INFRASTRUCTURE ASSOCIATION OF QUEENSLAND INC.

Submission

Title: The Infrastructure Association of Queensland (IAQ) Submission to Queensland Productivity Commission's Inquiry into Construction Productivity

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INFRASTRUCTURE ASSOCIATION OF QUEENSLAND INC

IAQ recognises and respects both Aboriginal peoples and Torres Strait Islander peoples, as the First Nations people in Queensland.

We recognise First Australians' their unbroken connection to land and water, which has continued for millennia. Their strength through culture and kinship will help guide our journey towards reconciliation.

We want to pay our respects to the traditional owners on whose lands we live, connect, work, and learn, along with their Elders past and present, and thank them for continuing to share their knowledge, ways of learning, and culture with us.

IAQ believes partnering with First Nations peoples will enable us to deliver infrastructure that recognises, embraces, and celebrates the traditions, practices, cultures, and stories that enrich Queensland and its people.

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1. EXECUTIVE SUMMARY

The Infrastructure Association of Queensland (IAQ) welcomes the opportunity to provide a written submission to the Queensland Productivity Commission's (QPC) inquiry into construction productivity. Formed in 1994 as an independent, evidence-based and non-partisan association, IAQ is the leading representative body for the Queensland infrastructure industry. We foster private sector investment in infrastructure and help develop a deeper understanding between the public and private sectors.

IAQ's valued member-base is actively engaged in planning, design, delivery and maintenance of infrastructure and provides extensive and varied experiences across the spectrum of construction in Queensland. We welcome this QPC inquiry undertaking to address sector-wide issues and enhance construction productivity across residential and non-residential sectors.

IAQ supports this undertaking aimed at improving infrastructure sector efficiencies, particularly to attract and facilitate private investment. We do note that infrastructure funding cannot be reviewed in isolation from broader institutional reforms. IAQ recommends adopting a comprehensive approach to investigating reforms that consider:

- policy settings for long-term planning
- infrastructure project prioritisation
- resolving project funding and financing issues.

Our submission presents an informed position on construction productivity issues and industry-ready solutions, offering a balanced and constructive perspective. Our submission also highlights the critical need to build the capacity of the public sector to effectively oversee complex funding, delivery and operating arrangements, addressing current challenges in coordination within the public sector. The focus on 'greater delineation of roles and responsibilities' among Games entities and the creation of a 'Games Leadership Group' for the 2032 Games, as supported by IAQ in its submission to Planning (Social Impact and Community Benefit) and Other Legislation Amendment Bill 2025, provide concrete examples of the coordinated decision-making models required to streamline processes and reduce inefficiencies across government.

In the timeframe available we have consolidated the diverse experiences of our members and welcome further collaboration to contribute to the development of effective policy recommendations, particularly related to provision of case studies and evidence to inform the Inquiry.

This submission will cover the following factors affecting construction productivity, derived from the QPC Construction Productivity Terms of Reference:

- Input Costs and Prices
- Supply Chain
- Regulatory Framework, Competition, Pipeline and Type of Development
- Industrial Relations Matters and Labour Force Needs
- Procurement and Tendering Arrangements
- Barriers to Entry and Innovation

2. INTRODUCTION

IAQ supports the intent of this QPC inquiry to identify meaningful reforms to lift construction productivity while maintaining safety, quality and public value. The purpose of our submission is to offer a collaborative and meaningful contribution which we see as a crucial opportunity for industry and government to work together to address long-standing challenges and unlock the sector's full potential.

We note that the inquiry's focus includes:

- state and local government legislation and regulation, including in relation to land use, urban planning, building, licensing and workplace health and safety
- state government procurement and contracting policies, including Best Practice Industry Conditions
- skills and labour force issues.

Given the critical role the effective use of economic infrastructure plays in promoting state and national productivity and economic growth, the consequences of not acting on construction productivity are serious. Infrastructure materially affects Australia's competitiveness and the wellbeing and living standards of all Australians. In this context, the private sector has an increasing part to play in the provision of public infrastructure. The appropriate use of alternative funding and financing models will be essential to attracting much-needed additional private investment.

With a severe housing shortage and an ambitious infrastructure pipeline including projects for, and surrounding, Brisbane 2032 Olympic and Paralympic Games, construction productivity is constrained by complex factors including:

- inconsistent regulatory frameworks
- acute workforce and skills shortages
- a slow adoption of innovation and technology
- vulnerable supply chains exacerbated by rising material costs and regional disparities
- increasing complexity and customisation of modern homes compared to previous decades
- project funding and financing.

As highlighted in our inaugural report Industry Insights by IAQ Queensland Infrastructure Performance 2024 (QIP Report 2024) achieving worthwhile reforms critically depends on a robust, long-term infrastructure plan that provides certainty to industry and underpins sustained private sector investment. A coordinated and multi-faceted approach will be essential to addressing these issues. Collaboration between government and industry will be a vital part of implementation to achieve productive and sustainable construction capable of meeting Queensland current and future needs. This approach must focus on:

- strategic regulatory streamlining
- comprehensive workforce development
- incentivising innovation
- optimising procurement processes
- strengthening local supply chains.

Crucially, these reforms must be pursued while upholding the highest standards of quality and safety in construction. Particularly consideration is given to regional factors in this submission, however IAQ notes that cities (SEQ broadly) are responsible for around 80% of Australia's population and GDP. The shape and form of our metropolitian areas is fundamental to the productivity of our state and is worthy of detailed analysis in this Inquiry.

IAQ recognises that this Inquiry is undertaken in the context of significant fiscal constraints facing governments at all levels, alongside competing arrangements and priorities across different tiers of government. As detailed in IAQ's recent submission the timey delivery of Brisbane 2032 venues and

related transport infrastructure is paramount. Efforts to 'join-up' planning and pipeline management are crucial and should be actively encouraged and incentivised to optimise resource allocation.

The following sections of this submission explore the key drivers and barriers, highlighting potential actionable strategies and solutions that IAQ is well-placed to assist government in enhancing construction productivity.

3. KEY DRIVERS AND BARRIERS TO CONSTRUCTION PRODUCTIVITY – THE IAQ EXPERIENCE

IAQ has considered the Terms of Reference for this inquiry and now presents the factors driving, and limiting, productivity for construction in Queensland for this submission.

3.1 Input Costs and Prices

3.1.1 Challenges

The infrastructure sector faces significant pressures from input costs and pricing issues. Input costs and pricing for construction is a complex factor that arguably is affected by many of the other factors discussed in this submission.

Notably, hyperinflation in regional Queensland areas, attributed to elevated costs for essential supply of materials to regional projects and a lack of competition presents a significant element of rising input costs and prices for the sector. For instance, for our Brisbane-based members that provide expertise throughout the state, supply costs for regional Queensland projects can be 3-4 times higher than those within 100km of Brisbane. The further out from metropolitan centres, the more difficult is it to plan and implement projects to ensure delivery is on time and on budget.

A specific, but insightful example, is the availability of sand. This key building material is highly specified on many projects which results in limited supply of the right materials. Limitations in local resources, such as the limited availability of thermal sand deposits with specific insulation properties presents the need for expensive long-haul transportation. To broaden this example, high haulage costs of delivering large components to regional sites such as steel and other materials further compound these pricing challenges for project construction.

Labour costs are also a notable substantial driver of overall construction costs affecting the price of materials as well. Queensland's overall construction costs are also more expensive compared to other states, driven by higher material and labour expenses.

3.1.2 Opportunities for Improvement

Addressing these challenges requires a multifaceted approach. A dedicated approach to doing things differently starts with a government commitment to – and an appetite for – innovative construction methodologies. Industry believes a strategic approach to amending technical specifications for projects to foster greater flexibility, in adopting locally available materials and resources, while maintaining safety and quality standards, would also go a long way to decreasing input costs and prices for construction.

Greater adoption, and effective application, of digital tools presents an opportunity to mitigate rising construction costs, with some estimates suggesting potential reductions of 15% in public construction costs and 40% in unbudgeted changes. To extend take-up a range of approaches are recommended including:

- workforce capability enhancement including embedded aspects in trade and university education settings, targeted training and shared development hubs for SMEs

- remove contractural and commercial barriers (particularly in relation to data)

- explore options for sharing of information (to address reluctance by some to share what they consider to be proprietary IP)

- encourage pilots and trials, with promotion of efficicences and outcomes to be shared with the sector

3.2 Supply Chain

3.2.1 Challenges

The supply chain of construction presents both cost and availability challenges. We have vulnerable supply chains compounded by rising material costs and regional disparities across the state, and nation. Current government procurement practices determine largely how suppliers can tender for projects and use available supply chains. Fluctuations in the availability and cost of materials can disrupt project timelines and budgets. There are also potential future constraints on resources, such as rare earth minerals, which are critical for emerging technologies like humanoid robots.

3.2.2 Opportunities for Improvement

To enhance supply chain resilience and improve productivity, IAQ notes a greater emphasis on circular economy principles and sustainability goals could maximise the lifespan of assets while minimising waste and improving environmental outcomes. This requires a commitment to enhancing capacity and optimisation of local supply chains as well as embracing modern methodologies of construction and learning from other states and global entities using and excelling with emerging technologies.

Providing all parties with a forward pipeline of projects would allow industry and all levels of government to plan for supply chain investment, stimulate regional economies and importantly ensure adequate supply capacity. The absence of this supply chain confidence undermines investment certainty and limits expansion of existing suppliers.

3.3 Regulatory Framework, Competition, Pipeline and Type of Development

3.3.1 Challenges

Interrelated factors of regulatory frameworks, competition, pipelines and types of development all contribute to the cost of construction, which directly and indirectly hinders productivity.

A lack of competition, particularly in regional areas, exacerbates cost-related issues and is felt across a wide range of areas of construction costs for infrastructure projects. One pain point includes competition for labour from the existing pool of skilled labour that will need to be shared between upcoming public infrastructure projects – especially those associated with Brisbane 2032 – and residential construction capacity.

Uncertainty surrounding project pipelines, regulatory frameworks and type of development, traditionally aligned to cyclical nature of government election cycles, can negatively affect private appetite for investment. This applies to supply chains referred above, infrastructure projects and the myrid of associated developments that come with major projects (such as utilities, housing, health, transport etc). This lack of certainty regarding government commitments to long-term plans, a point consistently raised in QIP Report 2024, means key industry players cannot adequately invest in the development and success of new processes, materials and workforce skills that may not eventuate in the next election cycle. This uncertainty is further compounded by diverse and sometimes competing arrangements and priorities at different levels of government. A key concern leading up to 2032 is the unique pressures of the “immovable deadline” for venues and transport infrastructure recently noted in IAQ’s submission to Planning (Social Impact and Community Benefit) and Other Legislation Amendment Bill 2025 demands a robust and consistent framework to support large-scale, time-sensitive projects.

Modular construction is one area many in the sector believe to be a crucial part of decreasing costs and improving productivity, but without solid support and commitments from government, this area will continue to be a challenging space for projects. The risk of facing financial difficulty or even voluntary

administration due to factors including market fluctuations, costs and project delays is a real threat to companies in the modular construction space in Australia.

Specific to residential homes, features such as solar panels, batteries, water tanks and ducted air conditioners, alongside more stringent AS/NZS and building codes have changed design considerations, material requirements and construction timelines compared to traditional builds. Research shows that these changes can have a a positive impact on building lifecycle costs, maintenance and occupant health. However, there is an opportunity to streamline regulations and look to outcomes, rather than prescription of specifications to promote innovation and alternative approaches, which could address upfront cost and time issues.

Finally, inconsistent or out of date regulations and policies in general affect the overall productivity of construction due to less appetite for change, risk and innovation. An example of this is the openness of new approaches and innovation. Industry notes that there are regular examples of innovations exiting Queensland and taken up in other states and abroad, as the operating environment limits, and can be prohibitiative, new process, approaches and products.

3.3.2 Opportunities for Improvement

To foster a more stable and competitive environment, it is crucial to provide certainty regarding the project pipeline of not just Brisbane 2032 and the longer-term legacy projects but also the other areas requiring construction in Queensland. As advocated in IAQ's QIP Report 2024, this long-term commitment from the government, underpinned by sound policy settings and institutional reforms to enhance investment decision-making, will allow for increased commitments from the private sector for funding, world-class solutions with local expertise as well as an appetite to take on more risk.

The Queensland Government's objective to 'streamline the planning approvals process' for 2032 Games infrastructure, as supported by IAQ in its recent submission. IAQ noted that the approach adopted for the Gold Coast Commonwealth Games 2018 was streamlined planning and coordination delivery of Games-related development through a Priority Development Area. IAQ strongly urged in that same submission that the early identification and careful planning of Games-related transport infrastructure was critical to mitigating risks associated with "cost and availability of materials and labour, delivery timeframes, coordination of project delivery and driving innovation".

More specific opportunities for improvement at the forefront of IAQ member's solutions include pre-qualifying companies on panels, using the information once (avoid duplicatative effort), which can streamline procurement processes, promote benchmarking and encourage value-for-money solutions, rather than a race to the bottom on price. Industry notes that the cost of tendering in Queensland is higher than other jurisdictions, and the absence of contemporary procurement approaches is a major source of productivity drain.

Outcome-based delivery models are also seen as a solution to further incentivising performance and efficiency to increase overall productivity for construction. Strategic and well-thought-out staging of large infrastructure projects would also assist in easing current skill and material shortages.

Government incentives to encourage increased productivity could be valuable in the planning, design, contruction and implementation phases across the infrastructure sector. Outsourcing of regulatory elements, such as independent assessors, would be welcomed by Industry.

A review and reform of regulations that negatively affect productivity, cost, or timely delivery are also necessary to increase confidence and ability to abide by a standardisation of regulations across the sector. A specific example is zoning adjustments could enable increased dwellings per square metre and contribute to an increased housing supply and potentially driving productivity gains in residential construction.

Considering the diverse and sometimes competing priorities of different levels of government, providing certainty through strategic policy and institutional reform could offer a truly integrated and efficient approach to infrastructure development and investment. Building the capacity of the public sector to oversee complex funding, delivery and operating models are also essential to improve coordination within and across government to streamline processes and reduce inefficiencies. Other jurisdictions offer examples that are helpful in improving productivity. For example, Infrastructure Australia has a capability tool that has been beneficial in assisting Western Australia analyse its ability to deliver.

The initiatives surrounding the 2032 Games, including efforts to 'increase the clarity of roles and responsibilities among the Games entities' and the 'creation of a Games Leadership Group…similar to the governance model for Paris 2024' (as detailed in IAQ's recent submission), also provide valuable blueprints for strengthening inter-governmental coordination and accelerating project delivery.

3.4 Industrial Relations Matters and Labour Force Needs

3.4.1 Challenges

Without a fundamental shift in contractual mindset and behaviours, the sector faces the risk of increased disputes and entrenched behaviours, which can negatively affect productivity both in the detail of a project to the overall approach to procurement, innovation and risk. Examining past industrial relations challenges, such as those in other states, can provide valuable lessons for avoiding counterproductive practices.

The industry also faces significant skills gaps across consultants, contractors and government agencies. IAQ shares concerns about the capacity and skills of the workforce, noting observed trends that will have far-reaching effects and will present real challenges to any infrastructure reform agenda. This shortfall in the workforce will affect all parts of the “infrastructure chain” including planning, problem identification, policy development, option identification, modelling, project identification as well as approvals and contracting. An aging workforce and difficulty in attracting younger workers, who may not perceive a viable future in certain trades further contributes to this labour shortfall.

This generational skills shortage, discussed in industry for more than two decades, extends beyond simply quantity of personnel to significant gaps in specific skills, qualifications and experience. It also highlights a critical challenge in succession planning, where valuable knowledge often leaves the industry with experienced retirees, and the general competitive cultures among contractors and consultancies in the sector.

When looking at a lack of confidence in pipelines and industry capabilities, a limited number of precast suppliers and the labour to deliver construction projects also affects costs and delivery timelines.

3.4.2 Opportunities for Improvement

Cultivating a shift in contractual mindset and behaviours within the industry and government is crucial to fostering a more collaborative and productive environment. This is something that IAQ is keen to assist the government in understanding further as part of this inquiry and potential reform suggestions.

Addressing labour force challenges requires a focus on modernising education and skilling programs encompassing digital design, manufacturing, logistics and assembly. Government regulation opportunities could include a mandate for inclusion of specific subject matter in university and TAFE courses that lead to trades and professional qualifications addressing critical skills shortages. Key topics that could significantly improve sector-ready graduates include:

- **Risk Management:** Awareness of risks, identification and mitigation strategies and how to apply to a range of project delivery models.

- **Construction Planning:** Fostering a deeper understanding of process optimisation and the importance of each planning element.
- **Project/Construction Management:** Emphasising a balanced approach that prioritises quality alongside time and budget constraints.
- **Procurement:** Providing robust education on sourcing, tendering and purchasing best practices.
- **Small Business Management:** Offering tailored training for sole-trader trades to improve business acumen.

Increasing competition among contractors and educating the workforce on productively working with AI is also an area IAQ members are seeing as important to future-proof the construction industry and increase productivity. Additional solutions include promoting wellbeing as part of the industry culture and facilitating access for overseas workers to be trained to Australian standards. Developing a long-term policy framework for overseas labour can contribute to a sustainable workforce strategy.

3.5 Procurement and Tendering Arrangements

3.5.1 Challenges

BPIC settings (and similar procurement and contracting arrangements) can affect productivity within the construction and wider infrastructure sectors.

From an industry perspective, procurement processes can often lack adequate risk allocation and fail to encourage confidence in providing innovative solutions. Short-term approaches and commitments decrease suppliers' ability to invest in and deliver innovative solutions.

A specific factor contributing to project inefficiencies and disputes comes from poor awareness of risks including how to effectively identify and mitigate them. This can result in inadequate 'gating' to proceed to the next stage of project pursuit or delivery, a tendency to tender for non-core business without tangible business advantage and reliance on 'industry standard' contingencies and margins rather than project-specific, deterministic or probabilistic values.

Another specific factor that often decreases overall productivity of a project is the construction planning. When lacking an understanding of process optimisation and including too heavy a focus on time and budget pressures, quality and productivity decreases due to costly reworks and a culture of “asking for forgiveness rather than permission” to circumvent obligations.

Examples such as the UK's mandatory BIM Level 2 on government projects highlight the potential of progressive procurement policies to drive positive change.

3.5.2 Opportunities for Improvement

Regular review and improvement of BPIC settings are necessary to enhance productivity without compromising safety or quality.

Enhancing procurement practices for mega-projects with a shift in government mindset to underwrite the risk associated with innovation would increase the opportunities for better productivity. This shift in mindset to appropriately de-risk different stages of a project's lifecycle will attract greater private investment and foster innovation that improves overall productivity and effectiveness. Enhancing public sector capabilities in complex procurement, contract management and project oversight is equally important to maximise the benefits of improved procurement practices. To maximise opportunities for the public and private sectors to collaborate together, IAQ, in its recent submission, suggests strategies such as 'developing an industry reference group for feedback, resolving issues, and collaborating on solutions,' and to 'develop and publicise opportunities for industry involvement on specific venues, villages and Games-related transport infrastructure, such as delivery cases/project validation reports, reference designs, peer reviews, and market sounding for construction.' These approaches will foster confidence and allow suppliers to better integrate value-for-money and productivity into their offerings.

One example IAQ members understands from industry that could significantly increase site and overall project productivity is the ability to incorporate technologies like site cameras that are used for more than timelapse of construction progress. Allowing new technologies like site cameras with AI capabilities to track logistics and timeframes to be fully considered as part of the procurement processes could increase confidence of the private sector to invest in technologies that would increase productivity and accountability for construction deliverables.

Longer-term thinking and certainty are essential to enable suppliers to adapt and incorporate value for money and productivity into their procurement offerings. Increasing MMC-specific procurement streams, aggregated procurement and transparent pipeline visibility can further improve outcomes.

3.6 Barriers to Entry and Innovation

3.6.1 Challenges

Restrictive definitions of what innovation entails and government appetite for embracing innovative technologies on projects can decrease the likelihood of private industry adopting and developing new methods. A perceived lack of incentive to experiment with new approaches, resistance to modular construction due to perceived union issues and lack of precedent means Queensland is not well-placed to take full advantages of innovation to increase productivity.

Local examples of companies developing IP in Queensland and scaling it globally demonstrate the potential for innovation to drive both local and international growth.

Building infrastructure for the future has a particular aspect in Queensland with the increasing impact of natural disasters – flood, bushfire, cyclone, storms. To improve productivity means targeting investment and resources to new and upgrading infrastructure. However, we are caught in the rebuild phase after each natural disaster or major weather event.

3.6.2 Opportunities for Improvement

Fostering an appetite – both for industry and government – for risk and innovation is crucial to increasing productivity in construction and infrastructure projects. Governments actively sponsoring innovation and providing confidence and long-term planning to encourage experimentation and investment in new technologies and methods would significantly increase private sector confidence to invest and develop these for the benefit of Queensland.

Clear MMC-friendly pathways, fast-tracked assessment processes, regulations that recognise pre-fabrication standards would all be advantageous undertakings. A dedicated MMC advisory body could also facilitate the adoption of modern methods strategically and productively. Mandating BIM and digital twin technologies on all public construction, investing in digital infrastructure and standards, supporting open data platforms, grant programs for pilot projects and establishing a national information framework for infrastructure assets can further drive innovation.

Similarly resilience should not be seen as a fringe concept in infrastructure planning, rather a central element and required for any investment. Adopting approaches to achieve resilient infrastructure, as the norm rather than exception, would have widespread productivity gains across diverse industries and avoid major disruption to communities and local economies. In part, to achieve resilient infrastructure we need to actively manage assets – this means not only doing cyclical maintenance, but clear asset improvement strategies. There is much research and evidence around the benefits of resilient infrastructure, including the OECD, which highlights the significant role for local government in building climate resilience.

4. CLOSING COMMENTS

IAQ thanks the QPC for receiving our submission. We acknowledge the complex nature of multiple factors discussed in this submission.

We welcome the opportunity to contribute further to the inquiry's next phase. As a leading representative body for the Queensland infrastructure industry, our members have deep experience in infrastructure and construction and welcome the opportunity to further engage to provide case studies, reviews and private-public collaboration.

As evidenced by IAQ's QIP Report 2024, we have strong collaboration and engagement with our members who are keen to work together for construction productivity and wider infrastructure sector improvements.

We look forward to continuing constructive collaboration to improve productivity outcomes.

Industry Insights by IAQ

Queensland Infrastructure Performance 2024

QUEENSLAND INFRASTRUCTURE PERFORMANCE BY IAQ INFRASTRUCTURE ASSOCIATION OF QUEENSLAND

Jacobs Challenging today. Reinventing tomorrow.

Contents

Overview of the QIP project

The Infrastructure Association of Queensland Inc (IAQ) identified the need for a pilot project to measure performance, priorities and social license for Queensland using industry sentiment by analysing Queensland's infrastructure framework.

As part of the Queensland Infrastructure Performance (QIP) Pilot Project, the purpose of QIP Sentiment Survey (The Survey) was to collect industry views on Queensland's infrastructure framework to measure performance, priorities and social license for Queensland Infrastructure.

IAQ engaged Jacobs in June 2024 to undertake all aspects of this project. This report documents key elements of the QIP project work undertaken, including the data analysis and relevant industry insights gained from strategic advisors, industry reports, and from the Queensland government's Big Build Survey.

The high response rate to this survey from industry highlights strong engagement with IAQ's aim to collect industry views on Queensland's infrastructure framework to measure performance, priorities, and social license for Queensland Infrastructure.

The QIP pilot has successfully achieved IAQ's aim to create a product that will allow IAQ to have a long-term voice, engage with the Government, and share the industry sentiment to build a stronger Queensland, leading into The Brisbane 2032 Games.

It is anticipated that this report with its full documentation of all processes undertaken, including the lessons learned, will lay the foundation for the pilot to be repeated in 2025 and to become an important and informative gauge of industry sentiment annually.

Industry Insights by IAQ

Industry Insights by IAQ - Queensland Infrastructure Performance 2024 is the outcome of the QIP Pilot Project and Sentiment Survey.

The high industry response rate **highlights strong engagement** with IAQ's goal to collect industry views on Queensland's Infrastructure.

Industry Insights by IAQ is intended to become an annual industry temperature check and publication.
The **annual survey** could measure performance, priorities, and social license for Queensland Infrastructure across **different regions** and **focussed** infrastructure classes.

The **QIP Pilot Project** demonstrates the value of industry and government partnering to understand and improve outcomes for Queensland's Infrastructure Performance.

Background & Purpose
Queensland Government's Infrastructure Framework

Infrastructure in Queensland

- Queensland Government leads infrastructure policy, planning, and investment prioritisation for the state, in collaboration with federal and local governments to ensure appropriate planning and delivery.
- Both public and private sectors play a role in sustainable and well-rounded infrastructure development for Queensland's future.

State Infrastructure Strategy 2022-2042 (SIS)

- The SIS aligns infrastructure investments across agencies
- Covers 10 infrastructure classes (IC), for a 20-year vision,
- Outlines challenges and opportunities for each IC, as well as priority actions.
- The strategy will be revised every four years to reflect the evolving nature of infrastructure.

Regional Infrastructure Plans

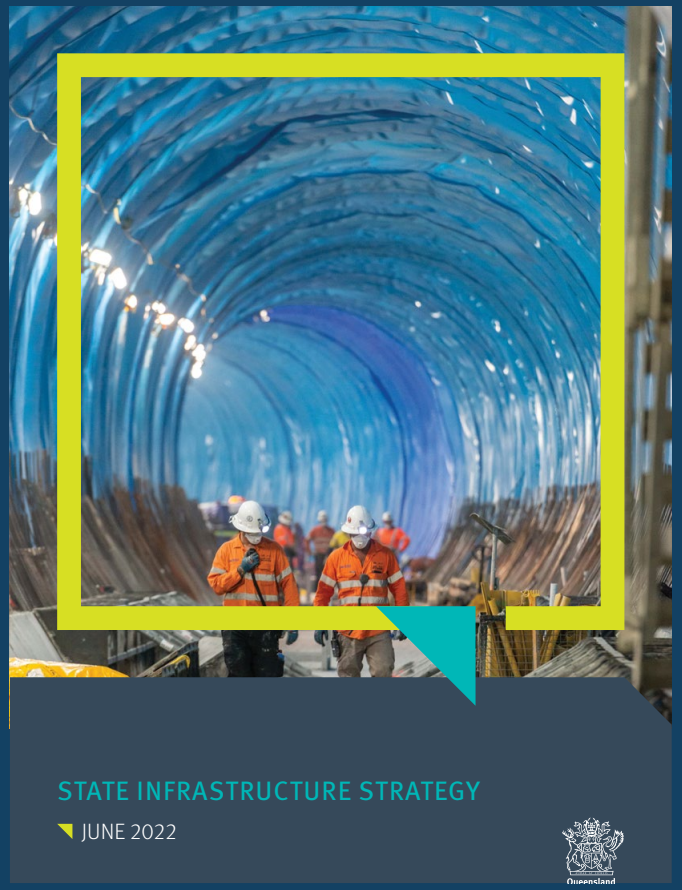
- Seven Regional Infrastructure Plans support the SIS, prioritising regionally significant infrastructure needs, recognising the significant role infrastructure plays in catalysing regional economic recovery, growth and livability.

Queensland's Big Build

- Queensland's Big Build program includes a wide range of projects such as building more hospitals, upgrading schools, improving transport systems, and expanding renewable energy sources, aimed at transforming the state over the next decade.

Queensland Government Infrastructure Pipeline (QGIP)

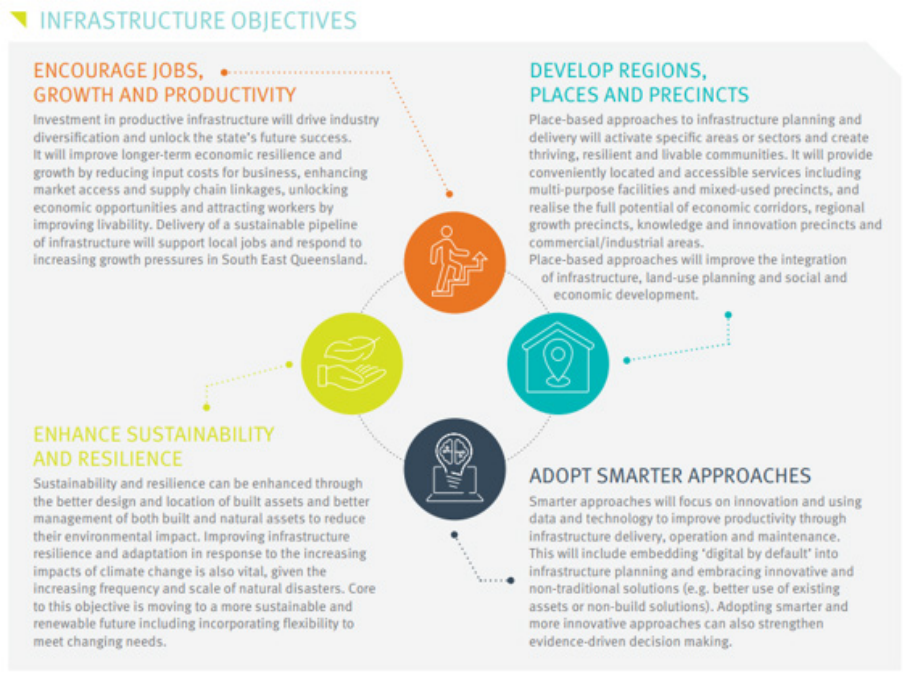
- The QGIP provides industry with visibility of the government's forward infrastructure pipeline, supporting industry confidence and enabling workforce planning.

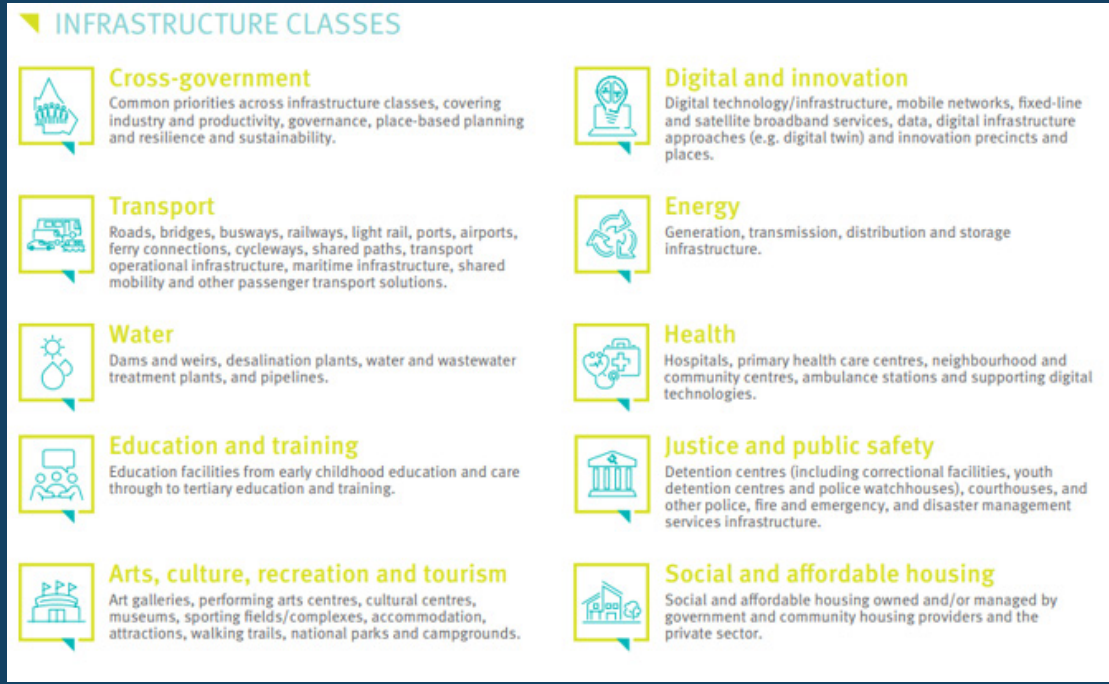


Background & Purpose
Queensland Government's Infrastructure Framework

The SIS aligns infrastructure investments across agencies and covers 10 infrastructure classes (IC). The 20-year vision, outlines Infrastructure Objectives, challenges and opportunities, and priority actions for each IC.

The strategy will be revised every four years to reflect the evolving nature of infrastructure.





QIP Sentiment Survey Structure

The purpose of the survey was to collect industry views on Queensland's infrastructure framework, to measure performance, priorities and social license for Queensland Infrastructure.
The survey was organised around the key themes in the State infrastructure Strategy.

1. General awareness and understanding
2. Relevance and impact / Industry capacity
3. Performance against key objectives
4. Performance / Priorities (Transport)
5. Performance / Priorities (Energy)
6. Social Licence – performance / responsibility

Key Objectives

- Encourage Jobs, Productivity, and Growth
- Enhance Sustainability and Resilience
- Develop Regions, Places, and Precincts
- Adopt Smarter Approaches

Transport Opportunities

- Environmental Sustainability
- Technology for mobility
- Brisbane 2032
- Accessibility & connectivity

Energy Opportunities

- Renewable Energy Growth
- Industrial Decarbonisation
- Future Energy Mix
- Supply Chain and Hubs:

Methodology Snapshot & Survey Insights

Methodology Snapshot

- Several channels were used to distribute the survey.
- The survey was hosted on the IAQ website and open to industry professionals for three weeks in July 2024 and closed on Monday 29 July.
- The survey was distributed to IAQ's industry contacts via a suite of emails.
- Social media, including Linked In posts and a Video featuring the IAQ CEO raised awareness across multiple platforms of the survey.

Additional insights on Survey data

To integrate and understand the industry relevance of the data, the Jacobs QIP team consulted other sources of infrastructure advisory and research.

Jacobs Strategic Infrastructure Advisors

The Jacobs QIP project team shared the data findings in a session with key Jacobs Strategic Infrastructure Advisors. These advisors are infrastructure leaders in their technical areas and provided their insights and observations on the survey results, some of which have been captured as opportunities for the project, government and industry in the future stages.

Relevant reports

Other Industry reports were considered to determine if there was alignment, support or contrast for the QIP Survey Results.
Including –

- The Big Build Survey (Queensland Government),
- Running on Empty, (June 2024), Arcadis Half Year Australian Construction Market View, and
- Infrastructure Australia's Infrastructure Market Capacity 2023 Report.

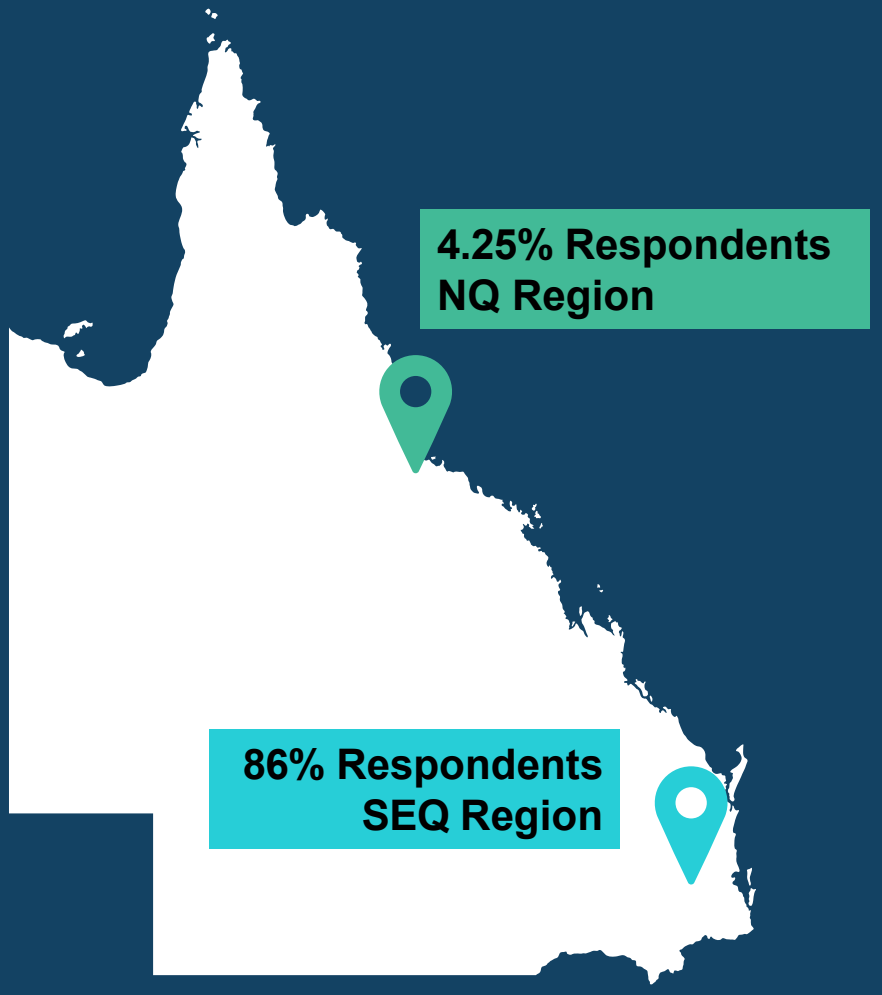
All reports reviewed are listed in the **References Page**

Survey Response

The QIP survey targeted the Managers, Professionals & Trades sub section of Queensland's Construction Sector, with the population size of 110,000.

636 industry professionals responded, demonstrating high industry engagement with the pilot.

This response rate provides a positive confidence level (95%) and acceptable margin of error (4%).



QIP Survey – Highlights

71% Respondents are **aware** of the Qld Infrastructure **Framework.**

68% stated they were **not aware** of the **details.**

Most Respondents considered the **4 SIS Infrastructure Objectives** were being applied / achieved at least to a **moderate extent.**

62% Respondents agree the Framework will **benefit** their industry in the **short and long-term.**

55% Respondents do **not agree** the industry has **capacity to deliver** the current pipeline.

QIP Survey – Highlights

Respondents have highlighted **SEQ rail network** and **Brisbane 2032** as critical **opportunities** to deliver better **outcomes.**

57% disagree that the state is on track to meet the commitment of **50% renewable energy** target **by 2030.**

Approx. **60% Respondents strongly agree** that social license **is needed** to achieve the objectives of the **State Infrastructure Strategy.**

Respondents rated the **State Government highest (90%)** as the government body to be **responsible** for **creating social license.**

Awareness of Queensland Infrastructure Framework

The majority (71%) of Respondents are aware of the Qld Infrastructure framework.

Respondents agree the framework will:

- **benefit their industry (62%),**
- **encourage investment (56%).**

71% are aware of the framework

68% are not aware of the **details** of the framework

32% are aware of the **content** and **objectives** of some or all of the framework

62% agree that the Framework will **benefit** their **industry** in the **short** and **long-term**

Only **5% disagree** that the Framework will **benefit** their industry

56% agree that the Framework will **increase confidence** and **encourage investment** in Queensland's infrastructure

Less than 8% disagree that the Framework will **increase confidence** and encourage **investment**

Awareness of Queensland Infrastructure Framework

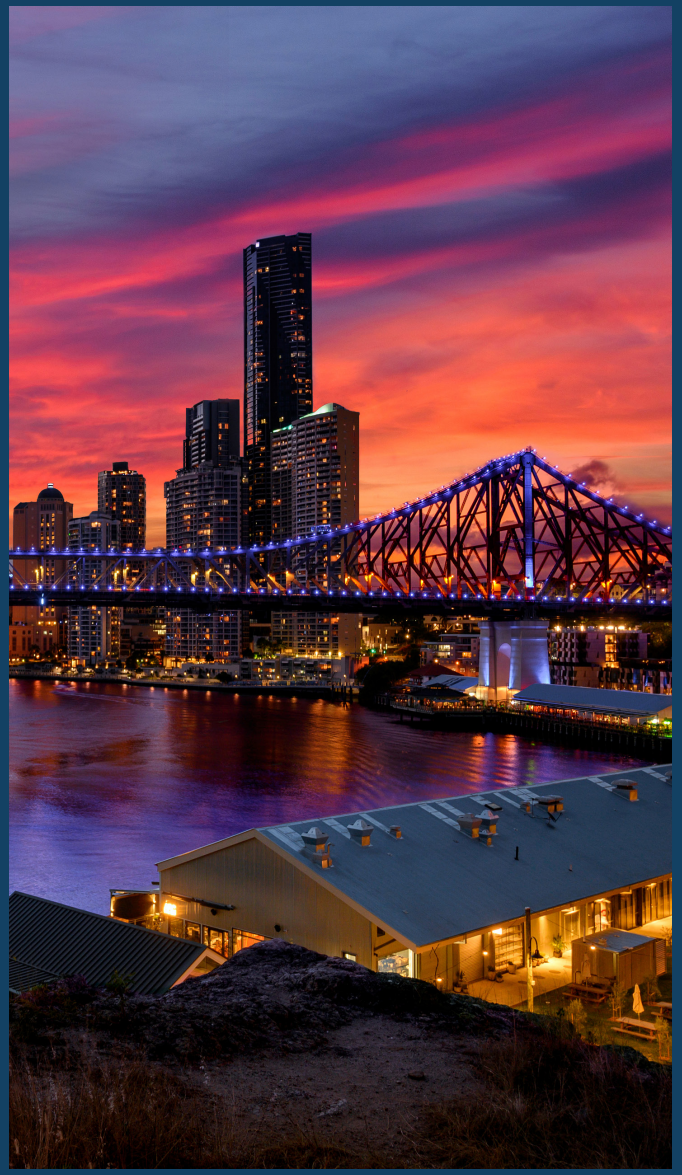
Awareness of the Queensland government's Infrastructure Framework

Overall there is positive sentiment relating to Queensland's Infrastructure Framework and it's impacts on the industry.

The majority of survey respondents (71%) are aware of the Queensland Infrastructure Framework and agree that it will benefit their industry in the short and long term (62%), and encourage investment in Qld's infrastructure (56%).

Only a small percentage of respondents disagreed that the Framework would benefit their industry (5%), or increase confidence and encourage investment (less than 8%).

- 68% of industry professionals were not aware of the details of the framework.



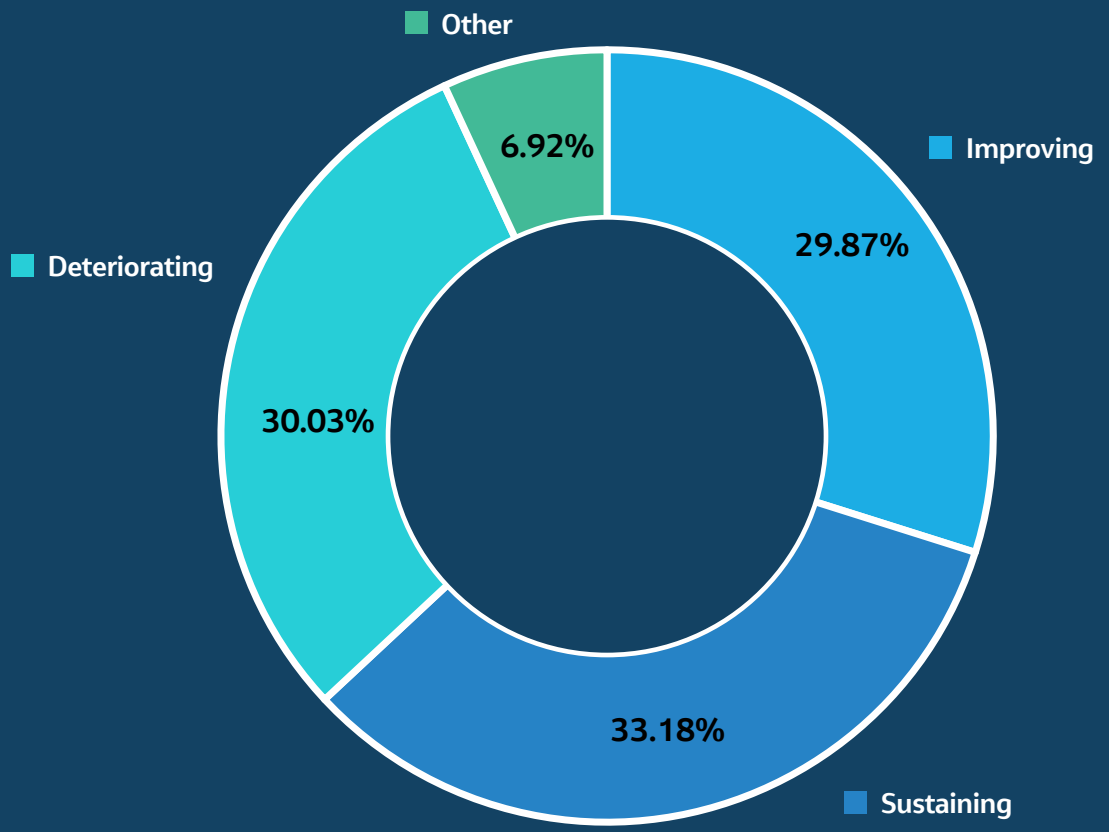
Queensland Infrastructure Investment Environment

Respondents are divided regarding the state of Qld's Investment environment and the appetite for infrastructure investment.

> There is plenty of infrastructure investment required but **far too much delay in commitment.**

> Appears very **robust on paper,** however **viability** of the extent of investment a **real concern.**

Queensland's Investment Environment



Queensland Infrastructure Investment Environment

Respondents were divided regarding the state of Qld's investment environment and the appetite for infrastructure investment. Roughly a third each indicated the environment was improving (29.87%), sustaining (33.18%), and deteriorating (30.03%). In general, additional comments made by respondents indicated positivity tempered with concern about delayed progress and caution relating to the upcoming Qld State Election.

This sentiment aligns the Arcadis (June 2024) Running on Empty - Half-Year Australian Construction Market View.

- Appetite is strong. Infrastructure costs are weighing down progress
- There is an apparent increase in appetite yet to see this in effect
- There is plenty of infrastructure investment required but far too much delay in commitment.
- Good intensions, but lack of continuity and commitment to progress
- Appears very robust on paper, however viability of the extent of investment a real concern

Running on Empty, Half Year Australian Construction Market View, Arcadis (June 2024)

Optimism and confidence has started to wane considerably as major decisions continue to be deferred and an increasing lack of clarity regarding the project pipeline for the 2032 Games.

State and local government elections in Queensland in 2024 impact on timing, funding and planning and potential re-evaluation of infrastructure delivery.

The forward pipeline across most states remains relatively strong. However, the lion's share of this lies within the public sector and several project commitments have continued to be delayed and pushed to the right. This has had a significant impact on market confidence.

The knock down and rebuild of the Gabba for the 2032 Games has been scrapped following a recent review of proposed venues. This is in favor of utilizing and upgrading existing infrastructure and venues – at what will still be a substantial cost.

The response to this U-turn has been significant, with the public largely divided on the matter. The industry response has been loud and clear in that there are other – and perhaps better – options that should be explored further before any commitment is made.

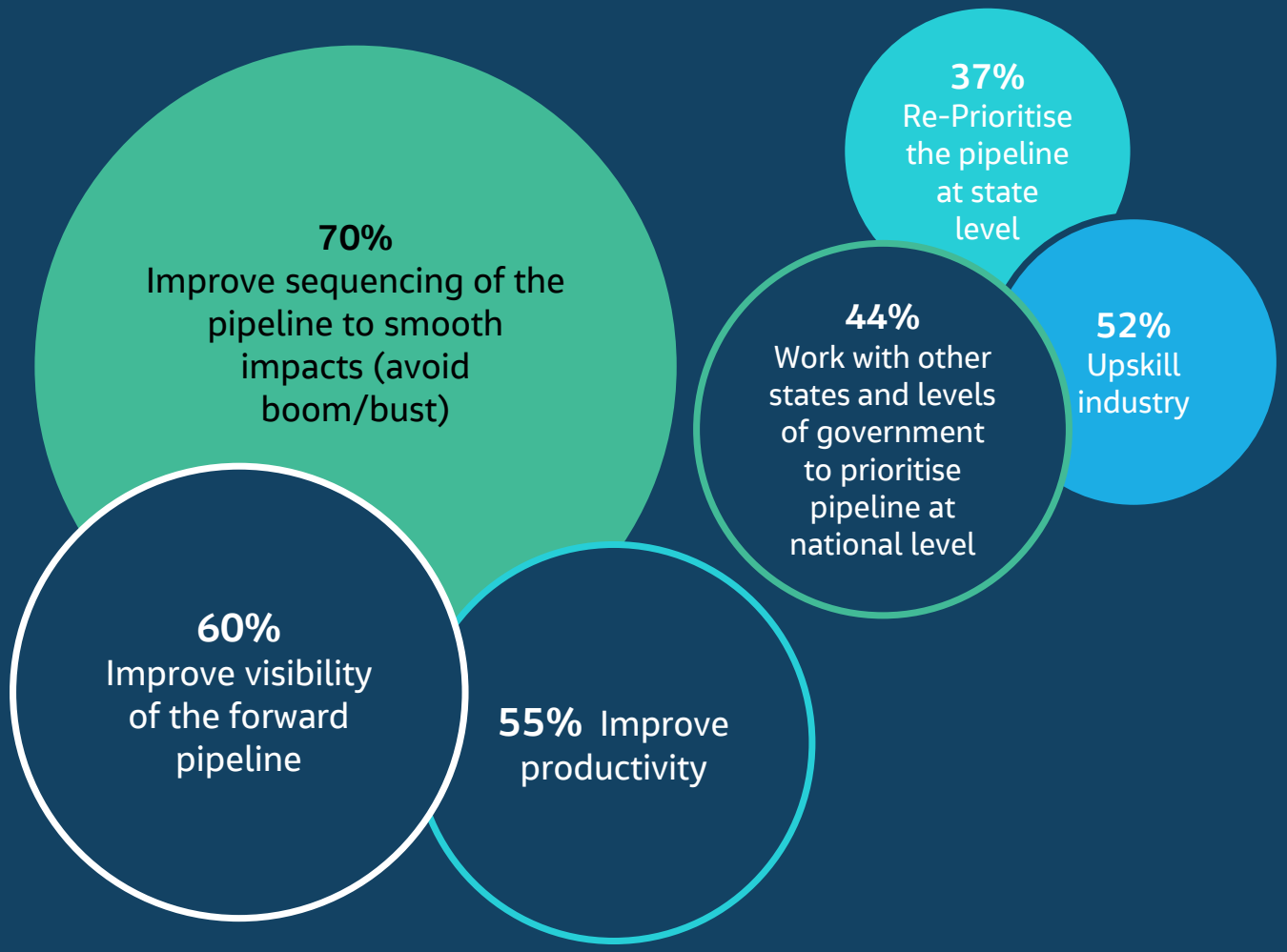
Arcadis. (2024, June). Running on Empty - Half-Year Australian Construction Market View

- Hesitant/Cautious to invest given upcoming elections
- I think there is industry concern over impact of the potential change of government
- I would say "Improving" but with caveat that outcome of coming election may adjust priorities"

Improving Industry Capacity

55% Respondents do **not agree** the **industry** has **capacity** to **deliver** the current pipeline (disagree or strongly disagree).

Respondents top ranked factors for improving the industry capacity.



Improving Industry Capacity

The survey found that 55% of respondents do not agree that the industry has the capacity to deliver the current pipeline. This is in line with industry market reports which show signs of diminishing labour capacity continuing to prevail (Arcadis, 2024), and concerns with the domestic capacity of materials supply (Infrastructure Australia, 2023). Respondents ranked the top factors for improving the industry capacity as "Improving sequencing of the pipeline to smooth impacts (70%) and Improving visibility of the forward pipeline (60%).

Queensland Government Big Build Survey

Queenslanders recognise population growth is increasing across the State.
While population growth does lead to economic growth and greater access to funding and services, for many, their greatest concern is that it places higher demand on resources and ultimately means development is unable to keep up and support a high influx of residents.

Big Build - Qualitative summary findings (Oct 2023), Living in Queensland

Infrastructure Australia - Market Capacity 2023 Report

- Industry surveys and interviews indicate concerns with the domestic capacity of materials supply.
- Local materials supply - particularly steel and quarry products - cannot meet demand in particular hotspots.
- There is an opportunity to build domestic capacity and markets for new low emissions construction materials - such as green steel and recycled materials - in response to Australia's Net Zero 2050 and 2035 targets.

Infrastructure Australia. (2023, December 12). Infrastructure Market Capacity Report

Jacobs Strategic Advisory Panel- Insights

Harmonising accreditations with other states could improve industry capacity. For example rail is regulated at the state level and qualifications do not translate. There are principal testers, or qualified rail workers in Victoria who have no work but cannot work in Queensland because their qualifications don't translate and can take 6 to 12 months.

Running on Empty, Half Year Australian Construction Market View, Arcadis (June 2024)

Signs of diminishing labour capacity continue to prevail.

An average of 17% of contractors are struggling to secure professional services (architects, engineers, project managers etc), general labour, and Group 1 and 2 tradespeople and that capacity is a critical issue.

74% respondents agree that availability of skills and labour is a growing concern across most sectors. (2024 Market Sentiment Survey)

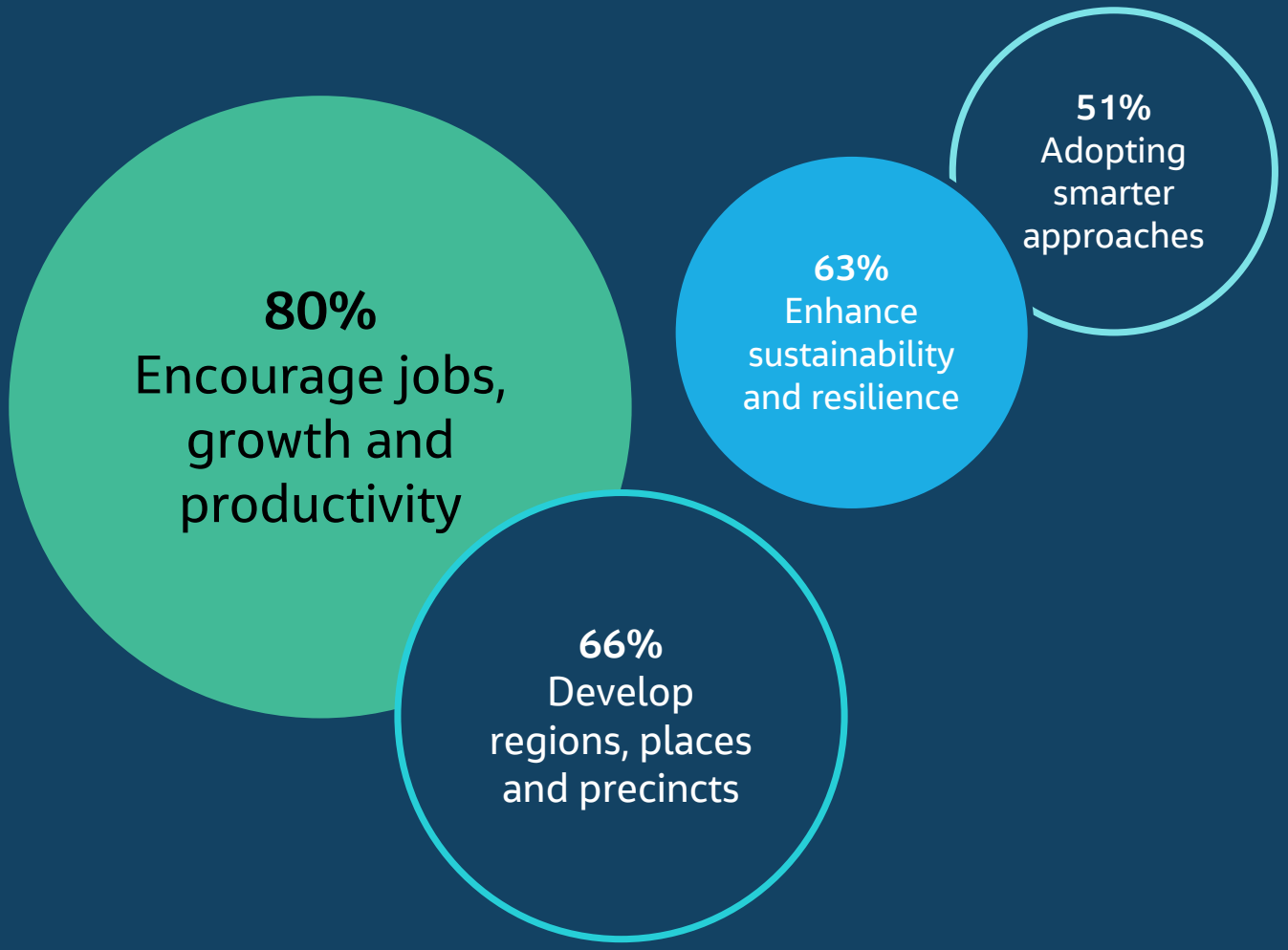
Overall level of improvement in tendering conditions, with pricing volatility markedly reduced. However, it will not take much for this capacity to be quickly absorbed, along with a swift return to pricing volatility.

Arcadis. (2024, June). Running on Empty - Half-Year Australian Construction Market View

State Infrastructure Strategy Objectives

The majority of Respondents considered the four State Infrastructure Strategy objectives were being applied / achieved.

(at least to a moderate extent)



State Infrastructure Strategy Objectives

The most common response from respondents was that objectives were being applied or achieved "to a moderate extent" Ranging 40% to 50%.

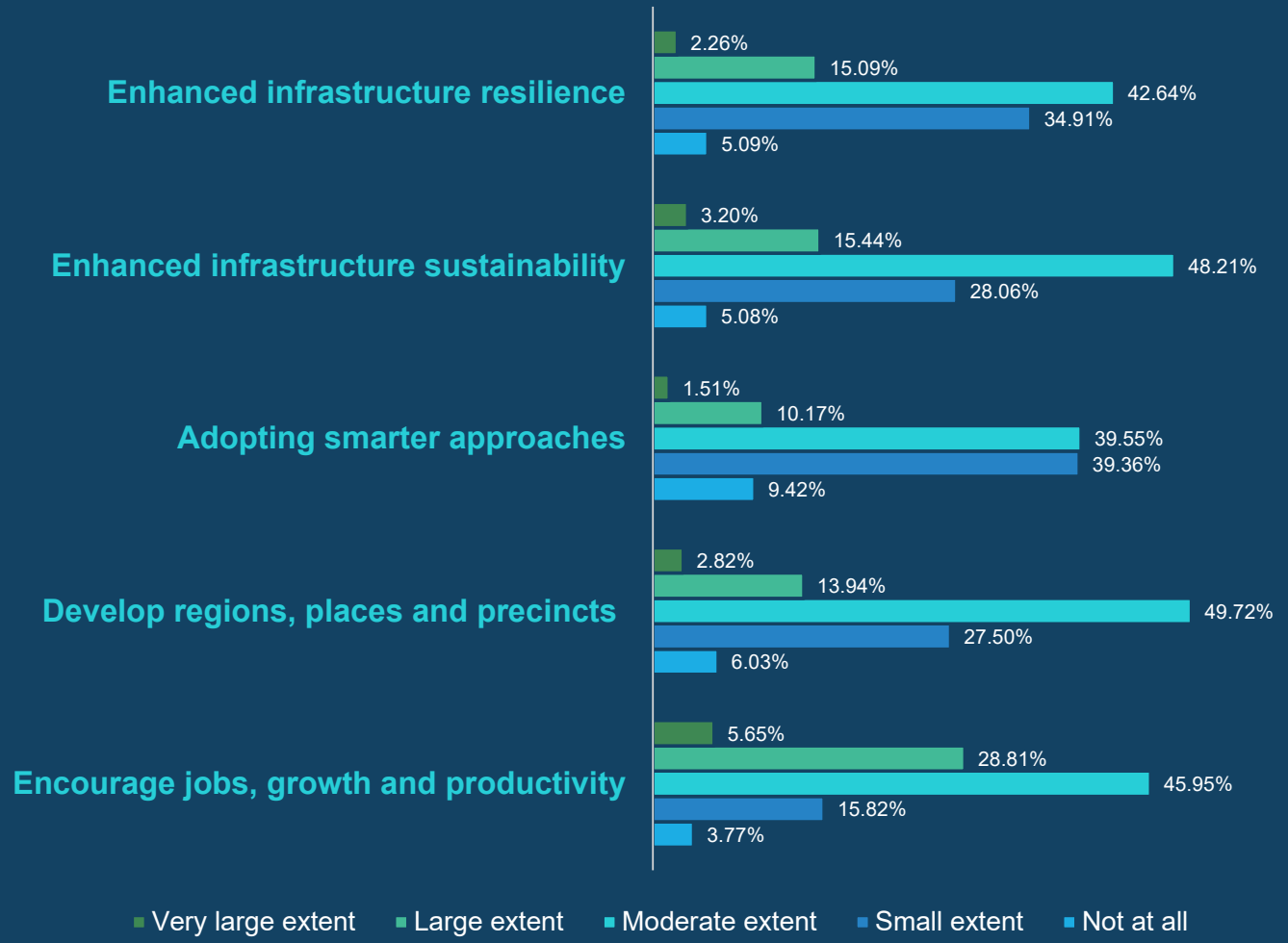
Infrastructure Objectives

The majority of respondents considered the 4 infrastructure objectives in the state infrastructure strategy were being applied or achieved, at least to a moderate extent for all objectives.

The most common response from respondents for all objectives was they were being applied or achieved **"to a moderate extent",** between 40% & 50%.

These results may indicate that industry sentiment is that we are 'treading water' and not yet significantly enhancing our outcomes.

Noting that the SIS Infrastructure Objectives are quite broad, results could also indicate respondents are not confident they know the answer to the question and therefore choose the 'moderate' response option as a default.



Encourage Jobs Growth and Productivity

"Encourage jobs, growth and productivity"…

Infrastructure classes creating jobs and supporting sustainable infrastructure and construction industry growth.

> **Living in Queensland**
> The state of public infrastructure significantly influences quality of life;
> Big Build (Oct '23)

Approximately **80%** of Respondents agree that Queensland initiatives and projects are positively creating jobs and supporting sustainable infrastructure and construction industry growth (with **46%** stating to a moderate extent only).

Infrastructure Classes ranked in order of driving industry growth

1	2	3	4
Energy	Transport	Water	Health

Big Build Quantitative summary findings (Nov 2023)

1	2	3	4
Health	Water Supply	Justice & Public Safety	Energy

The key aspects of infrastructure that are perceived as **most important** by Queenslanders.

Encourage Jobs Growth and Productivity

When asked “Which of the ten SIS Infrastructure Classes are driving industry growth?” respondents clearly nominated energy, transport, water, and health. The infrastructure classes nominated by industry are considered not surprising and reflect current investment and market delivery. However, industry confidence is considered to be starting to wane as major decisions continue to be deferred and increasing lack of clarity regarding the project pipeline for the 2032 Games (Arcadis, 2024).

These industry results show strong alignment to the results from the community in the Qld Governments Big Build - Quantitative summary findings (Nov 2023), which found the key aspects of infrastructure that are perceived by Queenslanders as the most important are:

1. Health (92%),
2. Water Supply (90%),
3. Justice and Public Safety (87%), and
4. Energy (87%).

Through the Big Build survey, Community members also commented that “The state of public infrastructure significantly influences quality of life; affecting mobility and access to essential services and amenities that support a comfortable life”.

Running on Empty, Half Year Australian Construction Market View, Arcadis (June 2024)

Ongoing investment in transportation and the health sector, a promising pipeline of projects supporting the state’s energy transition and, of course, the 2032 Olympic and Paralympic Games had built optimism across the past 18 months.

However, that optimism and confidence has now started to wane considerably as major decisions continue to be deferred and an increasing lack of clarity regarding the project pipeline for the 2032 Games.

Arcadis. (2024, June). Running on Empty - Half-Year Australian Construction Market View

Infrastructure Classes For Priority

"Encourage jobs, growth and productivity"…

Top 3 infrastructure classes to be prioritised for improvement, upgrade or development.

> Queenslanders place the greatest importance on public infrastructure that is fundamental to meeting the basic needs of society.
> Big Build (Oct '23)

Infrastructure Classes to be prioritised for improvement, upgrade or development

68%	66%	42%
		
Energy	Transport	Social and Affordable Housing

Big Build Quantitative summary findings (Nov 2023)

68%	51%	48%
		
Health	Housing	Transport

Infrastructure Classes For Priority

When asked to rate the top 3 infrastructure classes to be prioritised for improvement, upgrade or development, energy, transport and affordable housing were ranked highest by the industry respondents.

Housing has been identified in the industry as an infrastructure class to be prioritised for improvement, upgrade or development by the government. This is reflected in recent substantial investment by Queensland government for the delivery of social housing.

In the Big Build Survey, Queenslanders identified their top three Infrastructure categories as priorities for improvement, Health (68%); Housing (51%) and Transport (48%).

It was noted that Digital infrastructure as a class, did not rate highly. This could reflect respondents considering digital as a subset of all of the other categories, and woven in as a component, for example within a desalination plant or railway project.

Running on Empty, Half Year Australian Construction Market View, Arcadis (June 2024)

The Queensland government aims to deliver 53,500 new social homes by 2046 and, to meet this target, is providing $1.25Bn over the next five years to deliver 2,000 social homes every year from 2028. This is in addition to the $6Bn that has already been committed.

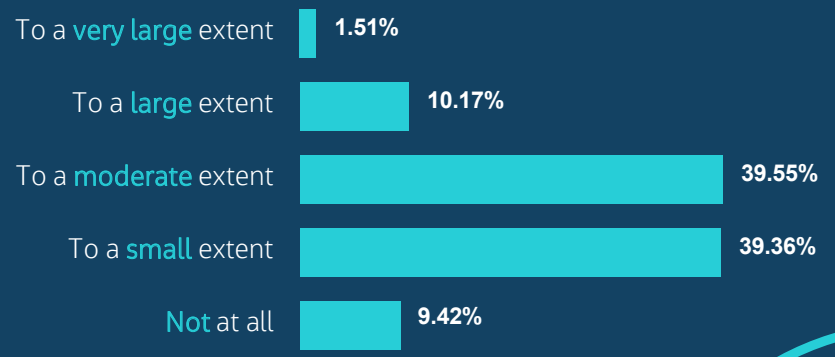
This commitment is seeing some developers, who have historically played in the commercial sector, pivot towards this growing market.

Arcadis. (2024, June). Running on Empty - Half-Year Australian Construction Market View

Adopting Smarter Approaches

Extent that Government and industry are adopting smarter approaches to provide improved infrastructure.

Only **12% Respondents** rate the government and industry as embracing better practices and adopting smarter approaches to a **large** or **very large extent.**



49% of Respondents think that **government** and **industry** are embracing **better practices** and adopting **smarter approaches** to a **small extent**, or **not at all.**

Adopting Smarter Approaches

Areas for the Government and Industry to focus for improving smarter approaches to drive productivity and safety outcomes.

1. Streamlining Regulatory and planning processes

2. Harmonising standards

3. Harmonise procurement processes

4. Innovative construction approaches

Technology & digital

5. Building Information Modelling (BIM)

6. Off-site manufacturing

7. Sensors and data

8. Robotics

Adopting Smarter Approaches

Just over half of respondents (51%) indicated that government and industry are embracing better practices and adopting smarter approaches to a moderate, large, very large extent. However the majority of these ratings were moderate, with only 12% of respondents considering that smarter approaches are being embraced to a large or very large extent.

When asked 'Where should government and industry focus on improving and adopting smarter approaches to drive greater productivity, and safety outcomes?', streamlining regulatory and planning processes, followed by harmonising standards, harmonise procurement processes and then innovative construction approaches rated as the top 4. With the more technology-based options of building information modelling (BIM), off-site manufacturing DfMA and modular construction, sensors and data, and robotics all ranking significantly lower.

These responses may indicate the industry consider the barriers to improvement to be more structural and process related, rather than technological.

An observation was made that some existing concept design processes may at times not make room for transformative innovative construction in delivery phases across markets.

Procurement processes in Queensland can limit the ability for new international contractors' investment and expertise to enter the market, with criteria required to show Qld experience. This may limit the introduction of new innovative construction methods. There is however the opportunity to further explore joint ventures between local and global companies to bring innovation while also uplifting local capabilities.

An example was provided from Western Australia where Tier 1 companies partner with Tier 2 companies to uplift their skills and experience, then this is replicated between Tier 2 and 3 companies.

Top Transport Opportunities

Top Transport Opportunities in terms of importance and ability to deliver outcomes.

> **Connectivity beyond Brisbane**
> Develop regional travel - including providing adequate public transport and active travel networks to the regions

Approx **52%** of Respondents **did not think** the transport improvement opportunities from **Brisbane 2032 Games** are being maximised.

1. Optimise and enhance the **SEQ rail network**
2. Use Brisbane 2032 Games to deliver a **step change in public and active transport**, **connectivity**, and access to reduce dependence on private motor vehicles.
3. Protect and **improve** the **resilience** of the **transport network**
4. Transport planning for the **Brisbane 2032 Games**
5. Encourage and facilitate **active transport**

Top Transport Opportunities

Opportunities to deliver outcomes through Transport

Respondents highlighted optimising and enhancing the SEQ rail network, and using Brisbane 2032 to plan and deliver a step change in public and active transport, as the most important transport opportunities with the ability to deliver outcomes. Protecting and improving the resilience of the transport network, Transport planning for the 2032 Games, and encouraging and facilitating active transport, also ranked in the top five.

Just over half (52%) of respondents did not think the transport improvement opportunities from Brisbane 2032 Games are being maximised.

Respondents also commented on the importance of developing Intra-state connectivity, delivering large transport projects outside of SEQ, and maintaining regional highways.

There is clear opportunity for the Brisbane 2032 Games to drive transport towards:

- net positive outcomes and demonstrate uplift in integrated sustainable transport infrastructure.
- optimising systems and existing investments for efficiency and sustainable resilience across all infrastructure.

Top Energy Opportunities

Top 5 Energy Opportunities in terms of importance and ability to deliver outcomes.

57% disagree that the state is on track to meet the **commitment** of **50% renewable energy** target by **2030** (disagree or strongly disagree).

1. Grow Queensland's energy storage
2. Capitalise on the abundance of critical minerals
3. 50 per cent renewable energy target by 2030
4. Unlock renewable wind energy in Northern and Southern QREZ
5. Support and encourage the development of future fuels

> Energy storage improvement for local homes. More affordable solar storage in individual properties to reduce grid demand. Mandatory solar and battery installations in new properties

Top Energy Opportunities

Industry respondents identified the top 5 Energy opportunities in order of importance and ability to deliver outcomes. Respondents rated these top 5 as extremely or very important:

- Grow Queensland's Energy Storage,
- Capitalise on the abundance of critical material.
- 50 per cent renewable energy target by 2030.
- Unlock renewable wind energy in Northern and Southern QREZ.
- Support and encourage the development of future fuels.

It is noted that coal's importance in Queensland is not mentioned, which may simply reflect that this data set represents mostly respondents from the South-East Queensland region, where there are fewer coal projects.

Queenslanders in the wider community stated that they generally see renewable energy infrastructure to have a positive impact on the environment, but some Queenslanders question the expense of this kind of development and if it's the kind of projects that should be prioritised. Big Build Survey, Qualitative summary findings (Oct 2023).

57% of industry respondents do not agree that the state is on track to meet the commitment of 50% renewable energy target by 2030. This response contrasts with recent government publications, highlighting the state's progress on this target: The Queensland Energy and Jobs Plan states that, "With 27 per cent renewable energy supply now in Queensland, we are on schedule to reach our first renewable energy target of 50 per cent by 2030" (Queensland Government, 2023, p. 3).

A recent joint statement from The Premier, The Honourable Steven Miles and The Minister for Energy and Clean Economy Jobs, The Honourable Mick de Brenni states that "Queensland's renewable energy transition will support the state in achieving the landmark 75 per cent by 2035 emissions reduction target and 80 per cent renewable energy by 2035 target, both enshrined in law." (Queensland Government, 2024).

The data response rate suggests that there is a real opportunity for the government to increase industry awareness of the Queensland Infrastructure Framework, through improved communications to industry of the state government's progress on key milestones.

A regional industry insight was provided that suggested there remain barriers to incorporating sustainability and renewable energy innovations into projects in Queensland, where multidisciplinary project workshops identify great ideation activities that go beyond business as usual, but are often reduced in implementation phases. More so in Qld, when compared to other Australian states and New Zealand projects.

Social License to Operate

Approx 60% strongly agree that social license is needed to achieve the objectives of the State Infrastructure Strategy.

Respondents identified the responsibility for creating social license to sit with

- State Government (90%)
- Local Government (78%)
- Federal Government (65%)
- Individual project proponents (64%)

Elements to impact the creation and continuation of social license

1. ***Transparency***

   Open communication builds trust with stakeholders

2. ***Clarity about Benefits***

   People need to understand how they benefit

3. ***Accountability***

   Accountability demonstrates commitment to ethical behaviour

Over 55% Respondents rate **Transport sector** as currently having a **large social license** to construct/operate

Compared to **39%** for **Energy infrastructure**

Social License to Operate

Approximately 60% respondents strongly agree that social license is needed to achieve the objectives of the State Infrastructure Strategy.

Transparency, clarity about benefits and accountability are the top three elements identified which are needed to create and continue social license to operate, and it is likely that consent was ranked lower as an element because consent is achieved as a result of transparency and accountability.

The State Government (90%) is identified as the government body to be most responsible for creating social license.

Over 55% respondents rated the Transport sector as currently having a large social license to construct/operate. This compared to 39% for the Energy infrastructure. These sector results may reflect that the majority of respondents were located in the Southeast Queensland and not in regional Queensland where there are more energy projects being delivered.

The data results suggest opportunities to create and further continue Social License to Operate through earlier conversations with the community and informing of the broader positive outcomes of investments.

The Big Build program is a strong step towards this. Further industry education on definitions, good practices and successful SLO examples across industry markets in Queensland, will also support as energy projects increase.

Emerging Opportunities

Opportunity for the government to increase industry awareness of the Queensland Infrastructure Framework, through:

- easy wayfinding and mapping of the linkages between all the key documents that make up the Framework.
- highlighting the details of SIS in an industry relevant way, utilising graphics, and showing targets and progress.
- improved communications to industry of the state government's progress on key milestones.

Opportunities for improving industry capacity

- improve sequencing of the pipeline with purposeful phasing across mega projects.
- improve visibility of the forward pipeline.

Infrastructure Australia identified the opportunity to build domestic capacity and markets for new low emissions construction materials - such as green steel and recycled materials - in response to Australia's Net Zero 2050 and 2035 targets.

Opportunities for improving industry capacity - professionals

A strategy to grow and support Indigenous designers and industry professionals, who are in high demand due to increased requirement and commitment of projects across the state to deliver cultural impact assessments and deliver Connection to Country outcomes.

Emerging Opportunities

Opportunities to deliver outcomes through Transport

A clear opportunity for the 2032 Games to drive transport towards net positive outcomes and demonstrate uplift in integrated sustainable transport infrastructure.

Opportunities for Adopting smarter approaches

Industry engagement by government to review and improve systems, policies and standards to support adopting smarter approaches and innovations in construction across the industry.

Opportunities to deliver outcomes through Transport

Intra-state connectivity was identified by industry as a key improvement area to deliver outcomes for transport.

Opportunities to create and further continue Social License to Operate

There is opportunity for earlier conversations with the community and informing of the broader positive outcomes of investments. The Big Build program is a strong step towards this.

There is opportunity for further industry education on definitions, good practices and successful SLO examples across industry markets in Queensland as energy projects increase.

Industry Insights by IAQ

Queensland Infrastructure Performance 2024

Thank you to all our IAQ members, and our government and industry partners who took the time to complete the survey and share with your networks.

These shared efforts have allowed IAQ to successfully deliver the first of (hopefully) many more.

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