informed and utilised by local governments.

DSDILGP did identify local governments as a primary audience which is likely informed by the Department's acute understanding of the value of local governments in the regional planning process in SEQ and the development of the LSDM report.

Given the essential role they play in SEQ's regional planning, analysis as part of this Peer Review agrees with DSDILGP that SEQ local governments are also a core component of the primary audience.

Little utilisation of LSDM in local governments' decision making

For the most part, local governments do not use the LSDM to inform decision-making. Given that local governments are not using the report for one of its intended purposes, but they are a key intended audience highlights an issue in the delivery of the LSDM (primarily from monitoring to action.) It can be concluded that there are missing feedback loops and/or understanding from local governments regarding how the LSDM could be of value to their policy settings and decision-making systems.

That local governments hardly utilise the LSDM findings for their purposes is disappointing, particularly given that:

- Local governments invest significant time and resources into providing critical inputs in the LSDM, and the State Government invests significant time and resources into developing and publishing the LSDM;
- The coordination of local government action to address the challenges faced by the region is important, and, at times, critical; and
- Ensuring adequate land supply for its residents and land to support employment and economic opportunity is a key responsibility for local governments.

Some potential hypotheses for why the local government does not use the LSDM have been developed These reflect both stakeholder feedback and the principles of this Peer Review:

- Timeliness - Local government has information and land use models which are more up to date than LSDM data, and so therefore use and rely on their data and models for ease and accuracy.
- Transparency - Local government is unclear about the methodology and assumptions applied to the data as a result of the lack of feedback loops. As such, they do not rely on the LSDM.
- Purpose limited - Local government does not use the LSDM as it does not provide sufficient information to meet their needs. This may reflect the local government view that the LSDM is focused on regional planning matters for a State Government audience. Changes will be required to data processing presentation as well as governance and accountability if this perceived purpose and use is to change.
- Accountability – Some local governments only provide data that is publicly available, withholding more up to date data to mitigate the potential risk of a breach of confidentiality, therefore using their model for ease and accuracy.
- Confidence - Local government has lack confidence in the LSDM Report as a result of timeliness, transparency and purpose limited concerns detailed above, thus do not rely on it.

Industry

While industry did not identify themselves as a primary audience, it is clear through Peer Review consultation and ongoing engagement with the LSDM that this group receives value from the report. Industry has an important role in responding to demand in the market. Industry remains a key participant in helping to deliver regional and local planning outcomes through its participation in the market.

As industry holds a primary role in responding to demand for land supply, analysis as part of this Peer Review has identified they are considered a primary audience. Industry is predominately motivated by commercial outcomes which may shape their views on what constitutes adequate land supply and how they approach data methodologies.

While industry has raised concerns over the confidence they have in the data, it is acknowledged that the industry has used the LSDM in the past to lobby governments and has relied on this data in the planning and environment court, therefore there is some perceived accuracy in the LSDM.

Utility providers

Consultation with local government and industry did not identify utility providers as a key audience. The utility providers are active in the development of the LSDM by providing data as well as participating in the development of Best Practice Research. These stakeholders are the custodians of information about whether the land can be serviced by infrastructure, a critical requirement to progress land through the development pipeline.

Analysis as part of this Peer Review has identified that utility providers provide key data as inputs to the LSDM, however, are currently not key users of the LSDM Report**.**

There is an opportunity to elevate the role of utility providers as a primary audience, given the important role utility providers play in delivering enabling infrastructure to support land supply and the delivery of *ShapingSEQ.* Given the essential role utility providers play in the delivery of land supply, analysis as part of this Peer Review agrees with DSDILGP that utility providers are a core component of the primary audience.

Community

As the report is publicly available, the community may be an interested party. More broadly, communication of land use planning matters (including growth and location of development) to the community has been identified as a challenge by the Regional Planning Committee (RPC). The consultation highlighted that the LSDM largely contains very technical concepts and language, requiring industry knowledge to understand the content. Consideration should be given to how key information could be communicated to the community to address the broader issue that the communication of land use planning matters. This would be an enhancement of the existing summary document.

The LSDM has included a summary of the annual results that are available to view alongside the main report ('results brochure'). This 2–3-page summary presents the high-level statistics and trends (including approved dwellings, median new lot size, planned supply of vacant industrial land and housing type) in far fewer words than the LSDM Report itself. The community / general public is more likely to find this summary more accessible and easily understandable and hence more likely to find value and use in it than the LSDM Report in its entirety.

Analysis as part of this Peer Review has identified that the community is not a key audience of the LSDM. However, as the ultimate customer of *ShapingSEQ*, they have a stake in having visibility over how SEQ is meeting the measure benchmarks each year.

See Section 10 visualisation recommendations relating to the community as the audience.

Future audiences

In consultation, DSDILGP indicated that one of their aspirations for the LSDM was to increase the scope of the report's usefulness over time. This could be done by increasing the number of uses of the report by existing stakeholders and/or expanding the audience to new stakeholders.

Stakeholders highlighted that there are barriers to considering other audiences, including the complexity of the information presented, and the timeliness of the information presented. Expanding the scope of the LSDM in its current form would pose an additional burden on the data collection and analysis processes, which could compromise the LSDM's effectiveness or efficiency. Communication for non-technical audiences is considered in Section 10: Visualisation.

Panel Findings

The Panel has identified the current audiences of the LSDM as the State Government, local government, utility providers and industry.

As the report is a monitoring mechanism for *ShapingSEQ*, a state regional planning policy, the DSDILGP and the SEQ Regional Planning Committee are the primary audiences for the LSDM.

The SEQ local governments are a primary audience for the LSDM. SEQ local governments are a necessary and valued stakeholder as part of the LSDM process and has a pivotal role in regional planning in SEQ.

Similarly, given the important role that utility providers play in enabling land supply in SEQ, utility providers are considered a primary audience.

Industry is a primary audience for the LSDM. While industry is not responsible for planning approvals, they are critical to facilitating land supply and have a primary role in responding to demand for housing and employment lands. Industry are acutely impacted by land supply decisions, have real time insights around market dynamics and have a wealth of knowledge relating to the delivery of development for residential and commercial purposes.

6.5 Recommendations

The Peer Review has identified the following opportunities:

Table 7: Audience recommendations

	Section	Recommendation	Responsibility
3.1	Audience	Detail the intended audiences (DSDILGP, local government, utility providers and industry) of the LSDM and outline the acknowledged needs / intended value of the LSDM to these users (i.e. focus of industry on realistic supply; the focus of the DSDILGP on Shaping SEQ measures that matter; the focus of local government on the appropriateness of zoned ultimate capacity/ realistic supply; as well as a wider context of guiding future infrastructure planning, funding and financing priorities). This recommendation is linked to the data consumer profiles outlined in recommendation 5.5. This focus is also intended to inform the continual improvement of the LSDM Report to ensure maximum value is realised by these stakeholder groups.	DSDILGP

The analysis has identified industry as a key audience and critical partner in the development of the LSDM report, particularly understanding the drivers of demand for land supply. The report sections 7 to 11 outlines recommendations to increase the role of industry in the development of the LSDM.

The analysis has identified there is a need to ensure local government obtains value from the LSDM. This recommendation will be addressed through the remainder of the report sections 7 to 11 which focus on increasing the value, confidence and transparency of information in the LSDM.

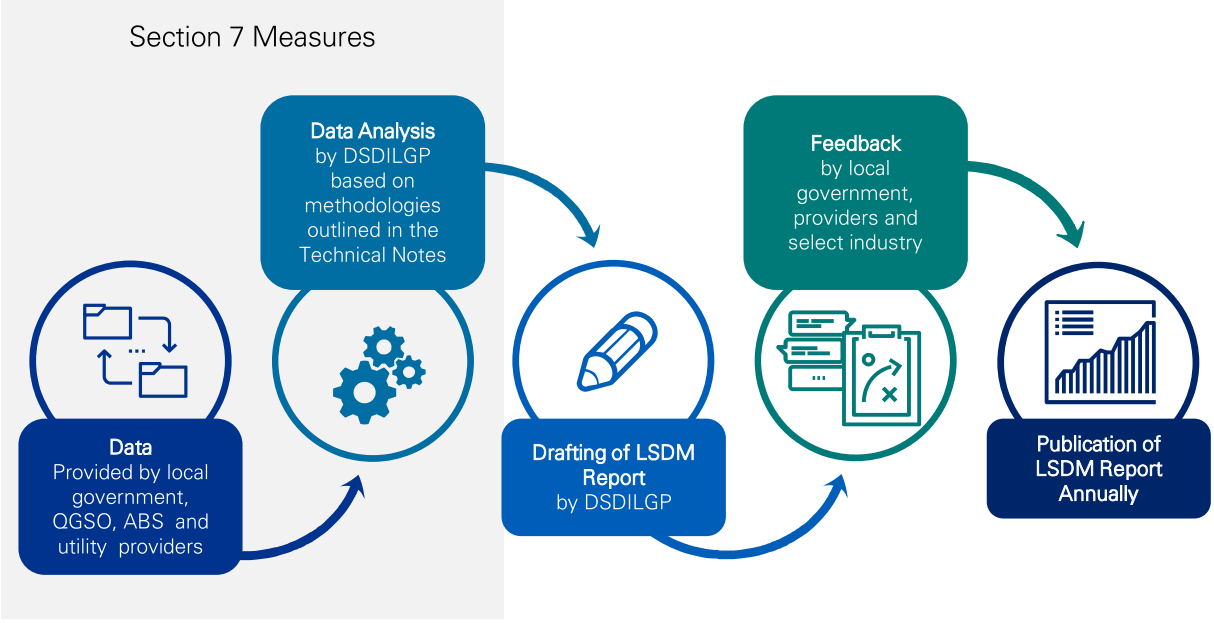
7 Measures

The measures of the LSDM should directly address the purpose and deliver on the problem statement. The first consideration is whether the measures - the outcomes of the LSDM program - address the purpose and deliver on the problem statement. Secondly, the measures are produced by obtaining data as an input which is then transformed through the application of assumptions generated through a process of data analysis. The second consideration, therefore, is whether the data inputs and approach to analysis are effective.

Problem	**Data**	**Data Analysis**
Do the measures address the problem?	Is the approach to data collection effective?	Is the approach to data cleansing, transforming and modelling (methodology) effective?

The Peer Review of the LSDM measures in this section considers both the data inputs provided by local government, utility providers and QGSO, and the data analysis based on methods outlined in the LSDM Technical Notes. Figure 9 gives an overview of this process below.

Figure 9: Overview of scope of the review of the measures as part of the overall delivery approach for the LSDM.



Source: KPMG, 2021

The LSDM measures, as presented in the online report, include:

1. Planned dwelling supply
2. Approved supply
3. Planned industrial land supply / take-up
4. Planned industrial employment supply
5. Dwelling growth
6. Dwelling density
7. Changes in housing type
8. Sales and Price
9. Market Factors

LSDM Report, 2021

Each of these measures is detailed in the following sections.

7.1 Limitations to the assessment of measures

In undertaking this analysis, KPMG drew on consultation and survey results in addition to the materials presented in the LSDM. The Peer Review has not observed input data or the approach to the transformation of the input data by local governments.

7.2 Local government, utility providers and industry consultation

High-level themes across the measures that were identified during consultation by local government, industry and utilities include:

- **Residential supply measures are the most useful:** While there was large support for the breadth of the indicators, stakeholder consultation highlighted the most useful measures were planned dwelling supply and approved supply measures. Some stakeholders questioned the need for all measures, noting that there was complexity associated with each measure and that their preference is for a focus on the most useful.
- **A need to understand the development pipeline:** There is a diverse range of factors that dictate whether the land is available for development including fragmentation, infrastructure planning, servicing, land withholding, cost of development and market expectations. These factors impact whether the land supply is realised in the market, and many stakeholders acknowledged the need to understand the issues associated with land supply for the realisation of products in the market.
- **Inconsistent methods and assumptions across local government areas impact stakeholders' assessments of the reliability of measures:** Consultation highlighted that the measures for industrial supply and planned supply were perceived to be the least reliable due to different methods and the assumptions underpinning these, particularly for realistic supply for expansion areas in planned dwelling supply and industrial employment supply. Some local governments called for consistent standards and approaches to how land supply data is collected and measured in SEQ.
- **A need to understand the drivers of demand to accurately measure supply:** Industry stakeholders acknowledged that confidence in the measures as reported by the LSDM is undermined by a perceived disconnect between the underlying demand (such as household formation), market demands for housing type/products, and planning policy and expectations. Some industry stakeholders highlighted the need for consideration of an additional overall housing

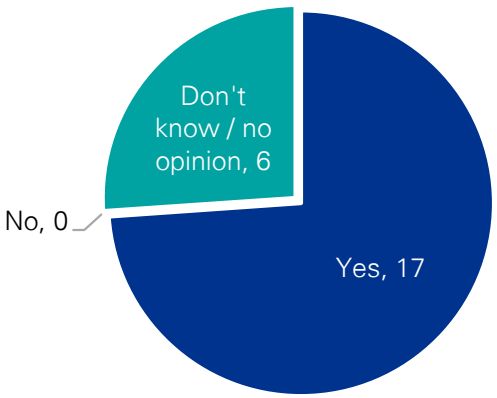
demand measure for the region, informed by market data. local governments identified a desire for consideration of local government-specific measures, in addition to the differing council needs (i.e. Growth Councils, Regional Councils, and Urban councils) which may disaggregate drivers of demand by attributes of localities.

- **Frequency of data collection and updates to data sets relative to purpose:** Industry provided consistent feedback that there is a concern with the accuracy of planned supply figures reported in the LSDM. This comment on accuracy comprises several layers, including the time lag between data collection and reporting as well as differing views between industry and government on the assumptions applied to transform council data into an estimate of realistic supply. This concern seems to be targeted to a large degree at the industry's desire to see a short-term accuracy of data that can inform short term planning responses. In contrast, some local governments highlighted that the time lag in input data was less of a concern, as they believed that the measures were performing a monitoring function around tracking supply against a longer-term regional planning horizon. Ensuring that the currency, accuracy and timeliness of the LSDM data align with the purpose and use of the LSDM has formed a core consideration for the Panel.
- **The LSDM is not the single point of truth for regional land supply:** Due to its large audience and complexity, the outcomes of the LSDM are used as measures to cross-check supply by some stakeholders but are not considered the single source of truth for land supply.
- **Acknowledging established and emerging trends:** Several emerging trends in housing type/product are not currently acknowledged in the LSDM. For example, the impact of Airbnb on product type, density and rental prices particularly in tourist destinations such as Noosa. In addition, industry identified there is a preference for households with two kitchen and living areas indicating the need to cater for multi-generational households and/or multiple households due to affordability and some family / cultural preferences.

7.2.1 Survey results

Figure 10 shows there was a general view among stakeholders (17 out of 23 respondents that the LSDM in its current form could be improved.

Figure 10: Responses to Survey Question 12 "Do you think the LSDM could be improved?"



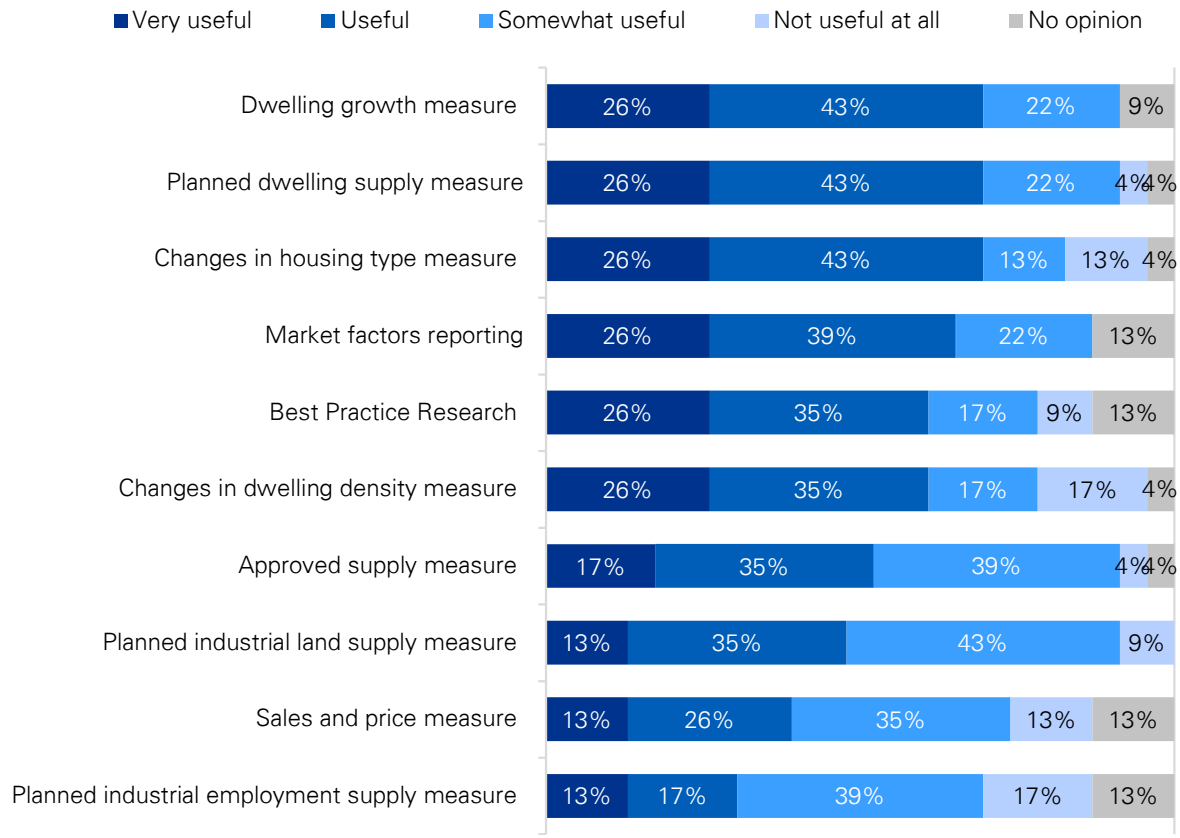
Source: KPMG survey of stakeholders, 2021.

The survey explored the usefulness of the measures. Overall stakeholders identified planned dwelling supply, changes in housing type and dwelling growth as the most useful measures. While the survey and consultation identified planned dwelling supply as the most useful, it has been highlighted as the most complex and perceived to be the least reliable through consultation.

As summarised in Figure 11, planned industrial land supply, planned industrial employment supply and sales and price measures were identified as the least useful. Consultation identified sales and price

data is available from other sources more frequently likely contributing to the lower use of the measure in the LSDM. The measures for industrial land supply and employment are relatively immature compared to the other measures, as such the methodologies are still being refined and stakeholders are less familiar with their application.

Figure 11: Responses to Survey Question 11 "Thinking about how you use the report, how useful are the following report outcomes?"



Source: KPMG survey of stakeholders, 2021.

Concerning stakeholder types (Table 6), the following was found:

- Industry found the following measures most useful: changes in dwelling density, changes in housing type, sales and price and dwelling growth. Industry found planned industrial land supply and planned industrial employment supply the least useful. It is noted that limited responses were provided for this question from industry.
- The local government indicated that market factors and dwelling growth were the most useful measures, while planned industrial employment supply and sales and price were the least useful. Local governments with smaller resident populations found more use in the sales and price measure than larger LGAs. Most of the larger councils identified the market factor report as more useful than many of the smaller councils.
- Utility providers rated planned dwelling supply, planned industrial land supply, changes in dwelling density, changes in housing type and dwelling growth as the equally most useful measures. Sales and price was the least useful measure for utility providers. It is noted that limited responses were provided for this question from utility providers.

Table 8: Most useful measures as detailed in survey results by stakeholder group

Industry	local government	Utility providers
Changes in dwelling density Changes in housing type Sales and price Dwelling growth Planned dwelling supply Approved supply Market factors Planned industrial land supply Planned industrial employment supply *Note: Based on three respondents*	Market factors Dwelling growth Planned dwelling supply Changes in housing type Approved supply Changes in dwelling density Planned industrial land supply Sales and price Planned industrial employment supply	Planned dwelling supply Planned industrial land supply Changes in dwelling density Changes in housing type Dwelling growth Approved supply Planned industrial employment supply Market factors Sales and price *Note: Based on three respondents*

Source: KPMG survey of stakeholders, 2021.

7.3 Discussion of consultation themes

Key outcomes identified during consultation with local government, industry and utilities included that in general, stakeholders considered that:

- Most measures were valuable and linked to the purpose of the LSDM.
- The factors impacting land supply and land supply pressure points could be elevated in the LSDM Report.
- There was a need for more transparency in methodologies and assumptions across LGAs to determine the accuracy or otherwise of the outcome statements of supply.
- There could be changes to the frequency of data collection and updates to data sets relative to that data set's purpose.
- There would be high utility in providing more detailed information regarding the status of land and stock in a more detailed development pipeline, rather than just two points in the supply chain.
- Unless methods for industrial land supply and planned industrial employment were strengthened there is a lack of utility in including these in the LSDM as the current outputs are not seen as particularly useful.
- Including further discussions/understandings of the drivers of demand would be beneficial in understanding the extent of the supply issue and would contribute to the range of responses required to address supply (if and when necessary).
- These consultation themes are detailed further in the following sections except for the development pipeline which is detailed in Section 7.3.3 below and land supply pressure points which are detailed in Section 7.3.4.

7.3.1 Consideration of principles in relation to the measures

As noted at the outset, the Peer Review has considered the following principles when determining ways to assess measures and, where necessary, improve their effectiveness.

Purpose	Timeliness	Confidence	Transparency	Value
Role in measuring and monitoring land supply	Currency of information	Level of confidence in the measure is a result of the data inputs, assumptions and methodology	Understanding of the methodology and approach to analysis	Effectiveness in measuring and monitoring land supply

The following discussion of the principles as they relate to measures overall draws together the perspectives of each stakeholder group and the survey findings. These principles are explored in further detail for each measure.

Purpose

Most measures are directly delivery upon the purpose of the LSDM to measure and monitor land supply in South East Queensland, aligning to the Measures that Matter as part of the delivery of *ShapingSEQ*.

ShapingSEQ identifies the need to measure and monitor employment land of each land use type annually, planned industrial employment supply contributing in part to delivering this objective. The industrial measures link to the purpose are less clear to stakeholders. The consultation highlighted that the planned industrial employment supply was too narrow, and as such it does not deliver on its purpose to report employment supply by land use type.

Timeliness

Timeliness captures the currency of the data used in the LSDM. ABS and QGSO data sets such as estimated resident population and lot certifications respectively are often published months after the data has been observed, therefore may not be considered 'accurate' due to a lack of timeliness. In addition, when the same data is available from other sources and published more frequently than ABS, QGSO or the LSDM, the LSDM data may not be considered accurate by stakeholders due to the publication of more recent data.

Confidence and transparency

These two principles - confidence and transparency – have been observed to be correlated. These principles are primarily delivered through the data inputs and methodology.

For data from ABS and QGSO, there is a moderate to a high level of confidence and transparency in the data. ABS and QGSO have their data assurance processes which underpin the reliability of this data. Local government data is sourced from 12 local governments and given the range of input sources the confidence and transparency vary across these sources.

The transparency of local government data inputs is low which is likely to result in low confidence in the local government data. There is not a consistent approach to the data provided by the local governments which reflects the varied internal approaches to data management and land use modelling adopted by the local governments. To some degree, these data limitations are expected with 12 different data sources with varied resources and approaches to data management.

The methodologies used to develop the measure vary in complexity. Typically, ABS and QGSO input data has more straight froward methodologies applied by DSDILGP. The greater the data assurance associated with the input data, the less complex, the methodology to develop the LSDM measure and the greater the confidence in the measures by stakeholders.

Where greater transformation of input data is required by DSDILGP, the more complex the methodology. Complex methodologies lead to less transparency (despite these methodologies being accurately documented in the technical notes) and low confidence by stakeholders.

Value

For measures that cannot be sourced easily elsewhere (such as planned dwelling supply), there is a high level of utility. For those measures that are can be obtained through other data sources (such as sales and price data) the value is considered moderate level. The exception to this is with the industrial measures, as these are considered of low value in their current form.

Generally greater transparency in the methodologies and confidence in data inputs would improve the value of the measures. This would enable stakeholders to be more reliant on the measures/information.

7.3.2 Summary of measures against evaluation principles

The analysis of consultation findings across all measures has identified the following.

Table 9: Summary of measures against evaluation principles

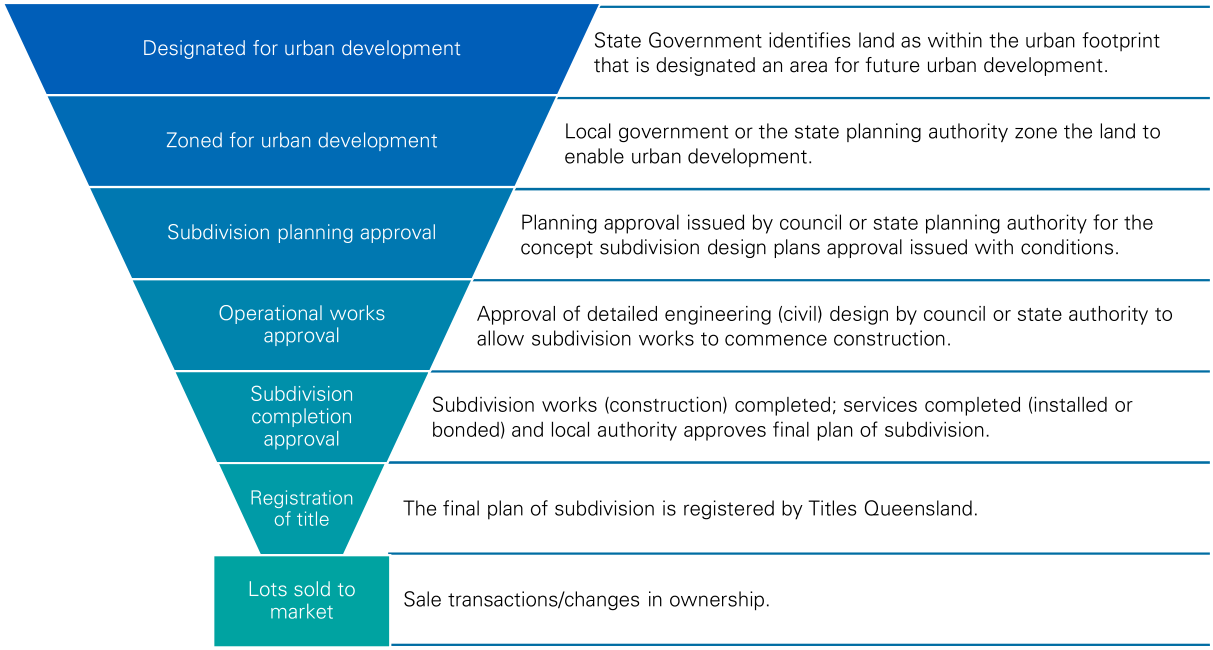
Measures	Purpose *To measure*	Timeliness	Confidence	Transparency	Value	Methodology	Frequency of data updates [6]
Planned dwelling supply	Supply	Lagging	Low	Unclear	High	Complex	Inconsistent
Approved supply	Supply	Lagging	Moderate	Visible	High	Simple	Annually
Planned industrial land supply/take-up	Supply	Lagging	Low	Unclear	Moderate	Complex	Annually
Planned industrial employment supply	Supply	Lagging	Low	Unclear	Moderate	Complex	Annually
Dwelling density	Supply	Lagging	Moderate	Visible	High	Simple	Annually
Changes in housing type	Demand	Lagging	Moderate	Limited	Moderate	Simple	Annually
Sales and Price	Demand	Lagging	Moderate	Visible	Low	Simple	Annually
Dwelling growth	Demand	Lagging	Moderate	Visible	High	Simple	Annually
Market Factors	Demand	Lagging	Moderate	Visible	High	Simple	Annually

[6] [6] 'Frequency of data updates' refers to the frequency of data published in the LSDM report not the frequency of publication of these data sources.

7.3.3 Development Pipeline

From the designation of land in the urban footprint to the sale of a property, there are several stages in the development pipeline. The development pipeline visualisation is a useful tool to communicate the stages involved in the land supply and the responsible entities at each stage. The stages of the development pipeline for a greenfield lot are detailed in Figure 12 below.

Figure 12: Development Pipeline [7]



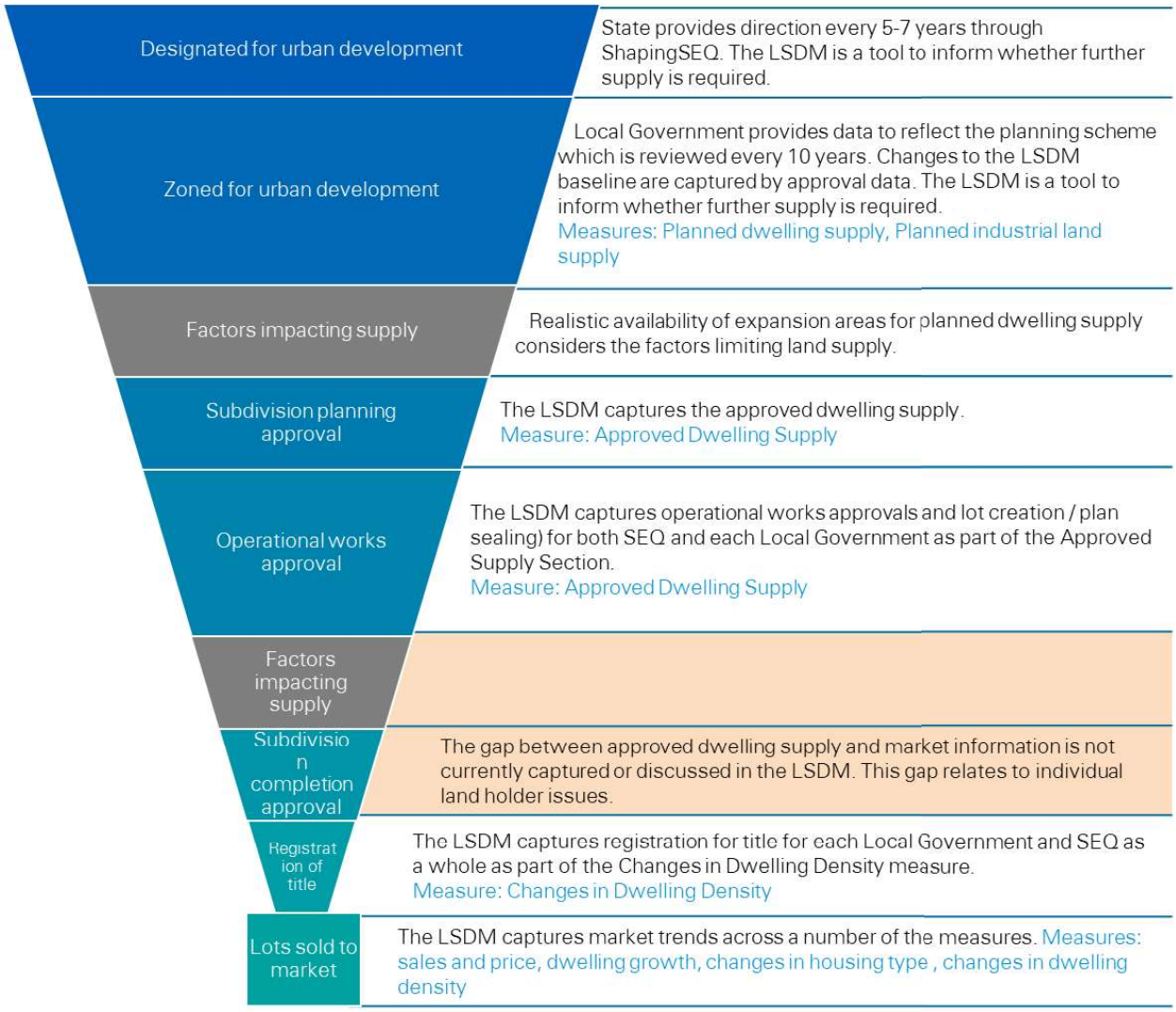
Source: KPMG, adapted from HIA 2021*: The land supply pipeline and approval stages.*

[7] [7] The delivery the of the development pipeline would be a staged approach. First with the introduction of a visualisation. Following this first task the information shown in the pipeline could be expanded to include greater detail such as additional measures or qualitative commentary. Additional detail would be driven by stakeholder feedback to ensure any additional effort reflects the value to the audience.

Alignment of LSDM reporting to development pipeline

The LSDM report includes seven measures that can be aligned to the development pipeline. By aligning these measures to the pipeline, the relationship between the measures is clearer and assists audiences in understanding the measures in conjunction with each other, rather than in isolation. These measures are aligned to the stages of the development in Figure 13 below.

Figure 13: Alignment to the development pipeline



Source: KPMG adapted from HIA 2021: The land supply pipeline and approval stages.

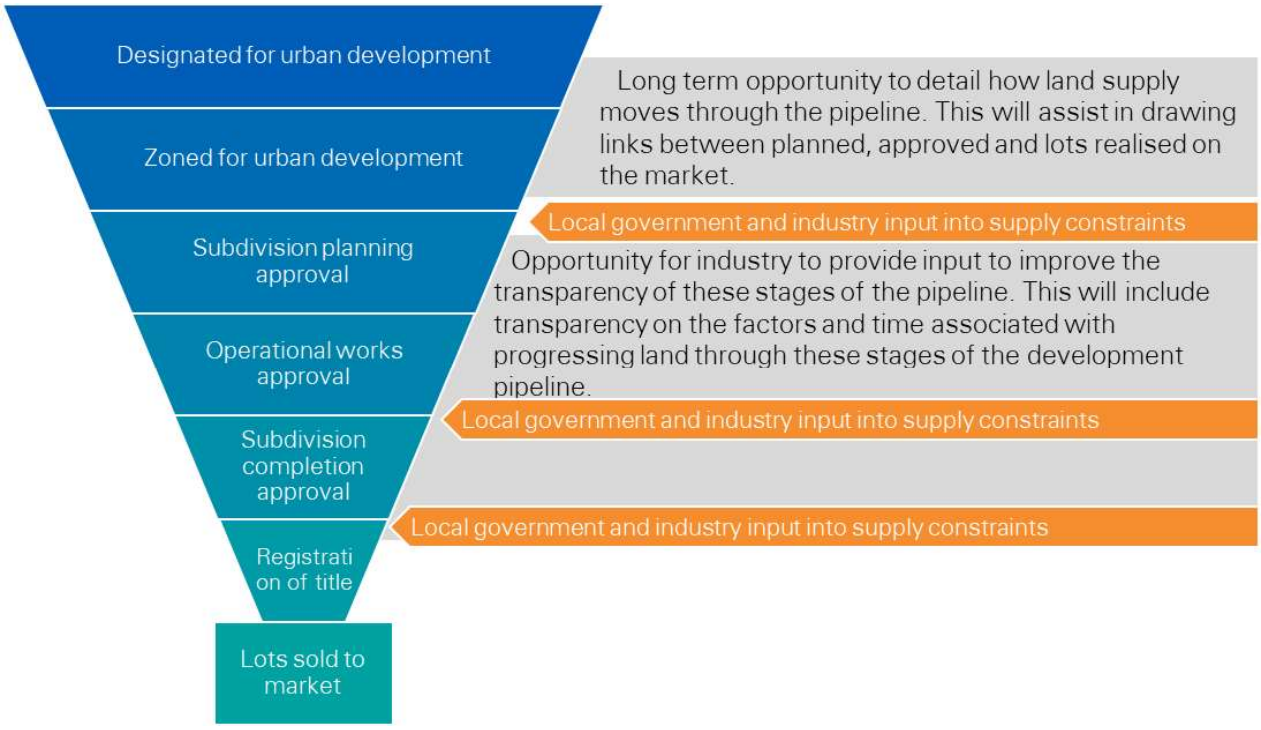
Opportunity to use the development pipeline to communicate information in the LSDM

An improved understanding of the development pipeline could be delivered through the visualisation of capacity at each stage of the approvals process, including the stages of development, activities, potential barriers, and the time at each stage in the pipeline. The LSDM measures for planned and approved dwelling supply could be aligned to each stage.

There is an opportunity to engage with industry around a draft development pipeline that identifies each point in the delivery pipeline and how the region's land supply regime is performing against this as a means of benchmarking the efficiency of land supply approvals. This would need to include consideration of how stakeholders (including local government) capture this information and supply it to the State. It would also require consideration of an appropriate baseline benchmarking approach which could adopt a differential focus to provide a distinction between high growth areas and lower growth areas in SEQ. This is shown in Figure 14 below.

See Section 10.4 visualisation for recommendations relating to the inclusion of the pipeline in the subsequent LSDM Report.

Figure 14: Pipeline opportunities to improve transparency



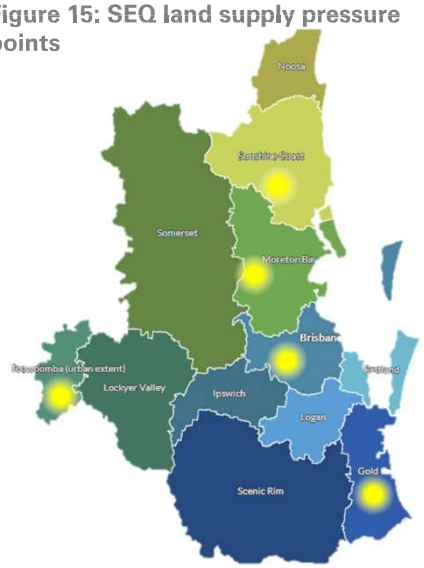
Source: KPMG adapted from HIA 2021: *The land supply pipeline and approval stages.*

The delivery of the development pipeline recommendation in the LSDM would be a staged approach. The first ask would be the introduction of a graphic visualisation showing the relationship between measures and approximate timeframes (similar to Figure 13). A visualisation would assist the readers in understanding the stages of land supply delivery, how the LSDM measures land supply across these stages and at what stage external factors may impact land supply.

Following the introduction of the development pipeline visualisation, information shown in the pipeline could be expanded to include greater detail such as additional measures or qualitative commentary. Additional detail would be driven by stakeholder feedback to ensure any additional effort reflects the value to the audience.

7.3.4 Land supply pressure points

Figure 15: SEQ land supply pressure points



Source: KPMG, 2021

The consultation highlighted that growth pressures are experienced differently across the region. Some local government's dwelling supply will be primarily catered for in expansion areas while in other locations it will be in consolidation areas. Some local governments are experiencing much higher growth rates compared to others.

There is an opportunity for the LSDM to be flexible in its focus on accuracy across the region and focus on those 'hotspot' locations where there is considerable pressure in ensuring land supply can respond to demand pressures. These locations may change in any given year. Potential criteria that could determine these locations may include:

- Areas, where growth projections are considerable and known land supply (residential or employment), is limited or low.
- Areas where a high proportion of demand is expected to be accommodated in consolidation or expansion areas.
- If existing measures are near or below the benchmark.
- The criteria would be used to identify supply pressure based on evidence and could then address industry concerns of requiring more accurate information for hotspot areas.
- This analysis would consider all LSDM measures drawing on the development pipeline to understand at what stage of development any supply barrier exists.
- Given the existing delivery pressures on the LSDM report, this analysis could be undertaken as a separate internal analysis or publication. This analysis could also be used to inform future Priority Growth Areas focus areas.

7.3.5 Recommendations

The Peer Review has identified the following opportunities:

Table 10: Measures recommendations

	Section	Recommendation	Responsibility
4.1	Measures - all [8]	Engage with industry to inform the generation of a draft development pipeline. This will identify each point in the delivery of a dwelling from land designation to final delivery and how the region's land supply regime is performing against this. It will also articulate how the region's land supply regime is performing to ensure sufficient capacity at each stage of the pipeline. This will provide a means of benchmarking the efficiency of land supply approvals and available supply at the regional and sub-regional level as well as identifying steps in supply delivery not currently presented in the LSDM.	DSDILGP
4.2	Measures - all	Engage with a communications specialist to improve communication of the methodology (Technical Notes). This may involve the inclusion of worked examples and clearer rationales for differing methodologies and the use of specific datasets.	DSDILGP
4.3	Measures - all	Undertake a detailed assurance exercise on input data sourced from Local Government and utility providers (which was beyond the scope of this review) to ensure they are of suitable quality and format to inform the LSDM.	DSDILGP
4.4	Measures - all	Report the LSDM growth measures relative to population growth rather than in absolute terms to enable a reference point for the measure and assessment of the performance of supply relative to demand.	DSDILGP
4.5	Measures – all	Undertake a case study to test the transformation of raw data to understand the impact of assumptions on the final measures in the LSDM. Consider including sensitivities relating to raw data accuracy, future growth scenarios and market shocks.	DSDILGP

[8] The delivery the of the development pipeline would be a staged approach. First with the introduction of a visualisation. Following this first task the information shown in the pipeline could be expanded to include greater detail such as additional measures or qualitative commentary. Additional detail would be driven by stakeholder feedback to ensure any additional effort reflects the value to the audience.

	Section	Recommendation	Responsibility
4.6	Measures - Addressing variances across the region	Identification of critical pressure points for each local government along the development pipeline (as identified in recommendation 4.1) and inclusion in LSDM reporting. This will enable informed engagement between State Government, local government, utility providers and industry to understand the drivers and temporal impact of these pressures.	DSDILGP in consultation with industry, utility providers and local government
4.7	Planned industrial land supply/take-up and planned industrial employment supply	Undertake engagement with industry, utility providers and local government stakeholders to understand, validate and test potential improvements to industrial land supply estimates (as a subset of employment land supply) to improve the value of the industrial land measures and the transparency of methodology to stakeholders.	DSDILGP in consultation with local government and utility providers
4.8	Planned industrial land supply/take-up and planned industrial employment supply	Work with industry, utility providers and local governments to develop methodologies that calculate a wider array of employment land use types (beyond just industrial). This will enable the wider assessment of employment land supply across the region in line with the direction of Shaping SEQ.	DSDILGP in consultation with local government and utility providers
4.9	Planned dwelling supply and approved supply	Undertake annual engagement with industry to test and unpack the key assumptions informing planned realistic supply (both expansion and any future estimation of realistic consolidation supply) in local government areas experiencing land supply development pressure.	DSDILGP in consultation with industry
4.10	Planned dwelling supply and approved supply	Undertake annual engagement with local government (jointly with industry and utility providers where appropriate) to test and unpack key assumptions informing planned realistic supply in each local government area, to progress to consistent definitions and applications across all local governments in SEQ.	DSDILGP in consultation with local government
4.11	Planned dwelling supply and approved supply	Consider the utilisation of scenario-based forecasts for land demand when estimating years of supply. These could provide a high, medium and low estimate of demand for land (i.e. the draw-down of approved, unallocated lots), based upon the current approaches using the average annual expected future growth (planned dwelling supply) and average annual recent historical growth (approved supply), and two sensitivity scenarios informed by the state of lead indicators in the market factors reporting.	DSDILGP
4.12	Measures - market factors	Include sub-regional commentary and findings on key market factor indicators for which data is available at a local government level. This will assist in identifying potential leading indicators of anticipated demand increase or decline in key sub-markets across the region.	DSDILGP

	Section	Recommendation	Responsibility
4.13	Measures - market factors	Inclusion of additional leading indicators in the market factors reporting (i.e. off the plan sales) to provide further lead time on the need for potential response to anticipated supply draw-down.	DSDILGP in consultation with industry

7.4 Planned dwelling supply

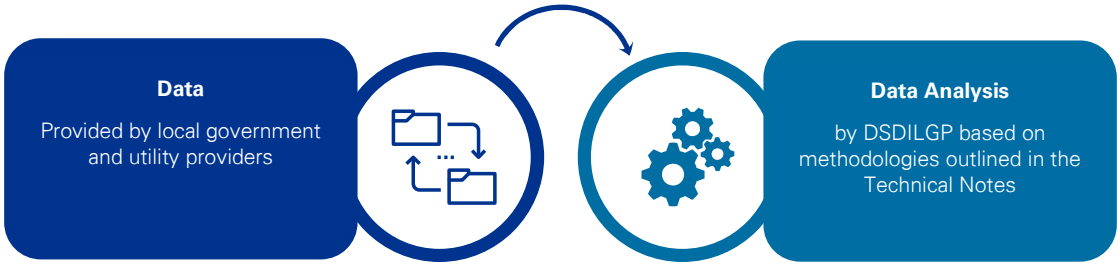
7.4.1 LSDM 2021 Report

The 2021 LSDM defines planned dwelling supply as the following:

> "A collective term for both the capacity of a d the realistic availability of planned dwelling supply, which are separately defined."
>
> 2021 LSDM Technical Notes, Planned Dwelling Supply

The technical note for planned dwelling supply details the methodology used to calculate the measure including variations in methodology across LGAs**.** Figure 16 provides an overview of the data sources and the approach to data analysis undertaken by DSDILGP.

Figure 16: Overview of data sources and data analysis for planned dwelling supply

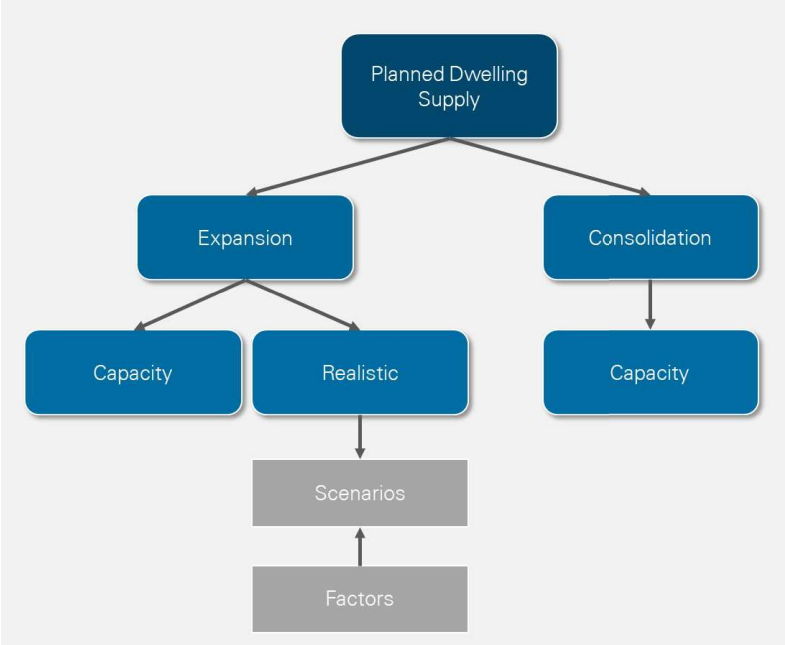


Source: KPMG, 2021

Planned dwelling supply

Figure 17 provides a high-level overview of the approach and key elements in developing planned dwelling supply.

Figure 17: Detailed data analysis approach to calculating planned dwelling supply drawn from the technical notes

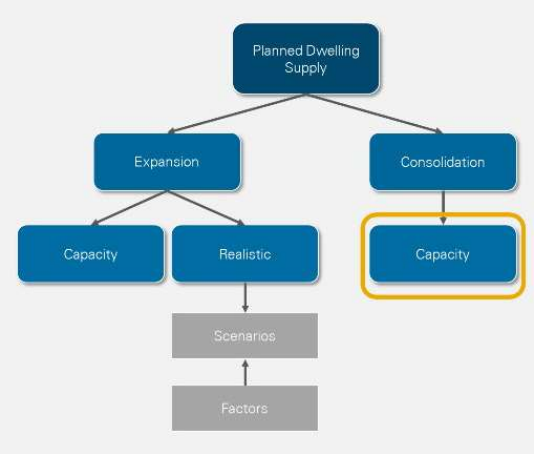


Source: KPMG, 2021

Capacity for residential consolidation areas [9]

The capacity methodology estimates capacity in each LGA and across SEQ. While there is a consistent base methodology, there are variations based on the data provided by each local government.

There are five approaches to calculating the capacity for planned dwellings. These are variations of the same methodology but adjusted to reflect differences in the data provided by local governments. There are no consolidation areas in Scenic Rim, Lockyer Valley and Somerset and therefore these have not been discussed.



Base methodology

The base methodology for calculating the capacity of planned dwelling supply from 2021 onwards, for consolidation areas in each local government area, is to:

- Calculate expected dwelling growth from 2016 to the identified 'ultimate' dwellings, using the available local government and utility provider property-level datasets or summary data.
- Subtract from that figure the equivalent 2016-2021 constructed dwellings estimate. This is the dwelling building approvals from 1 July 2015 to 30 June 2020 for that area (i.e. building approvals with a 12-month lag to allow for their construction).

There are, however, some variations to these based on geographical differences. These are outlined below.

1) For SEQ, capacity is determined using the following methodology:

- From 2016 onwards, extract the total number of additional dwellings from a 2016 base number of dwellings to the identified ultimate dwellings for consolidation areas.
- From 2021 onwards, subtract the 2016-21 constructed dwellings estimate from the capacity from a 2016 base.

2) Consistent methodologies for consolidation areas in Brisbane, Ipswich, Logan [10], Moreton Bay, and Sunshine Coast [11]. The steps to drawing out capacity from 2021 are outlined below:

- Identify parcels within the consolidation areas.
- From 2021 onwards, subtract the 2016-2021 constructed dwellings estimate from the ultimate capacity from 2016 onwards.

There are unique methodologies for Noosa, Redland, Gold Coast, and Toowoomba.

3) For consolidation areas in Noosa, the steps to drawing out capacity from 2021 are outlined below:

- Identify parcels within the consolidation areas.

[9] This is sourced from the technical notes.
[10] Note: For Logan, ultimate capacity is estimated by drawing upon Logan City Council's 2020 dataset, and adding the 2016-2020 constructed dwellings estimate.
[11] Note: Sunshine Coast Council dataset does not identify ultimate dwellings. As such, ultimate dwellings reflect expected dwelling growth from 2016-2041.

- Draw upon UnityWater datasets to extract the 2016-2021 dwellings constructed estimate and subtract from Ultimate Capacity [12].

4) For consolidation areas in Redland [13] the steps to drawing out capacity from 2021 are outlined below:

- Estimate ultimate development growth from 2016 based on the 2014 Redland Land Supply Review undertaken by Urbis. [14]
- Extract the total number of additional dwellings.
- Subtract the 2016-2021 constructed dwellings estimate from ultimate capacity from 2016 onwards.

5) For consolidation areas in Gold Coast, the steps to calculate capacity are outlined below:

- Identify SA2s within the consolidation areas. Parcel-level information was not used for this analysis as only SA2 information was available to inform the LSDM.
- From 2021 onwards, subtract the 2016-2021 constructed dwellings estimate from Ultimate Capacity from 2016 onwards.

6) For consolidation areas in Toowoomba [15], the steps to calculate capacity are outlined below:

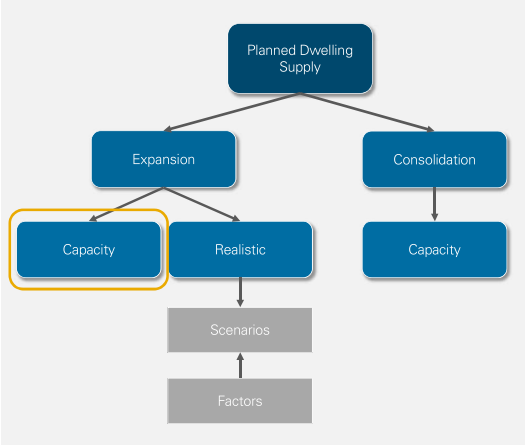
- Identify parcels within the consolidation areas.
- Extract the total number of additional dwellings from 2021 to the identified ultimate dwellings by consolidation and expansion areas.

Realistic availability for residential consolidation areas

No estimate of realistic availability has been made in the LSDM for the consolidation areas for each local government. Two indicative scenarios only are calculated for the overall SEQ consolidation area. These assume a percentage (25% or 50% respectively) of the region's total identified consolidation dwelling capacity, that is not yet built or approved, will not be available for development by 2041. The technical notes detail the calculations underpinning these scenarios.

[12] Note: To calculate ultimate capacity, the ultimate dwellings identified in the UnityWater dataset is added to the July 2016 to December 2016 constructed dwellings estimate.
January 2017 to identified ultimate' dwellings, to which is then added the July 2016 to December 2016 constructed dwellings estimate.
[13] In the absence of property-level or summary data which aligned directly to the consolidation areas, reported dwelling yields were allocated to those areas based on location, zoning and lot size information, including proportional allocations to consolidation and expansion areas where appropriate
[14] Note: To identify remaining capacity at June 2016, estimated construction from January 2014 to June 2016 was subtracted from the remaining capacity identified in 2014 by Urbis.
[15] Note: The method for determining capacity in Toowoomba varies from most other areas because the new Business-as-Usual model planning assumptions data provided by the Council in 2021 has a base date of 2021 rather than 2016.

Capacity for residential expansion areas [16]



There are a number of approaches to calculating the capacity of planned dwelling supply in expansion areas. These reflect the methodologies for capacity of consolidation areas. Most of these are variations of the same methodology but adjusted to reflect differences in the data provided by local governments.

Base methodology

The base methodology for calculating the capacity of planned dwelling supply from 2021 onwards, for consolidation areas in each local government area, is to:

- Calculate expected dwelling growth from 2016 to the identified 'ultimate' dwellings, using the available local government and utility provider property-level datasets or summary data.
- Subtract from that figure the equivalent 2016-2021 constructed dwellings estimate. This is the dwelling building approvals from 1 July 2015 to 30 June 2020 for that area (i.e. building approvals with a 12-month lag to allow for their construction).

For SEQ, capacity is determined using the following methodology:

- From 2016 onwards, extract the total number of additional dwellings from 2016 to the identified ultimate dwellings for expansion areas.
- From 2021 onwards, subtract the 2016-21 constructed dwellings estimate from the capacity from a 2016 base.

Consistent methodologies for expansion areas exist in Brisbane, Ipswich, Lockyer Valley, Logan [17], Moreton Bay, Scenic Rim, Somerset and Sunshine Coast [18]. The steps to drawing out capacity from 2021 are outlined below:

- Identify parcels within the expansion areas.
- From 2021 onwards, subtract the 2016-2021 constructed dwellings estimate from Ultimate Capacity from 2016 onwards.

There are unique methodologies for Noosa, Redland, Gold Coast, and Toowoomba.

- For consolidation areas in Noosa, the steps to drawing out capacity from 2021 are outlined below:
- Identify parcels within the consolidation areas.
- Draw upon UnityWater datasets to extract the 2016-2021 dwellings constructed estimate and subtract from Ultimate Capacity from 2016 onwards.

For expansion areas in Redland [19] the steps to drawing out capacity from 2021 are outlined below:

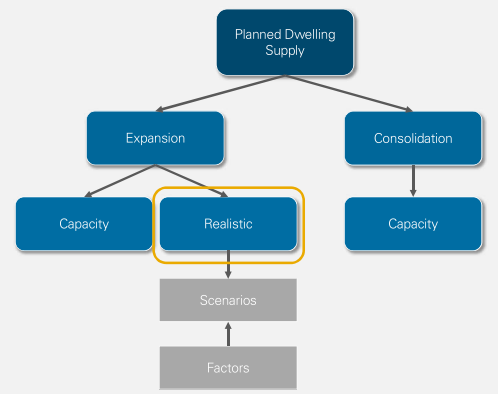
[16] This is sourced from the technical notes.
[17] Note: For Logan, ultimate capacity is estimated by drawing upon Logan City Council's 2020 dataset, and adding the 2016-2020 constructed dwellings estimate.
[18] Note: Future dwellings identified for the Beerwah East Major Development Area and Additional dwellings assumed for the Enterprise Corridor beyond 2031 were excluded.
[19] In the absence of property-level or summary data which aligned directly to the expansion areas, reported dwelling yields were allocated to those areas based on location, zoning and lot size information, including proportional allocations to consolidation and expansion areas where appropriate.

- Estimate ultimate development growth from 2016 based on 2014 Redland Land Supply Review undertaken by Urbis. [20]
- Add to this an estimate for Southern Redland Bay Area's ultimate dwelling yield.
- Extract the total number of additional dwellings.
- Subtract the 2016-2021 constructed dwellings estimate from Ultimate Capacity from 2016 onwards.

For expansion areas in Gold Coast and Toowoomba, the steps to calculate capacity are outlined below:

- Identify SA2s within the expansion areas. Parcel-level information was not used for this analysis as only SA2 information was available to inform the LSDM.
- From 2021 onwards, subtract the 2016-2021 constructed dwellings estimate from Ultimate Capacity from 2016 onwards.

Realistic availability for residential expansion areas [21]



At a local government area level, realistic availability is only estimated for expansion areas. The approach to calculating this remains relatively consistent, however, changes depending on the inputs provided by local government. The methodology estimates the realistic availability of expansion areas by reducing the expansion capacity (calculated earlier) by assuming unavailable growth area dwellings, assumed unavailable dwellings both inside and outside the "current intent to service layer", with the latter calculations partly affected by location inside or outside the urban footprint and partly based on the calculation of assumed unavailable fragmented area dwellings.

In calculating realistic availability for expansion areas, the technical notes outline the specific methodology for:

- Identified growth areas.
- Fragmented areas.
- Areas within the current intent to service layer without development approval, preliminary approval or infrastructure agreement.
- Areas outside the current intent to service layer, inside the urban footprint and without development approval, preliminary approval or infrastructure agreement.
- Areas outside the current intent to service layer, outside the urban footprint and without development approval, preliminary approval or infrastructure agreement.

Each area type has a specific methodology to enable the calculation of realistic availability. These are outlined in the table below.

[20] Note: To identify remaining capacity at June 2016, estimated construction from January 2014 to June 2016 was subtracted from the remaining capacity identified in 2014 by Urbis.
[21] This is sourced from the technical notes.

Table 11: Realistic availability assumed unavailable dwellings for expansion areas methodology

Area type	Methodology (as detailed in the Technical Notes)
Identified growth areas	• Dwellings within growth areas identified within the current intent to service layer are classified as assumed unavailable for development to 2041 [22]. • Dwellings within growth areas outside the current intent to service layer are considered not realistically available.
Fragmented areas	• Subject to variations based on the current intent to service layer, 2013 BHS rules for calculating expected yield from theoretical yield are used, including identified proportions for selected zones and parcel sizes as detailed in Appendix B [23] of the technical notes.
Areas within the Current Intent to Service layer without a DA, preliminary approval or IA	• Calculate the assumed unavailable fragmented area dwellings as per fragmented area methodology.
Areas outside the Current Intent to Service layer, inside the Urban Footprint, without a DA, preliminary approval or IA	• Identify all parcels where the ultimate dwellings are greater than one (effectively counting all single dwellings developed on vacant lots as realistically available) • Calculate the total capacity of these areas by totalling the additional dwellings from 2021 to ultimate and assume those dwellings are unavailable.
Areas outside the Current Intent to Service layer, outside the Urban Footprint, without a DA, preliminary approval or IA	• Calculate the assumed unavailable fragmented area dwellings as per the fragmented area methodology

The realistic availability of planned dwelling supply for SEQ's expansion areas as a whole is calculated by adding together each local government's realistic availability of planned dwelling supply within expansion areas. This draws upon the methodology detailed in Table 11. The table below outlines the assumed unavailable dwellings for the whole of SEQ by area type.

Table 12: Realistic availability assumed unavailable dwellings for expansion areas methodology

Area type	Methodology
Identified growth areas	• For growth areas identified inside the current intent to service layer, dwellings are assumed unavailable for development to 2041. • For growth areas outside the current intent to service layer, the whole growth area is assumed not realistically available.
Fragmented areas	• Subject to further adjustments under the current internet to service layer (see row below), dwellings in fragmented areas

[22] Note: This is to the extent the 'Base capacity' identified for that growth area is not identified as 'Estimated take-up 2016-2041' (as outline in Table C1 in the technical notes).
[23] For further detail on this methodology, refer to Appendix B of the Technical notes.

Area type	Methodology
	are assumed unavailable to 2041 based on the rules used for the 2013 broad hectare study. These rules calculate expected yield from theoretical yield identified in Appendix B of the technical notes. • For local government areas where there is not suitable parcel-level information, the difference between theoretical and expected yield was used as an allowance for the measure.
Areas within the Current Intent to Service layer without a DA, preliminary approval, infrastructure agreement and identified as unavailable dwellings in a fragmented area	• Dwelling were assumed unavailable to 2041
Areas outside the Current Intent to Service layer, inside the Urban Footprint, without a DA, preliminary approval or IA	• The whole of the capacity for planned dwelling supply were assumed unavailable.
Areas outside the Current Intent to Service layer, outside the Urban Footprint, without a DA, preliminary approval or IA	• The whole of the capacity for planned dwelling supply were assumed unavailable.

The table below maps these methodologies against local governments, highlighting where there are inconsistencies, or differing methodologies used.

The methodology also identifies several limitations including data inconsistencies such as timing, outputs and assumptions about densities and developable areas. Similarly, DSDILGP noted that the interpretation, determination and timing of ultimate development may affect the consistency and comparability of reporting across LGAs.

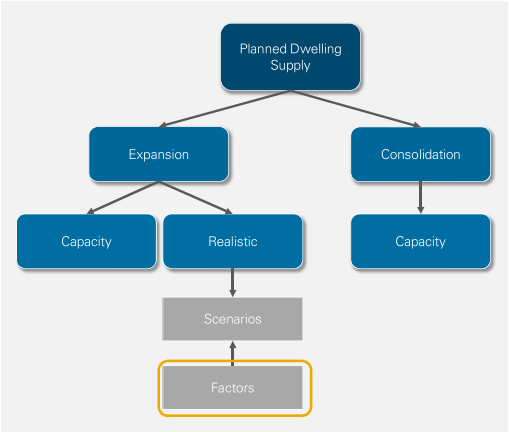
Table 13: Analysis of factors in realistic supply methodology by LGA

Factors	Brisbane	Gold Coast	Ipswich	Lockyer Valley	Logan	Moreton Bay	Noosa	Redland	Scenic Rim	Somerset	Sunshine Coast	Toowoomba
Identified growth areas	NA	Differing methodology to the majority of LGAs, utilisation of BHS & SGS Report. Areas outside of the current intent to service layer and within the urban footprint are considered not currently realistically available.	Within Current Intent to Service and considered unavailable for development	NA	Within current intent to service and considered unavailable for development	Outside of current intent to service, but within the urban footprint.	NA	Within Current Intent to Service and considered unavailable for development	NA	NA	Within Current Intent to Service and considered unavailable for development	Differing methodology to the majority of LGAs, utilisation of BHS & SGS Report. Areas outside of the current intent to service layer and within the urban footprint are considered not currently realistically available.
Fragmented areas	✓	✓	Differing methodology due for assumed unavailable dwellings due to lack of available suitable parcel-level information.	✓	✓	✓	✓	Differing methodology to the majority of LGAs, utilisation of BHS & SGS Report.	✓	✓	✓	
Areas within the Current Intent to Service layer without a DA, preliminary approval or IA	✓	✓	✓	✓	✓	✓	✓		✓	✓	Differing methodology as 1240 dwellings from six sites have been treated as within the Current Intent to Service layer and all realistically available based upon Sunshine Coast Planning Scheme 2014.	
Areas outside the Current Intent to Service layer, inside the Urban Footprint, without a DA, preliminary approval or IA	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	
Areas outside the Current Intent to Service layer, outside the Urban Footprint, without a DA, preliminary approval or IA	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	

✓ Identifies which factors are applied as per the methodology above. Additional commentary identifies variations to the base methodology

Factors influencing realistic availability for residential expansion areas [24]

The technical notes identify several factors that in combination, or alone impact supply. Each measure of realistic availability is presented as an alternative measure of supply and is included as a scenario and/or sensitivity analysis that presents the effect of factors that may constrain availability up to the 2041 horizon. The factors feed into the scenarios, as outlined in the figure right.



These factors include:

- Infrastructure availability;
- The practical staging of and capability for development;
- Land ownership fragmentation;
- Landowner intent; and
- Insufficient demand for the planned scale/density of uses in some areas up to 2041
- Existing vs planned density or land value in the existing vs planned use
- Age of existing development
- Accessibility
- Constraints affecting the economic feasibility of development

Planned dwelling supply (years of supply) [25]

Determining the years of supply provides a calculation to align to the benchmarks set in *ShapingSEQ*. The calculation draws on both consolidation and expansion figures. The methodologies are presented in the table below.

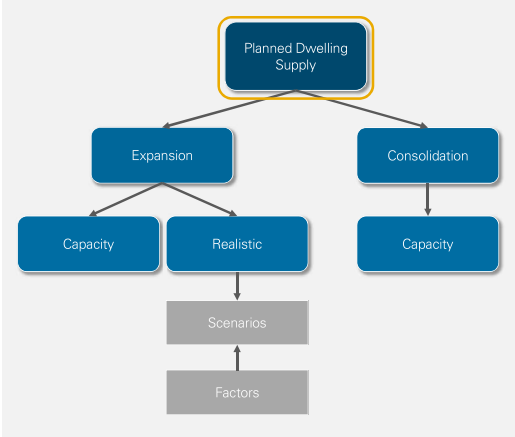


Table 14: Planned dwelling supply methodology

Location	Methodology
SEQ	• Calculate the capacity of the planned dwelling supply for the region by adding each local government's consolidation and expansion area's capacity using the methods outlined in each local government section below. • To provide indicative realistic availability scenarios for the region's consolidation areas, two percentages were used to consider the impact of assuming 25 or 50 per cent of the region's total identified consolidation dwelling capacity, that is not yet built or approved, will not be available for development by 2041. These proportions were chosen and only applied at the overall regional level.

[24] This is sourced from the technical notes.
[25] This is sourced from the technical notes.

Location	Methodology
Local governments	• For consolidation, subtract the 2016-21 constructed dwelling estimate from the identified capacity from 2016 onwards and divide by *ShapingSEQ*'s adjusted average annual benchmark. • For expansion capacity, subtract the 2016-21 constructed dwelling estimate from the identified capacity from 2016 onwards and divide by *ShapingSEQ*'s adjusted average annual benchmark. • For realistic availability, subtract the 2016-21 constructed dwellings estimate from the identified expansion realistic availability from 2016 onwards and divide this by *ShapingSEQ*'s adjusted average annual benchmark

Underpinning datasets

The datasets used to inform these calculations are varied based on the data provided by local governments. These are outlined below in the table.

Table 15: Information underpinning the calculation of planned dwelling supply [26]

LGA	Information	Date
Brisbane	Parcel-level information, as developed for LGIPs [27]	February 2016
Gold Coast	SA2-Level information as developed for currently LGIP	June 2017
Ipswich	Parcel-level information from Ipswich Population Modeller	2017
Lockyer Valley	Parcel-level information aligns to LGIP	June 2018
Logan	Parcel-level information from Logan Growth Model	February 2021
Moreton Bay	Parcel-level information developed for LGIP	October 2019
Noosa	Parcel-level information from Unitywater forecasts	July 2018
Redland	Summary data by parcel size, zone and locality	2014
Scenic rim	Parcel-level data from Land Supply Monitoring	June 2018
Somerset	Parcel-level data from Population and Demand Model	May 2018
Sunshine Coast	Parcel-level information underpinning the LGIP	July 2018
Toowoomba	Parcel-level information from the Business-as-Usual Model	2021

[26] DSDILGP Provided Information, January 2022
[27] LGIP = Local Government Infrastructure Plan. Queensland local governments are mandated under the *Planning Act 2016* to make or amend a planning scheme for an LGIP or review an existing LGIP, as required, every 5 years. LGIPs aim to identify local shared infrastructure requirements so that future demand can be met.

7.4.2 Local government, utility providers and industry consultation

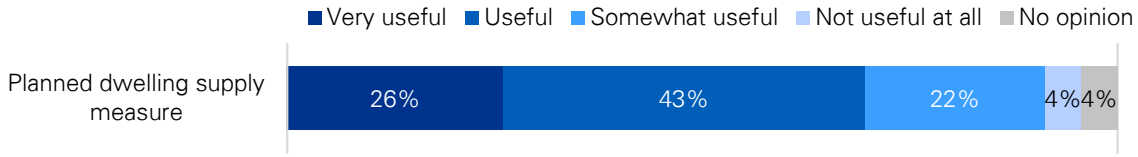
Key themes that were identified during consultation by local government, Industry and Utilities include:

- **Critical measure but low confidence:** Across all stakeholder groups, the planned dwelling supply measure was identified in consultation as the most important measure, however, it is also of the most concern in terms of accuracy and confidence.
- **Timeliness of data inputs from local government:** There were concerns across all stakeholder groups around the timeliness of data, noting that in relation to planned dwelling supply, this is often based on older datasets. Given the limited frequency of updating planning assumptions, the perception of the accuracy of the planning dwelling supply outcomes included in the LSDM is questioned by stakeholders.
- **Inconsistency in definitions:** Stakeholders across local governments and industry highlighted that definitions can be inconsistent across local governments. For example, the way ultimate development or capacity is defined across different local governments.
- **Calculation of capacity:** There was minimal feedback from stakeholders in relation to the methodology for capacity of consolidation and expansion areas. The lack of response indicates that there is an acceptance of the methodology underpinning the calculation and/or lack of detailed understanding.
- **Realistic availability calculations based on proxy datasets:** The use of proxies such as infrastructure capacity for planned capacity was highlighted by local governments and utility providers as an area of concern. As the infrastructure capacity data is not designed to be used to inform planned capacity.
- **Calculation of realistic supply for expansion areas:** Stakeholder consultation identified that the definition of 'realistic supply' is contested. Industry stakeholders noted that the LSDM does not mention the barriers to planned dwelling supply such as fragmentation, infrastructure planning etc. which contributes to mistrust of the measure amongst stakeholders. As discussed above, however, it is noted that the technical notes indicate that the methods do take into account these factors (for expansion areas only). Thus, it would seem that there is a need to have more transparency and at least some discussion of the factors contributing to supply (or lack of it) in broader documents/outputs (as opposed to just the technical notes).
- **Disconnect between assumptions and delivered expectation:** Industry stakeholders noted that they feel there is a disconnect between the reporting of land supply, and how the assumptions underpinning these calculations assume the delivery of the product (for example detached versus attached). Industry thought that the distinctions are tied only to the LGA's understanding or expectations of the final product and that in many cases the evidence for the distinctions is not forthcoming. Industry felt that they could play an important role in highlighting trends and preferences.

7.4.2.1 Survey results

Figure 18 summarises the survey results which predominately identified the planned dwelling supply measure as useful (43%) and very useful (26%).

Figure 18: Responses to Survey Question 11 "Thinking about how you use the report, how useful are the following report outcomes?"



Source: KPMG survey of stakeholders, 2021.

7.4.2.2 Summary of consultation themes

Consultation theme	DSDILGP	Local Government	Utilities	Industry
Critical measure but low confidence		✓	✓	✓
Timeliness of data inputs from local government undermines confidence				✓
Inconsistency in definitions for expansion and consolidation areas		✓		✓
Concerns relating to calculation of capacity of expansion and consolidation areas			✓	
Realistic availability calculations based on proxy datasets which are not fit for purpose			✓	✓
Calculation of realistic supply for expansion areas is unclear		✓	✓	✓
Disconnect between assumptions utilised and the delivered of product				✓

7.4.3 Discussion of consultation themes

The analysis of consultation findings has identified the following for planned dwelling supply.

Purpose	Timeliness	Confidence	Transparency	Value
Role in measuring and monitoring land supply	Currency of information	Level of confidence in the measure is a result of the data inputs, assumptions and methodology	Understanding of the methodology and approach to analysis	Effectiveness in measuring and monitoring land supply
To measure **Supply**	**Lagging**	**Low**	**Unclear**	**High**

The following discussion of consultation themes draws together the perspectives of each stakeholder group and the survey findings. These findings have been used to inform the recommendations.

Purpose

This measure delivers upon the purpose of the LSDM to measure and monitor land supply in South East Queensland. It directly aligns with the Measures that Matter as part of the delivery of *ShapingSEQ*.

The Peer Review has identified that this measure delivers against the purpose as outlined in *ShapingSEQ*.

Timeliness

Industry stakeholders have highlighted their concerns about the timeliness of the planned dwelling supply. Timeliness of input data varies across local governments as some do not provide data to reflect planning scheme updates, while others provide more frequent data. There is an opportunity to improve the timeliness of datasets by considering an approach to ensuring local government datasets (such as building approvals) are updated regularly.

Based on stakeholder consultation, this analysis has identified that lagging datasets are of greatest concern to stakeholders, particularly industry. There is an opportunity to be more transparent in the limitations impacting updating data and develop an agreed approach across the local government stakeholders to improve the timeliness of input data. There is an opportunity to consider a standardised approach across local governments to ensure updates to building approvals

Confidence

Both consultation and the survey highlighted the limited confidence that stakeholders have in the measure due to the assumptions and transformation of the data to arrive at the realistic availability of supply. Furthermore, there is little transparency in the factors/assumptions utilised to arrive at realistic availability of supply, unless the reader engages with the technical notes. Given the variety of input data sources, confidence varies across local government datasets. There are several opportunities to tackle these issues which include:

- Reduce the amount of transformation undertaken by DSDILGP and require the local governments to complete this task. If this was to be actioned, it would be necessary to ensure consistency across Local Government areas, potentially through a data/factors dictionary and guidance regarding how to assess each of the factors.
- Alternately, improved transparency regarding how DSDILGP transforms the data could be provided.
- Regardless of the approach taken, where 'hotspot' areas are concerned, it would also be useful to have roundtable discussions with local industry representatives to assist in informing the assumptions utilised.

In summary, there are opportunities to consider the pathways to improve confidence through validation and confirmation processes, plus through the introduction of a standardised data compilation process for local governments.

This Peer Review has highlighted that confidence in the measure is low. Stakeholder consultation highlighted that confidence could be improved by implementing a validation process that would enable industry and local governments to test and assess the data with the experiences on the ground. Standardised data compilation processes for local governments could also be instigated.

Transparency

This Peer Review has identified limited transparency in the planned dwelling supply measure as a result of both inabilities of stakeholders to observe the input data and the complexity of the methodology used to calculate the measure. While the methodology is documented in the technical notes it is very complex, varies across local government areas and is considered difficult to follow.

This Peer Review has noted that there is an opportunity to improve the communication of the technical notes by including key assumptions in other graphical outputs /interfaces produced by the LSDM. Including assumptions and any related inconsistencies in datasets underpinning the measure in the technical notes themselves would also be useful.

Value

Despite low levels of transparency and confidence, all stakeholder groups highlighted the value of the planned dwelling supply measure. The measure delivers on the purpose and outlines how each local government is tracking against *ShapingSEQ* targets. Value could be improved by drawing upon more consistent inputs and ensuring there is a shared understanding of the methodology, its limitations and assumptions. The value of the measure could also be improved through a clearer communication of the methodology.

The value of the planned dwelling supply measure is high but could be improved through clearer communication of the methodology and underpinning assumptions. Further consideration of factors (assumptions) for the consolidation component of the measure would be useful.

Realistic supply of consolidation areas

ShapingSEQ identifies a range of policy directions, including increasing consolidation within SEQ, and a desire to measure the estimated realistic supply for consolidation areas. The Peer Review has identified that there is a need for consideration of realistic supply for consolidation to deliver on the requirements of *ShapingSEQ*. DSDILGP are progressing this measure having considered the ability to service and the finical feasibility of consolidation areas. There is an opportunity for DSDILGP to work with the Regional Planning Committee (RPC) to build this approach to best meet the needs of all stakeholders.

The planned dwelling supply measure would be improved through the inclusion of the realistic supply measure for consolidation areas. The Peer Review notes that DSDILGP is already exploring this and is encouraged by the work done to date.

Application of the factors (assumptions)

It is unclear how the factors (assumptions) are applied to the input data and which entity is responsible for determining these factors. The application of the factors primarily underpins the differences in land supply analysis across stakeholders. Currently, this primarily relates to either the estimation of ultimate capacity or the realistic availability of supply in residential expansion areas. Nevertheless, as realistic calculations for other measures are developed this issue of lack of clarity and difference in opinion is also likely to be experienced.

While there will always be a difference of opinion in the application of assumptions across stakeholder groups, there could be improved communication and validation around how assumptions are applied. Greater transparency relating to the application and source of assumptions would be helpful. While this information is captured in the technical notes consultation has highlighted it is not well understood by the majority of stakeholders. In addition, the acknowledgment of how differences

of opinion are most likely to occur (e.g. constraints affecting the economic feasibility of the development) should also be acknowledged.

As detailed above, the value of the planned dwelling supply measure is high but could be improved through clearer communication of the factors (assumptions) including source, application and the core drivers of differences in results across stakeholders.

Panel Findings

The Panel has identified planned dwelling supply measure is a core measure of the LSDM and is considered important by all stakeholders. The measure could be improved through standardising the methods used for data cleansing, transforming, and modelling to be more transparent in the approach used to calculate the measure. In addition there is an opportunity to report dwelling supply by dwelling type which may assist in identifying an overreliance on certain dwelling types (e.g. high-rise attached dwellings).

7.5 Approved supply (residential)

7.5.1 LSDM 2021 Report

The LSDM 2020 Report defines approved supply as the following:

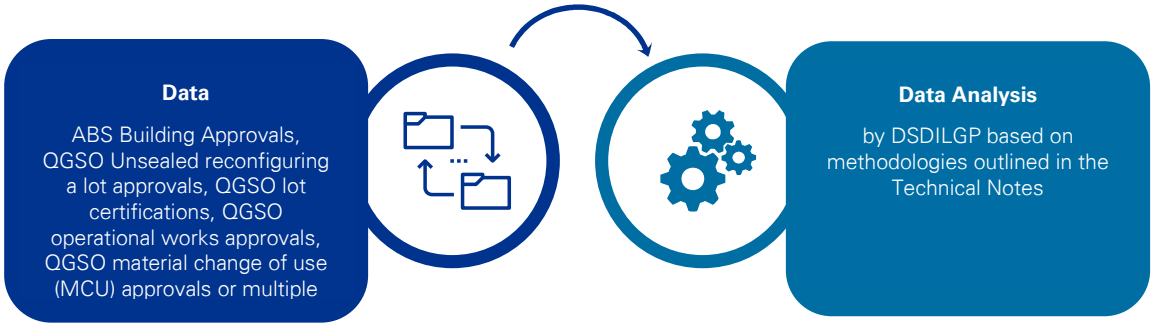
> "Approved supply measures either the number of lots that have a development permit for reconfiguring a lot but have not yet been certified (referred to as 'uncompleted lots'), or the number of multiple dwellings that have a material change of use development permit, in the consolidation area, but have not yet been constructed (referred to as 'uncompleted multiple dwellings'), as at the relevant date."
>
> 2021 LSDM Technical Notes, Approved Supply

The technical notes detail the approach to how approved dwelling supply is calculated, with a consistent methodology used for all local government areas.

The measure intends to provide the current status on the trends of the amount of residential approved supply across SEQ. The measure reports the number of years of supply of uncompleted lots and uncompleted multiple dwelling approvals. This is compared to the minimum four years of supply benchmark sought by *ShapingSEQ*.

Approved supply draws on a range of ABS and QGSO datasets (some of which include processed local government data). The data sources are outlined in Figure 19 below.

Figure 19: Overview of data sources and data analysis for Approved Supply



Source: KPMG and DSDILGP, 2021

The methodology underpinning the approved dwelling supply measure is consistent for each local government area and SEQ as a whole. The methodology is detailed in Figure 20 below.

Figure 20: Approved supply methodology

Approved Supply

Uncompleted lot approvals (reconfiguring a lot)

- Extract total uncompleted residential lots at 30 June for each year.
- Determine years of supply by dividing the total number of uncompleted lots as reported by the average annual lot certifications of the previous four years at each reporting period.

Uncompleted multiple dwelling approvals (material change of use) for consolidation areas only

- Extract total number of uncompleted lots as at June for each year
- Determine years of supply by dividing the total number of uncompleted multiple dwellings by the average annual consolidation attached dwelling approvals of the previous four years.

Operational works approvals

- Extract total number of uncompleted lot operational works approvals as at 30 June each year.

Source: KPMG analysis of LSDM, 2021

In calculating the years of supply for approved dwelling supply, the LSDM draws upon the above results for uncompleted lot approvals and uncompleted multiple dwelling approvals and then divides by the previous four years at each reporting period. This methodology is inconsistent with the methodology undertaken in the planned dwelling supply methodology.

7.5.2 Local government, utility providers and industry consultation

Key themes that were identified during consultation by local government, Industry and Utilities include:

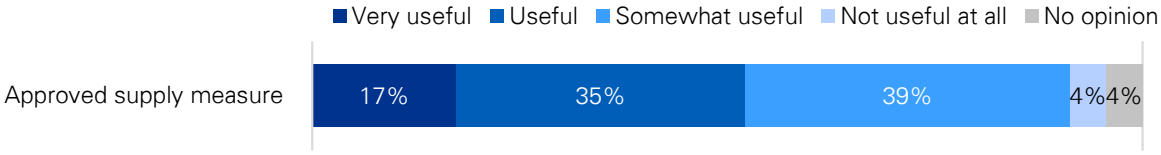
- **Important measure:** Approved supply was identified as an important measure by all stakeholder groups.
- **Limited accuracy due to the nuances of a development pipeline:** Stakeholders across all industry groups raised that the approved supply measure could have limited accuracy due to the conversion of dwelling approvals. It was highlighted that in several instances in both urban and regional LGAs, there are significant lots approved but not delivered.
- **Opportunity for alternative measures:** Alternative measures were highlighted by stakeholders as appropriate for consideration such as a conversion metric as an approach to overcome the issues with approved supply, or "plumbing approvals" as a proxy to highlight the completion of development.
- **Lagging datasets lower confidence in the measure:** Local governments have raised issues around the lag time for processing information and the implication this then has on results. In some areas, this means that there is an inaccurate reflection of the current supply in the region. Industry stakeholders have highlighted a desire for short term use and updates for this dataset.
- **Consideration of Economic Development Queensland (EDQ) or court-approved lots**: Industry and local government stakeholders raised questions about how EDQ or court-approved lots were

captured in the datasets. In particular, there were questions about whether these were captured, and if so, if there was the potential for double-counting and misrepresentation of approvals.

7.5.2.1 Survey results

The survey results are shown in Figure 21, which predominately identified the planned dwelling supply measure as somewhat useful (39%) and useful (35%).

Figure 21: Responses to Survey Question 11 "Thinking about how you use the report, how useful are the following report outcomes?"



Source: KPMG survey of stakeholders, 2021.

7.5.2.2 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
Important measure	✓	✓	✓	✓
Limited accuracy due to the nuances of a development pipeline		✓		✓
Opportunity for alternative measures				✓
Lagging datasets lower confidence in the measure				✓
Need to understand how (or if) EDQ or Court-Approved lots are taken into account		✓		✓

7.5.3 Discussion of consultation themes

The analysis of consultation findings has identified the following for approved supply (residential).

Purpose	Timeliness	Confidence	Transparency	Value
Role in measuring and monitoring land supply	Currency of information	Level of confidence in the measure is a result of the data inputs, assumptions and methodology	Understanding of the methodology and approach to analysis	Effectiveness in measuring and monitoring land supply
To measure **Supply**	**Lagging**	**Moderate**	**Visible**	**High**

Purpose

This measure delivers upon the purpose of the LSDM to measure and monitor land supply in South East Queensland. It directly aligns with the Measures that Matter as part of the delivery of *ShapingSEQ*.

The Peer Review has identified that this measure delivers against the purpose as outlined in *ShapingSEQ*.

Timeliness

Industry and local government stakeholders have highlighted their concerns about the timeliness of the approved supply measure. This is largely due to a lag in the datasets which are drawn from the ABS and local governments. These data sets are often published months after the data has been observed, they may not be considered 'correct' due to the time lag between collected and published information. While there is a desire from the industry for the LSDM to be used in the short term, given DSDILGP's intention for the LSDM to be a longitudinal dataset, the use of lagging data over a relatively short period (e.g. 6 months) has limited impact on delivering the purpose. Improving the timeliness of this measure may be difficult unless real-time reporting/updating was available (which is not considered achievable at the moment). There is, however, an opportunity to clearly explain in the LSDM the rationale for including a lagging dataset and the limited impact if longer-term information/trends are required.

The Peer Review has acknowledged that while the data is lagging, there is limited ability to increase the frequency or timeliness of building approval data at this point. There is, however, an opportunity to explain the lag and its impact on the LSDM to better inform the audience.

Confidence

Both consultation and the survey highlighted the limited confidence that stakeholders have in the measure as a result of the transformation of the data. The measure largely draws upon ABS and QGSO which has a high level of confidence in terms of the accuracy of the data as both undertake data assurance. Given the lagging nature of many of these datasets, stakeholders, may not consider these correct, and therefore have lower confidence. As noted with the former measures, there is an opportunity to consider pathways to improve confidence, such as processes of validation, and confirmation, particularly with Industry stakeholders.

The calculation of years of approved supply of residential land is calculated based on a four-year rolling average. This methodology effectively assumes that the future land supply will continue at a rate of the last few years. This assumption limits confidence in the measure and has historically been a point of contention with stakeholders. The use of an industry-led or industry-validated demand measure would enable improved confidence in the measure and a more 'realistic' understanding of the years of planned supply.

In regards to lots being approved but not delivered, there is an opportunity to leverage the development pipeline and industry knowledge to factors limiting supply in this stage of the development pipeline.

Confidence in the approved dwelling supply as a measure is limited. Stakeholder consultation highlighted that confidence could be improved by implementing a validation process that would enable industry and local governments to understand the data used, and its role in delivering the purpose of the LSDM. This would also present an opportunity for an external third party assurance process.

Transparency

Overall, the approved dwelling supply has a transparent methodology, though it is based on data that is often published months after the data has been observed. While the lagging datasets are explained in the technical notes, there is an opportunity to improve the transparency of this information by including this explanation in the main body of the LSDM Report. This would strengthen the transparency of the measure and improve stakeholders' understanding of this limitation.

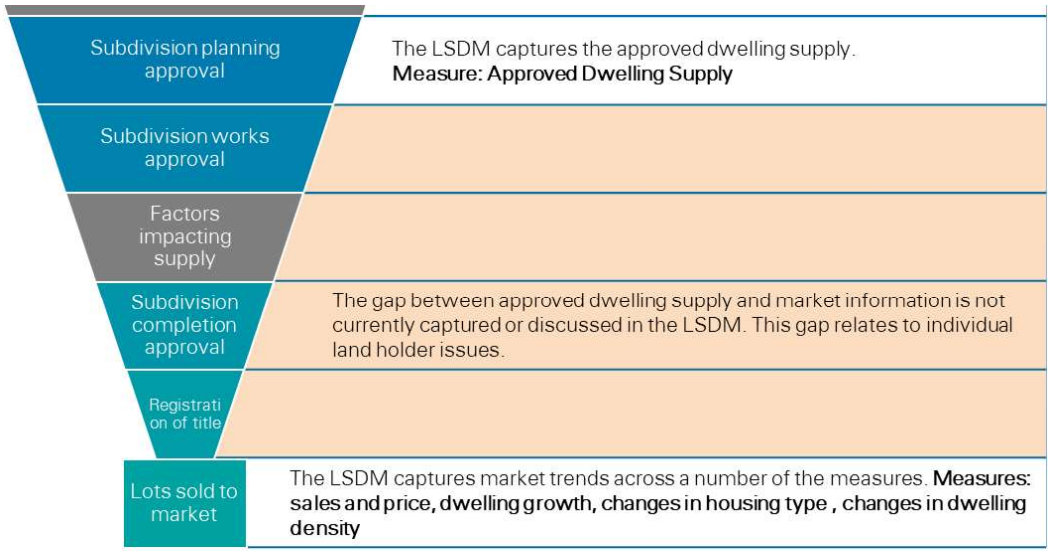
This Peer Review has noted that there is an opportunity to improve the communication of the timing of datasets underpinning the measure to improve the transparency of the datasets to stakeholders.

Value

Stakeholders highlighted that this measure was largely useful or somewhat useful and of value. The measure delivers on the purpose, to measure and monitor land supply. Stakeholders highlighted that the value could be improved by a clearer alignment to the development pipeline to show the conversion of approved lots to delivered lots.

The Peer Review has identified that value to stakeholders could be improved through improved communication, detailing factors that may impact supply following approved dwelling supply measure and mapping of alignment of this measure to the stages of the development pipeline, as seen in Figure 22 below.

Figure 22: Pipeline of subdivision approvals



Source: KPMG, adapted from HIA, 2021: *The land supply pipeline and approval stages*.

Panel Findings

The Panel has identified approved dwelling supply measure is a core measure of the LSDM. The understanding of the measure could be improved through clearly noting the lag times between data collection and publishing, and outline the impact on the trend information (limited for long term, more impactful if utilising for short term).

7.6 Planned industrial land supply/take-up

7.6.1 LSDM 2021 Report

The LSDM 2021 Report defines planned industrial land supply as the following:

> "Planned industrial land supply estimates the planned industrial land, by industrial land type, as at mid-2021, for South East Queensland (SEQ) and each local government area"
>
> 2021 LSDM Technical Notes, Planned Industrial Supply

> "Industrial land take-up within the region estimates the amount of take-up of developed industrial land from 2011-2021, recognising that a suite of other land uses could occur on industrial zoned land that are not industrial in nature, e.g. commercial, residential, recreational and community uses."
>
> 2021 LSDM Technical Notes, Planned Industrial Take-Up

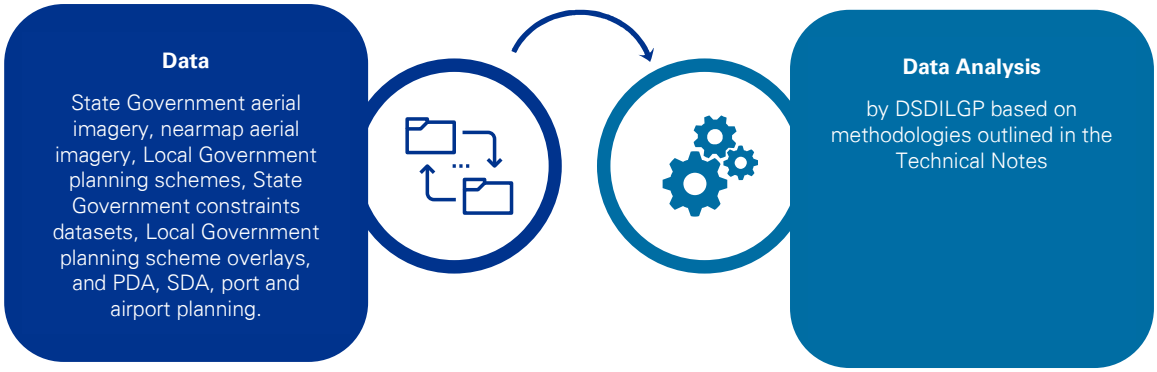
Planned industrial land supply

Planned industrial land supply estimates the planned industrial land, by industrial land type, at a specific point in time for the region and each LGA. It indicates the amount of planned industrial land there is within the region and each LGA to potentially accommodate future industrial activity and employment growth.

The data is updated annually, subject to further work to progress and implement Best Practice Research. There is a different methodology underpinning this measure and planned industrial employment supply (Section 7.8).

The measure draws on a range of data sources as outlined below in Figure 23.

Figure 23: Overview of data sources and data analysis for planned industrial land supply



Source: KPMG, 2021.

The planned industrial land supply / take-up technical notes details the approach to how the measure is calculated. The methodology has been updated in recent years based on stakeholder feedback and Best Practice Research. An overview of the method is presented below in Figure 24:

Figure 24: Overview of Method

Source: KPMG, 2021.

Planned industrial intent layer

Planned industrial intent was identified based on the particular zone, precinct or the like having a predominant industrial land use focus or overall industrial purpose. The identification of vacant versus underutilised/taken-up was based on available State Government and Nearmap aerial imagery, with the interpretation guided by the 'SEQ planned industrial land supply - Process, methodology and visual guide'.

SEQ-Wide developability (constraint) rules

The measure draws upon developability (constraint) rules which were developed in consultation with local governments for the whole of SEQ and applied across the region.

Developable industrial area

This then identified the developable industrial land layer, from which the values for planned industrial land were extracted.

Industrial Categories

The LSDM includes the following industrial categories:

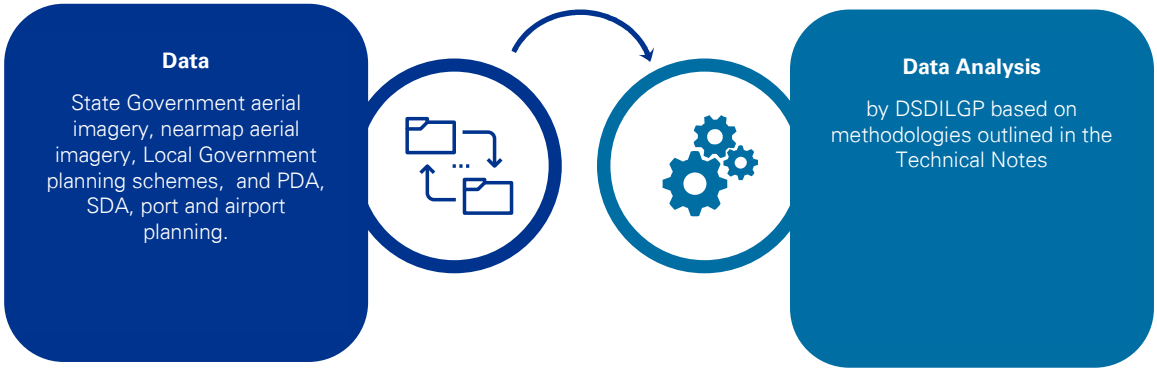
- Low Impact Industry
- Medium Impact Industry
- High Impact Industry
- Waterfront and Marine Industry
- High Technology Industry
- Airports and airbases
- Industry Investigation Area.

Industrial land take-up

DSDILGP assess the take-up of industrial zoned land noting that this can include land uses that are not industrial in nature such as commercial, residential, recreational and community uses. The measure is calculated for the region and each LGA, in conjunction with the planned industrial land supply analysis (above).

The take-up measure draws on the same datasets as the planned industrial land supply methodology except for constraints, as outlined in Figure 25 below:

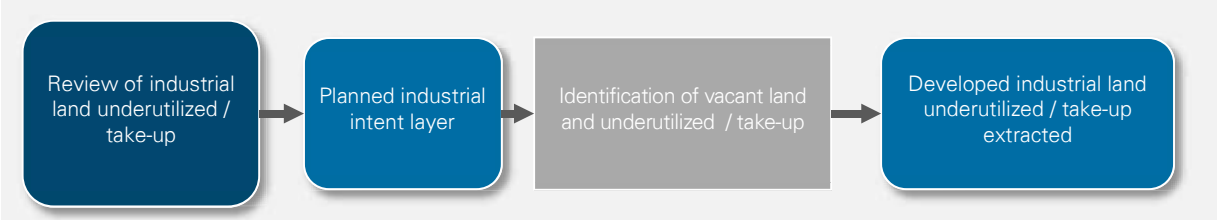
Figure 25: Overview of data sources and data analysis for planned industrial land take-up



Source: KPMG, 2021.

The technical notes detail how the industrial land take-up methodology has been delivered, the limitations and the rationale. The methodology is outlined in Figure 26 below.

Figure 26: Planned industrial land take-up methodology



Source: KPMG, 2021.

The data is updated annually, subject to further updates and progress as part of the delivery of Best Practice Research.

Industrial Categories

The LSDM includes the following industrial categories:

- Low impact industry
- Medium impact industry
- High impact industry
- Waterfront and marine industry
- High technology industry
- Airports and airbases
- Industry investigation area.

7.6.2 Local government, utility providers and industry consultation

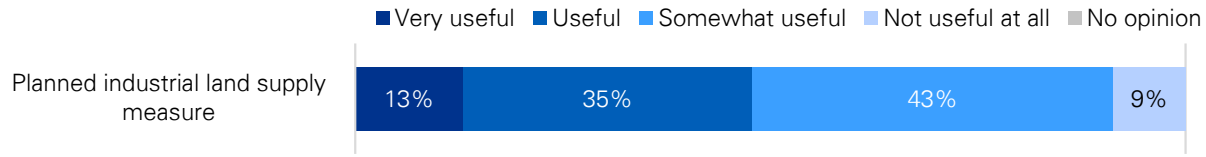
Key themes that were identified during consultation by local government, industry and utilities include:

- **Useful but challenging measure to calculate:** The measures relating to industrial supply (planned industrial land supply and planned industrial employment supply) were highlighted in consultation as the most challenging measures by stakeholders.
- **Land use zoning alignment:** Alignment between LSDM and local government land use zoning was highlighted as an opportunity for improvement. The current approach doesn't always capture nuances in specific LGAs and the implications can mean an over or understating supply.
- **Unclear and unreliable methodology:** Consultation highlighted that there are concerns associated with the methodology used to calculate this measure. The use of aerial imagery to capture vacant land was highlighted by local governments as often inaccurate and requires detailed conversations to establish greater accuracy.
- **Regional consideration of industrial land supply:** Industry stakeholders highlighted a desire for a regional consideration of industrial land supply rather than the current approach based on individual local government planning schemes.
- **Consideration of underdeveloped land:** Some local governments highlighted a desire to include underdeveloped land in the calculations. [28]
- **Differences between state and local planning assumptions:** Some local governments highlighted that different approaches to planning assumptions between state and local governments, such as serviceability of land, create a lack of clarity for industry.

7.6.2.1 Survey results

The survey results are summarised below in Figure 27. They predominately identify the planned industrial land supply measure as somewhat useful (43%) and useful (35%).

Figure 27: Responses to Survey Question 11 "Thinking about how you use the report, how useful are the following report outcomes?"



Source: KPMG survey of stakeholders, 2021.

[28] It should be noted that this is included in the calculation of take-up

7.6.2.2 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
Useful but challenging	✓	✓		
Land use zoning alignment	✓	✓	✓	✓
Unclear and unreliable methodology		✓	✓	✓
Regional consideration of land supply				✓
Consideration of underdeveloped land		✓		
Differences between state and local planning assumptions		✓	✓	✓

7.6.3 Discussion of consultation themes

The analysis of consultation findings has identified the following for the planned industrial land supply/take-up measure.

Purpose	Timeliness	Confidence	Transparency	Value
Role in measuring and monitoring land supply	Currency of information	Level of confidence in the measure is a result of the data inputs, assumptions and methodology	Understanding of the methodology and approach to analysis	Effectiveness in measuring and monitoring land supply
To measure **Supply**	**Lagging**	**Low**	**Unclear**	**Moderate**

Purpose

The purpose of this measure is to measure and monitor industrial land supply in SEQ. *ShapingSEQ* identifies the need to measure and monitor employment land of each land use type annually. While industrial land supply is a component of calculating planned industrial employment supply, it does not directly link back to *ShapingSEQ*. The purpose of this measure in monitoring land supply is unclear.

This Peer Review has identified that there is an opportunity to strengthen the overall confidence of the LSDM by focusing the effort on annual reporting of residential measures, with the concurrent focus on developing the planned industrial land supply/take-up with input from stakeholders. Following this period, when stakeholders are comfortable with the measure, it can be re-included in the LSDM.

Timeliness

In developing the measure, DSDILGP draws on information that includes local government zoning information. There is an opportunity to improve the currency of the datasets by undertaking a process similar to the Broadhectare Study [29] to identify parcels of land that are being developed and used.

This Peer Review has identified the opportunity for increased collaboration in validating the information and datasets.

Confidence

This measure was subject to significant stakeholder dispute due to the methodology and assumptions underpinning it. As such, there is limited confidence in the measure. In particular, it was highlighted that at times, there are repeated errors (specific zoning etc.) that have to be re-addressed annually. There also appears to be a limited understanding of the methodology and assumptions underpinning the calculations. Confidence can be improved by including worked examples of the methodology and assumptions for ease of replication by stakeholders.

Confidence is also undermined by a perspective that industrial land supply is too narrow a measure, and other employment land uses should be considered. There is an opportunity for increased confidence in the measure by exploring additional land use types. And the extent to which these should be considered to inform a perspective on the regional capacity of a wider array of land uses.

There is an opportunity to increase the confidence in the measure by introducing 'worked examples' to ensure the methodology and assumptions and their application are understood.

The Peer Review has also highlighted the opportunity for inclusion of additional land use types to increase confidence in the measure

Transparency

The methodology underpinning planned industrial land supply/take-up is complicated and as such stakeholders had an unclear understanding of the methodology underpinning the measure. The methodology draws upon research and reports that have been undertaken for DSDILGP and are based on several assumptions. There is low transparency in the inputs due to the reliance placed on independent reporting. These reports have identified, however, consistent hard and soft constraints in consultation with local governments which shape the availability of planned industrial land supply. Generally, there is limited transparency in how measures are calculated limiting the value of the measure to users of the report.

There is an opportunity to increase transparency in the measure by introducing 'worked examples' and providing wider access to underpinning datasets to ensure the methodology and assumptions and their application are understood.

Value

The consultation highlighted that stakeholders do not see value in this measure. This is due to the limited understanding, transparency of methodology, and confidence in the measure. There are opportunities to improve the value of the measure by including the consideration of other land uses, not just industrial. There is an opportunity to increase the value of the LSDM by introducing a validation approach with industry to test the findings and confirm the results. Further research to develop the measure beyond industrial only will be critical to increasing the value of the measure.

This Peer Review has identified several opportunities to increase value including a validation process for planned industrial land, and the continuation of research to deliver more diverse land types.

[29] QGSO's broadhectare study identifies the location and quantifies the area, timing of development, and dwelling yield of larger land parcels to house a specified region's growing population. According to QGSO "each study involves consultation and collaboration with local government, the Urban Development Institute of Australia (Queensland) and major developers".

Perceived value of this measure will need to continue to be monitored to ensure it is meeting the need of the primary audience.

Panel Findings

The Panel has identified that the measure should continue to be refined undertaking a validation process for planned industrial land, and the continuation of research to deliver more diverse land types. While much of the focus is on residential measures in the LSDM, the value of planning for economic and employment growth should be elevated to equal priority and integrated into strategic planning for industry growth in SEQ (i.e. State Development).

7.7 Planned industrial employment supply

7.7.1 LSDM 2021 Report

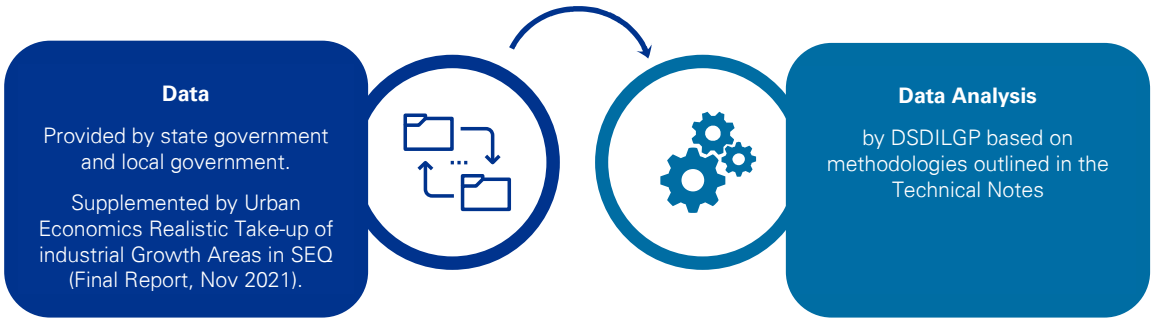
The LSDM 2021 Report defines planned industrial employment supply as the following:

> "Planned industrial employment supply estimates the total industrial jobs growth capacity (2016 to ultimate) within the region and for each local government area"
>
> 2021 LSDM Technical Notes, Planned Industrial Employment Supply

The planned industrial employment supply technical note details the approach to how planned industrial employment supply is calculated.

The measure utilises a realistic availability scenario to reflect the effect of factors that may constrain the availability of the industrial jobs growth capacity. The capacity and realistic availability of planned industrial employment supply are then compared to the *ShapingSEQ* 2041 industrial planning baseline. An overview of the data sources and analysis is presented in Figure 28 below.

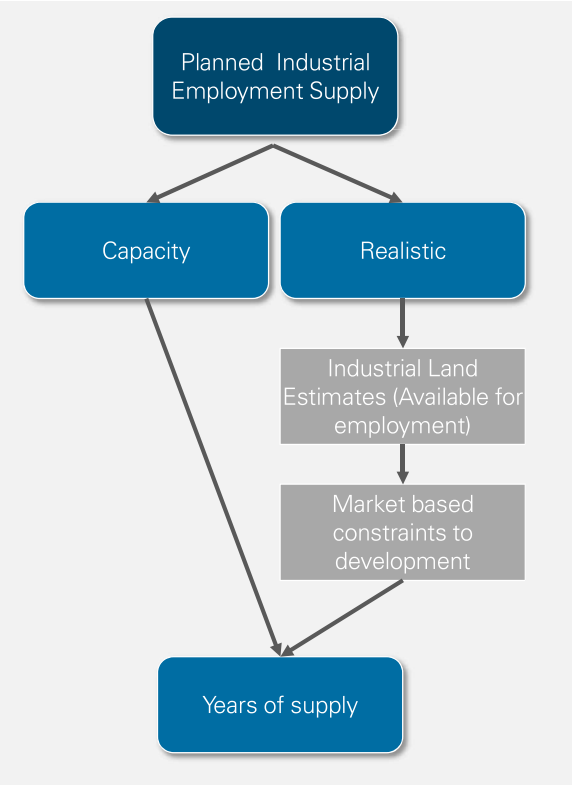
Figure 28: Overview of data sources and data analysis for planned industrial employment supply



Source: KPMG, 2021

An overview of the methodology is outlined in Figure 29 below:

Figure 29: Planned industrial employment supply calculation



Capacity of planned industrial employment supply

The capacity of planned industrial employment supply provides a rationale for assessing the ability, based on current planning intent, to accommodate the 2041 industrial targets outlined in *ShapingSEQ*.

To do this, DSDILGP extract the total number of additional industrial targets from 2016 to the "ultimate supply" identified for each LGA to assess whether currently planning for industrial supply is appropriate. The capacity of planned industrial employment supply is based on information supplied by SEQ local governments.

Base methodology

The base method for calculating the capacity of planned industrial employment supply is the total number of additional industrial jobs from 2016 to the identified ultimate based on available local government datasets. This is compared to the relevant industrial employment planning baseline from *ShapingSEQ*. Given the information available, there are some variations to this methodology. These are outlined below.

- **Logan:** Additional jobs are from June 2020 to the identified ultimate due to the base date of the data.
- **Noosa:** Additional jobs are from January 2016 to the identified ultimate due to the base date of the data.
- **Sunshine Coast:** Additional jobs are from 2016-2041 as the data does not identify ultimate jobs.
- **Toowoomba:** Additional jobs are from June 2021 to the identified ultimate due to the base date of the data.

Realistic availability of planned industrial employment supply

The realistic availability scenarios for these measures were generated to represent the effect of external factors that may constrain the availability of the land.

These include:

- infrastructure availability
- the practical staging of and capability for development
- land ownership fragmentation
- landowner intent
- lower employment densities than expected
- accessibility
- constraints affecting the economic feasibility of development.

In calculating this measure, DSDILGP believes that consideration of realistic availability as an alternative scenario provides a greater level of confidence about the adequacy of industrial employment supply. The realistic availability of planned industrial employment supply is informed by a market-based economic assessment by Urban Economics.

The methodology applied to estimate realistic availability varies across local government areas as highlighted by the technical notes. The three key methods are as follows [30]:

Methodology 1 – Major Enterprise and Industry Area (MEIA) with Property Level LGIP datasets:

- For each growth MEIA, use available Property Level LGIP Datasets to calculate employment growth from 2021 to ultimate.
- Extract the growth where 2021 to ultimate employment growth potential estimated by Urban Economics for a selected MEIA is greater than 1000, and the equivalent 2021-2041 employment growth estimated for that MEIA by Urban Economics is less than 2021 to ultimate figure from the LGIP dataset.
- Sum the differences for all such MEIAs in the local government area.
- Subtract the sum from the capacity of planned industrial employment supply for the whole local government area.

Methodology 2 – MEIA without Property Level LGIP datasets:

- For each growth MEIA, extract the closest available geographic area identified in LGIP to calculate employment growth from 2021 to ultimate.
- Extract the figures where:
    - 2021-2041 employment growth identified in the Urban Economics report is less than 2021 to ultimate; and
    - 2021 to ultimate employment growth identified by Urban Economics is greater than 1000 jobs and more than 75% of the 2021 calculation
- Sum those differences for all such MEIAs in the local government area.
- Subtract that sum from the capacity of planned industrial employment supply for the whole local government area.

Methodology 3 – No MEIA:

- There is no MEIA, therefore realistic availability scenario is the same as the capacity

Table 16 identifies each methodology applied to each local government area.

Table 16: Methodologies underpinning planned industrial employment supply

LGA	Methodology		
	Methodology 1	Methodology 2	Methodology 3
Brisbane	✓		
Gold Coast		✓	
Ipswich	✓		
Lockyer Valley		✓	
Logan	✓		
Moreton Bay		✓	
Noosa			✓
Redland			✓
Scenic Rim		✓	
Somerset			✓
Sunshine Coast	✓		
Toowoomba	✓		

[30] These methodologies are detailed in the technical notes and this language largely reflects the technical notes.

Determining years of supply for planned industrial employment supply

Building on the above methodologies, DSDILGP determines the years of supply of planned industrial employment, to track against the *ShapingSEQ* performance measure of 15 years of supply. To do this, the estimate is calculated by dividing the identified capacity and realistic availability by the average annual baseline in *ShapingSEQ* and subtracting the number of years from 2016 to the current year.

7.7.2 Local government, utility providers and industry consultation

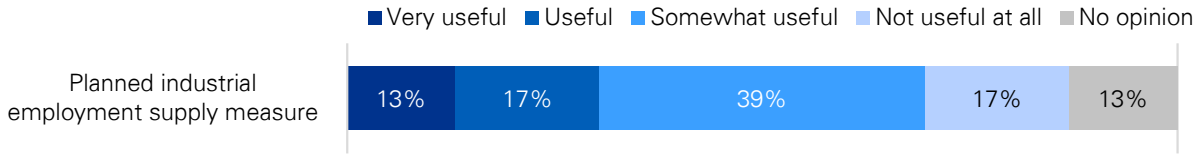
Key themes that were identified during consultation by local government, industry and utilities include:

- **Consideration of diverse land use types:** local governments articulated a need for diverse employment land considerations in calculating this measure for the LSDM. Some local governments identified a desire for this measure to also include land that is zoned and able to be serviced by each land use type rather than industry broadly.
- **Methodology and assumptions:** There is a general understanding from all stakeholder groups that the planned industrial employment supply measure is challenging. Concerns were raised by local governments around the calculations underpinning this measure. These include concerns around the calculations of realistic availability and classifications of industrial land.
- **Benchmark has limited value:** Industry and local government stakeholders highlighted that planned industrial employment supply provides little value and is a relatively weak benchmark in its current form. In its current form, few respondents in the survey indicated it was very useful or useful (30 percent), and a further 39 percent considered it somewhat useful in its current form.

7.7.2.1 Survey results

The survey results are shown in Figure 30 below, predominately identified the planned industrial employment supply measure as somewhat useful (39%). This measure has the highest level of not useful or no opinion responses.

Figure 30: Responses to Survey Question 11 "Thinking about how you use the report, how useful are the following report outcomes?"



Source: KPMG survey of stakeholders, 2021.

7.7.2.2 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
Consideration of diverse land use types		✓		
Methodology and assumptions		✓		
Benchmark has limited value:		✓		✓

7.7.3 Discussion of consultation themes

The analysis of consultation has identified the following for planned industrial employment supply.

Purpose	Timeliness	Confidence	Transparency	Value
Role in measuring and monitoring land supply	Currency of information	Level of confidence in the measure is a result of the data inputs, assumptions and methodology	Understanding of the methodology and approach to analysis	Effectiveness in measuring and monitoring land supply
To measure **Supply**	**Lagging**	**Low**	**Unclear**	**Moderate**

Purpose

The purpose of the measure is to monitor planned industrial employment supply in SEQ, however, it is not clear if it effectively delivers on the Measures that Matter. The measure stems from the need to measure "employment (by land use type)" annually (as outlined in Shaping SEQ Table 22, P167). Stakeholders highlighted that the measure was too narrow, and as such it does not deliver on its purpose to report employment supply by land use type. Consideration is required to further understand broader employment land considerations beyond just industrial employment supply. (if this is SEQ and intended to be covered by the LSDM). The value of this measure is linked closely to its perceived purpose which at this point is unclear.

This Peer Review has identified that the purpose of the Planned Industrial Employment Supply measure is unclear and its alignment to the purpose of the LSDM is not clearly articulated. Clarity around the purpose could be achieved through the development of further detail in different land use categories and linking these back to the *ShapingSEQ* requirement.

Timeliness

The consultation highlighted the significant effort utilised to deliver this measure, however, there was a recognition that this more manual process means it's difficult to deliver a timely update. The extracted data also draws upon LGIPs that may be dated. As such, the data may not always reflect the on-the-ground capacity or availability.

There is an opportunity to consider more recent datasets in identifying the capacity of industrial employment supply in SEQ.

Confidence

Confidence in this measure is low, with stakeholders unclear about the definitions of 'capacity' and realistic supply. The technical notes explore this, however, there is a view that it does not reflect what's occurring on the ground. The technical notes also include an extensive limitations section, which given the complexity of the methodology, limits stakeholder confidence. Confidence is also limited by the quality of the inputs for this measure, particularly the utilisation of aerial imagery to identify vacant land. Confidence could be improved by drawing upon more reliable datasets such as building approvals.

There is an opportunity to consider simplified explanations for the methodology to instil confidence in the measure.

Transparency

The technical notes outline the methodology for planned industrial employment supply, however, stakeholders felt there was a lack of transparency around the methodology. There were also concerns with the accuracy of the measure based on the assumptions underpinning the calculations. The measure draws upon a private Urban Economics report which is not fully available to stakeholders, limiting the transparency of the measures. This lack of clarity is further magnified by the inclusion of different methodologies for planned industrial land supply and planned industrial employment supply, underpinned by different datasets across different local government areas. In response to this uncertainty, some industry, local government and utility stakeholders outlined a desire to have 'worked examples' of measures, providing an opportunity for stakeholders to understand and validate the methodology.

The Peer Review has identified that the transparency of the measure could be improved through the inclusion of worked examples in the methodology.

Value

Overall, there is limited value in this measure from the perspective of stakeholders. This is largely grounded in an unclear methodology, and low confidence in the assumptions underpinning the methodology. The inclusion of only industrial employment supply was considered too narrow to be of value to stakeholders. To improve value, there is an opportunity to consider the measurement of other employment land use types.

This Peer Review has identified that the value can be improved by including additional employment land use types.

Panel Findings

The Panel has identified planned industrial employment supply valuable in ensuring future economic opportunity across the region. The measure could be improved through greater transparency in the desired outcome and why a focus on MEAIs has been used. While much of the focus is on residential measures in the LSDM, the value of planning for economic and employment growth should be elevated to equal priority and integrated into strategic planning industry growth in SEQ (i.e State Development).

7.8 Changes in dwelling density

7.8.1 LSDM 2021 Report

The LSDM 2021 Report defines dwelling density as the following:

> "Changes in dwelling density monitors changes in median lot size for new urban lots and mean population-weighted dwelling density to provide an indication of how efficiently land is being utilised in SEQ".
>
> LSDM Report Technical Notes 2021, Changes in Dwelling Density

The changes in dwelling density technical note details the approach to how planned dwelling supply is calculated.

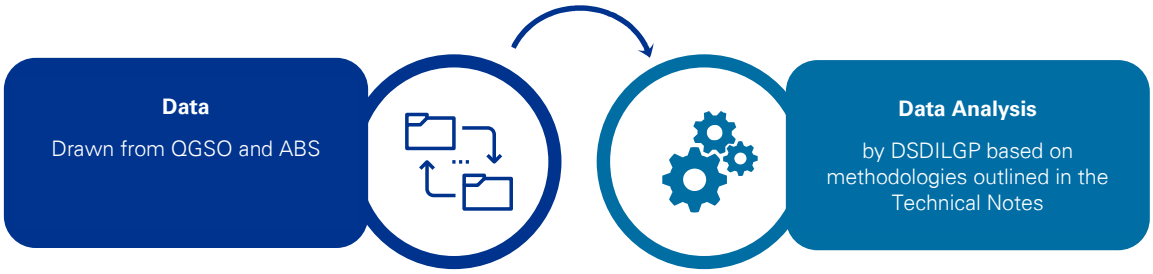
The reporting of median lot sizes, new urban lot registrations and overall dwelling density being delivered across SEQ are analysed to measure the changes to dwelling density. This measure draws upon the QGSO Residential Land Development Activity datasets and the mean population-weighted dwelling density measure is based on ABS Census Data.

The individual aspects that contribute to the overall analysis and measurement of the changes in dwelling density for SEQ include:

- median lot size of new lots
- new lot registrations
- mean population-weighted dwelling density.

The measure draws upon a range of data to deliver the analysis as outlined in Figure 31 below:

Figure 31: Overview of data sources and data analysis for change in dwelling density



Source: KPMG and DSDILGP, 2021

The methodology for calculating this measure is then outlined below in Figure 32:

Figure 32: Methodology for changes in dwelling density

Changes in dwelling density

For Median Lot size:

- Extract median lot sizes for the region and each local government area utilising QGSO Residential Land Development Activity Spreadsheet.

For lot registrations:

- Extract total urban lot registrations for the region and each local government area utilising QGSO Residential Land Development Activity Spreadsheet

For mean population-weighted dwelling density:

- Extract relevant years' ABS mesh blocks for the region, each local government area and consolidation areas.
- Calculate mean population-weighted dwelling density for the region, each local government area and consolidation areas using the following formula:

[The sum for all mesh blocks of [(mesh block dwelling count / area of mesh block) multiplied by mesh block population count]] divided by the sum of all mesh block population counts for an area.

Source: KPMG analysis of LSDM, 2021

7.8.2 Local government, utility providers and industry consultation

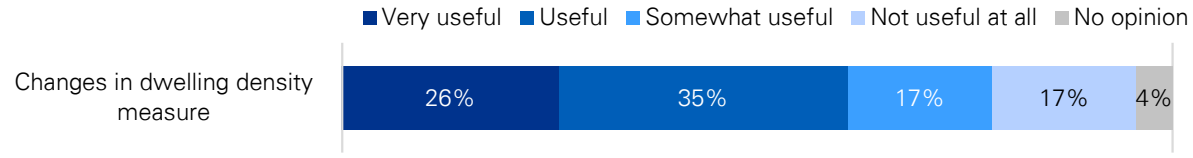
Key themes that were identified during consultation by local government, industry and utilities include:

- **Dated datasets underpinning methodology:** Stakeholders raised concerns that the dwelling density measure methodology is based on out-of-date datasets.

7.8.2.1 Survey results

The survey results summarised in Figure 33 below, predominately identified the changes in dwelling density measure as useful (35%) and very useful (26%).

Figure 33: Responses to Survey Question 11 "Thinking about how you use the report, how useful are the following report outcomes?"



Source: KPMG survey of stakeholders, 2021.

7.8.2.2 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
Dated datasets underpinning methodology		✓		✓

7.8.3 Discussion of consultation themes

The analysis of consultation has identified the following for dwelling growth:

Purpose Role in measuring and monitoring land supply	Timeliness Currency of information	Confidence Level of confidence in the measure is a result of the data inputs, assumptions and methodology	Transparency Understanding of the methodology and approach to analysis	Value Effectiveness in measuring and monitoring land supply
To measure **Supply**	**Lagging**	**Low**	**Visible**	**High**

Purpose

While there was minimal feedback on this measure, changes in dwelling density are directly linked back to the *ShapingSEQ* 'Grow' Measures that Matter.

This measure is a demand measure, however, this measure should be considered as an assumption input to supply measures.

This Peer Review has identified that this measure has a strong alignment with the purpose of the LSDM.

Timeliness

Lagging datasets that underpin this measure have been highlighted by stakeholders as an area of concern. There is a view that the measure's timeliness could be improved by drawing upon more current datasets such as those of local governments. The use of delayed data means there is often a discrepancy between the LSDM reporting and what's being experienced by local governments and industry

This Peer Review has identified that the value and timeliness of the measure could be improved by drawing upon more timely datasets in the calculation.

Confidence

The methodology used to calculate the changes in dwelling density is understood by stakeholders, and there is moderate confidence in the measure. There is, however, an opportunity to improve the confidence in the measure by drawing on data that is more frequently updated, such as data from local governments themselves.

The confidence in this measure could be improved by ensuring that the methodology draws upon datasets that are more frequently updated.

Transparency

The consultation highlighted that this measure was well understood, however, it is upon datasets that are not regularly updated. There was a recognition that there is an opportunity for this measure's regularity and timeliness to be reconsidered.

As above, the confidence in this measure could be improved by ensuring that the methodology draws upon datasets that are more frequently updated.

Value

The value of the measure in delivering against the purpose was agreed by stakeholders. It was noted that LGAs with less diverse housing stock does not value this measure – this particularly applied to

rural LGAs. It was also highlighted that this measure reflects consumer preference and provides useful market context and information. However, the feedback loop from the trends in this measure to the LGA policy setting is unclear and/or non-existent. Consideration of a protocol that alerts potential action/consideration of the outcomes of this measure to the policy-setting could increase the value of this measure to both industry and local governments.

The Peer Review has highlighted that the value of the measure could be improved by considering a protocol to stimulate action (where warranted) associated with the measure.

Panel Findings

The Panel has identified that the changes in dwelling density measure delivers against the LSDM's purpose, to measure and monitor land supply to inform action by State and local governments to ensure sufficient land supply in SEQ. There is opportunity to strengthen the value and confidence of the measure by value and timeliness of the measure could be improved by drawing upon more timely datasets in the calculation.

7.9 Changes in housing type

7.9.1 LSDM 2021 Report

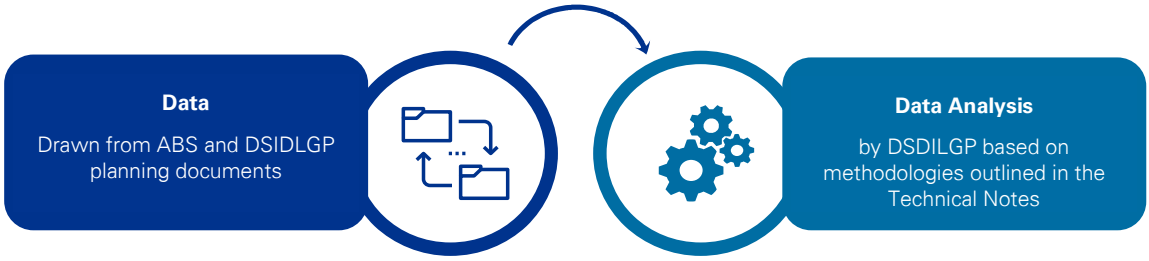
The LSDM 2021 Report defines the changes in housing type measure as the following:

> "Changes in housing type monitors the different types of new residential buildings being approved across the region as a proportion of total building approvals"
>
> 2021 LSDM Report Technical Notes, Changes in Housing Type

The changes in housing type technical note details the methodology for calculation. Trends in residential building diversity are analysed and reported on by extracting dwelling growth data for three main housing types (as reported in *ShapingSEQ*) for the region and each LGA using ABS dwelling building approval housing types.

The process by which the data is obtained and transformed to deliver the measure is outlined in Figure 34 below.

Figure 34: Overview of data sources and data analysis for changes in house type



Source: KPMG, 2021

The technical notes highlight that given the use of ABS datasets, there is a limitation to reporting that the housing type may not align to use definitions in planning schemes. This potentially impacts the reporting of houses and middle housing types compared to the closest equivalent planning scheme classification.

The technical notes highlight that there are different housing types across the region, with some local governments potentially categorising medium and high-rise buildings differently. The Department is

investigating how they could improve the categorisation of medium and high-rise dwellings. The methodology is outlined in Table 14 below:

Table 17:Changes in housing type methodology

Changes in housing type

Using information extracted for the dwelling growth measure, group ABS reported dwelling types into three main categories:
• Houses: includes detached dwellings
• Middle (attached dwellings one to three storeys) includes:
  ○ apartments, in a one or two storey block
  ○ apartments, in a three storey block
  ○ semi-detached, row or terrace houses, or townhouses of one storey
  ○ semi-detached, row or terrace houses, or townhouses of two or more storeys
• High-rise (attached dwellings four or more storeys) includes:
  ○ apartments (in a four to eight storey block)
  ○ apartments (in a nine or more storey block)
Percentages of dwelling building approvals by type may be compared to the percentages of total existing dwellings by type at the 2016 Census to indicate how approvals, over time, are changing the diversity of housing types overall.

Source: KPMG analysis of LSDM, 2021

7.9.2 Local government, utility providers and industry consultation

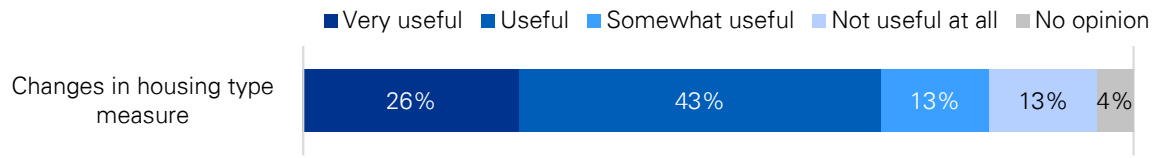
Key themes that were identified during consultation by local government, industry and utilities include:

- **Alignment of housing type definitions:** Concern was raised amongst stakeholders in both industry and local government that the change in housing type measure does not align with definitions used in local government planning schemes.
- **QGSO definitions:** While there are these different categories, it was highlighted that there may be better categorisations, such as the QGSO definitions that could be applied.
- **Useful to understand consumer preference:** Some industry groups highlighted that this measure was useful in understanding trends in consumer preference.

7.9.2.1 Survey results

The survey results shown below in Figure 35 predominantly identified the changes in housing type measure as useful (43%) and very useful (26%).

Figure 35: Responses to Survey Question 11 "Thinking about how you use the report, how useful are the following report outcomes?"



Source: KPMG survey of stakeholders, 2021.

7.9.2.2 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
Alignment of housing type definitions:		✓		✓
QGSO definitions				✓
Useful to understand consumer preference		✓		✓

7.9.3 Discussion of consultation themes

The analysis of consultation findings has identified the following for changes in housing type.

Purpose Role in measuring and monitoring land supply	Timeliness Currency of information	Confidence Level of confidence in the measure is a result of the data inputs, assumptions and methodology	Transparency Understanding of the methodology and approach to analysis	Value Effectiveness in measuring and monitoring land supply
To measure **Demand**	**Lagging**	**Moderate**	**Limited**	**Moderate**

Purpose

This measure is directly linked back to the *ShapingSEQ* 'Grow' Measures that Matter. The change in housing type measures the demand for different housing types in SEQ.

This Peer Review has identified that this measure has a strong alignment with the purpose of the LSDM.

Confidence

The use of building approvals as a means to calculate this measure undermined the confidence stakeholders had in the measure. Building approvals do not reflect accurately the development on the ground, with stakeholders across industry and local government highlighting that the measure captures approvals that have not always translated to development. The use of a different methodology, such as final inspections, or plumbing approvals, could improve confidence that the dwelling is completed.

This Peer Review has identified that the confidence in the changes in housing type measure could be improved by ensuring consistency in terminology and alignment to local government planning schemes.

Transparency

Despite a clear methodology outlined in the technical notes, and acknowledgement of inconsistencies in terminology, consultation highlighted that the varied terminology meant that the methodology was at times not as clearly communicated as it could be. There was a desire for alignment in definitions and consistency in reporting.

As identified above, transparency in the changes in housing type measure could be improved by ensuring consistency in terminology and alignment to local government planning schemes.

Value

The consultation highlighted the tensions between semi-rural and urban LGAs in achieving and delivering the target (as presented in *ShapingSEQ*) and in turn, the limited value of this measure. Stakeholders identified that this housing type shift is difficult to achieve in locations where consumer preferences and demand dictate a desire for specific housing types (such as detached). To overcome this, some consideration could be given to the trends in specific localities to increase the value of the measure.

Industry stakeholders highlighted that the value of the measure could be improved by linking changes in housing type to changing needs of consumers. For example, including measurements of building approvals for specific bedroom numbers.

This Peer Review has identified that the value of the changes in housing type measure could be improved by ensuring methodology reflects the diversity of markets in SEQ and the provision of associated commentary.

Panel Findings

Overall, the Panel has identified that the changes in housing type measure delivers against the LSDM's purpose, to measure and monitor land supply to inform action by State and local governments to ensure sufficient land supply in SEQ. There is opportunity to strengthen the value and confidence of the measure by ensuring consistency in terminology and alignment to local government planning schemes and to reflect the diversity of markets.

7.10 Sales and price

7.10.1 LSDM 2021 Report

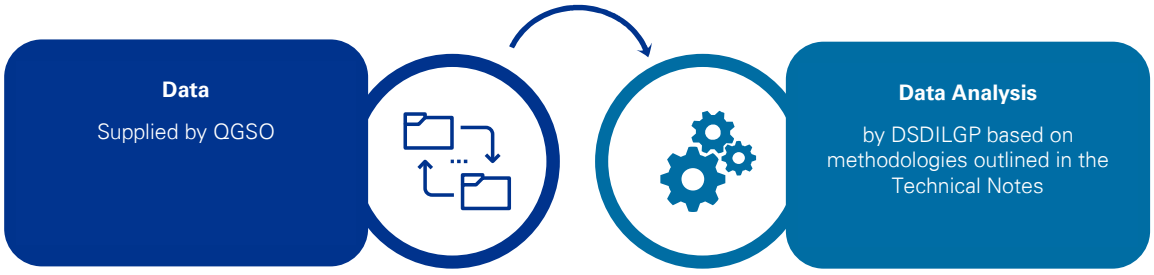
The LSDM 2021 Report defines sales and price measure as the following:

> "Sales and price measures the number of sales and median, and lower and upper quartile sales price information for residential development including vacant lots, vacant lots price per m^2, house and land, houses and attached dwellings, within consolidation and expansion area".
>
> 2021 LSDM Report Technical Notes, Sales and Price

The sales and price technical note details the approach to how this measure is calculated. This measure is intended to show trends in the number of sales, and lower, median and upper quartile sales price for developed residential lots and dwellings for the region and each local government**.** The technical notes highlight a potential lag in reporting due to the datasets used.

The approach to developing the measure is outlined in Figure 36 below:

Figure 36: Overview of data sources and data analysis of sales and price data analysis



Source: KPMG, 2021.

The methodology is outlined in Figure 37 below:

Figure 37: Sales and price measure methodology

Sales and price

- From 2011 to the most recent reporting period (usually June), extract QGSO supplied number of sales and lower quartile, median and upper quartile sales price information on:
  - Vacant lots (per lot and per square metre);
  - House and land;
  - Houses; and
  - Attached dwellings.
- This is considered within consolidation and expansion areas.

Source: KPMG analysis of LSDM, 2021

7.10.2 Local government, utility providers and industry consultation

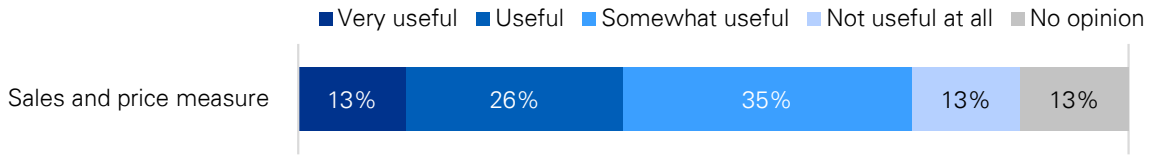
Key themes that were identified during consultation by local government, industry and utilities include:

- **Timeliness of data:** Some industry stakeholders highlighted a desire for this to be more frequently updated
- **Limited usefulness of measure:** Some local government stakeholders highlighted that the sales and price measure is not of great use for local governments but noted that this may be more relevant to Industry stakeholders.
- **Disaggregation of price growth:** Some stakeholders outlined a desire for more specificity beyond the local government measures to account for discrepancies within LGA's.

7.10.2.1 Survey results

The survey results summarised in Figure 38 below predominately identified the sales and price measure as "somewhat useful" (35%) and "very useful" (26%).

Figure 38: Responses to Survey Question 11 "Thinking about how you use the report, how useful are the following report outcomes?"



Source: KPMG survey of stakeholders, 2021.

7.10.2.2 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
Timeliness of data				✓

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
Limited usefulness of measure		✓		✓
Disaggregation of price growth		✓		

7.10.3 Discussion of consultation themes

The analysis of consultation findings has identified the following for the sales and price measure:

Purpose Role in measuring and monitoring land supply	Timeliness Currency of information	Confidence Level of confidence in the measure is a result of the data inputs, assumptions and methodology	Transparency Understanding of the methodology and approach to analysis	Value Effectiveness in measuring and monitoring land supply
To measure **Demand**	**Lagging**	**Moderate**	**Visible**	**Low**

Purpose

The purpose of this measure is not directly linked back to the *ShapingSEQ* policy and both consultation and the survey highlighted that it is of least value to stakeholders. This is in part due to the availability of other current data sets which are more accurate, timely, and useful.

Further to this, while measuring demand in SEQ is important, this measure is purpose limited as it does not consider broader factors in its calculation such as affordability.

Local government and industry stakeholders rarely use this measure to inform decision making, and rarely consider this a point of truth due to the availability of more timely datasets.

It has been highlighted that the purpose of this measure is not directly linked back to *ShapingSEQ*, and as such, its alignment to the purpose of the LSDM is unclear.

Timeliness

The annual publication of sales and price data limits the currency of the information. In a market where prices fluctuate quickly, the information's use is limited by its timeliness. Industry stakeholders highlighted the implication of lagging data on value.

While the methodology is clear, and the approach to analysis is understood, the lag in datasets has prompted questions around the value of the measure unless it is linked to a broader policy imperative such as affordability.

There is an opportunity to improve the timeliness by drawing on more current and up to date datasets and reporting on the measure in the LSDM more frequently.

The LSDM could consider improving the timeliness of the measure by regularly updating the measure and drawing on different industry datasets.

Confidence

There was a moderate level of confidence in the measure's methodology by industry and local governments. It has been highlighted that confidence in the measure could be improved by including a disaggregation and more careful reporting of price and rent growth.

This Peer Review has identified that the LSDM could consider improving the confidence and value of the measure by including a disaggregation and more careful reporting of price and rent growth.

Transparency

The methodology is detailed in the technical notes and is understood by stakeholders.

Value

To improve its value to stakeholders, consideration should be given to benchmarking within the region (or considering other jurisdictions) to understand the relative performance of the SEQ land supply model as well as the factors influencing demand and supply in line with the GMP core principles relating to continual improvement and stakeholder engagement.

The value of the measure could be improved in future versions of the LSDM by considering benchmarks against other areas within SEQ, or other jurisdictions.

Panel Findings

Overall, the Panel has identified that the changes in the sales and price measure delivers against the LSDM's purpose, to measure and monitor land supply to inform action by State and local governments to ensure sufficient land supply in SEQ. There is opportunity to strengthen the value of the measure by considering benchmarks against other areas within SEQ, or other jurisdictions and regularly updating the measure and drawing on different industry datasets.

7.11 Dwelling growth

7.11.1 LSDM 2021 Report

The LSDM 2021 Report defines Dwelling Growth as the following:

> "Dwelling growth monitors new residential building approvals in South East Queensland (SEQ) within consolidation and expansion areas, as identified in *ShapingSEQ*"
>
> 2021 LSDM Report Technical Notes, Dwelling Growth

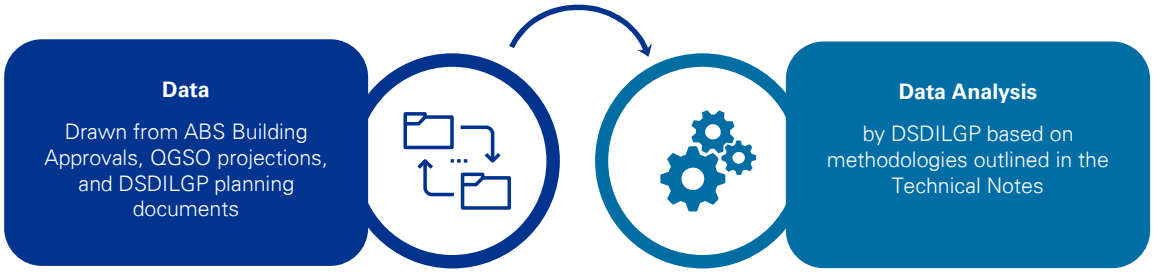
The dwelling growth technical note details the approach to how the dwelling growth measure is calculated. To measure dwelling growth**:**

"trends in annual new residential building approvals are compared against adjusted average annual benchmarks, i.e. average annual expected dwelling growth 2016-2031, with such growth aligning to the 2041 dwelling supply benchmarks as outlined on pages 42 and 43 of ShapingSEQ" (2021 LSDM Report Technical Notes, p8)

This measure is intended to indicate the progress of development in SEQ towards meeting the growth expected by the dwelling supply benchmarks of *ShapingSEQ*. As a guide, *ShapingSEQ* forecast the need for delivery of 32,000 new dwellings per annum to meet the region's 2041 targets.

The measure draws upon the data in Figure 39 to enable the methodology detailed in Figure 40.

Figure 39: Overview of data sources and data analysis for dwelling growth



Source: KPMG, 2021

Figure 40: Overview of methodology for dwelling growth measure

Dwelling growth
Extract dwelling building approvals for SEQ by SA2 through ABS for both private and public for: • Houses; • semi-detached, row or terrace houses, townhouses – one storey; • semi-detached, row or terrace houses, townhouses – two or more storeys; • apartments – in a one or two storey block; • apartments – in a three storey block; • apartments – in a four to eight storey block, and • apartments – in a nine or more storey block. Align SA2 information to the relevant local government area and existing urban area(EUA), with inside the EUA being consolidation and outside the EUA being expansion.

Source: KPMG analysis of DSDILGP, 2021.

7.11.2 Local government, utility providers and industry consultation

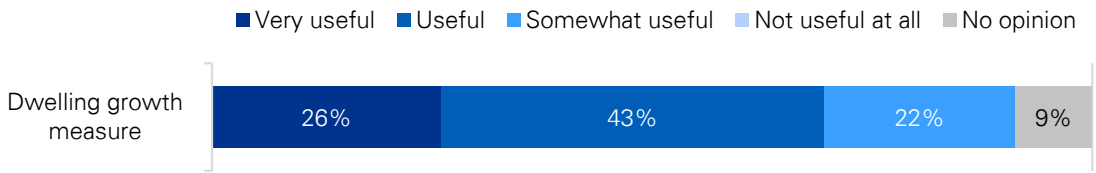
There was minimal feedback on this measure. Key themes that were identified during consultation by local government, industry and utilities include:

- **Tension arising from *ShapingSEQ* growth future:** There was tension between some local governments around the policy focus on increased consolidation in *ShapingSEQ*. Some local government stakeholders noted that there is a trend anecdotally noticed in the market for a desire for detached houses in expansion locations due to government incentives.

7.11.2.1 Survey results

The survey results are shown in Figure 41 below, predominately identified the dwelling growth measure as useful (43%) and very useful (26%).

Figure 41: Responses to Survey Question 11 "Thinking about how you use the report, how useful are the following report outcomes?"



Source: KPMG survey of stakeholders, 2021.

7.11.2.2 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
Tension arising from *ShapingSEQ* growth future		✓		

7.11.3 Discussion of consultation themes

The analysis of consultation findings has identified the following for dwelling growth:

Purpose	Timeliness	Confidence	Transparency	Value
Role in measuring and monitoring land supply	Currency of information	Level of confidence in the measure is a result of the data inputs, assumptions and methodology	Understanding of the methodology and approach to analysis	Effectiveness in measuring and monitoring land supply
To measure **Supply**	**Lagging**	**Moderate**	**Visible**	**High**

Purpose

This measure estimates the supply of dwellings in SEQ by region and assists in painting a picture of the conversion/drawdown of land supply to facilitate dwelling delivery. It delivers on the purpose to measure and monitor, directly linking back to *ShapingSEQ* 'Grow' Measures that Matter.

Analysis of this measure and input from stakeholders has identified that this measure is of use and delivers on the purpose of the LSDM.

Timeliness

The information is updated annually in the LSDM, however by the time the report is produced, the data is lagging. There is an opportunity to increase the timeliness of the report by publishing the data more regularly. The lagging data has lowered the confidence in the measure.

Analysis has highlighted that there is an opportunity to increase the timeliness of this measure, by providing more regular updates to this measure in the LSDM.

Confidence

The methodology underpinning this measure is clear and draws upon consistent datasets and minimal assumptions. Confidence in the measure from stakeholders is lowered by the timeliness of the inputs.

Stakeholders had minimal feedback on this measure, highlighting a moderate level of confidence in the measure and assumptions underpinning it. Confidence is only undermined by lagging data and could be readily addressed.

Transparency

The methodology and approach to analysis, as highlighted in the technical notes, are very transparent. There is limited confusion or misunderstanding surrounding this measure.

The level of transparency in this measure is high, and this contributes to the value stakeholders see in the measure.

Value

The methodology was well understood by stakeholders, and the methodology was consistent across geographies. There was minimal feedback around the measure, however, it was noted that it is of value and is effective in measuring and monitoring land supply. The value could be increased by a more frequent reporting of data.

This Peer Review has identified that the LSDM should include the dwelling growth measure to monitor supply, however, the confidence and value could be improved by increasing the timeliness of the data.

Panel Findings

Overall, the Panel has identified that the Dwelling Growth measure delivers against the LSDM's purpose, to measure and monitor land supply to inform action by State and local governments to ensure sufficient land supply in SEQ. There is opportunity to strengthen the value and confidence of the measure by delivering reporting more frequently.

7.12 Market Factors

7.12.1 Market Factors 2021 Report

The SEQ Market Factors Report 2021 accompanies the LSDM and outlines the ten metrics comprising measures of underlying demand and effective demand which include the following:

The SEQ Market Factors report provides contextual information for the LSDM and commentary around the short-term demand in SEQ. The ten demand metrics include:

- Building approvals;
- Median house price growth;
- Employed persons (total);
- Interest rates;
- Property sentiment surveys;
- Housing finance;
- Lot registrations;
- Wage price index;
- State population growth; and
- Gross state product (GSP).

In 2021, three new factors have been included, with one replacing a previous factor. These are:

- State final demand (replacing GSP);
- Rental growth; and
- Dwelling vacancy.

SEQ Market Factors 2021 – Dwelling Demand Analysis – Final Report, August 2021

The 2021 report has replaced GSP with state final demand due to the timeliness of the data (current to March 2021). These twelve core factors are separated by underlying or effective factors, with subcategories of economy-wide, direct, lag, current and lead.

Table 18 below details these factors.

Table 18: Categorisations of market factors measures

Dwelling demand factor categorisations		
	Economy wide	**Direct**
Underlying	• State final demand • Interest rates	• Population growth • Employment growth • Wage growth
	Lag	**Current & Lead**
Effective	• Residential building approvals • Rental growth • House price movements	• Housing finance • Lot registrations • Dwelling vacancy • Property sentiment • Surveys

The market factors report is structured under each of these categories, with commentary relating to each measure. The report draws its information from a variety of sources including:

- ABS
- Reserve Bank of Australia (RBA)
- DSDILGP
- Qld Rental Tenancy Authority
- SQM Research
- Qld Treasury
- ANZ Property Council
- QGSO

The conclusion includes a table that summarises each measure, and the change in the previous year, as in Figure 42 below.

Figure 42: Market factors report summary

	Factor	Measure		Change
		2021	2020*	
Underlying	State Final Demand	0.29%	1.21%	Slowing Growth
	Interest Rates	0.1%	0.25%	Down
	Population Growth	1.12%	1.62%	Slowing
	Employment Growth	12.92%	-5.39%	Rapid Growth
	Wage Price Growth	1.42%	1.75%	Slowing
Effective	Building Approvals	33,369	26,022	Strongly Up
	House Prices	7.53%	2.32%	Strongly Up
	Rental Growth (3b House)	10.4%	N/A	***New***
	Housing Finance	$55.5b	$37.2b	Strongly Up
	Dwelling Vacancy	1.16%	2.65%	Down ***(New)***
	Lot Registrations	18,774	20,995	Down
	Residential Construction Sentiment	66.3	23.5	Strongly Up

Source: LSDM Market Factors Report, 2021

In 2021, the market factors summary table indicates that there are high housing prices, lower lot registrations, and a high construction sentiment. Such indications inform whether there is a need for further consideration of a demand or supply response.

7.12.2 Local government, utility providers and industry consultation

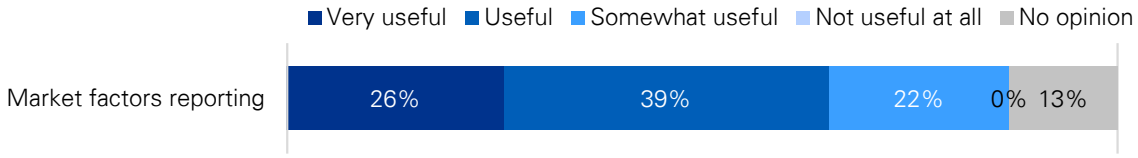
Key themes that were identified during consultation by local government, Industry and Utilities include:

- **Contextualising the LSDM:** Stakeholders generally indicated that the Market Factors Report gives some good context to the data reported by the LSDM – which helps understand the narrative and situation. Some stakeholders indicated that they do not look at the entire LSDM, but rather seek out the Market Factors Report.
- **Local government-specific market factor reporting:** Some local government stakeholders expressed interest in local government-specific components of the market factor report to support the analysis of land supply in the specific localities. This could include a snapshot of market factors that are appropriate at the local level.
- **Lagging datasets do not reflect the real-time market dynamics:** Stakeholders indicated that since the LSDM aims to track land supply benchmarks over the long term, the Market Factors Report is useful at highlighting how that year's data fits into the longer-term context, and which direction trends are heading. Conversely, some stakeholders felt shorter to medium-term impact isn't captured in the market factors report
- **Consideration of broader underlying demand factors:** Stakeholders noted that the Market Factors Report looks at drivers that influence demand in SEQ, however it does not include discussion regarding the underlying factors associated with demand for household formation. There was a desire from stakeholders for the inclusion of additional metrics such as fertility rates, migration patterns, and household composition to provide a more accurate picture of the type of housing being demanded and the drivers for investment.

7.12.2.1 Survey results

The survey results are shown in Figure 43 below, predominately identifying the market factors reported as "useful" (39%) and "very useful" (26%).

Figure 43: Responses to Survey Question 11 "Thinking about how you use the report, how useful are the following report outcomes?"



Source: KPMG survey of stakeholders, 2021.

7.12.2.2 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
Contextualising the LSDM		✓		
Local government specific market factor reporting		✓	✓	✓

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
Lagging datasets do not reflect the real-time market dynamics				✓
Consideration of broader underlying demand factors				✓

7.12.3 Discussion of consultation themes

The analysis of consultation findings has highlighted the following for the market factors report.

Purpose Role in measuring and monitoring land supply	Timeliness Currency of information	Confidence Level of confidence in the measure is a result of the data inputs, assumptions and methodology	Transparency Understanding of the methodology and approach to analysis	Value Effectiveness in measuring and monitoring land supply
To measure **Demand**	**Lagging**	**Moderate**	**Visible**	**High**

Purpose

The market factors report aligns with the LSDM's intent of being a long-term monitor, by helping identify where trends in data do not warrant immediate concern and where action may be required.

Analysis of this measure and input from stakeholders has confirmed the value of the market factors report as part of the LSDM.

Timeliness

The market factors report identifies the impacts of lagging datasets on its methodology. Some industry stakeholders have acknowledged that due to this lag, the report is often not as timely as stakeholders would like. The report is largely based on ABS and QGSO datasets, which on their own, have a high level of confidence and transparency, however, are often published months after data has been observed. As such, while it is the most recent data, stakeholders often perceive this as not current.

This Peer Review has identified an opportunity to more frequently update the LSDM's market factors report to provide additional context.

Confidence

While confidence in the report and its methodologies is high, this could be improved through the inclusion of a further breakdown in the LSDM of market factors and drivers of demand in each LGA to support the supply assessment and analysis methodology. Further analysis of the underlying demand for housing in the Market Factors report, could provide useful context to support the outcomes of the LSDM. This may include a detailed understanding of household formation based on clear underlying drivers such as fertility rates, mortality rates, household formation rates and types, migration (intrastate, interstate, international), and an analysis of other world events that are impacting these drivers. For example, the low vacancy rates may be a result of changing household formation and occupancy rates. Equally, low population growth represents current border controls and an associated build-up in latent demand rather than an underlying weakness in demand.

Stakeholder feedback and survey results have identified an opportunity to consider the further analysis of underlying demand for housing in the market factors report to provide further context to land supply in SEQ.

Transparency

Stakeholder consultation highlighted that the market factors report is transparent in its methodology, however, there further reporting could strengthen the measure. For example, consideration of benchmarking within the region (or considering other jurisdictions) to understand the relative performance of the SEQ land supply and demand in the broader market would improve the value and transparency of the report.

The Peer Review has identified an opportunity to strengthen the market factors report by including benchmarks to assist in painting a complete picture of demand in SEQ.

Value

No survey respondents indicated that the Market Factors report was not useful, with 87% of respondents finding it at least somewhat useful. Similarly to the narrative, the Market Factors report provides context to the information that the LSDM reports – namely, market trends and external factors which could be driving local movements in land supply. local governments find this particularly useful.

The value may be enhanced by the inclusion of a further breakdown in the LSDM of market factors and drivers of demand in each LGA to support the supply assessment and analysis methodology. The house prices and rent values are captured in the Market factors report and sales and price is detailed in section 5.2.6 of the LSDM. There is an opportunity to integrate these findings to ensure a more cohesive and useful report for stakeholders. This would then enable the number of dwellings to be aligned to the approvals data reported.

To improve value, the market factors report could ensure that measures are presented relative to population growth rather than presented in absolute. Importantly population projection underpins decision making for land supply, and as such, population projections should be included in the market factors report. Consideration could be given to the inclusion of scenarios for population growth in SEQ and the impacts this would have on land supply.

While the Market Factors report is highly valuable to stakeholders, there is an opportunity to increase its value by including further breakdowns of market factors and demand drivers by local government areas. There is an opportunity to improve the value of the report by also ensuring that measures are presented relative to population growth and that scenario-based population growth and their implications for land supply are included.

Panel Findings

The Panel has identified that the market factors report is very useful and considered of value by all stakeholders. Further strengthening could occur with additional information associated with underlying demand factors, plus a comparative view of data.

8 Data

This section provides insights related to the quality, governance, and management of data (scope element 2 – Section 1.2) utilised to deliver the LSDM report. The capabilities required to leverage data and deliver insights have been grouped across people, process and technology outlined below:

People	Process	Technology
Data governance, data operations and knowledge management	Data ingestion and integration, data management, reporting and performance management	Systems and platforms, data storage, architecture and infrastructure

During this section, data providers are defined as a group that provides DSDILGP with data that is used in the creation of the LDSM report (e.g. local governments, QGSO).

8.1 DSDILGP consultation

Key themes that were identified during consultation with DSDILGP include:

Review Lens	Key Themes
People	Data definitions and technical notes are consistently maintained by DSDILGP. The data definitions are provided as part of the data collection and draft report review process. The technical notes are publicly accessible as part of the delivery report. Processes exist to maintain report versioning and ensure document control. DSDILGP has data agreements in place with the majority of data providers. There is a range of audiences that consume the LSDM report; some users of the report derive more value from the report than others concerning delivering insights.
Process	DSDILGP has a standardised and defined process for requesting data for the creation of the LSDM report that details what data is needed as well as the structural requirements of the data. There is logging and version control within the Department and any changes as part of the iterative report creation cycle are made visible to the internal and external groups that review the LSDM report. There is a large number of datasets that are provisioned to create the LSDM (refer to Appendix C for more details) with varied life cycles for key datasets. The DSDILGP team works through all processes related to the end-to-end delivery of the report, including communication, administration, maintenance, data collection and ingestion, storage, transformation, analysis, and delivery which can put a demand on resources.
Technology	There are various processes in place to receive data, including a number of files sent by data providers via email to the Department. Each layer of the data collection and ingestion, storage, transformation, analysis, and delivery are performed in Excel. For all datasets some stages of data storage, transformation, analysis and delivery are performed in Excel, while some of this occurs in ArcGIS for extraction into Excel for further storage, transformation, analysis and delivery.

8.2 Local government, industry and utility providers consultation

Several key themes were identified during consultation with local government, industry and utility providers. These themes have been synthesized across people, process and technology as follows:

Table 19: Consultation outcomes

Review Lens	Key Themes
People	Local governments, industry and utility providers recognised the willingness to engage data provisioners and the consumers of the report. All stakeholder groups raised concerns regarding the quality of data and the accuracy of source data. All stakeholder groups raised the need to assess and agree on the definitions which underpin the measures and data collection. These definitions are often inconsistent across the region, and there was a view that there is an opportunity to assess the definition of these measures to ensure greater consistency. The example definitions that were identified during consultation included those relating to expansion, consolidation, realistic, and ultimate dwelling.
Process	There is a defined iterative feedback cycle between local governments, industry and utility providers and the Department concerning the draft report. There is engagement and communication between DSDILGP and the data providers and the audiences that consume the report but not all groups are consistently engaged and consuming the information effectively; some groups identified they are unclear as to the purpose of some data definitions, larger-scale changes, and key decisions. The reliance on key data sets that have varied and, in some cases, long periods between updates was raised as a key concern by stakeholders; in particular, industry raised their concern that key decision making was reliant on dated inputs, noting that in some instances the data supplied did not match the activities on the ground. Local government and utility providers highlighted the constraints in their ability to draw upon "draft schemes" meant that some underlying assumptions were out of date.
Technology	Resourcing and the time taken to collate and provide data to the Department were mixed; smaller local governments highlighted that data collation and provisioning was a significant burden on them given their limited resources relative to larger local governments. Some stakeholders recognised the benefits of data sharing to improve data quality, however, concerns around data privacy and security were also noted.

8.2.1 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
Recognised willingness for DSDILGP to engage	✓	✓	✓	✓
Data quality concerns		✓	✓	✓
Misalignment between some measures and on the ground activities			✓	✓
The need to reconsider definitions of certain measures		✓	✓	✓
Reliance on data with long periods between updates		✓		✓
Concerns around data privacy and security		✓		

8.3 Discussion of consultation themes

The following discussion of consultation themes draws together the stakeholder perspectives of each stakeholder group and a desktop review of relevant documentation. The discussion of these themes informs the recommendations.

Table 20: discussion of consultation themes

Review Lens	Key Findings
People	The consultation identified several challenges related to how data is governed, managed and transformed, manifesting as issues around the quality, integrity and ultimately trust in data and the insights being produced by the LSDM. While the LSDM report is supported by a list of data definitions and up-to-date technical notes, consumers of the report highlighted a lack of confidence and trust in the data, information and insights delivered in the report. There is a strong willingness to share data but there is a concern about the misuse or misrepresentation of the information. The DSDILGP team work through all processes related to the end-to-end delivery of the report with communication identified as a core component across the end-to-end process. While it was recognised that DSDILGP has a strong willingness to engage, not all the groups provisioning the data are actively consuming the data, information and insights delivered in the report. In particular, these groups identified a lack of understanding of some data definitions and measures, larger-scale changes, and key decisions.
Process	Industry identified challenges around timeliness and limited assurance over the preparation of data that is provisioned by others. There is a broader concern related to the process that governs the transformation of data to deliver insights into the LSDM. The timeliness and capability to deliver the LSDM report are constrained by the large number of data sets that are provisioned to create the LSDM with varied lifecycles for

Review Lens	Key Findings
	key data sets. This creates a reliance on data that might be considered out of data as inputs for key decision making. While the technical notes and engagement by DSDILGP with the audiences that consume the report provide a level of confidence in the LSDM report, the need to limit interpretations for varied audiences and the lack of awareness of the end-to-end data lineage (i.e., how data is sourced and transformed into the report), combined with limited governance over how measures are defined and changed over time has led to an overall reduction in confidence in the report.
Technology	The technology used to manage the data, create the report, and deliver insights has several limitations that decrease the efficiency and effectiveness of the collection, maintenance, auditability, and delivery of information. Information is not always presented in a format that enables the reader to derive insights easily meaning interpretation is required to answer the questions the different consumer groups of the report are seeking to answer. Concerns were raised about data privacy and security, especially concerning files being sent and received by email. Whilst the Department has been exploring alternate technology options, such as Power BI to deliver the report, the current technology being used to collect and ingest, store, transform, and deliver the report is a combination of ArcGIS and Excel. Whilst Excel is readily accessible and there exist strong people capabilities (current DSDILGP team) to use Excel, this technology can introduce data quality and integrity issues, meaning data is not as well-governed and managed as it otherwise could be.

Panel Findings

The Panel has identified a need to uplift data governance and management capabilities and practices within the Department to provide further confidence to data consumers about the quality, integrity, and ultimately trust in data, information, and insights delivered in the LDSM report.

This includes but is not limited to the development of a data strategy, governance, and operating model within the Department for (but potentially not limited to) the purposes of maturing data governance and management capabilities and practices. This would uplift data literacy and establish better ways of working with data. In doing so this would see DSDILGP. This involves enhancing the business glossary, data dictionary, and data specifications, as well as introducing more contemporary technology and tools, and data service delivery approaches. This will support a more modern and flexible delivery of the LSDM information, insights, and visualisations to data consumers.

There is also an opportunity to work with data provisioners to uplift their data governance and management capabilities and practices to provide further confidence over the quality and integrity of data provisioned to the Department, and including introducing assurance over the end-to-end process.

8.4 Recommendations

The Peer Review has identified the following opportunities:

Table 21: Data recommendations

	Section	Recommendation	Responsibility
5.1	Data – People	Develop a set of principles for how data is to be governed end-to-end, to provide local government and industry guidance on how data is governed and incorporated into the LSDM.	DSDILGP in consultation with local government
5.2	Data – People	Enhance the business glossary, data dictionary, and data specifications to ensure there is enough detail and that limits interpretation, noting the nuances for how certain data sets and measures are to be interpreted in the report. This will include details related to how the data was transformed to ultimately produce the outputs and insights provided in the LSDM, considering audiences with varied technical capabilities. Recommendations 5.3, 4.6 & 4.7 are related to this and cover training for users as well as validation engagement with local government and industry.	DSDILGP in consultation with local government
5.3	Data – People	Leverage existing forums or establish a new forum focused on ensuring data is managed and custodians for datasets are clearly defined and understood. It is recommended that these forums also be utilised to provide training to new and existing contributors as appropriate to ensure all contributors have clarity on the inputs required, the intended use of their inputs and associated implications.	DSDILGP in consultation with local government
5.4	Data – People	Formalise data privacy and security policies to ensure effective controls are in place to mitigate privacy and security risks and provide assurance to the providers of sensitive data on its management and intended use.	DSDILGP
5.5	Data – People	Formalise a set of data consumer profiles to inform the key questions the report is designed to answer, focusing on the data's relevance and reliability to the consumer.	DSDILGP
5.6	Data – Process	Improve integration and automate the ingestion of consistent external datasets such as Australian Bureau of Statistics (ABS) data, rather than doing this manually and semi-regularly, meaning there's limited transparency over whether the data is up to date.	DSDILGP

	Section	Recommendation	Responsibility
5.7	Data – Process	Leverage the current principles used to track and communicate changes during the iterative review phase of creating the LSDM and apply those to each of the components of the data handling process. Establish data logging to provide an audit trail to help users to understand when data is added, modified, or deleted during the data collection, transformation, and modelling phases.	DSDILGP
5.8	Data-Technology	Explore technology options to mature the current delivery process by uplifting people or process-driven activities that support the governance, management, and/ or delivery of data. Alternatives could include: A single analytics platform that provides an end-to-end solution covering collection, integration, transformation, modelling and delivery of insights. Multiple tactical solutions to improve certain pain points related to data collection, transformation, preparation, and delivery processes. The DSDILGP team have been exploring alternate technology options that would fit in this category, such as PowerBI. Uplift in technology processing is considered a critical early step to the further exploration of a regional planning model.	DSDILGP
5.9	Data-Technology	Deliver continual evaluation and exploration of different reporting delivery approaches, such as reporting frequency, to best meet the user decision-making cycles and align with data collection and LSDM reporting cycles. This will include the more frequent update of measures where data availability permits.	DSDILGP

9 Delivery approach

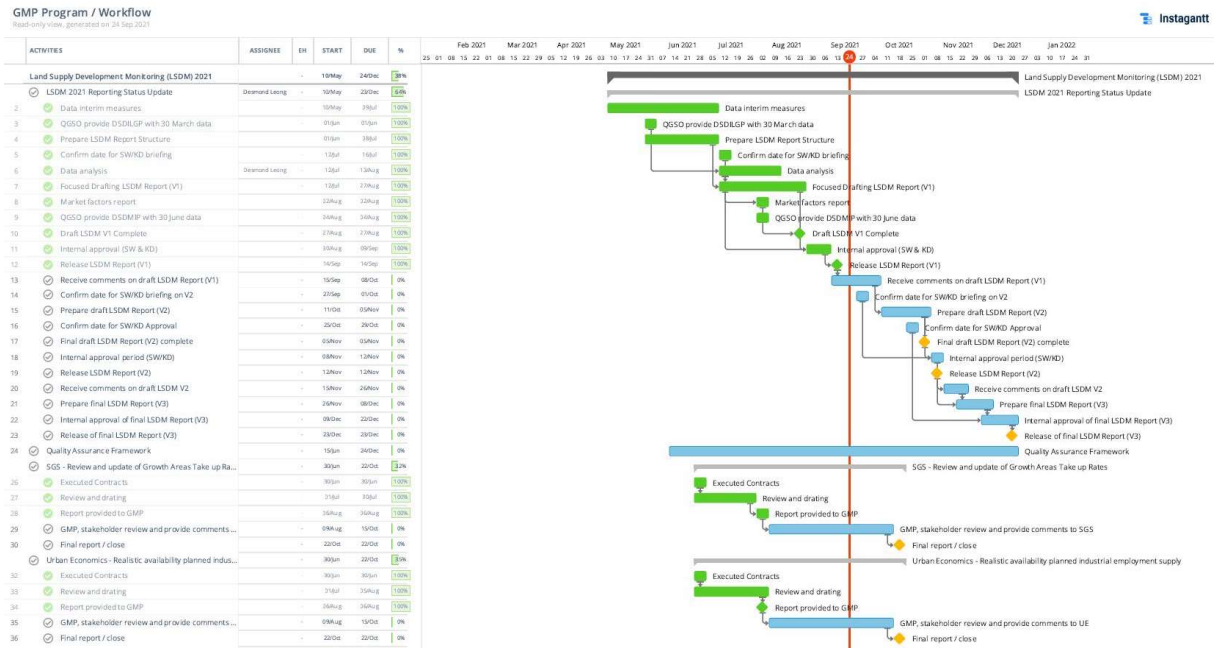
The delivery approach of the LSDM comprises the development of each annual report, through data collection, analysis, report drafting and stakeholder revisions. This is an extensive process that relies on synthesising stakeholder inputs in an efficient and timely manner. To maximise the quantum of impact from the number of resources invested, the delivery approach should reflect contemporary best practice and respond to stakeholder feedback. Technology solutions can act as enablers to this process, improving efficiency by lowering the resource and time burden from stakeholders while improving the quality of the inputs that DSDILGP receives.

9.1 DSDILGP consultation

Current delivery approach/process & timeframes for development and review

Consultation with DSDILGP identified that there is a detailed process for the delivery approach for the LSDM, as per Figure 44. This is an internal document; there are no documented processes available to stakeholders.

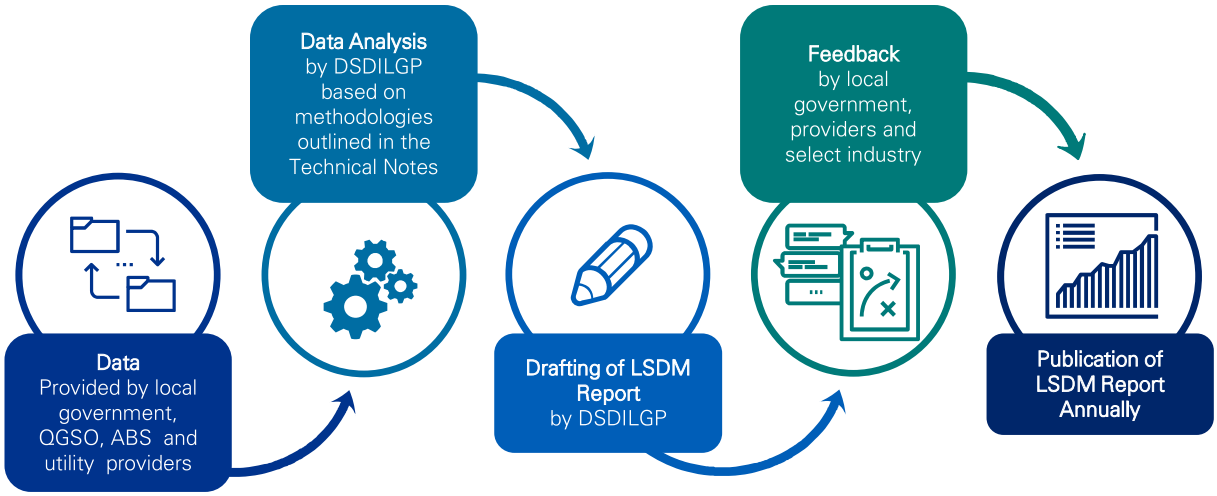
Figure 44: DSDILGP LSDM workflow



Source: DSDILGP, 2021.

Generally, the delivery approach encompasses the process in Figure 45, with five stages.

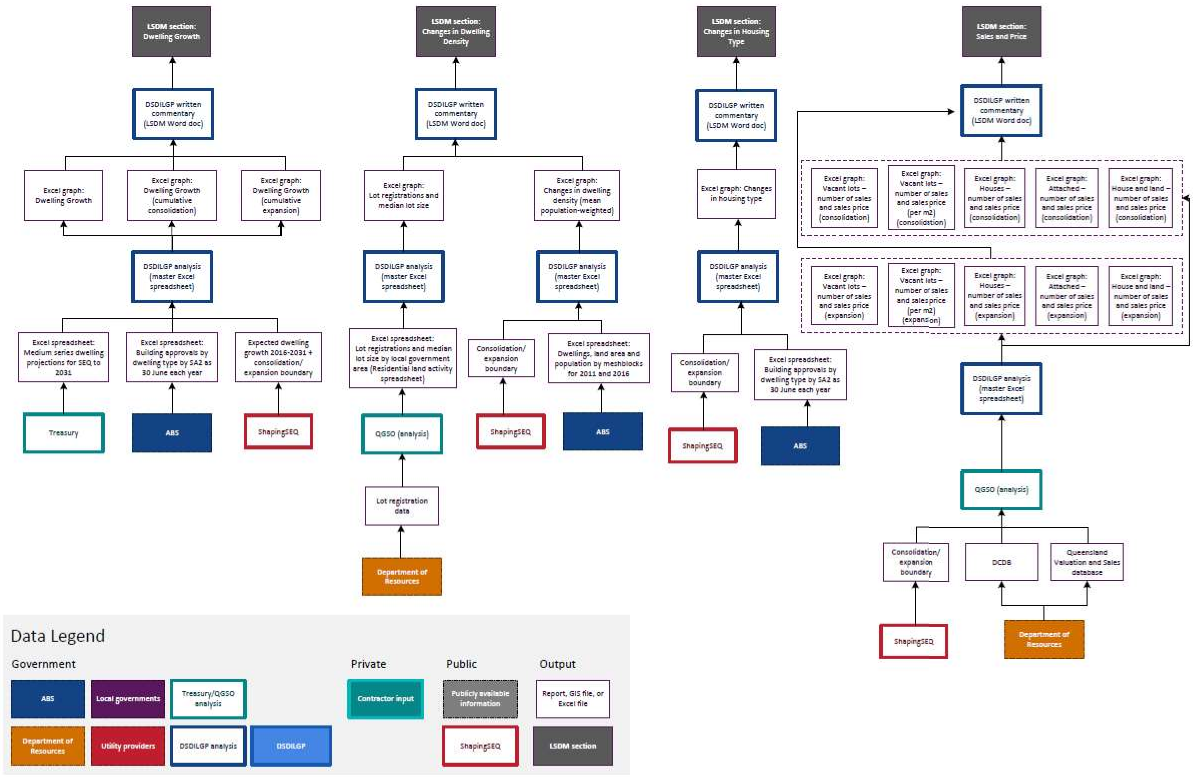
Figure 45: High-level LSDM process



Source: KPMG, 2021.

The process commences with DSDILGP collecting data from the ABS, QGSO and local governments. DSDILGP then takes this data and analyses it to produce the measures (Figure 46 outlines the general data inputs, processes, and outputs for some measures). DSDILGP drafts the LSDM report and then allows stakeholders to provide feedback on the draft report (one month). DSDILGP revises the report and invites stakeholders to again comment. The report is published on the DSDILGP website.

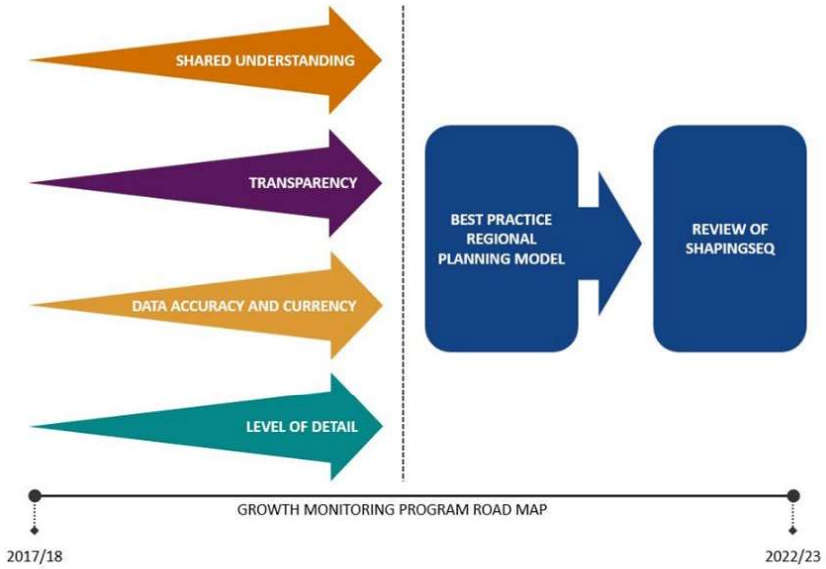
Figure 46: DSDILGP LSDM data analysis diagram



Source: DSDILGP, 2021.

At a macro level, DSDILGP has outlined its intentions to move towards a regional planning model, for tool for scenario development and analysis for regional planning, as per Figure 47. There is an opportunity for the LSDM to provide inputs into this model. This would involve a significant change to the current delivery approach as new technology and data solution would be required. The road map highlights the attributes which would aim to be enhanced through a regional planning model: shared understanding, transparency, data accuracy and currency and level of detail.

Figure 47: Growth Monitoring Program Road Map



Source: DSDILGP, 2020.

9.2 Local government, utility providers and industry consultation

Key themes that were identified during consultation by local government, industry and utilities include:

- **A process built on collaboration and goodwill:** Local government acknowledged the valuable support they receive from the GMP team. Most local government stakeholders noted that the GMP embodies a high level of proactive collaboration and goodwill.
- **Limited industry review in the process: Industry** flagged a desire to be more engaged in the process of data collection. Some suggested that there is an opportunity for earlier inputs to provide a "realistic" development lens.
- **Some stakeholders believe the LSDM is not required annually:** Local governments noted that some measures (lot approvals or lot supply) do not change on an annual basis and often data doesn't change much year to year in some locations. Some local governments put forward that the LSDM could be released biannually when state policy changes significantly or LSDM methodology changes. It was outlined that providing inputs more regularly than annually is not preferred by local government stakeholders.
- **Many local governments found the input process rushed:** While councils appreciate the two-stage review, many expressed that four weeks to provide comments can be less than preferred when trying to replicate calculations. Where there are changes to the method, some local governments believe they had not been given enough time to do that adequately.
- **Capacity - Data provision can be resource-intensive:** Consultation highlighted that the current approach to developing the LSDM Report can be resource-intensive for local governments and utility providers, especially on top of business-as-usual planning. This pressure is especially strong

for smaller councils that have a small number of staff. One local government noted the LSDM was just one of many State Government programs that required council inputs which cumulatively has a significant resource draw on the council. Several small councils suggested that the State could help facilitate resourcing through funding a dedicated resource or providing hands-on assistance (e.g. a 2-days-a-month secondment of a State officer).

- **Limitations of the data collection approach:** Stakeholders noted that there is a lag (six to eight weeks) from when data is recorded to when it is finalised and shared with DSDILGP. Councils expressed interest in opportunities to automate data provision and move towards a robust data collection model. Stakeholders also noted that staggering when DSDILGP requests data in line with when datasets become available could be more appropriate. Streamlining of the State interface with local government was also raised as an opportunity to reduce workload (i.e. consider the alignment between GMP and QGSO data requests).
- **Capability:** With a complex concept and process, local government knowledge resides within individuals, as such staff turnover poses a threat to continuity: Councils referenced the challenge of upskilling new staff members on the LSDM process, due to its complexity and a lack of educational materials.
- **Lack of transparency in the data analysis process:** All stakeholder groups cited the lack of visibility and understanding of how DSDILGP uses the data inputs to produce the final report results as a concern. Many referred to this process as a "black box". This causes confidence issues in the published data. Stakeholders generally would like to see clear and consistent definitions, methodologies and measurements to improve transparency, accuracy and understanding incorporated into the delivery approach.
- **Mixed opinions and expectations of a regional planning model:** Some larger councils are already investigating local planning models. Stakeholders demonstrated mixed interest in a regional model. At a baseline, stakeholders expect it to be able to complement and enhance existing processes and structures. That is to meet or exceed the quality of modelling that local governments produce and is compatible with these local models. A regional model could help improve data sharing, with strong data standards and governance, and it could also help with data accuracy/timeliness by providing a live, real-time, scenario-based estimation of regional supply. Any benefits to local government stakeholders in terms of integrating and automating the process and lowering workload is favourable. Stakeholders expressed interest in seeing what the model would look like, what resourcing and costs will be required and how it integrates with the LGIP framework and processes. They would also like to see tangible expected benefits and value to them. A regional model should consider best practice and examples from elsewhere in State Government (e.g. TMR).
- **Reservations on changes to the delivery approach to a regional planning model:** Stakeholders had concerns with a regional model, including duplication of effort and insufficient local government capability and capacity for such a step change (especially smaller councils). Furthermore, local governments were concerned that the State could potentially overstep the bounds of decision making and be overly prescriptive. Councils believe that planning assumptions should sit with themselves and that a regional model should not undermine individual community outcomes.

9.2.1 Survey results

The survey results did not consider the delivery approach.

9.2.2 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
GMP goodwill	✓	✓	✓	
Resource and time pressures		✓	✓	✓
Lack of data analysis transparency		✓	✓	✓
Reservations around a regional planning model		✓		

9.3 Discussion of consultation themes

The following discussion of consultation themes draws together the perspectives of each stakeholder group. These findings have been used to inform the recommendations.

Strength of the working arrangement

The current delivery approach is based on a foundation of collaboration and goodwill, led by the DSDILGP. It will be important to ensure any changes to the process preserves this working arrangement and those engagement activities are maintained.

There is an overall desire for an improved feedback and engagement loop between utility providers, local government, industry and the State so that opportunities for improvement can be identified and actioned. Local government stakeholders acknowledged the strengths of the ongoing commitment of DSDILGP being very available to support them throughout the LSDM delivery approach.

This Peer Review has identified in any changes to the delivery approach of the LSDM the strength of the goodwill between stakeholders should be preserved.

Resource intensive and capacity constraints

Local governments' participation in the LSDM is not legislated, though local governments are key delivery partners dedicating resources and time. The intensity of the process is further magnified by sub-regional differences within local government areas in the form of capability, capacity and local government size.

Consideration should be given to the time and resources committed by all stakeholders. The Panel recommends future changes to the change should enhance efficiency and effectiveness while aiming to reduce resource draw for local governments and utility providers.

Process transparency

Stakeholders indicated a desire for a documented high-level delivery approach process. A simple process diagram is an easy way to build a shared understanding of the delivery approach and allows stakeholders to identify how and when they interface with the process. This would identify why there is a data lag in some instances (i.e. lengthy development process).

Regional planning model

Stakeholders expressed interest in more information and detail about a regional planning model. Until such a time, there will be reservations around changes to the delivery approach, particularly regarding stakeholder effort and impost. The Best Practice Research into a regional planning model was recognised as valuable. The Regional Planning Model paper outlines that after completing the 2020 modelling package due diligence process a procurement process is proposed to be undertaken. As the Regional Planning Model paper has been undertaken as part of the LSDM Best Practice Research there is some confusion regarding the scope of the Regional Planning Model [31] and its relationship to the LSDM.

This Peer Review has identified while a comparison of the options for a regional model has been completed and preferred options identified, the value proposition of investing in a model has not been detailed.

Panel Findings

The Panel has identified the delivery approach of the LSDM is highly collaborative and is driven by the effort and commitment of State and local government officers. It is necessary to preserve this strength of the LSDM. Given the increasing complexity and need to deliver the evaluation principles - accuracy, timeliness, transparency, confidence and value – there is an opportunity to improve the delivery process by leveraging technology.

9.4 Recommendations

The Peer Review has identified the following opportunities:

Table 22: Delivery approach recommendations

	Section	Recommendation	Responsibility
6.1	Delivery	Explore technology options to uplift people- or process-driven activities that support the governance, management or delivery of data to increase confidence in the current delivery process.	DSDILGP
6.2	Delivery	Document the delivery approach at a high level (i.e. simplified process diagram) to illustrate the development timeframes for the LSDM and the role of each stakeholder group. This will transparently communicate the complexity of the LSDM and the cause of data lags in its development.	DSDILGP

[31] The Regional Planning Modelling would be used to plan for the future, using scenarios analysis to improve the understanding of possible future growth scenarios. The LSDM is based on historical data. Some of the LSDM data may also be used as the baseline or reference case in the Regional Planning Model.

	Section	Recommendation	Responsibility
6.3	Delivery	Engage with the RPC as well as related local government stakeholder groups to discuss preferred options for the progression of a regional planning model. The scoping for these options will detail the value proposition realised from investing in a model, road map for delivery and stakeholder roles to establish early alignment across the members of the RPC and other local government stakeholder groups.	DSDILGP

10 Visualisation

Information can only provide value to its intended audience if it is presented in a way that the audience can understand and use. The value that local government, industry and utility provider stakeholders receive from the LSDM hinges on how the information is presented. Data visualisation enables trends and insights to be easily identified. Graphs, infographics and maps are common methods of visualising data, all of which are currently utilised by the LSDM.

10.1 LSDM Report 2020

The section will outline how data is visualised in the LSDM and considers how easy the information is to access, understand and use, from a range of stakeholder perspective. [32]

Annually the LSDM report is published as an online report in a webpage format. The online report is located on the Queensland Government – Planning website, through the *ShapingSEQ* webpage (link). The landing page of the online LSDM Report (see Figure 48 below) describes the context and purpose of the LSDM, its link to *ShapingSEQ* and changes from the previous year's report, as well as contains commentary from the Housing Supply Expert Panel on the report. It also provides a link to a summary PDF of the report's results (link) and a map of the South East Queensland LGAs.

Figure 48: 2020 LSDM Online Report Landing Page

Source: DSDILGP, 2020,

[32] This section is based on LSDM 2020 as 2021 report is yet to be published at the time of drafting.

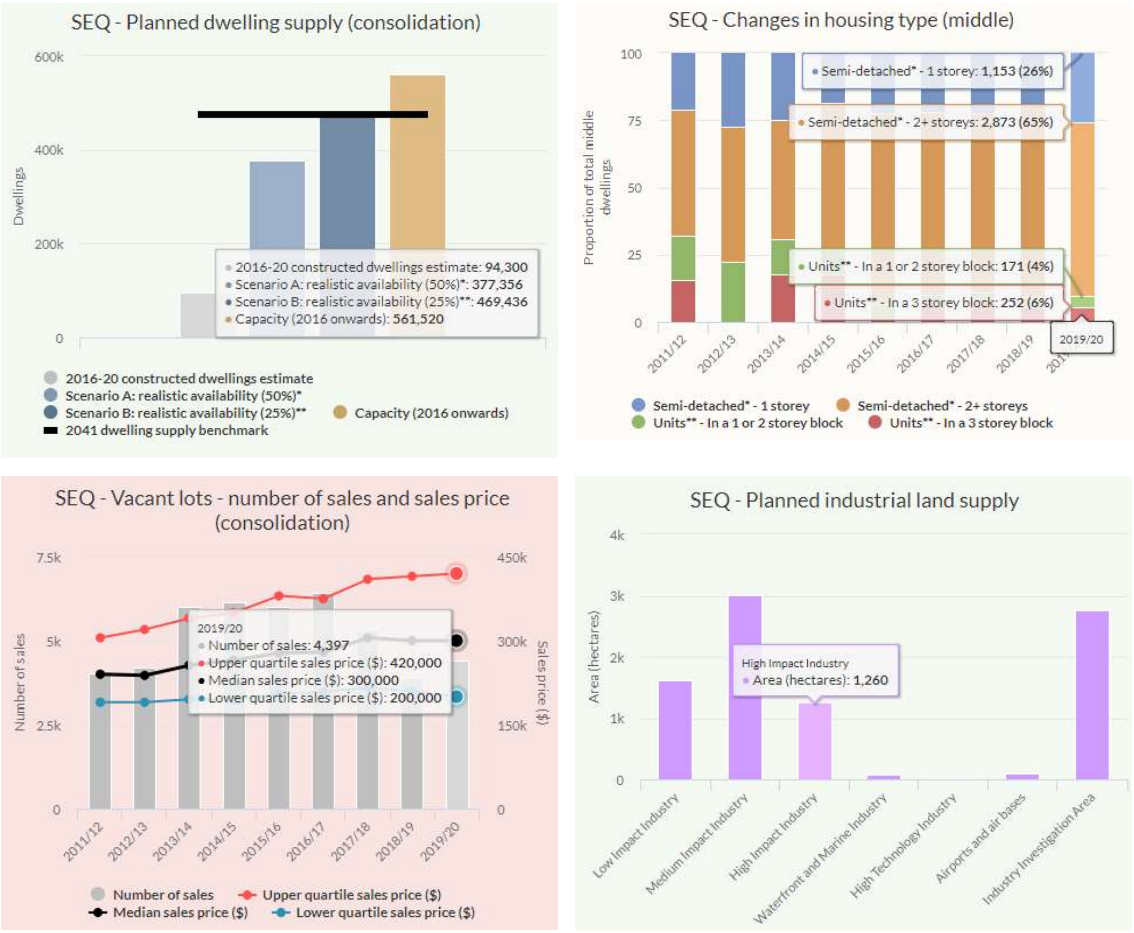
The LSDM Results Brochure provides a high-level summary of the LSDM results, in an easy-to-digest format. Simple graphs and infographics with minimal, key statistics are featured, such as those shown in Figure 49 below.

Figure 49: Examples of 2020 LSDM Results Brochure visualisations

Source: DSDILGP, 2020

To navigate to the body and results of the report, users click on any of the LGAs on the map or the South East Queensland icon to navigate to the corresponding webpage. Each LGA and SEQ have an individual webpage for both residential and industrial land supply. Across the residential and industrial web pages for each area, the results of the eight measures are detailed. These results include a narrative describing statistics, insights and trends, and are accompanied by at least one graph per measure – some examples of which can be seen in Figure 50 below. The text includes hyperlinks to the Definitions section, relevant Best Practice Research and corresponding detailed methodologies in the Technical Notes section. Each graph is interactive in that users can hover their cursor over a series to show a pop-up box displaying the underlying data.

Figure 50: Examples of 2020 LSDM measure results visualisations (graphs)



Source: DSDILGP, 2020.

In the 2018-2020 LSDM reports, graphs are the only way data is visualised in the main measures sections. In the 2021 LSDM, the measures section also includes a summary table of the LSDM results as shown in Figure 51.

Figure 51: Summary of 2021 LSDM Results

	Residential							Industrial	
Preferred Future	Planned dwelling supply (years of supply)			Approved supply* (years of supply)		Dwelling growth (%)		Planned industrial employment supply (years of supply)	
Metric	Minimum 15 years			Minimum 4 Years		Varies (see below)		Minimum 15 years	
Area	Consolidation	Expansion (Capacity)	Expansion (Realistic)	Uncompleted lot approvals	Uncompleted multiple dwelling approvals	Consolidation cumulative proportions 2016/21 (DSB)	Expansion cumulative proportions 2016/21 (DSB)	Capcity	Realistic availability
Brisbane	15	25	24	2.6	13.4	90% (96%)	10% (4%)	24	24
Gold Coast	25	24	17	2.1	25.1	63% (77%)	37% (23%)	42	41
Ipswich	28	37	23	6.7	15.3	17% (25%)	83% (75%)	672	328
Lockyer Valley	N/A	42	17	17.6	N/A	N/A	100% (100%)	36	29
Logan	74	61	31	4.8	10.4	36% (26%)	64% (74%)	244	229
Moreton Bay	34	38	13	3.5	6.9	55% (53%)	45% (47%)	64	53
Noosa	41	27	24	1.0	6.0	53% (63%)	47% (37%)	91	91
Redland	56	33	25	3.8	7.6	54% (72%)	46% (28%)	2	2
Scenic Rim	N/A	27	13	14.6	N/A	N/A	100% (100%)	118	118
Somerset	N/A	32	19	61.2	N/A	N/A	100% (100%)	97	97
Sunshine Coast	14	22	17	3.1	6.1	56% (58%)	44% (42%)	24	24
Toowoomba (urban extent)	82	68	60	5.4	6.3	31% (20%)	69% (80%)	412	158
SEQ	**25**	**39**	**23**	**4.3**	**13.3**	**59% (60%)**	**41% (40%)**	**91**	**63**

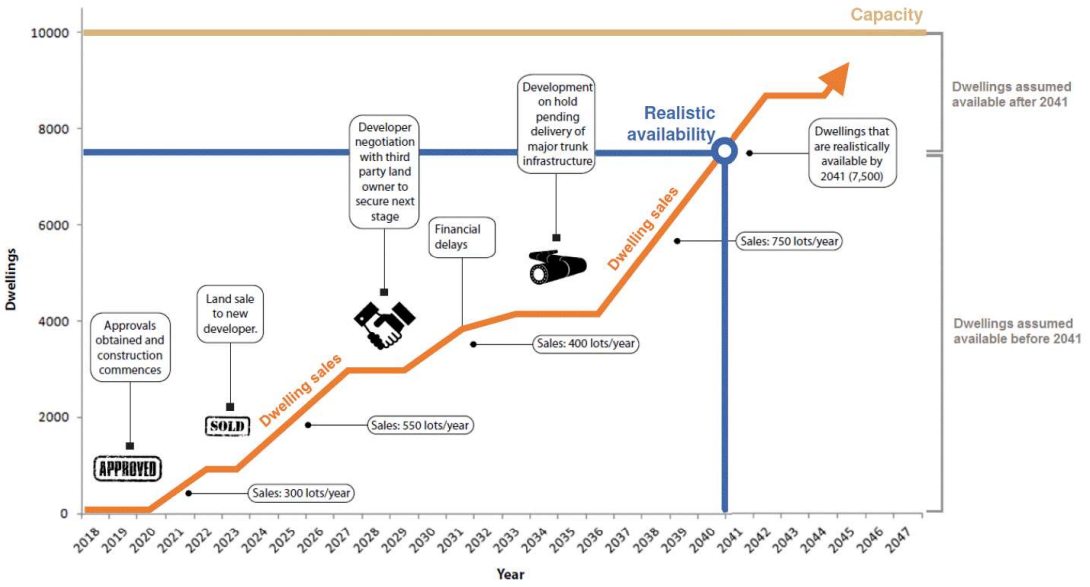
Note:
* All figures in the Approved Supply section are to 31 March 2021, except the multiple dwelling approvals figures which are to 30 June 2020. The uncompleted lots and operational works approval figures will be updated to 30 June 2021 for the final 2020 LSDM Report (for release). It is further noted that the Queensland Government's Statistician Office has recently released multiple dwelling approvals at the SEQ local government area level to 31 December 2020 as part of the Residential land development activity profiles. The multiple dwelling approval figures for consolidation areas used in the LSDM reporting will be updated to 30 June 2021for the final 2021 LSDM Report (for release), when data becomes available

Source: DSDILGP, 2021, p15

The rest of the LSDM report – or 'supplementary sections' – which includes the Program Delivery, Housing Supply Expert Panel, Best Practice Research, Market Factors, Fact Sheets, and technical notes sections/webpages also contains various tables and graphs, as exemplified in Figure 52.

Figure 52: Examples of 2020 LSDM other visualisations

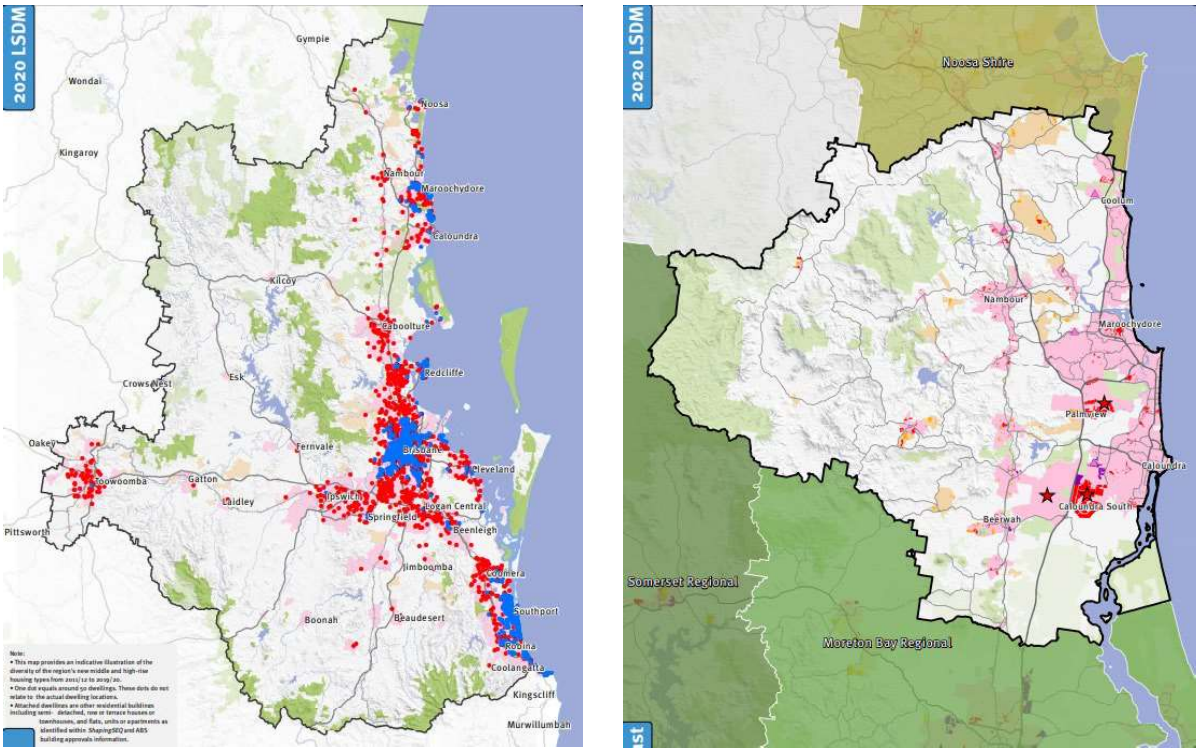
Factors		Measures 2019	Measures 2020	Change
Underlying	Gross State Product	3.08%	-1.07%	Negative
	Interest Rates	1.00%	0.25%	Down
	Population Growth	1.76%	1.62%	Slowing
	Employment Growth	1.87%	-5.39%	Rapid decline
	Wage Price Growth	2.34%	1.75%	Slowing
Effective	Building Approvals	28,943	25,445	Down
	House Prices	-1.30%	2.32%	Up
	Housing Finance	$37b	$37.2b	Stable
	Lot Registrations	22,845	20,995	Down
	Residential Construction Sentiment	-10.5	23.5	Strongly up



Source: DSDILGP, 2020.

The selected land supply and development mapping webpage/section contains links to several PDF maps that geographically present data on various measures for SEQ and each LGA. Examples of these maps can be found in Figure 53 below.

Figure 53: Examples of 2020 LSDM maps



Source: DSDILGP, 2020.

The LSDM's design is intended to be usable by all stakeholder groups – from those with a relatively limited understanding of the LSDM and land supply concepts to those who are well-versed in technical aspects of land supply. The report aims to do this without having to exclude information, which is why graphs and summaries of data are utilised often throughout the body of the report, and

technical notes are located separately at the end of the report. Data presented in simple formats are easily accessible and visible while technical details are available in the background and able to be accessed if desired.

10.2 Local government, utility providers and industry consultation

Consultation with stakeholders highlighted the following key themes:

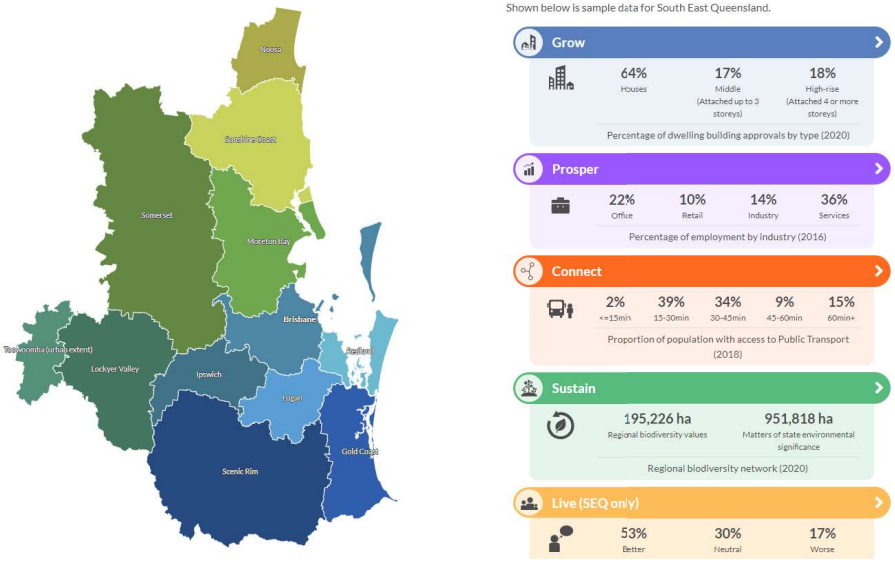
- **The general interactivity of the report makes it easier to use**: Industry and local government stakeholders noted the interactive nature of the report – namely, hyperlinks and graphs – which presented information in layers, so that information was at hand if desired but otherwise not visible and crowding the main report. They noted that this interactivity suited the diverse audiences of the LSDM.
- **The current report is generally difficult to use and engage with**: Stakeholders generally believe that the information in the LSDM is not always presented in a format that enables the user to derive insights easily. Generally, consultation revealed that interpretation is required to answer the questions the different consumers of information are seeking to answer. Specifically, stakeholders indicated that the online report was hard to find and there were various issues with navigation and structure. These issues contribute to a reluctance to use the report, and some stakeholders noted that they print out the report because the online report was too difficult to use.
- **Hard to understand how numbers are derived**: A select number of stakeholders, across all stakeholder groups, highlighted that results and data were generally difficult to engage with and understand, particularly for audiences without a detailed technical background.
- **Impression that the data included does not tell the full picture:** Industry stakeholders highlighted that the LSDM can be difficult to engage with, and in its current format there is a view that whole datasets and important nuances are not communicated in full. Accordingly, industry stakeholders sometimes have reservations about engaging with the information.
- **Narrative and market factors are useful, but could go further**: Stakeholders, particularly local governments, saw value in the general report narrative and the market factors report. On the contrary, some stakeholders felt these elements of the LSDM do not provide enough context for the results.
- **Stakeholders not knowing where to look for information:** Some stakeholders, particularly local governments, expressed a desire for information to be included in the report when it already was. An example of this was stakeholders wanting to view a summary and overview of the LSDM results. This information already exists and is accessible: the Report Summary Brochure (see above in Figure 54) contains a summary of the regions in terms of the measures – accessible via the LSDM, and the Measures that Matter Dashboard (see above) provides an interactive map and dashboard of SEQ whereby users can interact with the results of the region and each LGA against all of the Measures that Matter [33] – not accessible via the LSDM but instead separately on the DSDILGP website.

[33] Only the "Grow" Measures that Matter are relevant to land supply and are included in the LSDM.

Figure 54: 2020 LSDM Results Brochure

Source: DSDILGP, 2020, link.

Figure 55: Measures that Matter Dashboard (2020)



Source: DSDILGP, 2020, link.

- **Desire for a summary with normative labels:** Stakeholders across local government and industry highlighted a desire for an easy-to-understand summary that goes further and includes normative assessment (i.e. whether a result is 'good' or 'bad'). The status of land supply is not clear at first glance but rather requires understanding and consideration of the narrative. It was suggested that the communication of the information could be improved to include red flags against measures, or an overall assessment of SEQ against the *ShapingSEQ* benchmarks (e.g. "on-track", "lagging").
- **Distinct stakeholder group preferences**: There was a diverse range of views on how the presentation of the LSDM could be improved and, as such, a lack of clear consensus on the best way to achieve this outcome. local governments generally indicated a desire for information to be easier to access, digest and understand. A common comment was that the report was very

lengthy and that this made it difficult to engage with and less likely to be used. The next section which discusses survey results (Section 10.2.1) outlines which potential improvements different stakeholders supported.

- **Static relative to dynamic reporting**: The desire for accurate and timely monitoring led to several stakeholders highlighting the opportunity for the LSDM to move to a more dynamic reporting function which is updated iteratively when data is released, over the course of the year – as opposed to annually. Dynamic reporting would align with emerging industry trends which are triggering the need for more agile planning responses. This approach would have material resourcing and technology implications, however, that would need to be further explored and considered. Conversely, as covered in Section 9, some local government stakeholders posited that the report could be published less frequently as many data inputs do not change year to year.
- **Interactive maps**: A common theme arising in the consultation was a desire for more mapping, both interactive and static, to enhance the LSDM's usability. The following section which discusses survey results (Section 10.2.1) explores this theme further.
- **More alignment with LGIPs**: A few local governments believe that the way data is reported and presented in the LSDM should have a stronger alignment with that of the LGIP process. Doing so, they believe, will increase ease of reporting and understanding for local governments.

10.2.1 Survey results

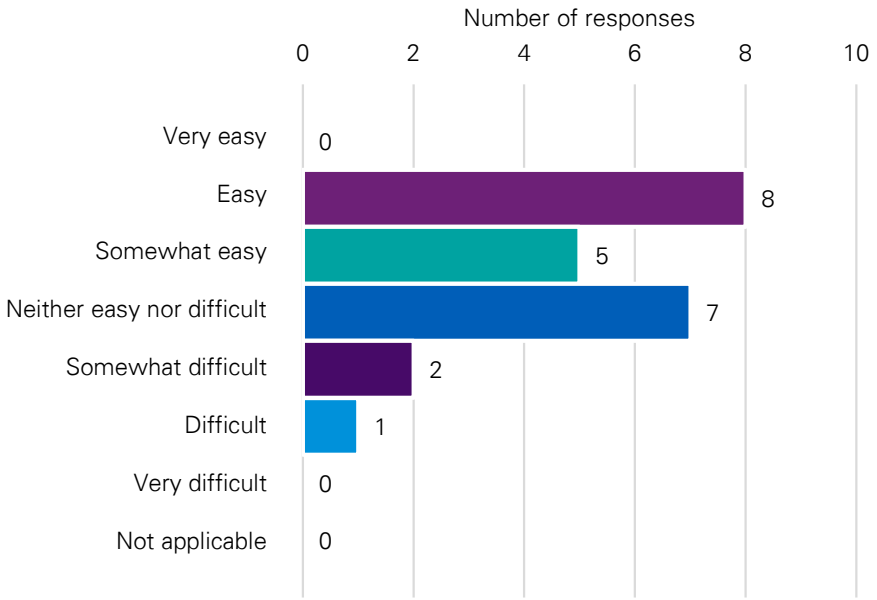
The survey results describe stakeholders' evaluations of the LSDM's presentation in terms of ease and impact. The results highlighted the following.

Ease of use

Stakeholders highlighted that the LSDM is relatively easy to use, with survey responses detailed in Figure 56. 11 respondents (57%) agreed that the LSDM was easy to use. However, seven respondents (30%) were indifferent to whether the LSDM was easy or difficult to use and three respondents (13%) found the LSDM difficult to use.

Survey respondents had differences in perceptions of ease of use based on stakeholder group, as well as varied responses across local governments. Utility providers were the stakeholder group that found the LSDM the easiest to use, with an average rating of between easy and somewhat easy. This was followed by local government and then industry, whom both rated the LSDM on average between somewhat easy and neither easy nor difficult to use.

Figure 56: Responses to Survey Question 7 "How easy is the LSDM to use for your purposes?"



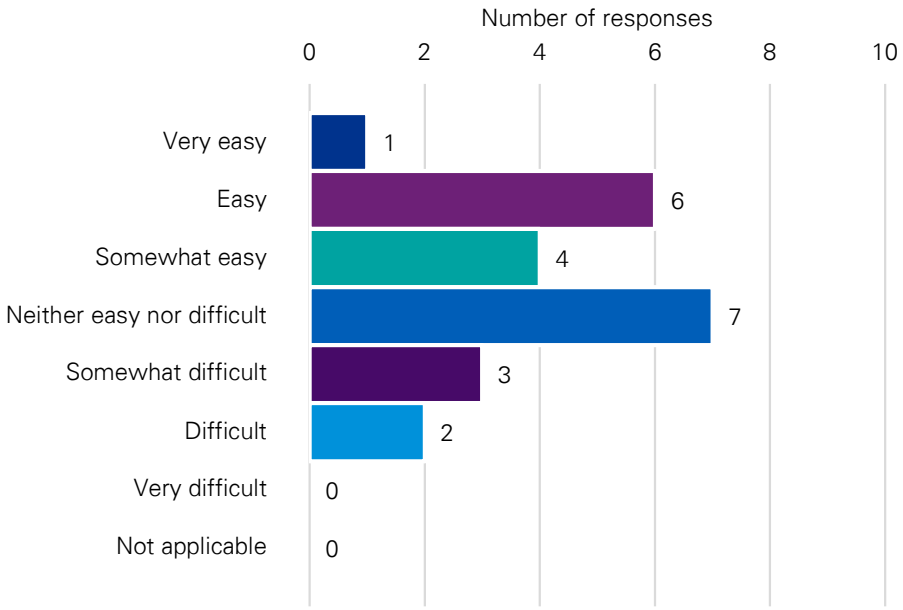
Source: KPMG survey of stakeholders, 2021.

Ease of understanding

Survey results regarding ease of understanding are presented in Figure 57. 11 respondents (48%) agreed that the information presented in the LSDM was at least "somewhat easy" to understand. However, seven respondents (30%) were indifferent to whether the LSDM was easy or difficult to understand and five respondents (22%) found the information in the LSDM difficult to understand.

Industry was the stakeholder group that found the information in the LSDM the easiest to understand, with an average rating of between "easy" and "somewhat easy". This was followed by utility providers and then local government, who rated the LSDM on average "somewhat easy" and between "somewhat easy" and "neither easy nor difficult to use", respectively.

Figure 57:Responses to Survey Question 8 "How easy is it to understand the information presented within the LSDM?"

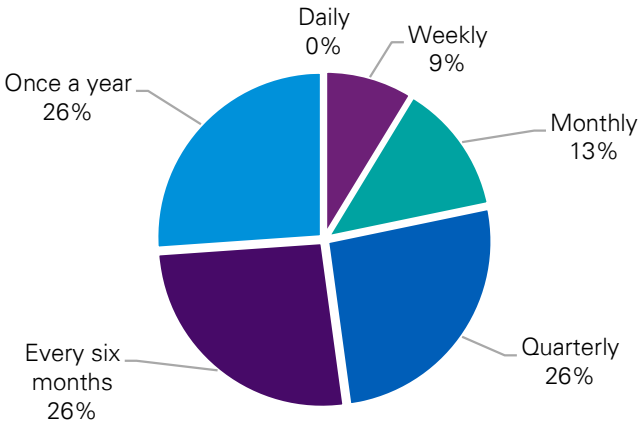


Source: KPMG survey of stakeholders, 2021.

Frequency of access

Survey respondents' frequency of access is outlined in Figure 58. Different stakeholder groups access the LSDM more often than others. Utility providers indicated they tend to access the LSDM less often than other stakeholder groups – between one to two times a year on average, compared to local governments and industry who on average accessed the LSDM slightly more frequently than twice-yearly. The frequency of access varied across local governments, with Councils with larger populations on average accessing the LSDM slightly more often.

Figure 58:Responses to Survey Question 5 "How frequently do you access the LSDM?"



Source: KPMG survey of stakeholders, 2021.

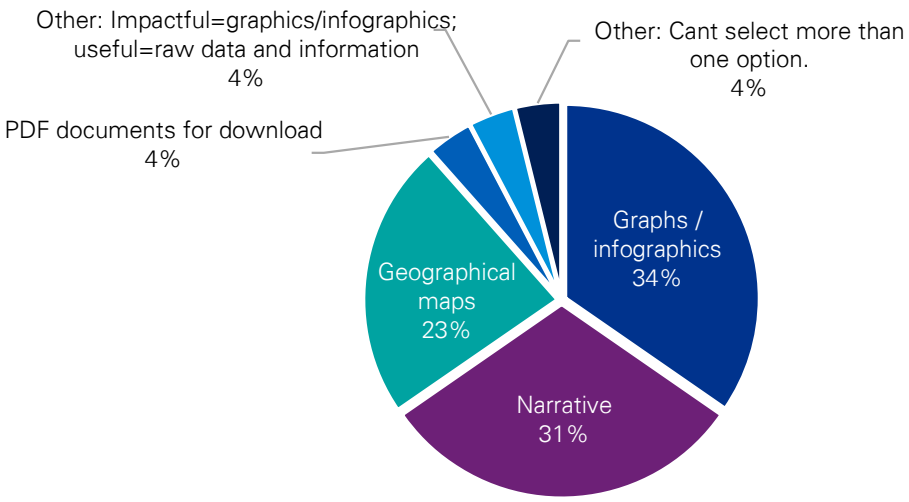
Impact and usefulness of presentation

As stakeholders interact with the information presented in the LSDM differently, they have had varying perspectives on the most impactful and useful way of visualisation as seen in Figure 59. Most stakeholder groups valued the variety of ways infromtion was presented, with most stakeholders

favouring graphs/infographics (35%) and narrative (31%) as a way to present information. Most local governments preferred the presentation of information as infographics/graphs, supported by narrative and geographical maps. Most local government responses indicated that Graphs/infographics were the most impactful and useful (35% of local government responses) followed by Narrative and Geographical Maps (30% and 25% of local government responses, respectively). No local government respondents believed that PDF documents were the most impactful and useful. One local government respondent indicated that graphics/infographics were the most impactful while raw data and information were the most useful.

There was no consistent viewpoint across industry or utility providers around preference of how information was presented. Each of the three industry respondents placed a single vote for graphs/infographics, narrative and PDF documents for downloads. Each of the three utility provider respondents placed a single vote for graphs/infographics, narrative and geographical maps.

Figure 59: Responses to Survey Question 9 "The LSDM presents information in a number of ways. Which of these ways do you think is the most impactful and useful?"



Note: The question asked respondents to select the most impactful and useful option however some respondents selected multiple. As such, there were 26 votes between 23 respondents.

Source: KPMG survey of stakeholders, 2021.

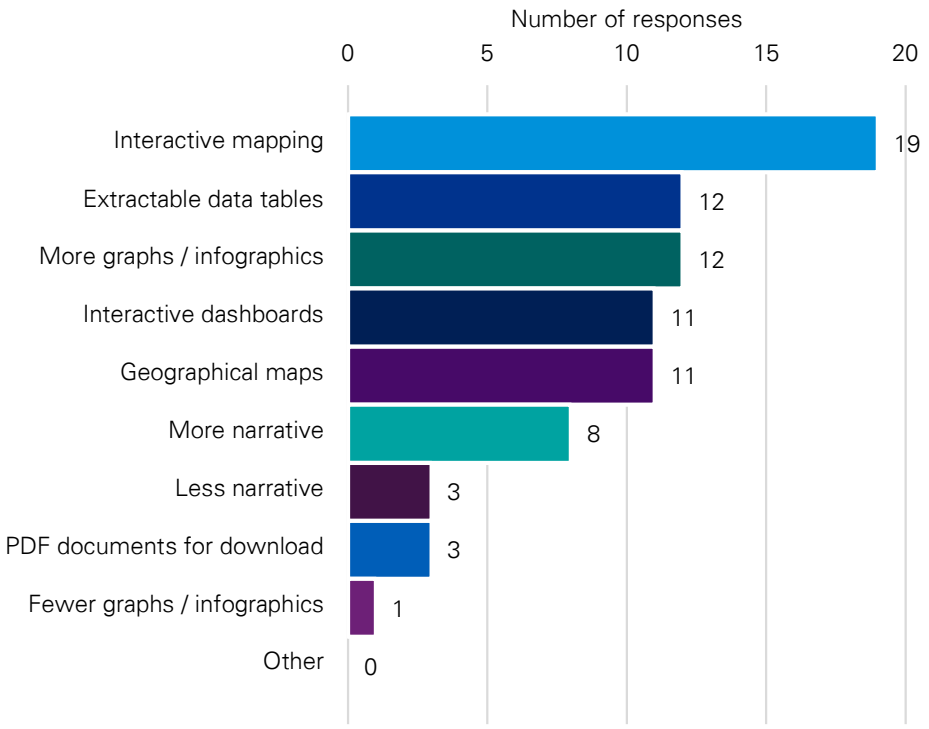
The survey also provided stakeholders with the opportunity to consider how they would like to see the information and/or the LSDM presented, the details of which are contained in Figure 60. There was a strong preference amongst survey respondents for interactive mapping (24% of responses), more graphs/infographics (15%), extractable data tables (15%), interactive dashboards (14%) and geographical maps (14%).

Nine local governments indicated they would like to see interactive mapping. The next most popular improvements were extractable data tables (eight local governments), interactive dashboard (eight) and more graphs/infographics (seven). The least popular actions were fewer graphs/infographics and PDF documents for download (one each).

All industry stakeholders highlighted a desire for interactive mapping and geographical maps. More graphs/infographics, more narrative and interactive dashboards each garnered the vote of two industry stakeholders. Fewer graphs/infographics and less narrative were the least popular (no responses).

All utility providers also indicated a desire for interactive mapping. Each other option received one vote except for fewer graphs/infographics, more narrative, geographical maps and interactive dashboard, which all received no votes.

Figure 60: Responses to Survey Question 10 "Are there any other ways you would like to see the information and / or LSDM presented?"



Source: KPMG survey of stakeholders, 2021.

10.2.2 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
The LSDM is generally somewhat easy to use and understand		✓	✓	✓
A need to improve the navigation of the report		✓	✓	✓
A need to improve the transparency of the information		✓	✓	✓
A desire for a greater variety of visualisation, more interactivity and a stronger impact of information		✓	✓	✓

10.3 Discussion of consultation themes

The following discussion of consultation themes draws together the perspectives of each stakeholder group and the survey findings. These findings have been used to inform the recommendations.

Improvement should focus on the presentation of information

While Section 7: Measures has highlighted improvements for the approach to certain measures, overwhelming stakeholder feedback noted that the LSDM contains high-quality information. However, stakeholders indicated that at times it is hard to find, digest and extract this information. Stakeholders

can only derive value from the LSDM if they can understand and use the information it contains. To ensure the LSDM delivers this value, and the effort of DSDILGP and stakeholders is best utilised, consideration of the LSDM's presentation and visualisation is required.

Particular consideration should be made regarding the navigation and structure of the online report. Users are unable to see the structure of the report before entering it – they have to dive into an area (SEQ or an LGA) before the navigation pane of the report is visible, leading to a feeling of disorientation by users. In three of the nine supplementary sections of the report, the navigation pane is not wholly visible until users scroll down to the bottom of the page. Consistency across the whole report is key to ensuring the user does not have to look hard for the information they are after. Applying a customer perspective and best practice user interface and experience principles will help information address and meet stakeholder needs.

A successful LSDM is reliant on meaningful insights that are presented in a way that is useful and usable by the audience.

To ensure the LSDM delivers value, visualisation needs to facilitate the report being usable by its audience (users). There is a strong link between effective communication of information and the value of the LSDM to the audience.

Visualisations that do not align with audience needs and preferences will not be used in an optimal fashion. Different audiences have different needs and preferences, as canvassed in the table below.

Table 23: Audience visualisation preferences

Audience	Generally preferred consumption of information
State Government *Broader government* *Less technical audience*	• Headline figures • Link to *ShapingSEQ*
Local government and utility providers *Planning departments* *Technical audience*	• Interactive – easy access to their relevant LGA • Dynamic – up-to-date data • Graphs/infographics • Narrative and normative commentary • Mapping • Extractable data tables
Industry *Property development* *Technical audience*	• Interactive • Dynamic • Mapping • Normative commentary
Community and other *Non-technical audiences*	• Graphs/infographics • Minimal information – headline figures • What it means – link to *ShapingSEQ* and approved/planned benchmarks

Source: KPMG, 2021.

A diverse audience means visualisation needs to be agile

The LSDM has a diverse audience and correspondingly has a diverse set of data consumption preferences. Some stakeholder groups comprise of technical users who tend to be involved in the detail of data analysis and planning processes, while others do not require the technical details and instead use key high-level takeaways. Technical audiences are more likely to prioritise data which are comprehensive and of high granularity, whereas non-technical audiences tend to focus on ease of use/navigation, accessibility and understanding.

In consultation, some stakeholders indicated that information in the LSDM could be difficult to engage with and the report is very lengthy – finding the most value in the accompanying narrative; others were more interested in seeing the raw data through tables or graphs. Because different stakeholder groups use the LSDM differently and place differing values on visualisation types, it is important for the LSDM to be agile in order to cater to and be usable by all audiences.

It was clear that people use the LSDM, and benefit from the variety of presentations. There were varying preferences for the way the information was presented, for example some stakeholders preferring extractable data tables and others preferring an interactive dashboard. The variety of audiences and uses means that the way information is presented must also be varied.

Desire for improvement

No stakeholders indicated that they believed the LSDM could not be improved. Three-quarters of respondents believed improvements could be made, with the remainder being unsure or having no opinion. There is an opportunity to improve the ease of use, ease of understanding and impact of the LSDM. Addressing these opportunities would align with the GMP's principle of continual improvement.

Consultation and survey findings highlighted that there is a need for consideration of alternative presentations that more accurately reflect the purpose and audience in order to provide value and confidence to stakeholders. Some options to improve the LSDM are detailed below in Table 19, but are not mutually exclusive nor exhaustive.

Table 24: Visualisation recommendations

Focus area	Description	Easier to read and understand	Easier to use	Add more value / usefulness
Landing page This webpage is the first one that users see when accessing the LSDM. As it is the user's first point of contact, its usability will influence whether and how users interact with the report further. General best practice suggests keeping information minimal and simple, with the most meaningful/useful information at the outset, and the rest of the report easy to navigate.	Reduce the number of words on the landing page to simplify the key messages.	✓		
	Add and highlight the headline figures/results (i.e. *ShapingSEQ* measures).	✓		
	Use infographics to display headline results. These could be lifted from the results summary document.	✓		✓
	Add normative commentary/labels (i.e. good/bad performance against *ShapingSEQ* benchmarks). This could look like a report card with a clear message of supply.	✓		✓
	Include an interactive dashboard of headline figures by the region and each LGA. See the Dashboard recommendation below.		✓	✓
	Make the link to the results summary PDF document easier to find and access, for example by moving its placement to the top or using a thumbnail/icon rather than just text.		✓	
	Integrate the information and infographics of the results summary document into the introduction of the LSDM online report (and keep the option of a PDF download).			✓
	Ensure the most important and useful information is the most easily accessible at the top of the landing page. An overview of the year's results is more useful than an introduction to the concept behind the LSDM.	✓		
	Ensure the navigation pane is available on the landing page (see Navigation recommendations). The map should not only function as being the only way to access the body of the report.		✓	
	Add meaningful information to the map (e.g. overall status of land supply, number of years of approved and planned supply).			✓
	Remove the pop-up boxes that appear after clicking on an LGA or SEQ in the map. Clicking an LGA or SEQ should navigate to a dedicated page for that area with the summary at the top.		✓	

Focus area	Description	Easier to read and understand	Easier to use	Add more value / usefulness
Dashboard The DSDILGP website contains a dashboard within an interactive portal, which displays the region and each LGA's performance against the Measures that Matter. An online dashboard can enable an improved understanding and easier navigation across data sets, while further interactivity (customisation of information) enables even better engagement. A dashboard format could also support more frequent updates of certain data sets.	Embed a truly interactive dashboard into the LSDM. Ensure it is easily visible and accessible. The dashboard should allow users to select the variables/data series of interest and allow them to compare it as they desire. For example, local governments would likely select their relevant LGA and compare different measures or different years, while industry representatives may select a single measure to compare the performance of all LGAs in that given year. The LSDM dashboard could pull the data that feeds into the Measures that Matter Dashboard.		✓	✓
Results summary document This PDF document is located as a download link on the Landing Page. It is two/three pages and presents overall SEQ performance against the measures.	Provide results from past years to compare the latest data– so that trends can be identified (i.e. increasing/decreasing).			✓
	Make the summary more meaningful. One option could be including the SEQ and each of the LGA summaries (which are available in the pop-up boxes which appear when clicking on the map on the landing page).			✓
Video Short videos are powerful at communicating information. They could be easily embedded into the online LSDM and even promoted individually by DSDILGP to stakeholders. Videos could consist of an interview of a key representative of DSDILGP or an animation, both with accompanying key graphics (headline figures).	Summarise the key takeaways from the LSDM Report into a short video – highlighting how the region is performing against benchmarks and whether there is adequate supply, how the results compare to past trends and relevant key market factors.			✓
	Summarise portions of the report that non-technical stakeholders derive value from into a short video – including the market factors report, and residential measures.			✓
Navigation A report which is difficult to navigate will be less likely to deliver value to users. Structuring and	Make a clearer distinction between the introduction, results ('body' of the report) and supplementary sections.	✓	✓	
	Ensure that the navigation pane (overview of the report's structure) is always consistent and visible throughout the online report.		✓	

Focus area	Description	Easier to read and understand	Easier to use	Add more value / usefulness
designing the report needs to consider user preferences and experience.	Use a separate webpage for each measure for each area. Include a summary and rationale of the measure at the top, then the results, then the relevant technical notes and methodology.	✓	✓	
	Pull out the supplementary sections of the LSDM (including delivery approach and Best Practice Research) into a separate stakeholder information website to ensure results are not crowded out by indirectly relevant material.		✓	✓
Interactive spatial mapping Spatial mapping visualisation can support an improved understanding of data. Through maps, users can much more easily identify trends, patterns, and outliers as well as understand differences across LGAs. Interactive maps allow users to find the information that they want much faster and access the underlying raw data.	Include interactive maps for each LGA and for SEQ showing underlying urban footprints, transport infrastructure, natural features (forest, waterways) as well as selectable layers (e.g. measures, consolidation areas, current intent to be serviced). An interactive map could include overlays with a potential needs analysis or indicative benchmark target.			✓
Data tables Data tables present raw data in simplified form. They form the basis upon which visualisations draw.	Include (exportable) data tables to enable stakeholders to understand and manipulate the datasets that inform the LSDM, if they desire. In particular, the inclusion of data tables would satisfy the data preferences of utility providers.			✓
Graphs Graphs are a simple yet effective way to visualise data and identify trends (across areas or time for examples).	See recommendation regarding graphs under 'Download options'			✓
	Add functionality for users to compare data series visually (across measures, LGAs, years). This would consist of adding the option on every graph to add relevant comparisons (e.g., for the graph of Somerset LGA's planned dwellings over time, the option to select other LGA data to overlay). Such non-technical users appreciate the opportunity to interactively engage with data.			✓
	Develop consistency between graphs: Use column graphs with time along the horizontal axis for time series data. Use bar graphs for other data series. Use the same colours for similar concepts (e.g. realistic availability currently uses different shades of blue). Include headings that are explanatory of the graphs rather than technical. Include key messages that the graph is showing (e.g. 1-2 dot points) Consider including measures over time to illustrate cyclical market dynamics.	✓		

Focus area	Description	Easier to read and understand	Easier to use	Add more value / usefulness
	For the interactive pop-up boxes displaying the underlying data of graphs, include the units and thousands and millions separator (e.g., "2041 dwelling supply benchmark: 318800" would become "2041 dwelling supply benchmark: 318,800 dwellings").	✓		
	Allow users to copy text from the interactive data pop-up boxes within graphs.		✓	
Context and narrative Without context, the results of the LSDM are not meaningful to users. Providing context and a narrative around the data can help explain why results are so, and whether they are in line with longitudinal trends.	To align with non-technical user preferences, add more context around the results and narrative around the state of the market and land supply environment. Doing so would also reinforce the long-term trajectory and trends that the LSDM is aiming to capture, as opposed to reacting to short-term deviations from trends. Implementing this recommendation could comprise of formalising the market factors report in all future LSDM reports, and even including a high-level summary alongside a summary of the LSDM results in the introduction.			✓
Development pipeline The development pipeline comprises the stages that land goes through to get from designated and zoned through to approvals and sale on the market. This is a fundamental process and concept which provides context for the report and can be easily visualised in a diagram.	Include a diagram of the development pipeline in the report to give a simple overview of the stages of land development. This would help to give non-technical audiences a baseline understanding of how land is developed which would provide useful context for the rest of the report. Further, the diagram could show alignment to planned and approved dwelling supply, development actions and potential barriers to supply, with hyperlinks to detailed information and definitions. It could also show capacity at each stage and the overall indicative time it takes for land to be sold. Aligning the pipeline to relevant concepts would improve the transparency of the report's measures and results.			✓
Increased dynamism Some datasets are available on a monthly or quarterly basis. To increase the timeliness of LSDM data, these datasets could be updated more regularly than the annual report.	Update data outside of the LSDM's publication, where datasets are available more frequently than annually. This could be done most seamlessly through a dashboard and would need to ensure the inclusion of dates of the most recent update.			✓
Download options Users of information tend to prefer more flexibility over less, to tailor content to their specific needs. By providing the option to download data or subsets of the report, users can focus on information that is relevant to them.	Include a link to download a PDF document for each section, located under the relevant report section.		✓	✓
	Include a 'self-service' portal at the back of the LSDM whereby users can select sections from the report's structure to download as a single PDF document – 'build' their custom report. 'Pre-made' options for each LGA could be offered as well.		✓	✓
	For each data visualisation (graph, infographic, table, map, dashboard), include the option to download the visualisation itself (JPEG or PDF) and the underlying raw data (CSV for tabular form, ESRI Shapefile and MapInfo Tab for spatial form).		✓	✓

Focus area	Description	Easier to read and understand	Easier to use	Add more value / usefulness
	Co-locate the results summary document with a download link for the whole report, at the bottom of the Landing Page.		✓	
Technical notes These notes detail the methodology and considerations of data inputs and analysis. The technical notes appear as a supplementary section after the body of the report, with approximately 81 pages worth of content in total.	Ensure each measure's rationale speaks to the benefit that measure provides by being included in the LSDM. Currently, some rationales only contain an outcome. For example, the current changes in housing type measure have the rationale: "To show trends the proportionate trends in the diversity of residential buildings are analysed and reported on, by extracting dwelling growth data for three main housing types (as reported in ShapingSEQ) for the region and each local government area. this would be complemented with a sentence like: 'By seeing the mix of housing type and trends over time, local governments can understand how future dwelling supply is likely to look and whether changes from historical distributions warrant policy action or further investigation.'			✓
	Include worked examples for each measure.			✓
	Make the limitations clearer and more concise. For complex limitations, use a summary sentence at the outset.	✓		
	Ensure the methodologies are in a language that non-technical audiences could easily understand.	✓		

Panel Findings

The Panel has identified the current communication of the report insights (through visualisation) are not sufficient to deliver the desired value to LSDM audiences. There are a number of opportunities to enhance the communication of the information in the LSDM in line with contemporary best practice.

10.4 Recommendations

The Peer Review has identified the following opportunities:

Table 25: Visualisation recommendations

	Section	Recommendation	Responsibility
7.1	Visualisation	Improve the legibility of the online report to facilitate improved transparency of the existing information and communicate the information in a more digestible format. This will improve the understanding of the content by users.	DSDILGP
7.2	Visualisation	Improve the presentation of data to include a range of formats (infographics, non-technical graphs, ability for comparison within SEQ LGAs) to provide greater value to stakeholders by meeting a range of audience needs.	DSDILGP
7.3	Visualisation	Increase the usefulness of the LSDM by adding elements (such as an interactive dashboard, videos, interactive spatial mapping, development pipeline diagram, worked examples in the technical notes) that deliver more value to users.	DSDILGP

Specific options are detailed above in Table 19.

11 Best Practice Research

Continual improvement is a key principle of the Growth Management Program, under which the LSDM sits. As such, the formalised way that continual improvement is embodied in the delivery and content of the LSDM is through Best Practice Research. Targeted research into topics and areas is conducted and published alongside the results of the LSDM, every year. The intent of Best Practice Research is to develop a better understanding of a given topic and commonly either share the increase in understanding with stakeholders or apply improvements to the LSDM based on the research. The desired benefits of using Best Practice Research are increases in the maturity of the LSDM and improvements in its usefulness and value.

11.1 LSDM Report 2021

ShapingSEQ sets out the approach to delivery regarding best practice principles, as follows:

> "As existing databases/models are updated over the next few years, those updates will be informed by best practice. This will be based on the findings of research into existing practice for land supply and development measurement. The research, including specialist advice, is the first priority of the SEQ Growth Monitoring Program.
>
> For land supply measurement, the best practice research findings will guide assumptions about use, density, land suitability and availability for development, and its take-up over time. For land supply measurement, the best practice research findings will guide assumptions about use, density, land suitability and availability for development, and its take-up over time. Land suitability and availability need to consider the full range of constraints to development. The appropriate basis for measuring serviceability will also be identified.
>
> For development measurement, the research will assess the appropriateness of existing approaches to measuring development and inform the approach to special cases, e.g. secondary dwellings and self-contained dwellings that may be used primarily for visitor accommodation."
>
> *ShapingSEQ*, 2017, p173

This is operationalised in the LSDM 2021 Report as follows:

"Since the launch of the Growth Monitoring Program (GMP) in 2018, the Department has worked with independent experts to research and recommend best practice methods for land supply and development monitoring in South East Queensland (SEQ). The research outcomes were discussed in the Best Practice Research sections of the annual Land Supply and Development Monitoring (LSDM) Reports.

In 2021, the department has furthered Best practice research, continuing to work off the recommendations from previous reports and the priorities identified by the GMP Data and Modelling Working Group."

…

"Progressive implementation of the LSDM Report's best practice research findings, undertaken in collaboration with local governments, industry and utility providers, will help inform and improve future annual LSDM Reports and assist in continuing to create a transparent and robust platform for ongoing land supply and development monitoring in SEQ. Actioning best practice research has realised improved residential and industrial reporting, as well as assisted with information and practices that will enhance the regional plan review process.

The best practice research of the LSDM Report also provides a valuable resource for key stakeholders, such as local governments, state agencies, industry and utility providers. GMP stakeholders have advised that best practice research informs activities such as improvement of infrastructure planning and to understanding industrial land supply. The department has also referenced the work of the GMP through plan drafting guidance for local infrastructure planning, which is available online here.

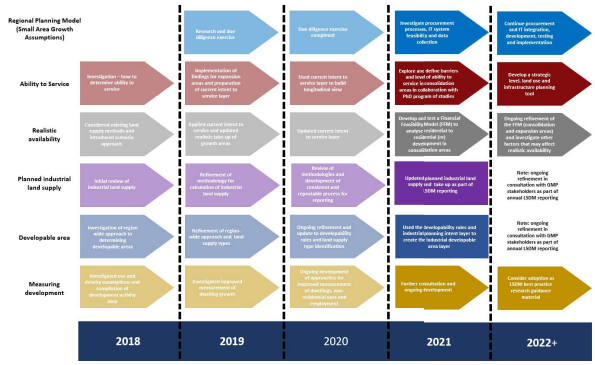
The department will continue to progress best practice research to enhance data accuracy within the LSDM report, as well as continue to provide a resource for stakeholders to utilise for their unique purposes.

The best practice research program has and will provide opportunities for ongoing engagement with local governments, utility providers, state government agencies, industry and academia through research partnerships, meetings and workshops. This will facilitate the sharing of knowledge, experiences and perspectives to promote a shared understanding of how land supply and development monitoring occurs in SEQ."

LSDM Report, 2021, Best Practice Research Section

In summary, DSDILGP commissions specialist firms to undertake research. This research is synthesised and presented as a separate section of the LSDM titled Best Practice Research. Best Practice Research published over the last four years in the LSDM encompasses the actions and topics outlined in Figure 61 and Appendix E: Plan of Best Practice Research 2021.

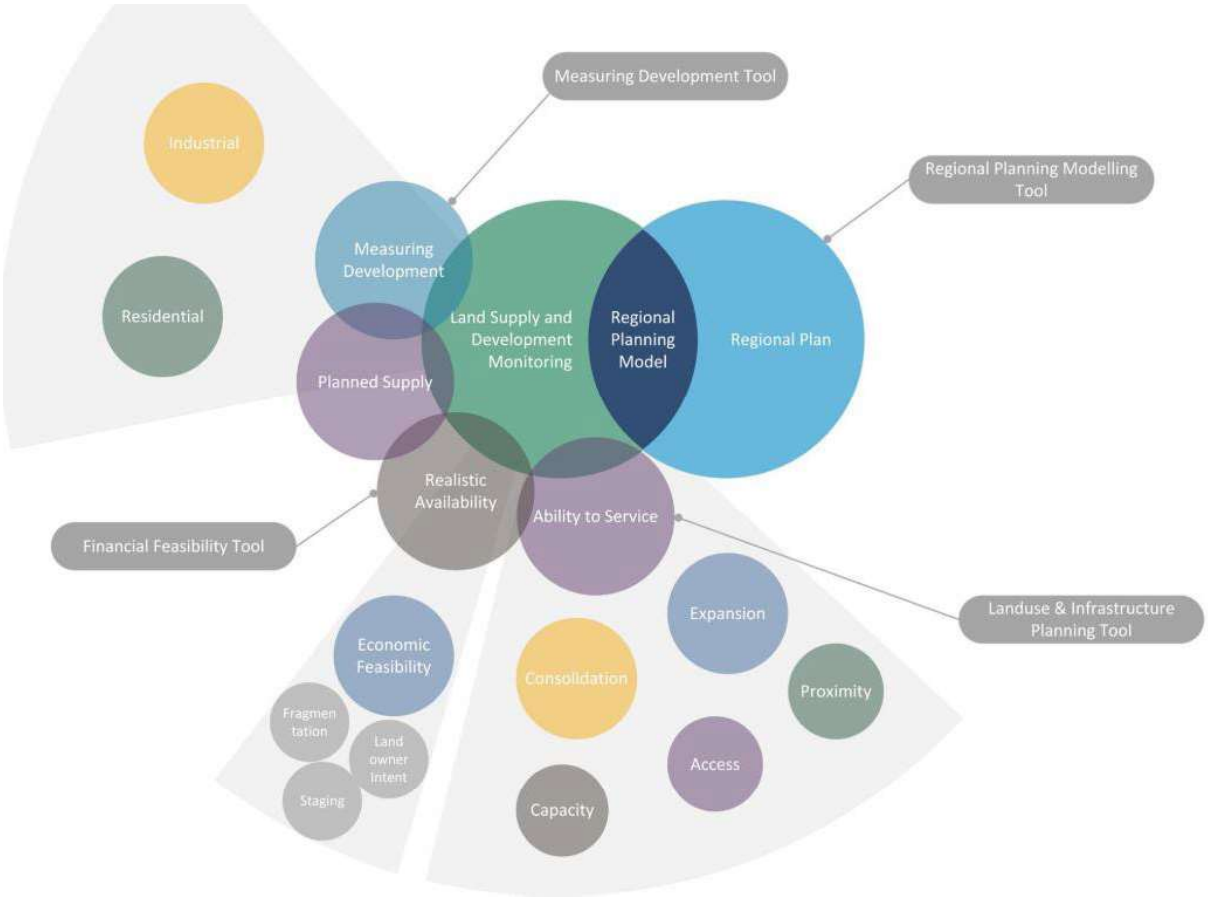
Figure 61: Program of Best Practice Research (2021)



Source: DSDILGP, 2021, p275.

Best Practice Research is also used to help enable the achievement of other Growth Management Plan strategic goals and tools, including a financial feasibility tool and regional planning model. The figure above visualises how these strategic tools are interrelated with concepts and areas of the LSDM. Best Practice Research topics generally align with the concepts illustrated in Figure 62.

Figure 62: Diagram of the strategic context and data and analysis inter-relationships of the LSDM (2021)



Source: DSDILGP, 2021, p285.

11.2 DSDILGP consultation

Consultation with DSDILGP confirmed that Best Practice Research was directly linked to the GMP principle of continual improvement. DSDILGP emphasised that improving the LSDM year-to-year was a strong priority. DSDILGP confirmed that Best Practice Research was intended to make the LSDM Report more useful (output) and to enhance the justification of the underlying assumptions and data transformation (process) so that they are grounded in the latest best practice.

DSDILGP also indicated that Best Practice Research was also intended to be used by other stakeholders. The Department believes that were they to use the Best Practice Research, stakeholders' understanding of the current process would be improved along with their skills, capability and maturity.

DSDILGP outlined in consultation that members of the DMWG are directly and indirectly utilising the BPR each year and have benefitted from the process and discussions. The DMWG community of technical stakeholders engage in detailed discussions about current approaches and best practice which provides information sharing across the region and upskilling of members. This disseminates into the day to day work of Councils and utility providers, progressing the region towards best practice

The Best Practice Research is intended to flow through and inform how LGAs prepare their planning assumption databases. A recent example is the inclusion of aspects of the Best Practice Research in the Local infrastructure planning (Guidance for local governments and applicants) to guide the development of planning assumptions for local government infrastructure plans (LGIPs).

The Department believes that progressive adoption of best practice methods in future updates of local planning assumptions datasets will support a common understanding of land supply and development measurement among stakeholders and provide progressively more consistent datasets to underpin increased confidence in the LSDM Report's planned supply measures in particular.

11.3 Local government, utility providers and industry consultation

Key themes that came through from consultation by local government, industry and utilities:

- **Stakeholders welcomed continual improvement**: Most stakeholders acknowledged the value of DSDILGP's ongoing commitment to the improvement of LSDM methodology. Utility providers have historically worked with DSDILGP to develop Best Practice Research and see value in Best Practice Research continuing to be published in some form. One specific topic of research that was cited by several local governments as providing value was the ability to service, while research into industrial measures was seen as more important by one council. Conversely, one local government expressed concern with research into small area growth assumptions as the outcome of research did not align with their assumptions.
- **Best Practice Research input can place a time and effort impost on stakeholders**: Stakeholders were required to provide a significant amount of input and feedback into some Best Practice Research, on top of standard LSDM data collection. Further, several local governments expressed a desire for having more time to discuss and digest research through the GMP data and modelling working group, before its inclusion in the LSDM.
- **Difficulty in engaging with Best Practice Research**: Some stakeholders commented on Best Practice Research being quite technical, difficult to understand and lengthy, similar to the technical notes. Furthermore, one council noted that Best Practice Research can result in methodology changing too frequently – which requires additional effort to adapt.
- **Stakeholders sometimes could not see the link from research to action**: Some stakeholders found it difficult to see the value of Best Practice Research, specifically how research maps to improvements to the LSDM. local governments in particular suggested a desire for Best Practice Research to become more solution-oriented, whereby research is conducted in an area in which stakeholders are wanting to see improvements.
- **Stakeholders sometimes could not see the value in research**: Some examples of Best Practice Research being used include Redland City Council noting that they have used research regarding land use and density, developable area and land supply types. Some utility providers have also indicated that they have used Best Practice Research to improve internal methodologies, while Toowoomba Regional Council is using Best Practice Research for their LGIP.

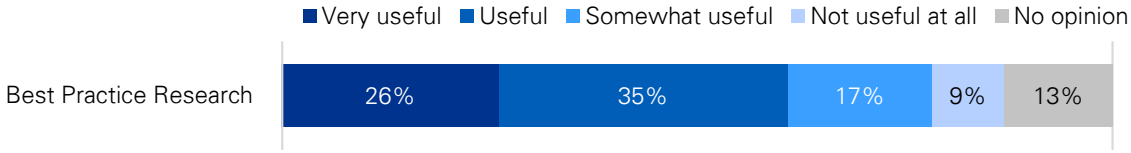
However, stakeholders often do not see value for themselves in the Best Practice Research and consequently, stakeholders generally do not use the Best Practice Research: Many local governments indicated that Best Practice Research does not always feed into their planning processes. Common reasons given for why Best Practice Research was not used were that stakeholders did not have the required skills or understanding (capability) or resources (capacity) to operationalise it. Furthermore, some local governments did not believe the research published was relevant, could provide benefit to them or be accessible in terms of technical language and concepts. One council noted that some research was not 'best practice' in nature.

- **Stakeholders suggested some topics for future Best Practice Research**: There were areas that stakeholders would like to see research targeted at, that were not already being looked at by DSDILGP, including:
  - the impact of short-term accommodation and different housing types (i.e. smaller houses, secondary dwellings, etc.)
  - time from development approval to lot registration
  - estimated vs. actual yield
  - regarding industrial land supply and take-up, consideration of underdeveloped sites.
- **Stakeholders had questions about whether Best Practice Research is best located inside the LSDM**: There was discussion around the relevance of including Best Practice Research as part of the LSDM as it was quite specific, technical and not necessarily required to understand the LSDM Report.

11.3.1 Survey results

The survey results reveal stakeholder attitudes toward Best Practice Research. The results highlighted that stakeholders found the Best Practice Research useful to some extent, as seen in Figure 63. 78 per cent of respondents found Best Practice Research at least somewhat useful while 9% did not find it useful at all. On average, local governments found Best Practice Research slightly less useful as compared to industry and utility providers.

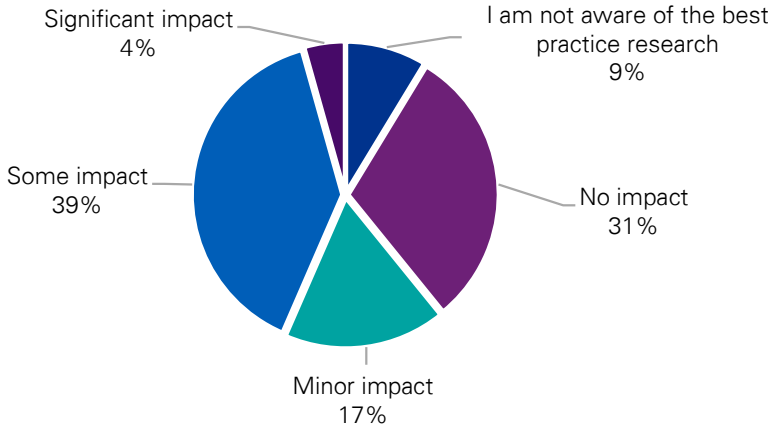
Figure 63: Responses to Survey Question 11 "Thinking about how you use the report, how useful are the following report outcomes?"



Source: KPMG survey of stakeholders, 2021.

Along with examining its usefulness, the survey asked respondents about the impact of the Best Practice Research, as laid out in Figure 64 below. 39 per cent of respondents indicated that they were either not aware of the Best Practice Research or that they believed that it had no impact. Another 39% indicated that they believed the Best Practice Research had made more than a minor impact on the LSDM and/or their approach to land supply measurement. On average, utility providers found the Best Practice Research more impactful than local government and then industry.

Figure 64: Responses to Survey Question 14 "What has been the impact of the Best Practice Research on the LSDM and/or your organisation's approach to determining land supply?"



Source: KPMG survey of stakeholders, 2021.

The survey asked respondents for areas in which they would like to see Best Practice Research explored. Some responses represented areas that Best Practice Research has already targeted – either stakeholders were unaware of this research taking place or believed there was scope to explore the area further. These areas include:

- Measuring development
- Regional Planning Model
- Small area growth assumptions
- Ability to service
- Developable area
- Market Factors report [34]
- The intent to measure projected development more comprehensively (e.g. including financial feasibilities)
- Better use of digital technology (such as the use of aerial photography)
- Striving for better quality and processing of data
- Standardised industrial land classification methodology
- Industrial and employment land supply methodology
- Constraints applied to land supply methodology
- Understanding benchmarking for determining planning assumptions for consideration of development constraints.

11.3.2 Summary of consultation themes

Consultation theme	DSDILGP	Local Gov.	Utilities	Industry
Continual improvement is important	✓	✓	✓	✓
The link between research and action/improvement is not clear		✓	✓	✓
Stakeholders generally do not use Best Practice Research		✓		✓

11.4 Discussion of consultation themes

Continual improvement is an important aspect for DSDILGP and all stakeholders.

A strong theme from consultation with DSDILGP and stakeholders was a commitment to improving the LSDM to better deliver on its purpose and increase the value it provides. The consultation identified that Best Practice Research is a key component of incorporating the GMP's principle of continual improvement into the LSDM. The intention is for each year's report to improve on the methodology, approach and analysis of the previous year. This Peer Review has identified value in the continual delivery of best practice, particularly given generally positive stakeholder feedback.

The value of Best Practice Research is not being fully realised

There is a material cost that is invested into Best Practice Research – encompassing consultant fees and DSDILGP time. This Peer Review has identified that the full value of the research is not being

[34] While not part of the 2019 suite of Best Practice Research, DSDILGP commissioned a 2019 Market Factors Report in response to stakeholder feedback and in line with best practice principles. The Market Factors Report sits underneath the LSDM. The Market Factor Report and findings were reviewed and updated in the 2021 LSDM Report.

realised and, as such, the cost may not be commensurate with the current amount of value it provides to DSDILGP and stakeholders.

As *ShapingSEQ* prescribes specialist research to accompany the LSDM, Best Practice Research will continue to be conducted and inform improvements to the LSDM. However, there is an opportunity to increase the value realised by stakeholders from the Best Practice Research. This could be delivered by outlining what this piece of research will reveal and what the benefit is of having this new information. To effectively communicate why a given piece of research is being conducted, DSDILGP should consider the outcomes (in line with PRINCE2 project management terminology) and develop a clear and consistent way of outlining these for each research topic.

After each piece of research is completed, there is an opportunity to detail how it will be operationalised in the LSDM, how stakeholders can incorporate findings into their processes and understandings and why stakeholders should use this piece of research (the benefits to them from taking the time to understand the research and act on any actions).

For example, there is an opportunity for relevant best practice methods to be reflected in the guidance material for the creation of local planning assumptions datasets (e.g. for LGIPs and Netserv Plans) to ensure consistency across local planning datasets.

Stakeholders are generally unaware of improvements outside of Best Practice Research

The LDSM's Program Delivery section outlines work undertaken by the GMP to improve the delivery of the LSDM. The consultation identified that some stakeholders were generally unaware of the specific actions that the GMP had implemented – indicating they did not read the Program Delivery section. There is an opportunity to publicise the highlights of this section to stakeholders, separately from the LSDM report itself, to increase awareness of the GMP's work program.

Stakeholders are generally unaware of how specific pieces of research build upon past research

Survey responses indicated several areas for future Best Practice Research, some of which past research has already explored. There is the possibility that this is due to stakeholders being generally unaware of this research. To ensure that going forward stakeholders are aware of past research and its outcome (action and/or link to further research), the existing program diagram (Figure 61 and Appendix E) should be more easily visible to report users. Through improved communication of the relationship between the research topics, there is an opportunity to improve the value realised from the Best Practice Research.

Stakeholders are generally unaware of the specific purpose and value of each piece of research in improving the LSDM

While the LSDM describes the outcomes of individual Best Practice Research topics, there is no consistent approach to clearly communicating these outcomes across the research program and the benefits of each research topic are generally not noted. One example of an outcome can be found listed against the Measuring Development subprogram:

"Key benefits of the proposed approaches to property-level measurement of dwellings and non-residential floor space and employment include: Providing a more equivalent 'apples with apples' basis for comparison between: property-based measurements, the ShapingSEQ dwelling supply benchmarks and employment planning baselines, and the state government's projections." 2021 LSDM, p291

In this instance, an 'apples with apples' basis for comparison is the outcome of the research, while the benefit of the research is a more accurate measurement of development. Without spelling out the benefit, users are unclear on how the research will improve the LSDM.

Furthermore, Best Practice Research should be addressing a problem or opportunity for improvement. This should be communicated at the outset of each research topic. Effectively communicating the problem/opportunity and benefits of each piece of research provides the rationale for its completion; when done, stakeholders can clearly understand why it is being undertaken and what they can expect to gain from it. Through improved communication of the purpose/application of the research there is an opportunity to improve the value realised from the Best Practice Research.

Stakeholders generally do not use Best Practice Research and are generally unaware of DSDILGP's intention for them to do so

Best Practice Research ties to another value of the GMP: 'Engaged and informed stakeholders'. Consultation with DSDILGP identified that an intended outcome of Best Practice Research was to improve stakeholders' understanding and knowledge, as well as to enable local governments to incorporate findings and best practice processes to improve their land planning and measurement processes. Some local governments did not understand that a key intention is for the Best Practice Research to be digested by them and operationalised into their internal processes. As a result, many stakeholders do not use the Best Practice Research.

There is a lack of clarity around the purpose of Best Practice Research – whether it is just intended to improve the LSDM's function as a monitoring tool or whether it also aims to educate and/or influence stakeholders. Through improved communication of the purpose/application of the research, there is an opportunity to improve the value realised from the Best Practice Research.

Research could be better aligned with improvements stakeholders would like to see made

The consultation revealed that stakeholders generally do not use the Best Practice Research. Increasing the alignment between stakeholder feedback and research topics would likely increase the engagement of stakeholders in Best Practice Research and ensure stakeholders are using it.

There is an opportunity to collect stakeholder feedback annually about what areas they would like to see researched and where they believe improvements could be made. Areas for research should be guided by stakeholder preference/needs if the intention is for Best Practice Research to be used by stakeholders to upskill them. Close the loop with stakeholders after the research is undertaken and actions have been made. As a start, the topics raised in consultation (see above) should be considered.

Panel Findings

The Panel has identified that the delivery of Best Practice Research is not the primary purpose of the LSDM. Nevertheless, it offers a valuable contribution to the continual improvement of land supply and development monitoring. It should also be acknowledged that the primary use of the Best Practice Research relates to the preparation of the LSDM and has limited impact outside the LSDM.

11.5 Recommendations

The Peer Review has identified the following opportunities:

Table 26: Best Practice Research recommendations

	Section	Recommendation	Responsibility
8.1	Best Practice Research	Confirm the targeted audience (e.g. local governments, a subset of local governments, industry etc.) at the outset of each best practice research report and ensure that appropriately targeted resources (training, implementation resources etc.) are also budgeted into BPR planning to maximise value.	DSDILGP

	Section	Recommendation	Responsibility
8.2	Best Practice Research	Confirm the (desired) outcome and intended benefits of each best practice research topic and confirm these with targeted audiences prior to commencement. This will assist in identifying and addressing any barriers to implementation and benefit realisation from the outset.	DSDILGP
8.3	Best Practice Research	Publish Best Practice Research as a standalone publication to 'lighten' the LSDM with clear linkages to LSDM where it has informed a change in methodology or finding.	DSDILGP
8.4	Best Practice Research	Relevant best practice methods should be reflected in the guidance material for the creation of local planning assumptions datasets (e.g. for LGIPs and Netserv Plans) to ensure consistency across local planning datasets.	DSDILGP

12 Governance, regional planning and action

Governance is the organising frame that allows discrete investments, stakeholders and strategic intents to be drawn together in an environment of authority, accountability, stewardship and leadership. It is the framework of rules, relationships and procedures by which an entity is directed, controlled and held to account, and whereby authority within the entity is exercised and maintained. Governance can range from informal to formal arrangements.

A governance model is important to establish an agreed, fair, and beneficial arrangement to enable stakeholders to effectively deliver common outcomes.

The consultation highlighted the value that stakeholders placed on the LSDM, however, the value in some instances exceeds the intended purpose (as covered in chapter five) with the data almost becoming a proxy for the efficacy of implementation of the Regional Plan.

With this emphasis, however, comes the tension highlighted in previous chapters between the purpose of the LSDM as a monitor, or as a trigger for implementation / regional planning responses. Stakeholders are not aligned on the role of the LSDM in supporting or triggering decision making and it was noted that the LSDM does not currently propose actions based on the identified benchmarks and trends. It was also not clear to stakeholders how the outcomes of the LSDM inform policy actions, investment priorities and the resource allocation required to respond to LSDM insights and observations.

The LSDM has the potential to be a powerful mechanism to strengthen SEQ regional planning responses in a more dynamic way to trigger responses to external market forces, however, this would need to reflect an evolution of its current role and function.

Equally, any consideration of a wider role for the LSDM would need to integrate with the governance for the delivery of the SEQ Regional Plan and be cognizant of the roles of the Regional Planning Committee, Housing Supply Expert Panel and other existing forums to facilitate collaboration on key planning matters (i.e. GAT including their Land Supply Advisory Group, local government working groups etc.).

While recommendations for the more formal integration of the LSDM into wider regional planning governance are outside of the scope of the current study, it is the view of the Panel that there is an opportunity here to gain greater clarity on the core function of the LSDM as well as to address stakeholder feedback around the need for greater connectivity from the LSDM to implementation.

"The primary objective of the [LSDM] report is to continue to work progressively towards a shared understanding for land supply and development activity data in SEQ and to better inform infrastructure planning and land supply planning and policy as part of the GMP. The long-term benefits of improved planning and policy are:

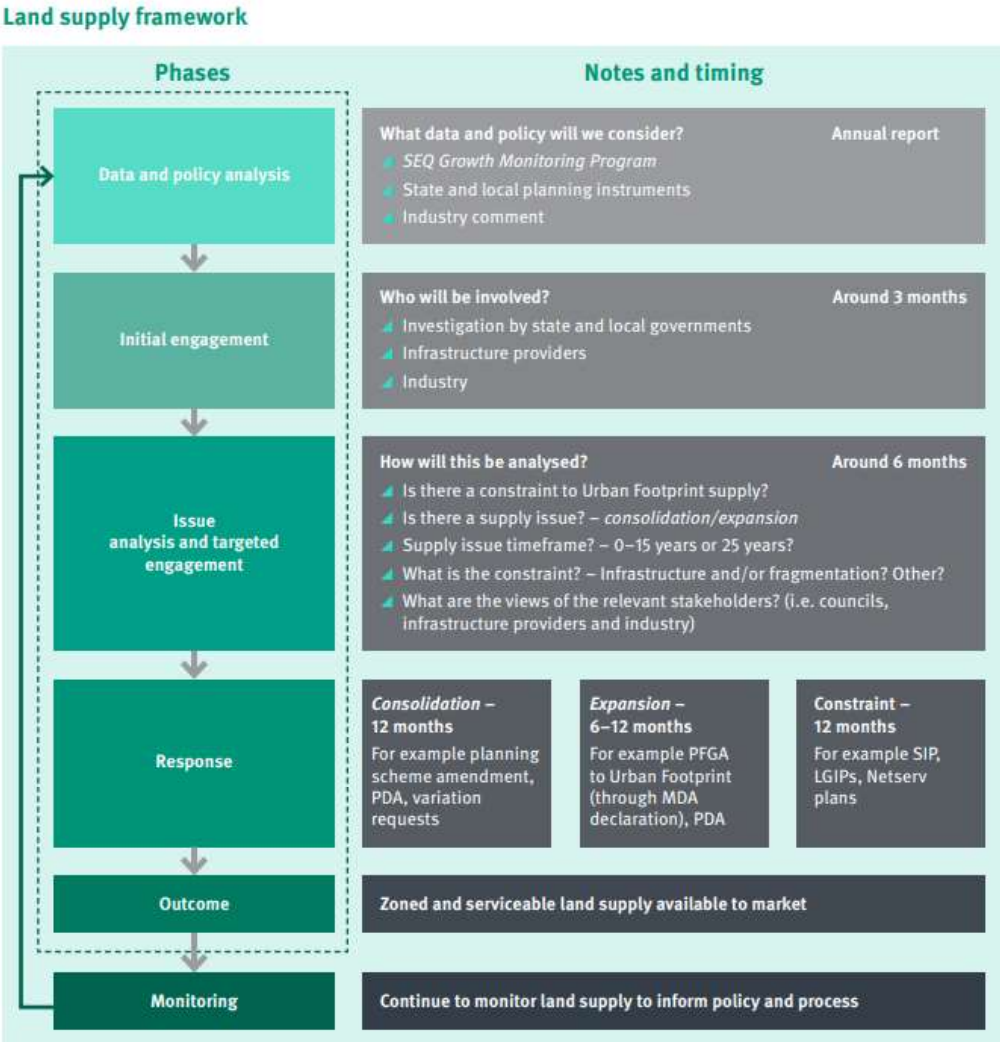
- being able to afford somewhere to live;
- having access to employment and other services; and
- continuing to enjoy the unique SEQ lifestyle.

This established and ongoing monitoring program will streamline future regional plan reviews and **provide the robust evidence to inform future policy decisions."**

LSDM Report, 2021, p18

The figure below is an excerpt from *ShapingSEQ*, outlining the proposed framework response to a shortfall in land supply across the region. While not explicitly called out, the LSDM (as a critical component of the Growth Monitoring Program) has a function at both the 'Monitoring' and 'Data and Policy Analysis' stages of the framework.

Figure 65: *ShapingSEQ* – Land supply framework for resolving shortfall in supply



Source: DSDILGP, 2017, p47.

What the diagram does not highlight, however, is the governance arrangements and accountabilities that will drive each step of the framework. Clarity around these governance arrangements and how the LSDM is then used to inform their activity will be critical to improving the value of the LSDM.

Panel Findings

The LSDM has the potential to be a powerful mechanism to strengthen SEQ regional planning responses in a more dynamic way to trigger responses to external market forces, however this would need to reflect an evolution of its current role and function.

Equally, any consideration of a wider role for the LSDM would need to be integrated with the governance for the delivery of the SEQ Regional Plan and be cognisant of the roles of the Regional Planning Committee, Housing Supply Expert Panel and other existing forums to facilitate collaboration on key planning matters (i.e. GAT including their Land Supply Advisory Group, local government working groups etc.).

While recommendations for the more formal integration of the LSDM into wider regional planning governance falls outside of the scope of the current study, it is the view of the Panel that there is an opportunity here to provide greater clarity on the core function of the LSDM as well as to address stakeholder feedback around the need for greater connectivity from the LSDM to implementation.

12.1 Recommendations

The Peer Review has identified the following opportunities to enhance the integration of the LSDM with regional planning activities and governance:

Table 27: Governance, regional planning and action recommendations

	Section	Recommendation	Responsibility
9.1	Governance, regional planning and action	Establish a pathway/feedback loop for clear communication back to industry around the actions taken by the State Government in response to the findings of the LSDM to clearly articulate the value and implications of the monitoring function.	DSDILGP in consultation with industry.
9.2	Governance, regional planning and action	Enhance the role played by HSEP in providing directions around potential actions for consideration in response to the findings of the LSDM. This will strengthen the impact and transparency of actions informed by the LSDM.	DSDILGP
9.3	Governance, regional planning and action	Identify/establish the triggers across each stage of the development pipeline that would warrant the need for policy intervention by local or state government. These should be based on the outcomes of the LSDM so that there is transparency in how the LSDM leads to action. This will require an understanding of the outcomes from the LSDM and how they relate to the development pipeline which would inform the nature and timing of responses for consideration.	DSDILGP / local government

	Section	Recommendation	Responsibility
9.4	Governance, regional planning and action	Provide HSEP the opportunity to brief the RPC on the implications of the LSDM Report findings to enhance the integration of the LSDM finding with regional planning considerations.	DSDILGP
9.5	Governance, regional planning and action	Include a summary of the actions undertaken by the State Government (e.g. establishing GAT) to demonstrate activity from the previous years' LSDM report findings, increasing the transparency of actions informed by the LSDM.	DSDILGP

13 Recommendations

Recommendations on the future of the delivery of the LSDM are outlined in section 13.2 for DSDILGP's consideration. The recommendations have been founded on the findings in the report analysis and informed by stakeholder insights. For each recommendation, the value, complexity, responsibility and timeframe for delivery of the actions have been identified. These will assist in the implementation, including prioritisation, of the actions.

The principles are drawn on to guide the review (Section 3.1) and are aligned to the recommendations, illustrating how these are delivered. The principles are:

- **Timeliness** | The recommendation aims to improve the expedience of information being made available to stakeholders to ensure it is timely and relevant.
- **Transparency** | The recommendation improves the ability of stakeholders to engage with and understand the approach used to develop the LSDM and understand how insights are drawn from data analysis.
- **Accountability** | The recommendation improves clarity in the responsibilities associated with governance and handling of data and the consideration and action regarding LSDM insights.
- **Confidence** | The recommendation improves stakeholder confidence around the overall outcome, process and implications of analysis undertaken for the LSDM.
- **Value** | The recommendation improves the value derived from the LSDM by stakeholders relative to the effort and resources used to develop the LSDM.
- **Purpose-limited** | The recommendation improves the alignment between data that is collected and the purpose that it is intended to be used. This aligns with a wider data principle that data collected for one specified purpose should not be used for a new, incompatible purpose.

13.1 Approach to recommendations

The Peer Review recommendations have been framed against the program logic (section 3.2) and include reference to the evaluation principles (section 3.1).

The Panel has included an analysis of the value and complexity to support DSDILGP in the prioritisation of the recommendations. A lead entity for delivery (e.g. DSDILGP) has been suggested as well as the time required to implement to assist in developing an implementation program. The scale used for each of these attributes is detailed below in the table.

Table 28: Recommendations scale

		Scale		
Value	the worth realised following the delivery of the recommendation.	High	Moderate	Low
Complexity	the level of complexity associated with the delivery of the recommendation	High	Moderate	Low
Time required to implement	duration to deliver the recommendation. Any changes would be reflected in the subsequent publication of the LSDM.	Short *Less than 6 months*	Moderate *6 -18 months*	Long *More than 18 months*

Source: KPMG,2021

13.2 Recommendations table

The Panel has identified in this report several recommendations which reflect each section of this Peer Review. They are presented in the table below with an assessment of principle, value, complexity, lead for delivery and time required to implement.

Table 29: Peer Review recommendations

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
1.1	Problem	Refine and elevate the call-out of the problem statement that is the driver for the continued investment in a land supply monitor (i.e. SEQ is a high-growth region with strong fundamentals for further growth.) The regional plan identifies the criticality for a monitoring function to track the long-term supply of land to meet this growth.	Purpose-limited	High	Low	DSDILGP	Short
2.1	Purpose	Draft a purpose statement and include it upfront in the LSDM report to clearly outline the role of the LSDM and maintain consistent stakeholder expectations (i.e. the provision of a longitudinal evidence base to measure and monitor land supply across the region and inform timely and appropriate policy responses at the regional and sub-regional level).	Purpose-limited	High	Low	DSDILGP	Short
2.2	Purpose	Detail the limitations (high level) of the report upfront to outline items out of scope for the LSDM to maintain consistent stakeholder expectations. This will assist in establishing consistent stakeholder expectations.	Purpose-limited	High	Low	DSDILGP	Short
3.1	Audience	Detail the intended audiences (DSDILGP, local government, utility providers and industry) of the LSDM and outline the acknowledged needs / intended value of the LSDM to these users (i.e. focus of industry on realistic supply; the focus of the DSDILGP on Shaping SEQ measures that matter; the focus of local government on the appropriateness of zoned ultimate capacity/ realistic supply; as well as a wider context of guiding	Purpose limited Value	High	Low	DSDILGP	Short

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
		future infrastructure planning, funding and financing priorities). This recommendation is linked to the data consumer profiles outlined in recommendation 5.5. This focus is also intended to inform the continual improvement of the LSDM Report to ensure maximum value is realised by these stakeholder groups.					
4.1	Measures - all	Engage with industry to inform the generation of a draft development pipeline. This will identify each point in the delivery of a dwelling from land designation to final delivery and how the region's land supply regime is performing against this. It will also articulate how the region's land supply regime is performing to ensure sufficient capacity at each stage of the pipeline. This will provide a means of benchmarking the efficiency of land supply approvals and available supply at the regional and sub-regional level as well as identifying steps in supply delivery not currently presented in the LSDM.	Value Confidence	High	Low	DSDILGP	Moderate
4.2	Measures - all	Engage with a communications specialist to improve communication of the methodology (Technical Notes). This may involve the inclusion of worked examples and clearer rationales for differing methodologies and the use of specific datasets.	Transparency Value	High	Moderate	DSDILGP	Short
4.3	Measures - all	Undertake a detailed assurance exercise on input data sourced from Local Government and utility providers (which was beyond the scope of this review) to ensure they are of suitable quality and format to inform the LSDM.	Confidence Transparency	High	Moderate	DSDILGP	Moderate
4.4	Measures - all	Report the LSDM growth measures relative to population growth rather than in absolute terms to enable a reference point for the measure and assessment of the performance of supply relative to demand.	Transparency Confidence Value	High	Low	DSDILGP	Short

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
4.5	Measures - all	Undertake a case study to test the transformation of raw data to understand the impact of assumptions on the final measures in the LSDM. Consider including sensitivities relating to raw data accuracy, future growth scenarios and market shocks.	Confidence Transparency	High	Moderate	DSDILGP	Moderate
4.6	Measures - Addressing variances across the region	Identification of critical pressure points for each local government along the development pipeline (as identified in recommendation 4.1) and inclusion in LSDM reporting. This will enable informed engagement between State Government, local government, utility providers and industry to understand the drivers and temporal impact of these pressures.	Value Confidence	High	Low	DSDILGP in consultation with industry, utility providers and local government	Moderate
4.7	Planned industrial land supply / take-up and planned industrial employment supply	Undertake engagement with industry, utility providers and local government stakeholders to understand, validate and test potential improvements to industrial land supply estimates (as a subset of employment land supply) to improve the value of the industrial land measures and the transparency of methodology to stakeholders.	Value Confidence Transparency	Moderate	Moderate	DSDILGP in consultation with local government and utility providers	Moderate
4.8	Planned industrial land supply / take-up and planned industrial employment supply	Work with industry, utility providers and local governments to develop methodologies that calculate a wider array of employment land use types (beyond just industrial). This will enable the wider assessment of employment land supply across the region in line with the direction of Shaping SEQ.	Value	High	High	DSDILGP in consultation with local government	Long
4.9	Planned dwelling supply and approved supply	Undertake annual engagement with industry to test and unpack the key assumptions informing planned realistic supply (both expansion and any future estimation of realistic consolidation supply) in local government areas experiencing land supply development pressure.	Transparency Value Confidence	High	Moderate	DSDILGP in consultation with industry	Moderate

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
4.10	Planned dwelling supply and approved supply	Undertake annual engagement with local government (jointly with industry and utility providers where appropriate) to test and unpack key assumptions informing planned realistic supply in each local government area, with a view to progressing to consistent definitions and applications across all local governments in SEQ.	Transparency Value Confidence	High	Moderate	DSDILGP in consultation with local government	Moderate
4.11	Planned dwelling supply and approved supply	Consider the utilisation of scenario-based forecasts for land demand when estimating years of supply. These could provide a high, medium and low estimate of demand for land (i.e. the draw-down of approved, unallocated lots), based upon the current approaches using the average annual expected future growth (planned dwelling supply) and average annual recent historical growth (approved supply), and two sensitivity scenarios informed by the state of lead indicators in the market factors reporting.	Confidence Value	High	Moderate	DSDILGP	Short
4.12	Measures - market factors	Include sub-regional commentary and findings on key market factor indicators for which data is available at a local government level. This will assist in identifying potential leading indicators of anticipated demand increase or decline in key sub-markets across the region.	Value Confidence	High	Moderate	DSDILGP	Moderate
4.13	Measures - market factors	Inclusion of additional leading indicators in the market factors reporting (i.e. off-the-plan sales) to provide further lead time on the need for a potential response to anticipated supply draw-down.	Timeliness Value Confidence	High	Low	DSDILGP in consultation with industry	Short
5.1	Data – People	Develop a set of principles for how data is to be governed end-to-end. This will provide local government and industry guidance on how data is governed and incorporated into the LSDM.	Value Confidence Accountability	High	Moderate	DSDILGP in consultation with local government	Moderate

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
5.2	Data – People	Enhance the business glossary, data dictionary, and data specifications to ensure there is enough detail, noting the nuances for how certain data sets and measures are to be interpreted in the report. This will include details related to how the data was transformed to ultimately produce the outputs and insights provided in the LSDM, considering audiences with varied technical capabilities. Recommendations 5.3, 4.6 & 4.7 are related to this and cover training for users as well as validation engagement with local government and industry.	Value Confidence Transparency	High	High	DSDILGP in consultation with local government	Moderate
5.3	Data – People	Leverage existing forums or establish a new forum focused on ensuring data is managed and custodians for datasets are clearly defined and understood. It is recommended that these forums also be utilised to provide training to new and existing contributors as appropriate to ensure all contributors have clarity on the inputs required, the intended use of their inputs and associated implications.	Value Confidence Transparency	High	High	DSDILGP in consultation with local government	Moderate
5.4	Data – People	Formalise data privacy and security policies to ensure effective controls are in place to mitigate privacy and security risks and provide assurance to the providers of sensitive data on its management and intended use.	Transparency	High	Low	DSDILGP	Short
5.5	Data – People	Formalise a set of data consumer profiles to inform the key questions the report is designed to answer, focusing on the data's relevance and reliability to the consumer.	Transparency Value	High	Low	DSDILGP	Short
5.6	Data – Process	Improve integration and automate the ingestion of consistent external datasets such as Australian Bureau of Statistics (ABS) data, rather than doing this manually and semi-regularly, meaning there's limited transparency over whether the data is up to date.	Transparency Timeliness Confidence	High	Moderate	DSDILGP	Moderate

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
5.7	Data – Process	Leverage the current principles used to track and communicate changes during the iterative review phase of creating the LSDM and apply those to each of the components of the data handling process. Establish data logging to provide an audit trail to help users to understand when data is added, modified, or deleted during the data collection, transformation, and modelling phases.	Transparency Confidence	High	Low	DSDILGP	Short
5.8	Data- Technology	Explore technology options to mature the current delivery process by uplifting people or process driven activities that support the governance, management, and/ or delivery of data. Alternatives could include: A single analytics platform that provides an end-to-end solution covering collection, integration, transformation, modelling and delivery of insights. Multiple tactical solutions to improve certain pain points related to data collection, transformation, preparation, and delivery processes. The DSDILGP team have been exploring alternate technology options that would fit in this category, such as PowerBI. Uplift in technology processing is considered a critical early step to the further exploration of a regional planning model.	Confidence Value	High	High	DSDILGP	Long
5.9	Data- Technology	Deliver continual evaluation and exploration of different reporting delivery approaches, such as reporting frequency, to best meet the user decision-making cycles and align with data collection and LSDM reporting cycles. This will include the more frequent update of measures where data availability permits.	Timeliness Value Confidence	High	Moderate	DSDILGP	Short
6.1	Delivery	Explore technology options to uplift people- or process-driven activities that support the governance, management or delivery of data to increase confidence in the current delivery process.	Value Confidence Transparency	High	Moderate	DSDILGP	Moderate

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
6.2	Delivery	Document the delivery approach at a high level (i.e. simplified process diagram) to illustrate the development timeframes for the LSDM and the role of each stakeholder group. This will transparently communicate the complexity of the LSDM and the cause of data lags in its development.	Transparency	High	Low	DSDILGP	Short
6.3	Delivery	Engage with the RPC as well as related local government stakeholder groups to discuss preferred options for the progression of a regional planning model. The scoping for these options will detail the value proposition realised from investing in a model, road map for delivery and stakeholder roles to establish early alignment across the members of the RPC and relevant local government stakeholder groups.	Value Accountability	High	Moderate	DSDILGP	Moderate
7.1	Visualisation	Improve the legibility of the online report to facilitate improved transparency of the existing information and communicate the information in a more digestible format. This will improve the understanding of the content by users.	Value Confidence Transparency	High	Low	DSDILGP	Short
7.2	Visualisation	Improve the presentation of data to include a range of formats (infographics, non-technical graphs, ability for comparison within SEQ LGAs) to provide greater value to stakeholders by meeting a range of audience needs.	Value Confidence Transparency	High	Low	DSDILGP	Short
7.3	Visualisation	Increase the usefulness of the LSDM by adding elements (such as an interactive dashboard, videos, interactive spatial mapping, development pipeline diagram, worked examples in the technical notes) that deliver more value to users.	Value Confidence Transparency	High	Moderate	DSDILGP	Moderate
8.1	Best Practice Research	Confirm the targeted audience (e.g. local governments, a subset of local governments, industry etc.) at the outset of each best practice research report and ensure that appropriately targeted	Value	Moderate	Moderate	DSDILGP	Moderate

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
		resources (training, implementation resources etc.) are also budgeted into BPR planning to maximise value.					
8.2	Best Practice Research	Confirm the (desired) outcome and intended benefits of each best practice research topic and confirm these with targeted audiences prior to commencement. This will assist in identifying and addressing any barriers to implementation and benefit realisation from the outset.	Value	Moderate	Low	DSDILGP	Short
8.3	Best Practice Research	Publish Best Practice Research as a standalone publication to 'lighten' the LSDM with clear linkages to LSDM where it has informed a change in methodology or finding.	Value Transparency	High	Low	DSDILGP	Short
8.4	Best Practice Research	Relevant best practice methods should be reflected in the guidance material for the creation of local planning assumptions datasets (e.g. for LGIPs and Netserv Plans) to ensure consistency across local planning datasets.	Value	High	High	DSDILGP	Moderate
9.1	Governance, regional planning and action	Establish a pathway/feedback loop for clear communication back to industry around the actions taken by the State Government in response to the findings of the LSDM to clearly articulate the value and implications of the monitoring function.	Value Confidence Transparency Accountability	High	Moderate	DSDILGP in consultation with industry.	Moderate
9.2	Governance, regional planning and action	Enhance the role played by HSEP in providing directions around potential actions for consideration in response to the findings of the LSDM. This will strengthen the impact and transparency of actions informed by the LSDM.	Value Confidence Transparency Accountability	High	Moderate	DSDILGP	Moderate

	Section	Recommendation	Principle	Value	Complexity	Lead for delivery	Time required to implement
9.3	Governance, regional planning and action	Identify/establish the triggers across each stage of the development pipeline that would warrant the need for policy intervention by local or state government. These should be based on the outcomes of the LSDM so that there is transparency in how the LSDM leads to action. This will require an understanding of the outcomes from the LSDM and how they relate to the development pipeline which would inform the nature and timing of responses for consideration.	Value Confidence Transparency Accountability	High	Moderate	DSDILGP / local government	Moderate
9.4	Governance, regional planning and action	Provide HSEP the opportunity to brief the RPC on the implications of the LSDM Report findings to enhance the integration of the LSDM finding with regional planning considerations.	Value Accountability	Moderate	Moderate	DSDILGP	Moderate
9.5	Governance, regional planning and action	Include a summary of the actions undertaken by the State Government (e.g. establishing GAT) to demonstrate activity from the previous years' LSDM report findings, increasing the transparency of actions informed by the LSDM.	Accountability	Moderate	Low	DSDILGP	Short

Appendix A: Stakeholders

Local Government	Industry Representatives	Utility Providers	State Government
Brisbane City Council City of Gold Coast Ipswich City Council Lockyer Valley Regional Council Logan City Council Moreton Bay Regional Council Noosa Shire Council Redland City Council Scenic Rim Regional Council Somerset Regional Council Sunshine Coast Council Toowoomba Regional Council	Housing Industry Association (HIA) Housing Supply Expert Panel (HSEP) Planning Institute of Australia (PIA) Property Council of Australia (PCA) Urban Development Institute of Australia (UDIA)	Gold Coast Water Queensland Urban Utilities Redland Water Unitywater	Queensland Treasury (QGSO) Department of State Development, Infrastructure, Local Government and Planning (DSDILGP)

Appendix B: Interim Report

LSDM peer review

Expert Panel Interim Observations

Department of State Development, Infrastructure, Local Government and Planning

1 March 2022

KPMG.com.au

Disclaimer

This interim report has been prepared as outlined with the Department of State Development, Infrastructure, Local Government and Planning in the Scope Section of the engagement contract dated 19 August 2021. The services provided in connection with this engagement comprise an advisory engagement, which is not subject to assurance or other standards issued by the Australian Auditing and Assurance Standards Board and, consequently no opinions or conclusions intended to convey assurance have been expressed.

No warranty of completeness, accuracy or reliability is given in relation to the statements and representations made by, and the information and documentation provided by stakeholders consulted as part of the process.

KPMG have indicated within this interim report the sources of the information provided. We have not sought to independently verify those sources unless otherwise noted within the report.

KPMG is under no obligation in any circumstance to update this interim report, in either oral or written form, for events occurring after the report has been issued in final form.

Contents

1 Purpose of the interim report

The purpose of this interim report is to document the early observations from the peer review of the Land Supply Development Monitoring Report (LSDM) produced annually by the Department of State Development, Infrastructure, Local Government and Planning (DSDILGP). The interim observations provide an initial view on where the peer reviewers consider there are opportunities for the Department to strengthen program outcomes for the LSDM Report.

This interim deliverable is informed by consultation activities and identifies preliminary observations and opportunities for improvement by focus areas. The content of this report will be further refined and expended following consideration and analysis of the evidence to inform recommendations of the peer reviewers in a final report.

Critically, while the interim report offers some early actions that could be considered as immediate priorities by the Department, the peer review panel is continuing to consider the breadth and depth of the recommendations that will be made. Accordingly, this report should be viewed as an early directional statement of the thematic areas that will form the focus for the final report. The final report will provide a fulsome review of the stakeholder insights, findings, recommendation areas and recommendations. Outlined are the high level stages of delivery for the LSDM peer review.

2 Purpose and scope of the peer review

The scope of the peer review is to provide insight and recommendations to DSDILGP on the LSDM's objectives and processes including data collection, analysis and report presentation. The Review's findings will inform the government's response regarding next steps for consideration or adoption of any changes to the LSDM data, methods and reporting. This review will collate findings from all stakeholders, with the focus being on systematic improvements that could enhance the LSDM in program outcomes.

The following are the key elements for the scope of the Review:

1. **Purpose of the report and intended audiences:** The review is determining who the intended audience for the report is, and whether the LSDM achieves its intended purpose and meets the needs of the audience.
2. **Data quality, governance and management:** The review is exploring the methodologies underpinning the LSDM and identification of any opportunities for improvement, including whether the current scope of data in the report is fit-for-purpose, and meets the needs of the data and information consumers. In addition, the peer review is identifying opportunities to improve the process of data provisioning and analysis as well as the data governance and management frameworks that support these processes.
3. **Reporting timeframe:** The review is exploring whether there are any opportunities for alternative reporting timeframes that would deliver greater value to stakeholders.
4. **Report presentation:** The review is exploring what opportunities there are to improve the structure and presentation of the LSDM, and if there are any other resourcing implications.

Out of scope of the review is the sourcing of new data, updating data sets and updating models (including modelling outputs).

3 Peer review approach

The peer review considered opportunities for continuous improvement, using a combination of quantitative and qualitative analysis to detail stakeholder views, and key success factors and barriers to delivery. The approach to the review of the LSDM leveraged a program logic framework to structure the approach and key principles to guide recommendations.

3.1 Program logic

The program logic is used to determine the relationship between the stated problem, the intended outcomes of the LSDM and development and delivery of the LSDM report. Figure 1 below details the program logic framework.

The policy objectives, including policy direction, LSDM purpose and audience, detail overarching drivers the LSDM should address.

The LSDM delivery framework includes problem statement, data, analysis, insights, outcomes and overarching delivery approach. These elements consider the process to deliver the LSDM report, ensuring alignment from problem to outcome.

To frame this review, the components of the program logic have been applied to the synthesis of stakeholder consultation feedback.

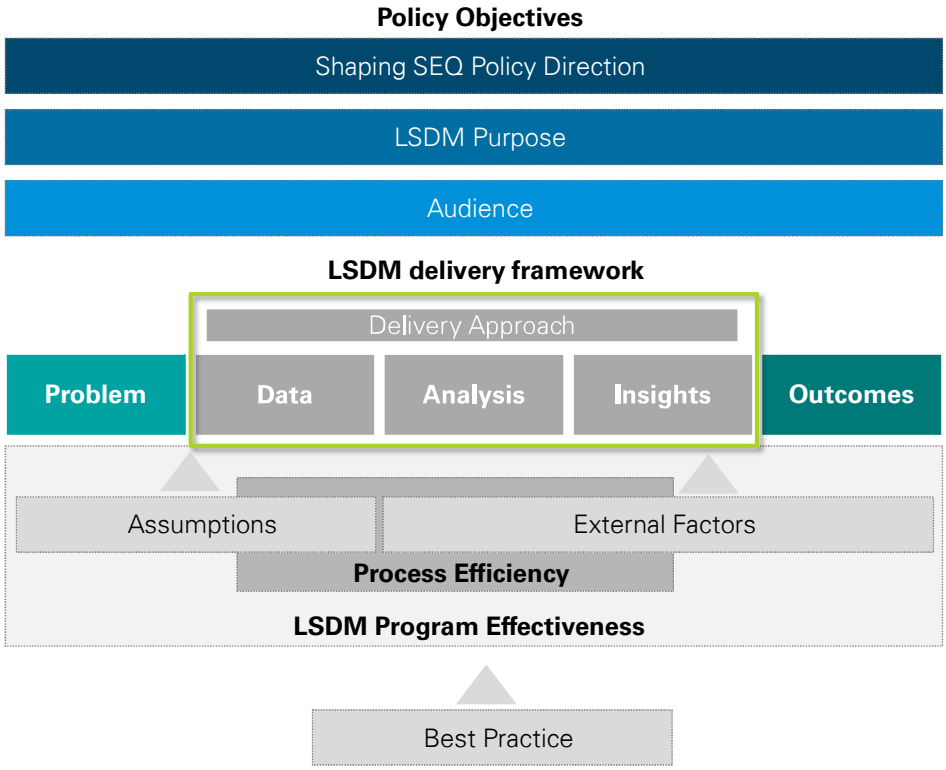


Figure 1: Program logic framework

Source: KPMG, 2021

3.2 Principles for review

The following principles have been identified by the peer reviewers to guide the review. These follow the reflections of stakeholders through the consultation and provide a frame of reference to shape peer reviewer observations and recommendations.

- **Timeliness** | The recommendation improves the expedience of information being made available to stakeholders to ensure it is timely and relevant.
- **Transparency** | The recommendation improves the ability for stakeholders to engage with and understand the approach used to develop the LSDM and understand how insights are drawn from data analysis.
- **Accountability** | The recommendation improves clarity in the responsibilities associated with governance and handling of data and the consideration and action regarding LSDM insights.
- **Confidence** | The recommendations will improve stakeholder confidence around the overall outcome, process, data and implications of analysis undertaken for the LSDM.
- **Value** | The recommendations will improve the value derived from the LSDM by stakeholders relative to the effort and resources used to develop the LSDM.
- **Purpose limited** | The recommendations will improve the alignment between data that is collected and the purpose that it is intended to be used for. This aligns with a wider data principle that data collected for one specified purpose should not be used for a new, incompatible purpose.

3.3 Stakeholder consultation

To gather insights from stakeholders, the peer review team conducted a series of interviews. The review to date has been informed by a short survey and by face to face consultation with DSDILGP, local governments, utility providers and industry stakeholders as outlined in the table below. To date, 21 consultations have been held with representatives from five industry bodies, twelve local governments, two utility providers, one Queensland government agency, and the Housing Supply Expert Panel. Each consultation was approximately one hour with representatives from a variety of levels and technical disciplines within each organisation.

Local Government	Industry Representatives	Utility Providers	State Government
• Brisbane City Council • City of Gold Coast • Ipswich City Council • Lockyer Valley Regional Council • Logan City Council • Moreton Bay Regional Council • Noosa Shire Council • Redland City Council • Scenic Rim Regional Council • Somerset Regional Council • Sunshine Coast Council • Toowoomba Regional Council	• Housing Industry Association (HIA) • Housing Supply Expert Panel (HSEP) • Planning Institute of Australia (PIA) • Property Council of Australia (PCA) • Urban Development Institute of Australia (UDIA)	• Gold Coast Water • Queensland Urban Utilities • Redland Water • Unitywater	• Queensland Treasury (QGSO) • Department of State Development, Infrastructure, Local Government and Planning (DSDILGP)

The interviews sought to extract deep insights from stakeholders on the LSDM objectives and process including data collection and report preparation. The consultation sought stakeholder views in regards to:

- **Purpose of the report and audiences;**
- **Impact of key measures;**
- **Report outputs to support analysis and decision-making;**
- **Process and governance of data provision; and**
- **Data sources, collection, and integration**

An online survey to the complete stakeholder list was administered for four weeks between 5 October 2021 and 1 November 2021, running in conjunction with the face-to-face stakeholder consultations. The survey questions sought stakeholder views on the effectiveness of various elements of the LSDM and opportunities for improvement. A full list of the survey questions and results are provided in A. The detailed analysis of the survey results will be included in the Final Report.

The confidential survey was issued to 21 stakeholder organisations with the opportunity for multiple people to respond. In total, of the 54 stakeholders were issued with the survey and 23 responses were completed.

The online survey resulted in a second quantitative data set which provided further validation of the views communicated by stakeholder during the face-to-face interviews.

This interim report has collated findings from all stakeholders, with the focus being on systematic improvements that could deliver on the program outcomes. The outcomes of the consultation will be drawn together as part of the evidence base for the peer review of the LSDM.

4 Core stakeholder perspectives

The consultation phase of the engagement has intentionally focussed on gathering as broad a perspective from the primary users and contributors to the LSDM. As highlighted in the previous chapter, this has included representatives from local government, industry representatives, utility providers and the State Government.

An early focus of consultation with stakeholders was testing the purpose and audience of the LSDM, with the State highlighting the following as a starting point for discussion:

*The LSDM **measures and monitors land supply availability in SEQ** to directly report on the Measures that Matter, as well as **capturing long term development trends**, providing support to local governments to inform future updates to local government and utility provider databases as well as to support data collection and analysis methodologies through **best practice research**, inform utility providers and local government **decision making** around land supply, infrastructure planning and funding, and provide a tool / evidence base for the State to discuss growth and change with all stakeholders.*

In considering this purpose, stakeholders universally acknowledged the value of a State-led monitoring function for land supply and a commitment to work with DSDILGP to strengthen the LSDM as well as support regional planning ambitions. Feedback consistently highlighted the importance of an accurate and timely assessment of the status of the land supply pipeline relative to current and anticipated demand.

Consultation has highlighted a number of key strengths to leverage going forward including:

- All stakeholders recognised the value of the LSDM, agreeing land supply monitoring is important for the future of SEQ.
- The Growth Monitoring Program (GMP) team have a strong relationship with stakeholders and should continue to build and foster this relationship. The development of the LSDM is underpinned by collaboration and goodwill.
- There was wide support for the breadth of the indicators included in the LSDM with stakeholder consultation highlighting the most useful measures were planned dwelling supply, and approved supply.
- Stakeholders acknowledged the strengths of ongoing commitment of DSDILGP to improve the LSDM methodology. These improvements in the LSDM have been noticed and encouraged by stakeholders.
- The LSDM's structure and reporting does provide optionality for stakeholders using the report and caters to differing levels of analysis and frequency

The role of the LSDM and the manner in which it delivers this function was a topic that highlighted a series of contrasting perspectives across the stakeholder groups. These included:

- ***Monitoring relative to action:*** these contrasting perspectives highlighted a divergence in views on whether the LSDM function should predominantly be to monitor and provide a consistent view on the state of land supply across the region, or whether it should be more formally linked to thresholds under which intervention in the market is made by planning authorities to accelerate

supply. Industry representatives were largely of the view that the role should extend to be more tightly linked to areas for action.

- ***Regional planning relative to local planning insight:*** These contrasting perspectives focussed on the relative granularity of data and what is considered realistic supply both underpin insights and assumptions in the LSDM Report. While there was a degree of comfort that the local government level was the appropriate level for rolled up analysis and reporting, there were differing views on the extent to which smaller level assumptions (subregional or precinct) should be considered to inform a more accurate view of realistic supply. The State Government identified a desire to continue to ensure accuracy for the data which has been explored in the best practice research on the regional planning model (formerly small area growth assumptions). Industry identified some assumptions were highlighted to have little relevance to the realistic developability of land. For example, where there are specific large land holdings that are not likely to come to market (in a real-world scenario) and therefore are considered not realistically available. While consideration of specific localities may increase industry confidence and accuracy of the data, there may be a compromise on timeliness for the delivery of the LSDM. A strong view from local government consultations was that the LSDM should focus on insights that influence State and regional level planning decisions. Some of these local government stakeholders highlighted the LSDM should not be linked to local government actions. This view was on the basis that this level of decision making was best served by more granular planning tools and analysis.
- ***Static relative to dynamic reporting:*** The desire for an accurate and timely monitoring function resulted in a number of stakeholders highlighting the opportunity for the LSDM to move to a more dynamic reporting function that updates in line with iteratively released data over the course of the year. More frequent reporting of some measures would provide confidence in the data and transparently demonstrate that if some measures are not updated it is for logistical reasons not because of neglect or error. Conversely, some local government stakeholders identified the report could be less frequent, as often the data inputs did not change year to year. This is particularly the case in parts of the region that have more stable growth trends. Stakeholders could see a model where the main growth areas SEQ were subject to more regular and dynamic reporting than those in more rural settings.
- ***Simplicity relative to comprehensive analysis:*** There was a common view that the content of the LSDM has evolved significantly over the four years to date, with both the scope and rigour of analysis evolving each year to reflect stakeholder feedback. This expansion in scope, however, has led to reflections from some stakeholders that the scale of material presented in the LSDM has become difficult to engage with and that this has moved away from the core question of available supply. For example, it was identified that Best Practice Research has informed improvements to LSDM methodologies and delivers a commitment to a program of continuous improvement. However, some stakeholders found it difficult to see the value of Best Practice Research including the nexus between how research mapped to improvements to the LSDM. These contrasting perspectives between simplicity of insight presentation relative to the need for a comprehensive database has arisen across stakeholder groups.
- ***Technical relative to non-technical audiences:*** Stakeholders offered differing views on the need for the LSDM to speak to non-technical audiences. This was largely attributable to their views on the purpose of the LSDM and its associated need to speak to a breadth of audiences. To the extent that their views were that the State was the primary audience, then a technical lens was considered appropriate, as these stakeholders were similarly aligned in their view that this should be attached to State-led interventions. To this extent, the tool should provide a transparent monitor for use by industry and local government, there was significant feedback that greater ease of interface non-technical language was required.

- ***Accuracy of data relative to purpose:*** Industry provided consistent feedback that there is concern with the accuracy of planned supply figures reported in the LSDM. This comment on accuracy comprises a number of layers, including the time lag between data collection and reporting as well as differing views between industry and government on the assumptions applied to transform Council data into an estimate of realistic supply. This concern is specifically targeted at the industry desire to see short-term accuracy of data that can inform short term planning responses. In contrast, some local governments highlighted that the time lag in input data was less of a concern to the extent that the LSDM was performing a longer term monitoring function around tracking supply against a longer term regional planning horizon. ShapingSEQ outlines in the '*Grow' Measures that Matter* that the preferred land supply benchmarks are "a minimum 15 years zoned and able to be serviced, of each land use type in each LGA" and a "minimum 4 years approved" supply.[1] Ensuring that the LSDM data delivers the ShapingSEQ policy direction will form a core consideration for the Panel.

Opportunities to address these differing perspectives have been highlighted over the subsequent sections of this interim observations report.

[1] The purpose of the LSDM is outlined below as developed in consultation with DSDILGP.

*The LSDM **measures and monitors land supply availability in SEQ** to directly report on the Measures that Matter, as well as **capturing development trends**, providing support to local governments to inform future updates to local government and utility provider databases as well as to support data collection and analysis methodologies through **best practice research**, inform utility providers and local government **decision making** around land supply, infrastructure planning and funding, and provide a tool / evidence base for the State to discuss growth and change with all stakeholders.*

5 Planning and development context

Consultation highlighted the value that stakeholders placed on the LSDM. However, it was apparent that stakeholder expectations of the LSDM has evolved over the last four years. In the minds of some stakeholders the LSDM provides a reflection of the efficacy of SEQ Regional Plan implementation.

With this emphasis, however, comes the perspectives highlighted in the previous chapter between the purpose of the LSDM as a monitor versus being a trigger for regional planning implementation responses. Stakeholders across industry, local government and utilities are not aligned with DSDILGP on the role of the LSDM in supporting or triggering decision making and it was noted that the LSDM does not currently propose actions based on identified benchmarks and trends. It was also not clear to stakeholders how the outcomes of the LSDM inform policy actions, investment priorities and the resource allocation required to respond to LSDM observations.

Having said this, the State has initiated a range of actions in recent times in response to growth pressures and a number of Councils having also taken action to advance strategic planning, master plan precincts and land release to support growth objectives. Examples of actions taken by the State in recent times include:

- Establishment of the Growth Areas Team (GAT) within the DSDLIGP
- Development of the first GAT Pilot at Caboolture West
- Funding of catalytic infrastructure through the Building Acceleration Fund for Southern Redland Bay
- Funding of catalytic infrastructure through the Building Acceleration Fund for Greater Flagstone, and Ripley Valley.

The LSDM has the potential to be an important mechanism to strengthen SEQ regional planning response in a more dynamic way to reflect external market forces. To successfully enable a clear path forward for SEQ, the LSDM could include projections for demand which recognise the uncertainty and shocks which are present in the market whilst providing a long term view for the region.

Equally, any consideration of a wider role for the LSDM would need to integrate with the governance for the delivery of the regional plan, including the RPC, HSEP and interface with industry and local government between regional planning updates.

While recommendations for the integration of the LSDM into wider regional planning governance processes falls outside of the scope of the current review, it is the view of the Panel that there is an opportunity here to gain greater clarity on the core function of the LSDM as well as to address stakeholder feedback around the need for greater connectivity from the LSDM to implementation.

Direction statements (opportunities) that the panel will explore in preparing their recommendations for the final report have been summarised below, alongside some early actions that offer a 'no regrets' set of immediate next steps.

Opportunity	Early Actions
The following opportunities have been identified which will be further explored in the final report: • A pathway for clear communication back to industry around the implications of the LSDM and other actions taken by the State Government in relation to regional planning matters. This could include a consideration of consumer preferences (for example location, product type and price for both residential and commercial) and the way in which policy does or doesn't respond to this. • Strengthening the role of the HSEP in providing advice to the RPC, State and local governments on the opportunities to respond to the LSDM Report. • Agreed policy actions or triggers based on the outcomes of the LSDM. This could involve the use of the LSDM to inform improved application and use of relevant planning instruments through provision of additional insights. • Opportunities to strengthen the alignment and /or transparency between the findings of the LSDM and the State's commentary and findings in planning scheme State Interest Checks.	• To improve ***value*** and ***confidence***, provide the HSEP with a formal requirement to regularly report to the groups in the SEQ regional planning governance structure on the implications of the LSDM Report findings for regional planning matters. • To improve ***transparency*** and ***accountability***, include a summary of the actions undertaken by the State Government and Councils to demonstrate activity undertaken on the basis of the previous years' LSDM report findings.

6 Review opportunity focus areas

Outlined below are the preliminary observations for inclusion in the 2021 LSDM. The peer reviewers will further consider these findings to identify recommendations for the final report. The panel has adopted a series of principles for review (outlined in Section 3) which underpins the development of recommendations.

The actions outlined in the table below reflect no regret decisions that can be pursued prior to understanding the recommendations from the Final Report. These actions broadly relate to improved engagement and empowerment of stakeholders, data management and governance and communication of information.

Each preliminary observation has been grouped under one of the stakeholder consultation outcomes listed in section 3.3.

- **Audience** Purpose of the report and audiences;
- **Measures** Impact of key measures;
- **Data Governance** Process and governance of data provision;
- **Data Quality** Data sources, collection, and integration; and
- **Insight Delivery** Report outputs to support analysis and decision-making.

With the addition of **Market Dynamics** as its own theme due to the significance and consistent observations that were heard during the stakeholder consultations.

Consultation Theme	Opportunity	Early Action
## Audience Overall, consultation highlighted that the primary audience of the LSDM is unclear, typically with each stakeholder group identifying another stakeholder group as the audience.	The following opportunities have been identified which will be further explored in the final report: • As the report is a monitoring mechanism for ShapingSEQ, a state regional planning initiative, the SEQ Regional Planning branch of DSDILGP and the SEQ Regional Planning Committee could be considered the primary audience for the LSDM. • As the report is published online there are secondary audiences, like Industry, who are interested and impacted by the State's regional planning approach and the role of local government in these matters. Industry has an important role in catering for demand and enabling supply in the market. As such Industry remains an important participant in helping to deliver regional and local planning outcomes through its participation in the market.	Given the material linkage between the intended purpose of the LSDM and the audience the panel will further consider these matters and provide advice in the final report.

## Measures Consultation highlighted that confidence in measures is low for some local government areas and industry stakeholders, particularly planned supply due to differing methodologies and the assumptions underpinning these across local government areas, particularly around realistic and available supply, and consolidation / expansion boundaries. Consultation highlighted that the measure for industrial land supply was perceived to be inaccurate as the methodology is too coarse to reflect the supply of employment lands.	The following opportunities have been identified which will be further explored in the final report: • While sales and price data are effective in providing information for the calculation of some LSDM measures, these are predominantly a point in time estimate of market demand relative to supply. Leading indicators and scenarios around central demand projections could assist in guiding the need for a supply response. • It was identified that industrial land will be an important measure to support given the increasing focus on planning for employment lands to support industries which have a competitive and/or comparative advantages to drive economic growth in the region. The measure currently doesn't fully capture the demand for different types of employment land uses nor specific industrial land uses across the region. There is wider interest from stakeholders regarding, capturing a broader range economic land-uses. Further exploration could be given to broader employment land use categories in order to accurately measure the availability of lands to support economic development in a manner that would inform subsequent policy and planning considerations. • Consideration of the relationship between affordable living and the role of LSDM given ShapingSEQ's focus on affordable living rather than the cost of housing. The panel is further considering if there is a role of the LSDM in monitoring affordable living. Currently housing affordability (price) and land supply are measured in the LSDM, however these do not measure affordable living. • Consideration of the introduction of 'Industry Insight' roundtables or surveys to test, challenge, and explain assumptions to support transparency and understanding around assumptions and methods	• To improve ***accuracy*** of the measures, engage with stakeholders to understand potential improvements to further develop estimates of industrial land and consider the capacity to measure a broader definition of employment land supply. • To improve ***value*** and ***confidence*** by engaging with industry around the key assumptions that inform planned realistic supply in each local government area. Consideration of planned realistic supply should be considered by local government and state government to ensure consistency across the LSDM. • To improve ***value*** and ***confidence*** in the LSDM by engaging with industry around a draft development pipeline which identifies each point in the delivery pipeline, how the region's land supply regime is performing against this as a means of benchmarking the efficiency of land supply approvals and available supply. This would need to include consideration of how stakeholders (including Local Government) capture this information and supply it to the State. It would also require consideration of an appropriate baseline benchmarking approach which could adopt a differential focus to provide a distinction between high

	underpinning the accuracy of planned and industrial supply calculations. • Consideration of benchmarking within the region (or considering other jurisdictions) to understand the relative performance of the SEQ land supply model as well as the factors influencing demand and supply in line with the GMP core principles relating to continuous improvement and stakeholder engagement. Further consideration of what level of data granularity is required to ensure sufficient accuracy, in order to deliver the purpose of the LSDM as a region wide, and potentially, local government level tool to inform planning policy and decisions.	growth areas and lower growth areas in SEQ.

## Data Governance As identified above, consultation highlighted that confidence in measures is low for some local government areas and industry stakeholders. The trust in the accuracy of what the data and measures are representing is impacted by a lack of unified understanding of the common language around data and measures, the differences in how data is transformed across local government areas, and limited transparency across the methodologies.	Following consultations, the following opportunities have been identified which will be further explored in the final report: • Develop a formalised set of data governance principles for the end-to-end data lifecycle management of the LSDM that covers not only DSDILGP but also representatives from the groups that provision the information as well as the groups who consume the LSDM. • Develop (or enhance) a business glossary, a data dictionary and data specifications to ensure there is a common language and understanding of how data is to be provisioned by 3rd parties, as well as how data was transformed to ultimately produce the data and insights provided in the LSDM. • Leverage existing working groups or establish data management working groups to include the responsibilities of governing priority data issues and initiatives such as the low confidence in the data and measures. • Formalise a data privacy and security policy to ensure the secure management of data, focusing on the purpose and expected use for provisioned data, as well as compliance with the security requirements, effective controls are in place to mitigate any potential risks and the providers of sensitive data are confident with its management and intended use.	• Increase the ***transparency*** and ***value*** of the LSDM by developing a set of guiding principles that help resolve all types of data-related issues to ensure data is managed effectively and securely. • Increase ***transparency*** and ***confidence,*** by enhancing the business glossary, data dictionary and data specification for how data is to be provisioned to the DSDILGP and how it should be interpreted in the LSDM. • Define and document a Data Privacy and Security Policy, focusing on the purpose and expected use for provisioned data associated with the LSDM to improve the ***accountability*** and ***transparency*** in the LSDM.

## Data Quality Consultation highlighted that industry had low confidence in several reported measures, particularly planned and approved land supply. Confidence is undermined by long lag time in data sets, as well as perceived reduction in data integrity when managing the breadth and quantity of data involved in the preparation of the LSDM and limited third party assurance of data accuracy.	The following opportunities have been identified which will be further explored in the final report: • Formalise a set of data consumer profiles (e.g. industry or high growth local governments) to inform the key questions the report is looking to answer, focusing on the data's relevance and reliability to the consumer. • There are consistent and semi-regular data extracts being pulled form external sources that could be automated and improved. For example, the data received from Australian Bureau of Statistics (ABS). • Additional validation between the State, local government, and industry around growth areas to provide an additional level of transparency and understanding of the relationship between planned and approved supply assumptions. • Leverage the current principles used to track and communicate changes during the iterative review phase of creating the LSDM and apply those to each of the components of the data handling process. Establish data logging to provide an audit trail to help users to understand when data is added, modified, or deleted during the data collection, transformation, and modelling phases.	• To increase the ***value*** derived from the LSDM, formalise a set of data consumer profiles to inform the key questions the report is looking to answer, which will drive how that information is presented and visualised in the LSDM. • To increase the ***timeliness*** of the LSDM, improve efficiency sourcing data by directly integrating with consistent and semi-regular data extracts.

## Insights Delivery Consultation highlighted that the current approach to developing the LSDM Report can be resource intensive for Local Governments. Most Local Government stakeholders noted that there is a high level of collaboration and goodwill, and valued support received from State Government. It was also identified that there are users of the LSDM Report who have varied data consumption preferences, such as supporting narratives compared to the data or key tabular take-outs. Some stakeholders noted that the information was difficult to engage with, or that the report was lengthy. Consultation highlighted that the graphics and narrative in the existing report were of the most use, however there was a desire for the inclusion of interactive mapping, more graphics and extractable information.	The following opportunities have been identified which will be further explored in the final report: **Delivery Approach** • Explore technology options to mature the current delivery process by uplifting people or process driven activities that support the governance, management, or delivery of data. Options can include: — A single analytics platform can provide an end-to-end solution that covers collection, integration, transformation, modelling and delivery of insights. — Tactical solutions[2] implemented for different stages of the data process to improve efficiency or effectiveness of data handling and delivery processes. • Deliver continual evaluation and exploration of different reporting delivery approaches, such as reporting frequency, to best meet the user decision-making cycles and align with data collection and LSDM reporting cycles. **Visualisation** • An online dashboard with interactive visuals could support an improved user experience and easier navigation across data sets. They can also offer extensive data modelling capabilities that support more frequent and varied updates to data sets. • Improve the transparency of the data, measurements and reported insights through a well communicated, user-friendly and single sourced delivery platform. This would build on the current knowledge sharing sessions and technical guides by including how	**Delivery approach** Any determinations related to the delivery approach would be material and require further evaluation. These will be considered in the final report. **Visualisation** • To improve ***transparency***, include a visualisation of the development pipeline in the report to identify the stages of development, aligned to planned and approved dwelling supply, development actions and potential barriers to supply.

[2] A tactical solution is an application/system that targets a smaller component of a process. It is not necessarily a long-term investment but it provides tactical value by improving part of a process by making it more efficient or effective.

Finally, it was identified that technology solutions could improve the delivery process, however the significant barriers to change included expertise and resourcing.	to guides (such as short guiding videos) or worked examples on how best to access and use the information. • Additional and enhanced visuals delivering spatial views can improve the users experience exploring trends, patterns, and outliers across geographic regions and navigating the differences across local government areas. • An improved understanding of the development pipeline could be delivered through the visualisation of capacity at each stage of the approvals process, including the stages of development, activities, potential barriers, and the time it takes for land be sold to the market. The LSDM measures for planned and approved dwelling supply could be aligned to each stage.	

## Market dynamics Consultation highlighted that there have been changing consumer preferences for housing types, including household formation and desired housing product. These dynamics are not currently captured in the LSDM assumptions.	The following opportunities have been identified which will be further explored in the final report: • Inclusion of a further breakdown in the LSDM of market factors and drivers of demand in each LGA in order to support the supply assessment and analysis methodology. • Inclusion of industry insight relating to housing preferences, products, price, and realistic availability in the market which could provide further context and analysis to inform the LSDM. • Commentary could be included in the LSDM on the challenges and barriers to the land delivery process considering each stage of the land delivery. • Further exploration around a more temporal view of market dynamics to inform confidence around the intent and realistic ability to bring land to market. • Population growth is the most important driver of demand. As such there is opportunity to communicate both historical and projected population trends. This analysis may also consider using scenarios to communicate the uncertainty in the process of determining land supply. • Further analysis of the underlying demand for housing (including demographic characteristics), in the LSDM or the Market Factors report, could provide useful context support the outcomes of the LSDM. This may include a detailed understanding of household formation based on clear underlying drivers such as fertility rates, mortality rates, migration (intrastate, interstate, international), and an analysis of other world events that are impacting these drivers.	• To improve ***accuracy*** and ***value***, the market factors report should ensure that growth measures are presented relative to population growth rather than presented in absolute. • To improve ***value*** and ***confidence*** by engaging with industry around the key assumptions that inform realistic supply in each local government area. Consideration of realistic supply should be considered by local government and state government to ensure consistency across the LSDM. • To improve the ***value*** of the LSDM report, HSEP should present on its observations around the market dynamics influencing the 2021 LSDM. • To improve ***value*** and ***confidence***, by establishing a process to deliver ongoing insight and validation of the LSDM post release to inform regional planning matters. There is an opportunity strengthen the implementation of the SEQ regional plan by considering and building on the LSDM insights.

7 Appendix A: Survey

The following questions comprised the survey that stakeholders were asked to complete in order to obtain their views on the LSDM.

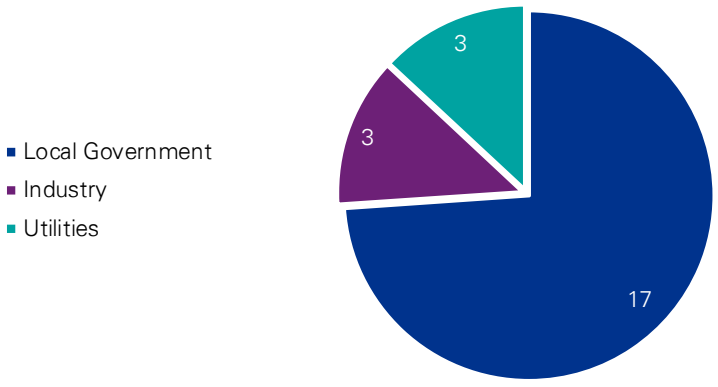
1. Which organisation do you represent?
2. How familiar are you with the LSDM?
3. In your view, what is the purpose of the LSDM? (top three)
4. How do you use the LSDM?
5. How frequently do you access the LSDM?
6. In your view, who is the primary audience for the LSDM? (ranking)
7. How easy is the LSDM to use for your purposes?
8. How easy is it to understand the information presented within the LSDM?
9. The LSDM presents information in a number of ways. Which of these ways do you think is the most impactful and useful?
10. Are there any other ways you would like to see the information and / or LSDM presented?
11. Thinking about how you use the report, how useful are the following report outcomes?
    a) Planned dwelling supply measure
    b) Approved supply measure
    c) Planned industrial land supply measure
    d) Planned industrial employment supply measure
    e) Changes in dwelling density measure
    f) Changes in housing type measure
    g) Sales and price measure
    h) Dwelling growth measure
    i) Best Practice Research
    j) Market factors reporting
12. Do you think the LSDM could be improved?
13. What are the areas that you feel could improve? (top three)
14. Over the last four years best practice research has been integrated into the LSDM with the aim to improve the quality of the report and improve the approach to determining land supply. What has been the impact of the best practice research on the LSDM and/or your organisation's approach to determining land supply?
15. Please outline the areas of best practice research that you have found the most valuable since the release of the LSDM?

16. If there is any other feedback you would like to provide regarding the LSDM, please detail below.

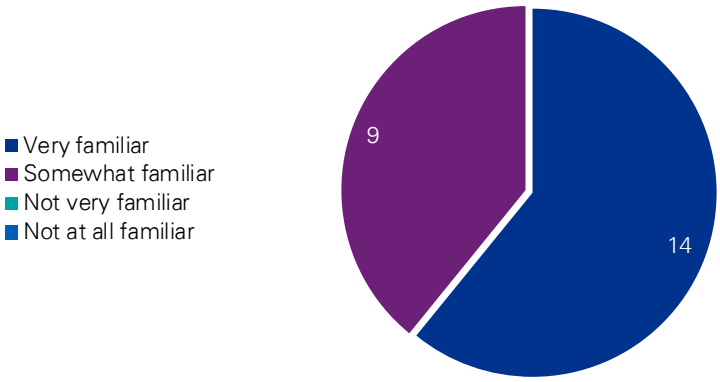
The following comprise the responses to the stakeholder survey.

1. Which organisation do you represent?

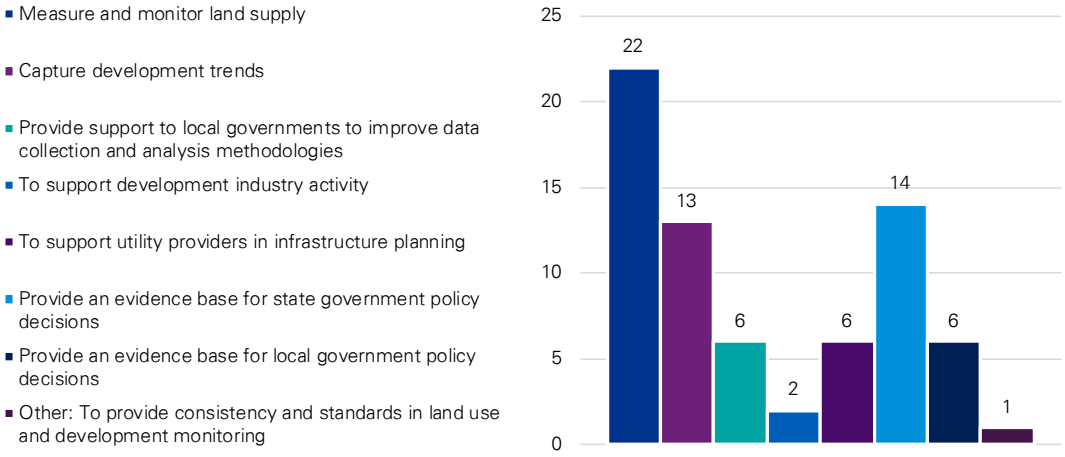
Brisbane City Council	1
City of Gold Coast	2
Ipswich City Council	1
Redland City Council	1
Logan City Council	1
Sunshine Coast Council	1
Toowoomba Regional Council	3
Moreton Bay Regional Council	2
Scenic Rim Regional Council	1
Somerset Regional Council	1
Lockyer Valley Regional Council	1
Noosa Shire Council	2
Urban Development Institute of Australia	0
Housing Industry Association	1
Property Council of Australia	1
Queensland Treasury - QGSO	0
DSDILGP	0
Urban Utilities	1
Unity Water	2
Gold Coast Water	0
Logan Water	0
Redland Water	0
Other	1



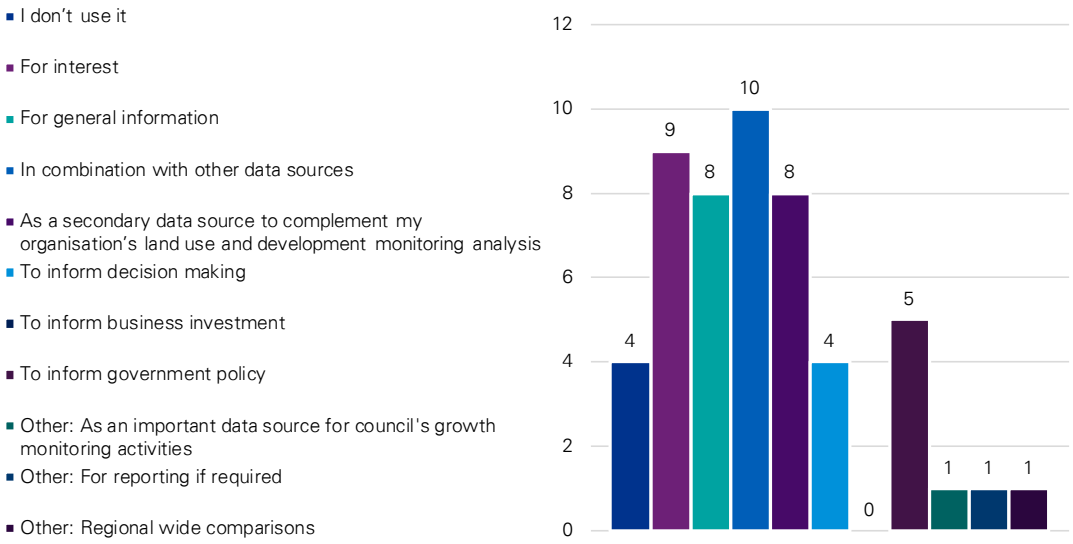
2. How familiar are you with the LSDM?



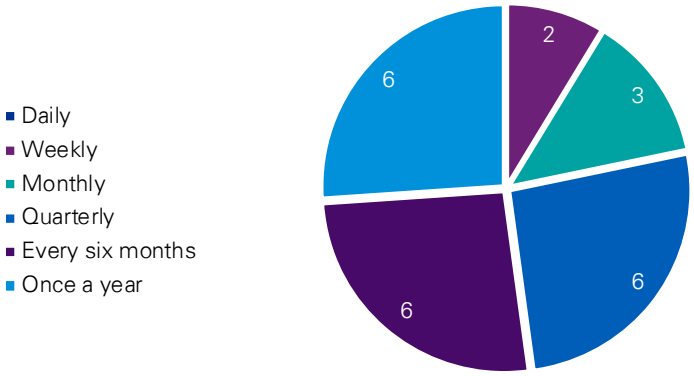
3. In your view, what is the purpose of the LSDM? (top three)



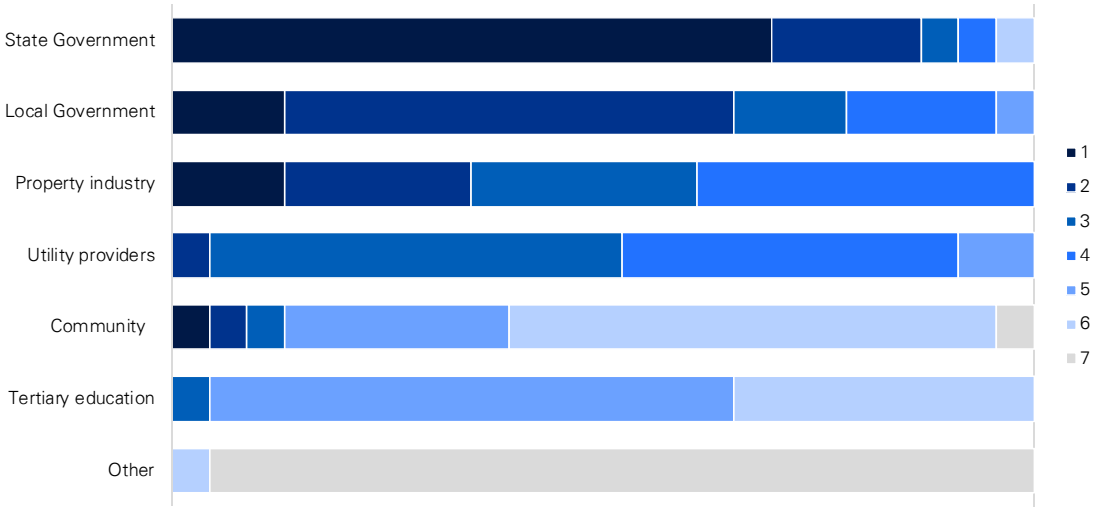
4. How do you use the LSDM?



5. How frequently do you access the LSDM?

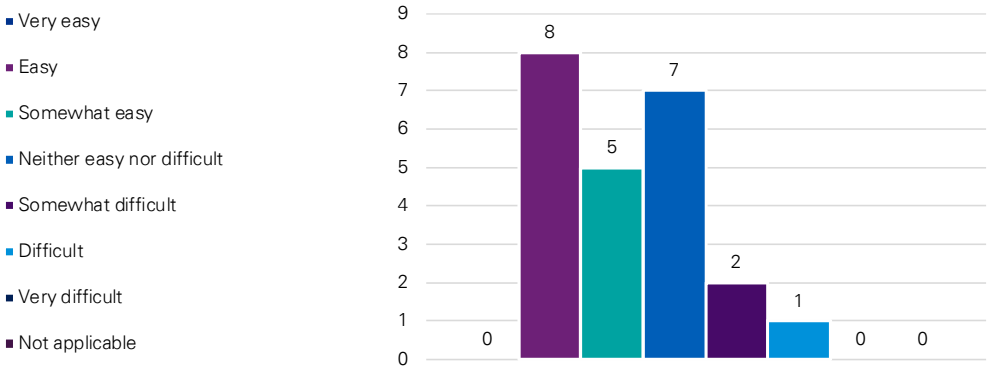


6. In your view, who is the primary audience for the LSDM? (ranking)

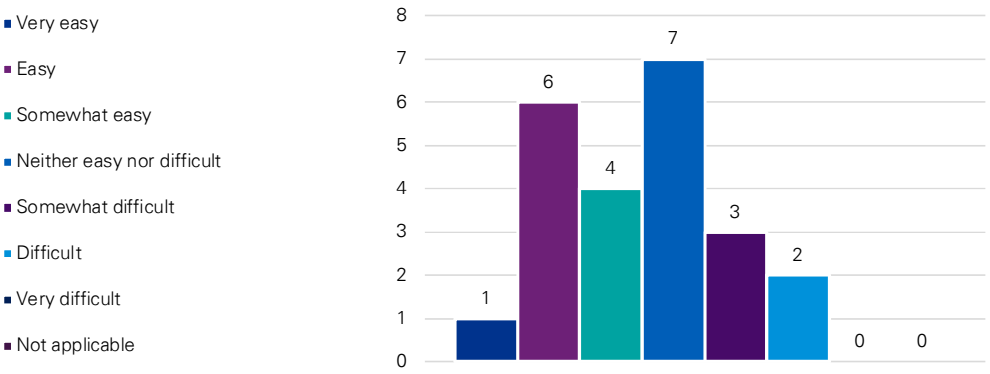


Note: Respondents were given the option to identify if they used a specific stakeholder to represent "Other". One such response was "Media", ranked 6. Another was "Developers", ranked 7.

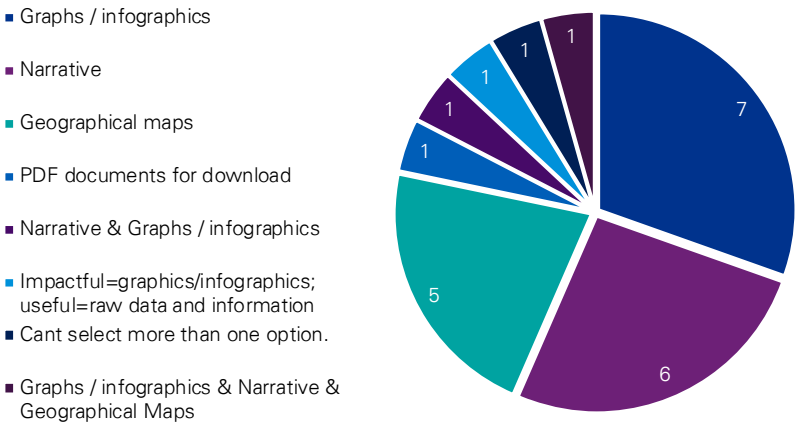
7. How easy is the LSDM to use for your purposes?



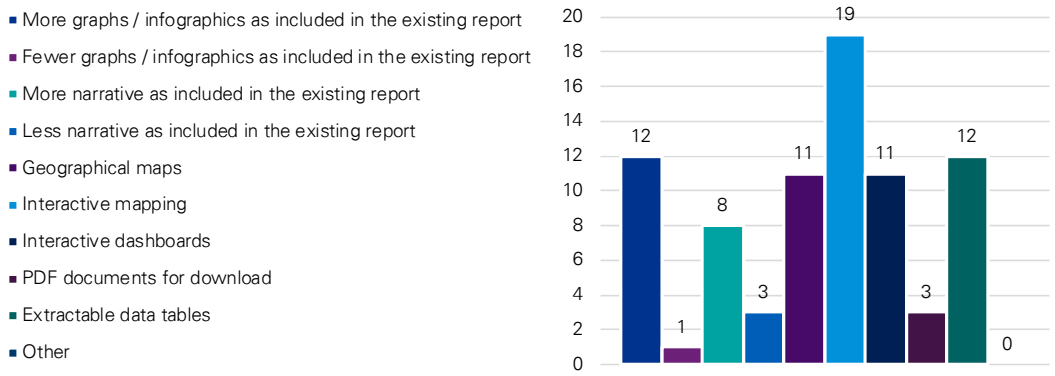
8. How easy is it to understand the information presented within the LSDM?



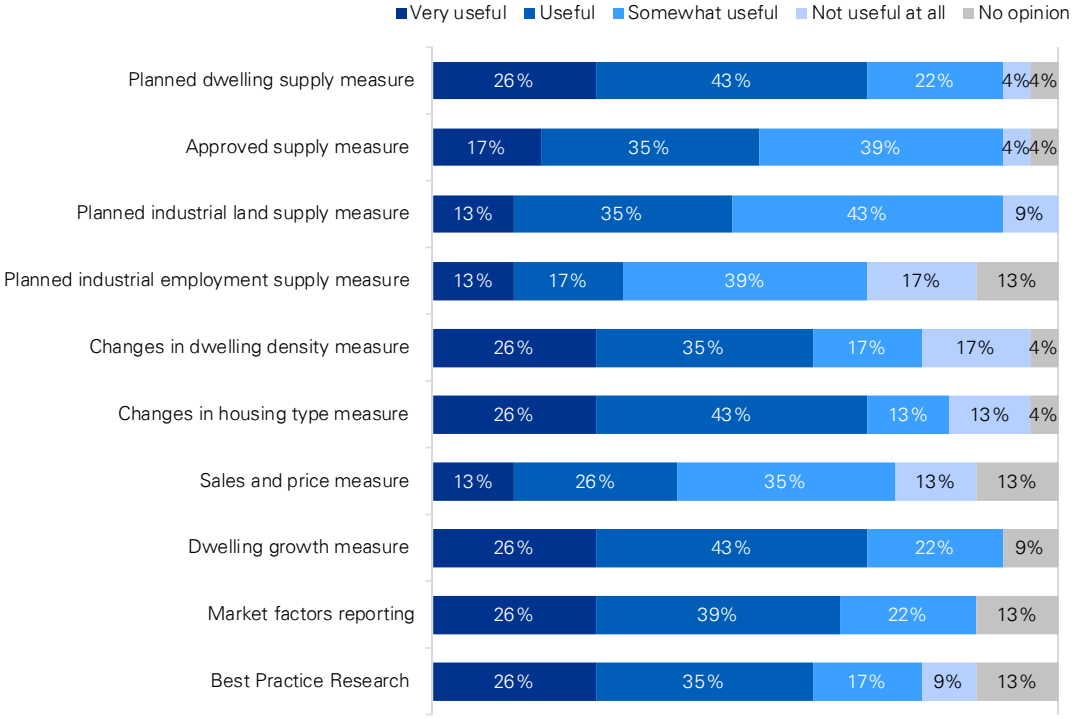
9. The LSDM presents information in a number of ways. Which of these ways do you think is the most impactful and useful?



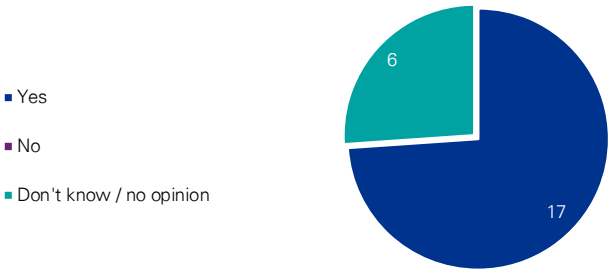
10. Are there any other ways you would like to see the information and / or LSDM presented?



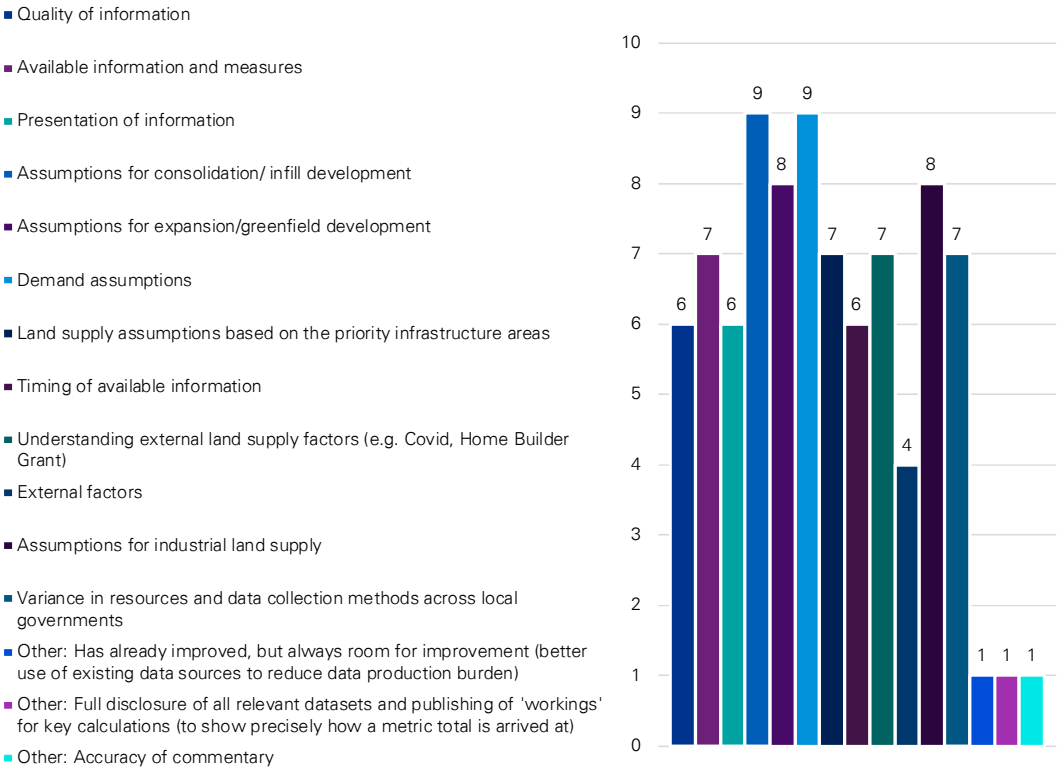
11. Thinking about how you use the report, how useful are the following report outcomes?



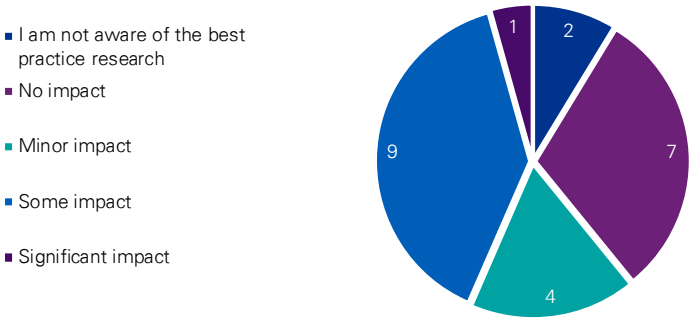
12. Do you think the LSDM could be improved?



13. What are the areas that you feel could improve? (top three)



14. Over the last four years best practice research has been integrated into the LSDM with the aim to improve the quality of the report and improve the approach to determining land supply. What has been the impact of the best practice research on the LSDM and/or your organisation's approach to determining land supply?



15. Please outline the areas of best practice research that you have found the most valuable since the release of the LSDM?
    - Market Factors report, Developable area and Regional Planning Model
    - The intent to measure projected development in a more comprehensive manner e.g. including financial feasibilities
    - Better use of digital technology (such as use of aerial photography)
    - Striving for better quality and processing of data
    - The standardised industrial land classification methodology has been very helpful
    - Small area growth assumptions/regional planning model
    - Industrial and employment land supply methodology and also the constraints applied to land supply methodology
    - Measuring Development
    - Understanding benchmarking for determining planning assumptions for example best practice consideration of development constraints.
    - Measuring development, ability to service
16. If there is any other feedback you would like to provide regarding the LSDM, please detail below.

    Individual responses will be consolidated for the final report

Appendix C: LSDM Data Inputs

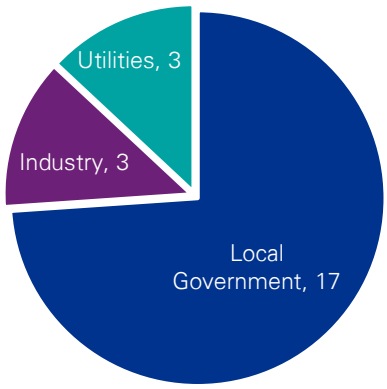
The data inputs required to deliver the LSDM include the following:

Stakeholder Group	Measure	Datasets
Local government	Planned Dwelling Supply	• GIS Files – LG Land Supply databases • Text doc – LG LGIPs • GIS File / text doc – Infrastructure Agreements • GIS File – Priority Infrastructure Areas • GIS File / text doc – Preliminary approvals • GIS File / text doc –Development permits • GIS File – Existing and future sewer connection areas
	Approved Supply	• Development approval information including reconfiguring a lot approvals, operational works approvals, lot certification and lot lapses and multiple dwelling approvals provided to QGSO
	Planned Industrial Land Supply / take-up	• GIS Files – Zoning and overlay information • PDFs - Planning Instruments
	Planned Industrial Employment Supply	• GIS File – LG Land Supply Databases • Text Doc – LG LGIPs
QGSO	Dwelling Growth	• Medium series dwelling projections for SEQ 2031
	Dwelling Density	• Processed lot registration and median lot size by LGA
	Planned Dwelling Supply	• Medium series dwelling projections for SEQ 2031 • Broad hectare results and fragmentation rules
	Approved Supply	• Processed development approval data
Dept. of Resources	Sales and Price	• Queensland valuation and sales database (QVAS) • DCDB

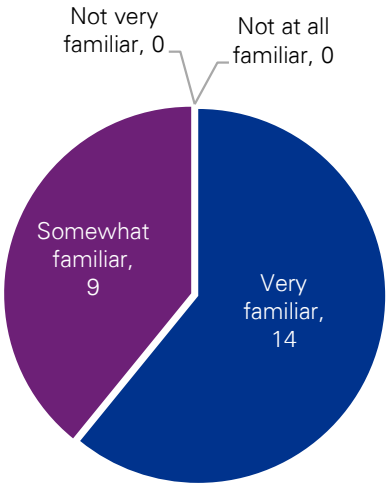
Stakeholder Group	Measure	Datasets
	Dwelling Density	• Raw lot registration data
	Planned Industrial Land Supply / take-up	• Aerial photography
Utility Provider	Planned Dwelling Supply	• GIS Files –utility provider land supply database (for Noosa only) • GIS File / text doc – Infrastructure Agreements • GIS File / text doc – Preliminary approvals • GIS File / text doc – Development permits • GIS File – Existing and future sewer connection areas
DSDILGP	Dwelling Growth	• 2016-2031 expected growth
	Dwelling Density	• Consolidation / expansion boundary
	Planned Dwelling Supply	• GIS - Current intent to service • GIS - Priority Development Areas
	Planned industrial land supply / take-up	• GIS Files – Aerial photography (nearmap) • GIS Files – Zoning and overlay information • PDFs - Planning Instruments
	Planned Industrial Employment Supply	• 2016 - 2041 employment planning baselines (*ShapingSEQ*) • 2016-2031 expected employment growth
	Approved supply	• Development approval information (Economic Development Queensland) to QGSO

Appendix D: Survey Results

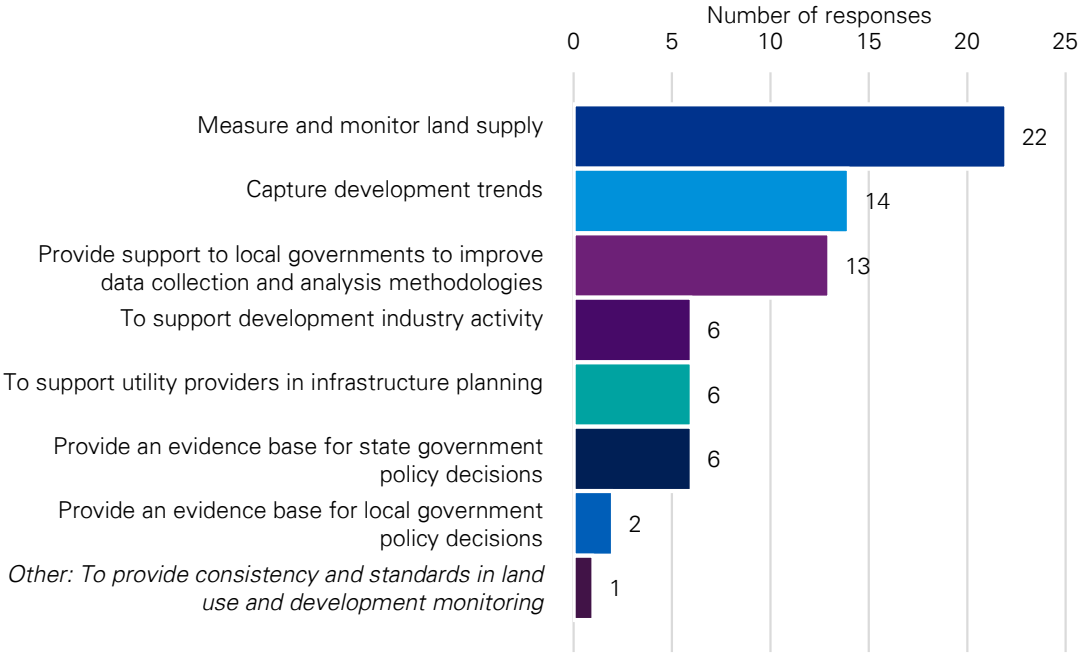
1. Which organisation do you represent?



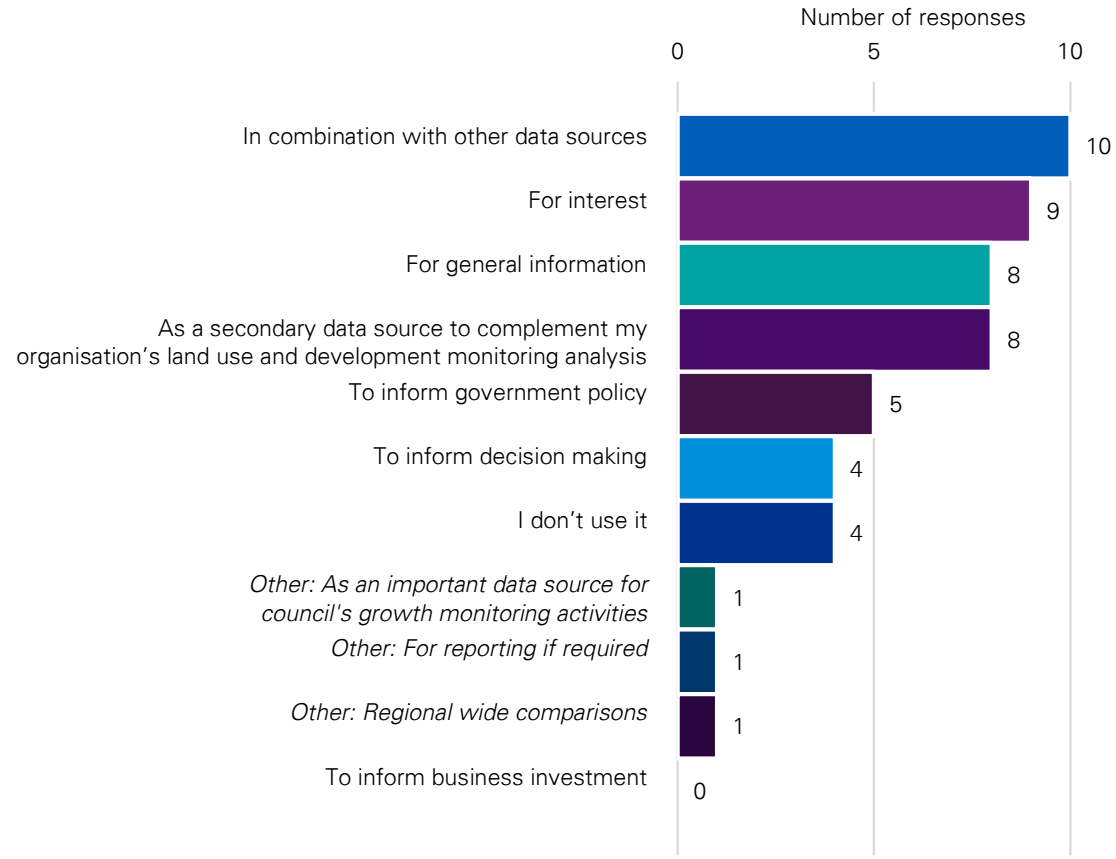
2. How familiar are you with the LSDM?



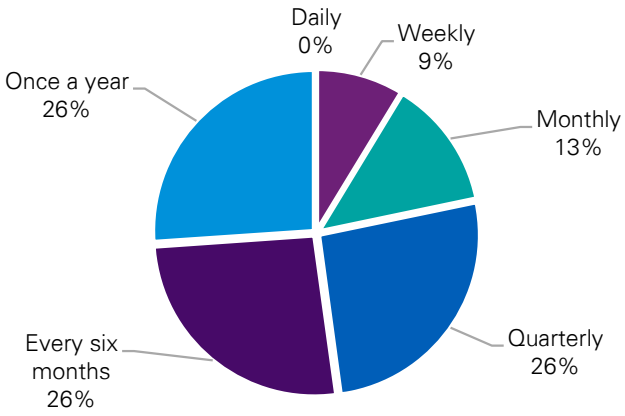
3. In your view, what is the purpose of the LSDM? (top three)



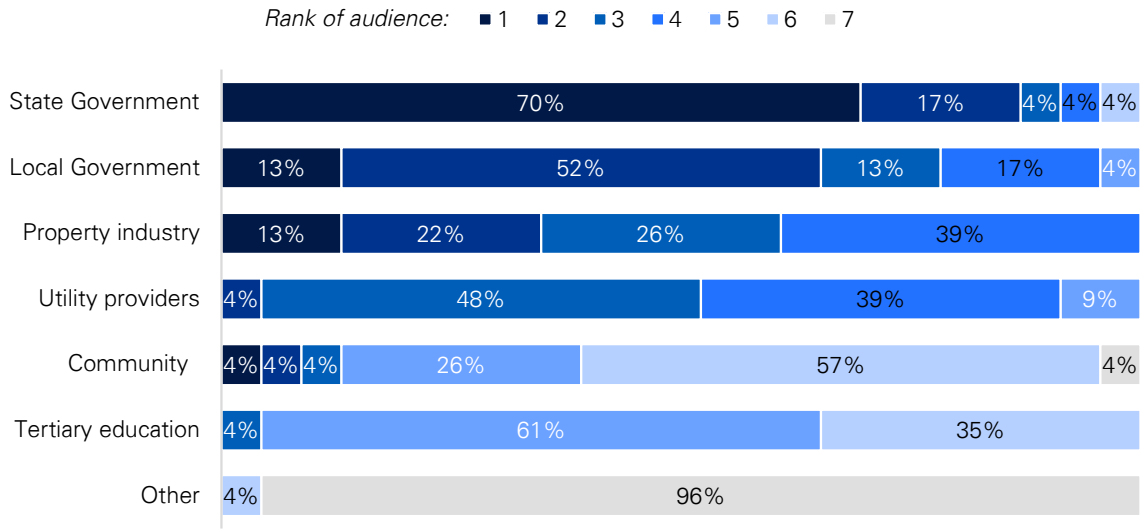
4. How do you use the LSDM?



5. How frequently do you access the LSDM?

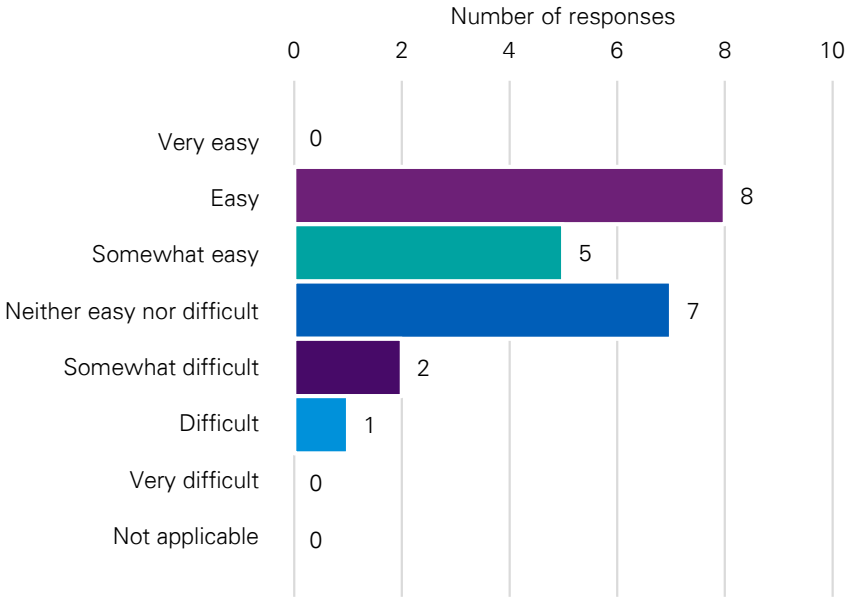


6. In your view, who is the primary audience for the LSDM? (ranking)

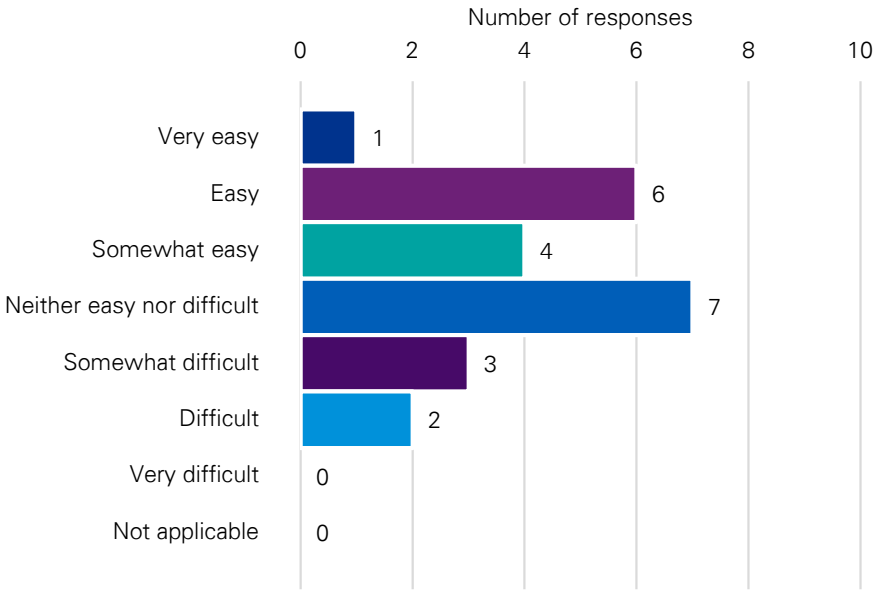


Note: Respondents were given the option to identify if they used a specific stakeholder to represent "Other". One such response was "Media", ranked 6. Another was "Developers", ranked 7.

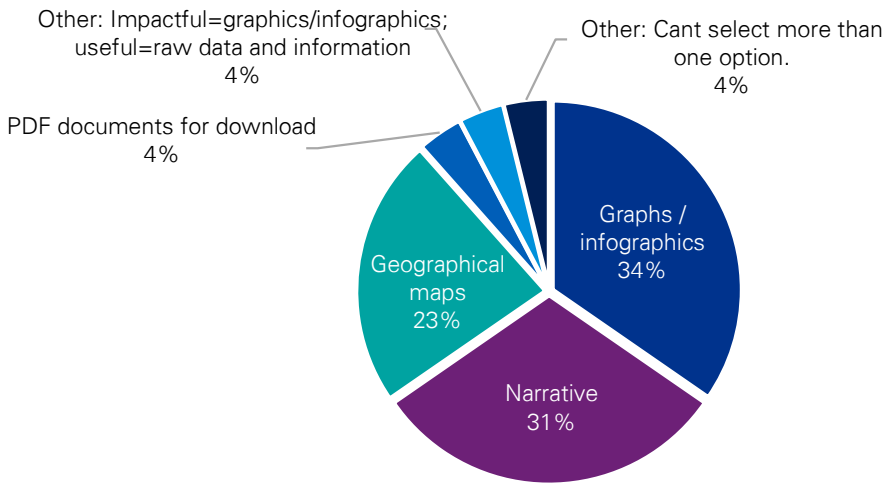
7. How easy is the LSDM to use for your purposes?



8. How easy is it to understand the information presented within the LSDM?

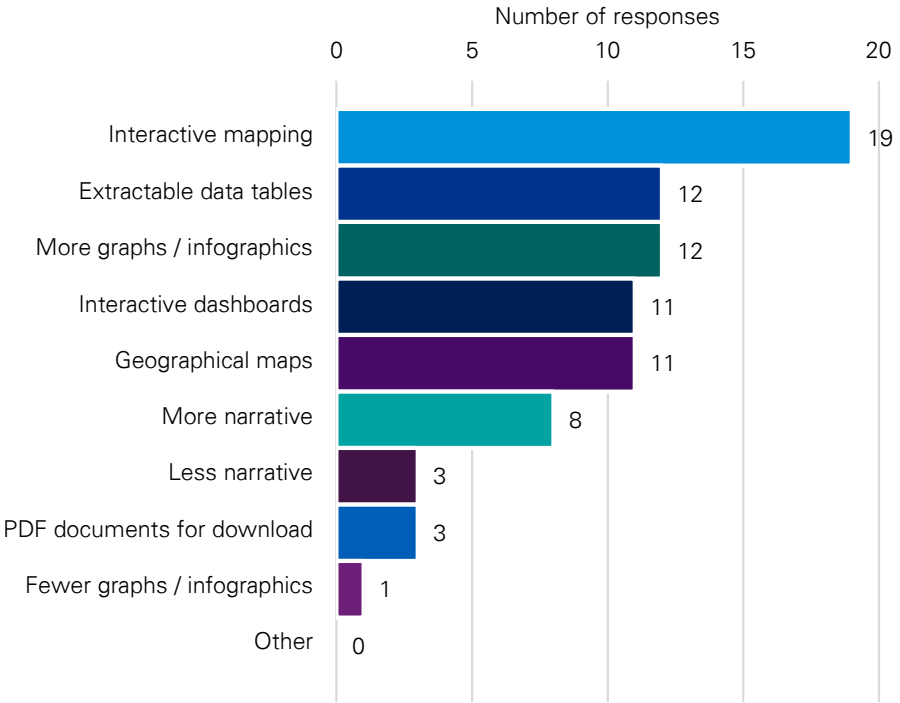


9. The LSDM presents information in a number of ways. Which of these ways do you think is the most impactful and useful?

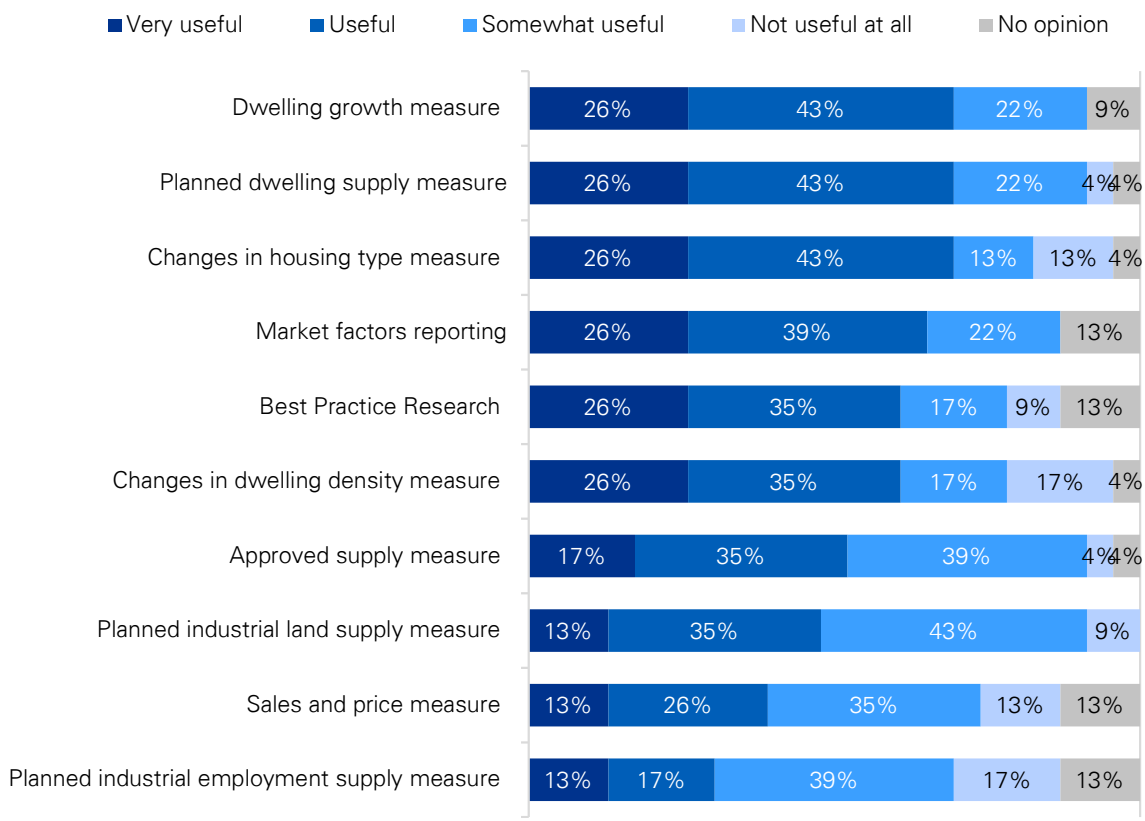


Note: The question asked respondents to select the most impactful and useful option however some respondents selected multiple. As such, there were 26 votes between 23 respondents.

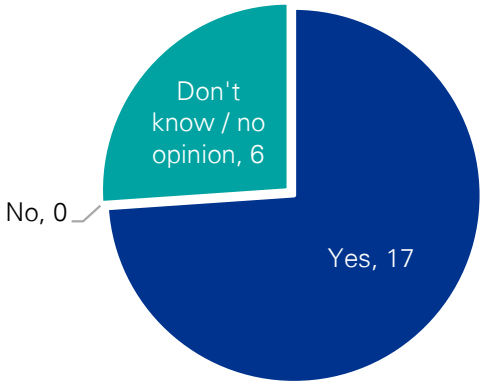
10. Are there any other ways you would like to see the information and / or LSDM presented?



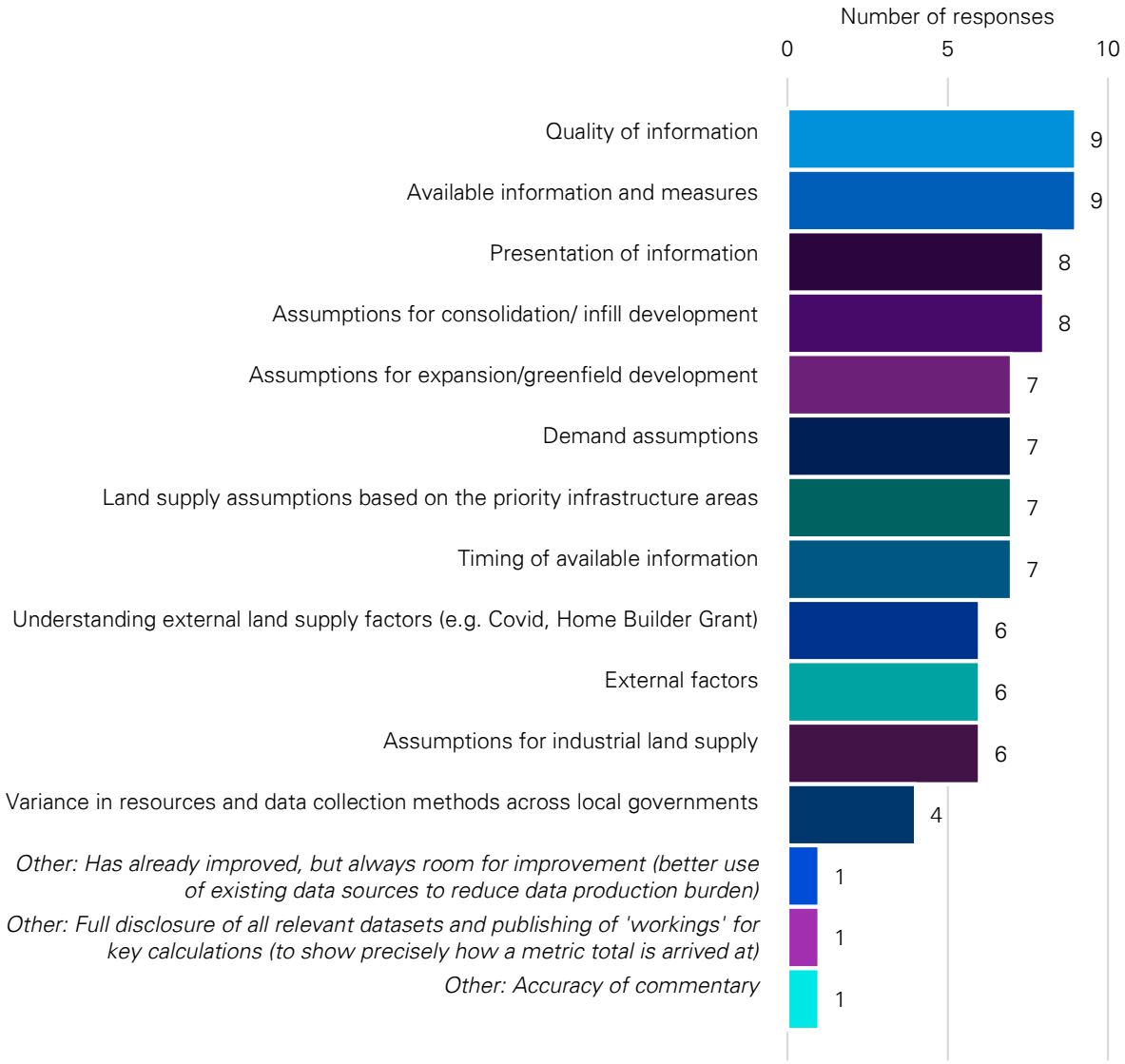
11. Thinking about how you use the report, how useful are the following report outcomes?



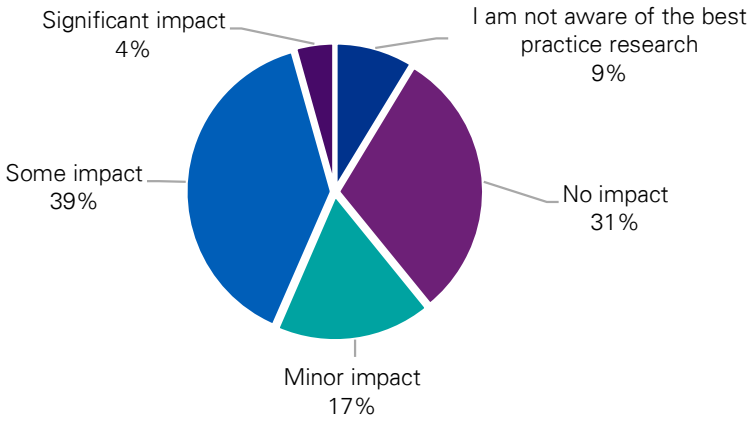
12. Do you think the LSDM could be improved?



13. What are the areas that you feel could improve? (top three)



14. Over the last four years best practice research has been integrated into the LSDM with the aim to improve the quality of the report and improve the approach to determining land supply. What has been the impact of the best practice research on the LSDM and/or your organisation's approach to determining land supply?



15. Please outline the areas of best practice research that you have found the most valuable since the release of the LSDM?

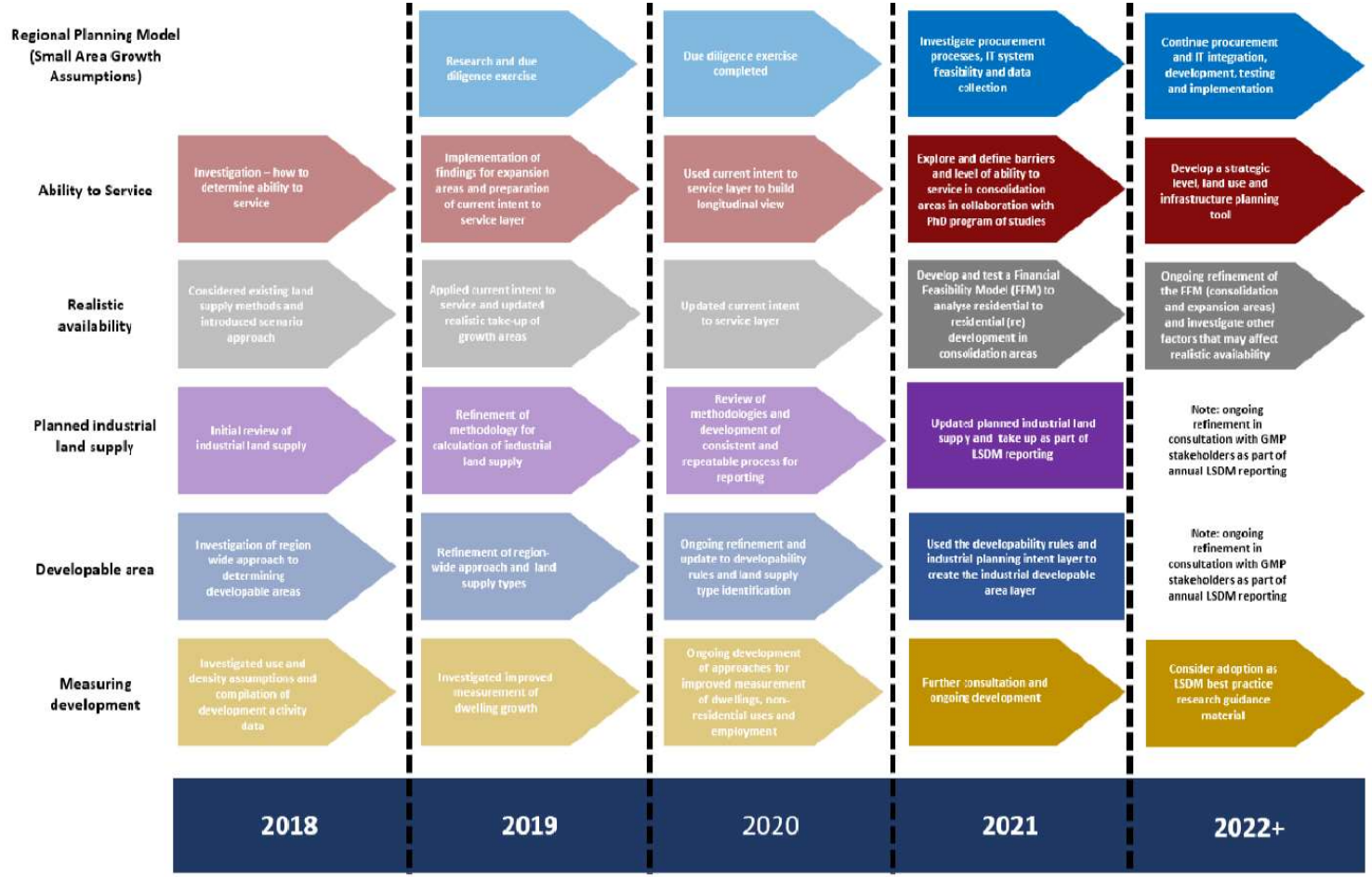
- Measuring development
- Regional Planning Model
- Small area growth assumptions
- Ability to service
- Developable area
- Market Factors report
- The intent to measure projected development in a more comprehensive manner (e.g. including financial feasibilities)
- Better use of digital technology (such as use of aerial photography)
- Striving for better quality and processing of data
- Standardised industrial land classification methodology
- Industrial and employment land supply methodology
- Constraints applied to land supply methodology
- Understanding benchmarking for determining planning assumptions for consideration of development constraints.

16. If there is any other feedback you would like to provide regarding the LSDM, please detail below.

- "Data integrity and currency is a key issue. Some of the data sources eg development approvals, have known issues with reporting structure, tracking changes to DAs etc and can be easily misinterpreted. Building approvals should not be used as building completion. Unclear how BPR should be used to inform LG planning assumptions and/or infrastructure planning?"
- "Ensure the LSDM aligns with SEQ policy on densification / better use of existing infrastructure / need for consolidation / minimising continual expansion / affordable living not just price, ie balancing the narrative regarding policy direction"
- "The LSDM is a work in progress and cannot be expected to be perfect at this stage in its evolution. The State has made great strides in setting it up, which should be acknowledged and supported. However, there is room for improvement in communicating the data and calculations that underpin the numbers. Collectively, there is (subjective assessment) quite low shared understanding of how the key metrics are calculated. Many Planning Managers would struggle to explain even the most common metrics (such as the difference between the 4 and 15 years of supply metrics) which creates a level of uncertainty/lack of confidence in the LSDM from that audience. Without their support however, the LSDM is almost certainly going to struggle in the medium and long term. Therefore (and subjectively) a major priority at this time in the LSDM's evolution is a significant effort on a simpler, more open LSDM.

  Paradoxically, it is possible to have a simpler, yet more detailed LSDM. As an example of a simpler yet much more detailed and open LSDM, a key metric as a figure or graph can be provided in a simple clean way but at a click the user could be shown the sub-totals and calculation 'workings' that sit behind that metric. Its current static PDF format doesn't allow for that type of presentation."
- "Recognition is due for high level of complexity of work and commitment to continuous improvement of program."
- "Brief context around SEQ Regional plan growth expectations, urban footprint, rural areas, land constraints, infrastructure etc.. Context around each LGA in terms of size, population, constraints and other limitations, infill vs greenfield approach etc"
- "Generally support the LSDM process and intent and it is useful to see where Council sits in regard to the Shaping SEQ Measures."
- "Greater hands on support for the less resourced rural / peri urban local governments and greater focus on local issues and priorities."
- "Applicable database may not be available in each LGA"
- "To a large degree, the narrative just states in words what you can see on the graphs, which doesn't really add any value. It would be better to have more explanation of the measures to improve understanding of how they are calculated without having to look elsewhere for it (eg. the technical notes) - this could be done using more pop-up bubbles."

Appendix E: Program of Best Practice Research 2021



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