



FUTURE STATE
11 AUGUST 2016

IDEAS & SOLUTIONS
FOR QUEENSLAND 2026

QUEENSLAND
FUTURES
INSTITUTE

INNOVATION . INDEPENDENCE . IMPACT

QFI's AIM

The Queensland Futures Institute aims to lead policy debate on issues essential to the future growth of Queensland. Tackling the most difficult policy issues; drawing upon evidence-based research; collaboratively engaging business, industry, researchers, local government and the community in developing workable solutions; to bring about essential reform.

Partnering with some of Queensland's most passionate advocates for change, we bring together like-minded people across many sectors and disciplines to address issues and create opportunities in Queensland.

Our driving philosophy: an innovative, robust and thriving economy to enhance the social well-being and quality of life of all Queenslanders

QFI's POLICY FRAMEWORK

Committed to improving the state of Queensland through private-public collaboration, the institute has five futures themes that guide its activities:

- Queensland – Global Hub for Education and Research
- Taking Advantage of Emerging Technologies
- Creating Thriving Regions
- Valuing our World Class Asset - the Great Barrier Reef
- Growing and Benefiting from the Asian Century

To broaden our policy agenda our Policy Committees this year include

- Accessing Investment Capital
- Business and Research Collaboration
- Energy
- Food and Agribusiness
- Growing Regional Queensland
- Innovation
- Financing Queensland's Growth

QFI IDEAS FOR THE FUTURE

EDUCATION AND RESEARCH

Professor Ian Frazer AC, Chief Executive Officer and Director of Research, Translational Research Institute

Establish Queensland as a premier location for the conduct of medical research by industry and academia, by introducing a single uniform public health system eHealth record across the State, by introducing opt out consent for contribution of data to medical research, by rationalising the governance aspects of the conduct of research in the public hospital system, and by expanding the pool of clinical research talent through creation of further practitioner research fellowships across all sectors of the public health service.

Professor Peter Høj Vice Chancellor and President, The University of Queensland

Australia needs to transform its economy and Queensland Governments have realised this through past initiatives, including the current Advance Queensland Initiative. This Initiative is well positioned to take advantage of the recently announced National Innovation Statement for Australia. The Initiative should be maintained and preferably boosted. This will strengthen the higher education sector and enhance its reputation, which is crucially important to further boost service export earnings from international student tuition. Whilst this activity already contributes almost \$3billion to the Queensland economy, it can be boosted further. The Initiative will also promote innovation in business and services to not only further develop existing businesses, but also attract and develop new activity.

Additionally, the development of new businesses and presence of tens of thousands of Queensland educated alumni throughout Asia will also allow us to leverage the growing economies of Asia, including Indonesia.

Mr Page Maxson, Chief Executive Officer, Australia Pacific LNG Pty Limited

Trade skilling for the 21st century. How do we establish training programs for trades such as coding, app development and graphic design to develop a skilled workforce for the innovative, high tech employers of the future? Having an ample workforce with the proper skills will be key to attracting these companies to Queensland and thus providing strong employment growth.

EMERGING TECHNOLOGY

Mr John Lord AM, Chairman and Independent Director, Huawei Australia

A Better Connected World is approaching

A Better Connected World will have a significant impact on every country's socioeconomic development. Connectivity will drive economic benefits and become a demand from the consumer – business and personal consumers.

Whole of Government Approach to Digitisation incorporating Internet of Things & Connectivity

By 2025 there will be 100bn global IoT connections – P2P 10%, M2M &T2T will make up 90%. To achieve the economic benefits & meet consumer expectations Governments need to ensure the latest technologies are considered, if not included, for all infrastructure, community and social projects.

Incorporating Latest Digital & ICT Technologies Will Have Economic Benefits for Government & Business – E.G.s

1. AFR Friday 6 May – CSIRO sensors throughout aged people’s homes, measuring food consumption, monitoring health, all remotely. Allows aged to stay at home longer, lessening care accommodation and improving the aged living experience
2. Huawei & SE Water in Melbourne – remote IoT sensors monitoring all their connectivity points – water wastage, under use, over use, defect prevention, all remotely
3. Huawei & Netherlands Towns – remote sensors supporting smart cities through efficient parking, lighting, optimum people and transport flows.
4. Huawei & Metricon Stadium – Huawei has incorporated the latest technologies in Metricon to maximize the spectators experience

Mr Tony Schiffmann, Managing Partner, BDO

The recent advances in data analytics capability offers significant opportunity to contribute to Queensland’s social and economic growth. We see an opportunity for Government to:

- Use data to provide deeper insights into the current state of government agencies and departments
- Create interfaces between agencies and departments for integrated policy making
- Better connect agencies and departments in regards to data sharing and insights
- Empower agencies and departments with data analytics and business intelligence capabilities

What might be a part of the Solution?

Leveraging the Open Data Project - a One-Government Data Insights Strategy - focused on generation of integrated social and economic insights:

The outcomes to Government?

- Improved knowledge – arming agencies and departments with deep insights (beyond data)
- Integrated Government Policy (end-to-end) – providing improved services and community outcomes
- Increased assurance over evidence based investment decisions –increasing Government’s likelihood of realising investment benefits

Professor Martin Betts, Deputy Vice Chancellor (Engagement) Griffith University

Proposal for an Advanced Design and Manufacturing Centre at the Gold Coast Health and Knowledge Precinct to provide:

- Advanced digital fabrication technologies that provide viable direct, end-use product manufacturing capabilities in high value innovation products spanning personalised medical devices through to next generation electronics.
- Co-location in knowledge precincts to facilitate authentic, long term engagement between industries and research organisations, with additive manufacturing enabling swift progression from discovery science to prototype, to product in market.
- Significant new markets nationally and internationally through the agile approach of a highly skilled workforce addressing specific client needs for short run/high customisation products via advanced design and distributed digital fabrication technologies.

- The intellectual and creative capital of the State to assure national leadership in design for manufacture rejuvenation:
- Customised design and transmission for distributed manufacture, utilising clean and energy efficient materials and integrated into global supply chains.
- Increased return on investments in advanced informatics capability, not least through identification and capitalisation of new market opportunities.

Dr David Williams, Executive Director, CSIRO Digital National Facilities & Collections

“Data driven policy intervention.”

To recognise the value of existing and new datasets and how state of art analytics and modelling can help inform and support policy decision making in Queensland. At the same time this can improve the visibility of outcomes to the population as well as services. Provide on line access to data sets that enable multi-disciplinary analysis of issues with spatially referenced outputs. Ensure quality of data sets is a known feature. Understand and use value of new remote observational systems to improve outcomes of the analytics. In terms of confidentiality we can now run analytics across encrypted data to retain individual anonymity. E.g. health data. We can use machine learning capabilities to run analytics across disparate datasets and at the same time weight the data in terms of quality. Data access platform needs to be a spatial map (google maps style) with metadata available on line for all and access conditions provided. Will work across all areas:

- Traffic modelling
- Health
- Smart cities
- Rural resources and planning
- Sustainable environmental management using all inputs in a synergistic way. Important for Barrier reef for example
- Marry hard data with soft social outcomes.

Aim to create Queensland as a modern state of art place for future digital technology companies and build on the new innovation statement.

Dr Catherine Ball, Director Applied Innovation, Elemental Strategy

Remotely Piloted Aircraft Systems (RPAS) aka Drone Technology

The estimated market value for the non-military applications of drone technology is USD 20 Billion per annum by 2020, combine this with the global spatial data industry being worth an estimated USD 270 Billion per annum, and also the Augmented Reality, and Virtual Reality advances in technology then there is a lot of value in being involved with drone technology.

Australia was the first country in the world to regulate for commercial RPAS operations back in 2002, and amendments are in place to deregulate the sub 2kg market for commercial operations at the end of 2016.

Queensland is leading the rest of Australia with these applications and we have the potential to lead better practice across the “Drones For Good” ecosystem.

Some areas that will need continued support with regard to policy and grants include:

- Precision Agriculture
- Data management, archiving, and storage
- Geo-ethics and the engagement of communities with these technologies

- Empowerment of communities
- Post-disaster response
- 3D printing
- Precision manufacturing.
- Insurance for RPAS operations
- Drone academies in schools
- Link with RPAS and coding and robotics.

ENERGY

Mr Terry Effeney, Acting CEO, Energy Queensland

To “stay the course” with the energy services model for the new merged entity (Energex & Ergon Energy) as a key driver to achieving the 2030 Energy Vision and to foster

- Education and research
- Collaboration and commercialisation
- Positive regional outcomes
- A focus on opportunities in the near Pacific and SE Asia

Mr Paul McCartney, Joint Chief Origination and Transaction Officer, Clean Energy Finance Corporation

CEFC perspectives on Queensland’s clean energy goals

- Queensland is faced with a challenging economic transition to new sources of investment and innovation in energy provision.
- Despite some natural advantages, Queensland lags behind other states in terms of total renewable energy production. Even when you include behind the meter solar, an area Queensland leads Australia, - Queensland produced just 5% of its electricity from renewables in 2015, this compares with 8% in NSW, 42% in SA and 100% in Tasmania.
- CEFC is very keen to continue developing mechanisms that will assist unlock the billions of private investment required to help the State meet this economic transition.
- In particular, it is recognised that Queensland is a natural leader in biomass given our access to water and land resources. To more sustainably accelerate an energy transition towards renewables, it is important to leverage opportunities in biomass that take advantage of Queensland’s competitive advantages in agriculture – eg: bagasse generation.
- Queensland has been leading the way in bagasse generation through its sugar cane production but projects are facing barriers. According to the Australian Sugar Millers Council with the Renewable Energy Target there is 1GW of unutilised generation capacity from bagasse in Australia.
- The CEFC has a range of finance mechanisms that can support the realisation of this generation capacity including effective early stage financing mechanisms under its new Innovation Fund vehicle for such things as aviation and transport bio fuels.
- In addition, as the Federal Government announced as part of its re-election policy, the CEFC will provide \$1billion over 10 years to invest in projects that directly benefit the Great Barrier Reef through a water quality outcome or are CEFC projects located in the catchment that contribute to combating climate change. The types of projects financed through this Fund are likely to cover a broad range of activities and ultimately assist organisations in Queensland’s regional communities further leverage their natural competitive advantages.

Mr Ian McLeod, Chairman, QFI Energy Committee

- Ergon Energy captures every regional city and town in Queensland every year with spatial LIDAR data and high resolution imagery. There is an opportunity for Queensland to leverage this investment and information across communities and industries to improve efficiency, reduce risks and costs. There is also an opportunity to progress utility infrastructure and community resilience work to reduce longer term economic losses from disasters. Queensland should strive to become a centre of excellence for spatial intelligence and use it as an export opportunity for knowledge based services.
- The government's response to climate change is predominantly focused on renewable energy and associated targets. Transport is a major contributor to carbon yet there is very little in the way of policy and support for electric vehicles. The charging infrastructure is already there in most people's garages. Promotion of electric vehicles along with government leading by example in the use of EV's would start create awareness and a second hand market.
- There has been significant work done in restructuring electricity network and retail tariffs in Queensland. Excluding the cost of smart metering there is a significant portion of the regional residential customers who would be better off on the Time Of Use Seasonal Demand tariff than the flat tariff. Migration of these customers would also assist in reducing future network constraints. A Market Led Proposal to roll out Smart Meters should be promoted. This will also assist with holding jobs levels in the industry for the short term.

INFRASTRUCTURE

Ms Julieanne Alroe, CEO and Managing Director, Brisbane Airport Corporation (President)

My pitch is in respect of infrastructure. Given the asset re-cycling is off the table and that we need more infrastructure to help drive growth, the Government needs to focus on how to quickly and reliably get private sector investment approved and into development.

This means quick decisions as to the appropriateness of MLP and if deemed suitable, a streamlined approval process for the next stages of the MLP. Greater clarity on environmental approvals so that it is not an endless series of challenges and court interventions that just frustrate what the government has already approved.

Where federal money is required to help fund infrastructure, Queensland agencies should use approved IA business case models to make assessment of the projects quicker and more straight forward and reducing re-work and delays. While this will not guarantee funding it makes it easier to make the case that Queensland projects are worthy of funding and prove that these projects add genuine value to the community and the economy.

Mr James Bangay, Managing Director, Fugro ROAMES Pty Ltd

Challenge: QLD has the most geographically sparse first world infrastructure.

Opportunity: QLD has the most detailed 3D model of infrastructure of any region in the world.

The 3D model of regional QLD is hosted in "the cloud" in a simulated virtual world that allows infrastructure owners to manage the risk, sustainability and resilience of their assets. Consumers of this virtual world simulator have been able to predict the impact of floods and storms, reduce operational expenditure, improve resource management and improve public safety.

The ability to extend the application of the virtual world into new industries represents a significant export opportunity for QLD technology while delivering immediate local productivity improvements.

Mr James Wright, Director, Orisson Consulting

Going again to infrastructure and asset development, firstly I think it's important to acknowledge the positive moves that have been made with the establishment of Building Queensland, the State Infrastructure Plan and Fund, and the embrace of a wider range of financing options including value capture and MLP – continued government support of these activities is important.

Two observations though, firstly the capacity of Building Queensland has been tested by what has been a great response from the private sector (some 40 MLP currently in the pipeline) leading to slow evaluation times – supporting the necessary capacity within Building Queensland to evaluate and assess these faster would enable the identification and therefore benefits of those compelling cases to be realised sooner.

Secondly, funding clearly remains a central challenge. Two areas that remain under-leveraged are in the asset recycling program and an emerging opportunity with “city deals”. Other states have benefited greatly from the asset recycling program whilst Queensland has missed out – having an ability to participate more fully in this would clearly unlock substantial benefit for the state. City deals also represent a new way of fostering innovative funding solutions and experience from other countries shows that it also supports better integrated investment decisions.

Finally QIC's recent agribusiness investment should also be seen as a welcome move – can government work more closely with QIC to support and enable their further investment in economic and social infrastructure and asset development in the state.

Mr Andrew Young, Chief Executive Officer, Brisbane Markets Limited

Queensland is positioning itself to increasingly be an exporter of agriculture products to serve a growing Asian market. Horticulture is a large part of the state's agricultural industry and fresh produce has a very bright future if it can service the growing demand for product. One significant barrier to the future growth of fresh fruit and vegetable exports is the lack of appropriate phytosanitary treatment facilities in Queensland. This problem will increase due to the ongoing shift away from some of the traditional chemical treatments, some of which have already been banned, and the potential damage caused by some of the newer alternative treatments, such as vapour heat.

Brisbane Markets Limited has undertaken a number of feasibility studies over recent years with respect to the construction of a purpose-built low-dose X-ray facility located at the Brisbane Markets. For this type of project to be successful, a seed capital component is required to assist with its establishment. Our studies suggest that with the higher capital cost of such a plant (\$12 - \$15 million) a long lead time is required before a facility of this type becomes feasible. We ask the Government to consider their assistance through an investment (say \$5 - \$10 million) to support the construction of a purpose-built facility at the Brisbane Markets, as an established marketing and distribution hub, to support the longer term growth of the horticulture industry in Queensland.

Mr Mark Courtney, General Manager, MacroPlan Dimasi

We need a system that has more flexibility to deal with globalisation, advances in ICT, the massive demographic shift in terms of aging and the rising Asian middle class. Queensland is undergoing a shift in its employment pattern. In SEQ for example, jobs are being created in the suburbs, not in Brisbane's CBD. With such changes impacting in centres throughout Queensland, we need a planning and infrastructure platform that has the capability to respond faster and appropriately to the “new”. Perhaps rather rely on one large ticket cross river rail, why not change tack and move towards a broader spend across the regions to future proof our employment futures. Jobs growth in the delivery of such projects would enhance the liveability of the regions and ensure that the trend of employment is addressed. Perhaps the new Planning Act 2016 will represent a positive response to this need. However we see that a more nimble flexible use of resources to coordinate and manage the impact to the State from the megatrends and promote economic growth through a geographically broader infrastructure spend would be an appropriate response.

INNOVATION

Mr Brett Kelly, Chief Executive Officer, Norco

A Day With A CEO. My idea is to offer a free one off consultative day to small business operators that never get this type of experience/exposure looking at their respective business. Qld CEO's could volunteer some time to small business. This could be promoted by the Government and through the QFI. This would be great PR for everyone involved as well as for the CEO's company and show Qld business and Government taking an initiative that no other states have done. I would be happy to take the lead in organising all aspects if there is an interest.

Mr Paul Spiro, Chairman, Gadens

To Advance Queensland it will be important to foster and grow the Creative Industries. There is a tremendous creative spirit that exists in Queensland and if that spirit can be properly harnessed and focused it will create new jobs and employment opportunities across the broader Queensland economy. The Creative Industries can help fuel the innovation that everyone acknowledges is required to transform our economic base and, as importantly, these Industries can bring tremendous social and cultural benefits to Queensland. The Creative Industries can also help us reach out to our friends in Asia through collaborative artistic offerings, help foster indigenous culture and bolster tourism. Victoria has recently unveiled a Creative Industries Strategy - Queensland should take note of this initiative, review its current strategies and funding of the Creative Industries and refresh (or perhaps, reshape) its own cultural platform. A society with a rich vein of creative spirit is always a happier, healthier and more successful place to live - that place should be Queensland.

Mr Robert Jones, Queensland Chairman, KPMG

The Government should appoint a Chief Entrepreneur to provide advice on maximizing opportunities from the Governments investment in technology and innovation - a whole of government position that sits within the Department of Science, Information Technology and Innovation (DSITI). Furthermore, the Chief Entrepreneur should appoint entrepreneurial champions within each department who have a mandate to drive entrepreneurial thinking to tackle Queensland's economic challenges, and to foster enhanced collaboration across Government departments to develop solutions that drive better engagement between Government and all stakeholders of the Queensland economy. Specifically to help drive:

- Better, more innovative service delivery;
- Increase productivity within government departments and agencies;
- Improvement in the return on investment for the government.

Mr Craig Fenton, Queensland Government Practice Leader, PwC

The focus around technology, digital etc is mostly on start-ups, high-end technology innovation etc. Whilst this is important, our research, undertaken in collaboration with Google, shows that there is a huge productivity benefit from extending technology/digital uptake to "traditional" sectors. Better use of technology can free up time that businesses currently spend doing unproductive tasks. They can then reinvest to grow their businesses, take on more employees and become more successful.

Think - the amount of time that could be saved by tradies making better use of electronic invoicing, BAS preparation, more technology-enabled relationships with suppliers etc. The gains might seem incremental and small, but they apply to virtually all businesses, so compounded across the economy to be huge.

PRODUCTIVITY

Mr Jason Scott, Executive General Manager, The Courier Mail & Sunday Mail

Possibly the No1 concern for the Queensland economy is the unemployment rate. At 6.2% it is too high to unlock consumer and business confidence. Critically, youth unemployment _ is double that. And with a participation rate of 65%, there's no doubt thousands more Queenslanders would like more hours if they could. And yet so many small businesses don't open their doors on Sundays and public holidays because they can't afford the wages. According to the CCIQ: *"Since the introduction of the Fair Work Act, the rate of inactive young people in the labour market has reached historical highs. Workplace reforms such as increased minimum work engagement periods and ongoing increases in junior rates of pay act as examples of award rate disincentives discouraging businesses from taking on young workers."*

CCIQ's Workplace Relations Survey of Feb 2015 found that 74% of small businesses in retail reduced both operating hours and employment hours as a direct result of penalty rates. If Sunday rates were the same as Saturday rates, businesses would be open for longer and overall employment hours would increase. As a journalist, I accept there are two sides to every story. I believe the key stakeholders need to explore every opportunity to make it easier for small business to prosper and provide employment opportunities for Queenslanders.

Mr Sean Ryan, Director, Stradbroke Capital

My proposal is to look at how private industry can assist the Queensland Government in unlocking opportunities and create greater efficiencies. This could be achieved through the creation of an efficiency task force made up of corporates to identify projects. An example of this is the outsourcing of speed cameras in Queensland. I understand that there are currently 100,000 hours of Police hours spent sitting in speed camera vans. The outsourcing of this one service could increase Policing and create a more cost efficient service whilst creating more Queensland jobs.

Mr Peter Carne, Public Trustee of Queensland

1. Orderly transfer of wealth – efficient transfer of wealth is important to keep funds available to be spent in the Queensland economy. Intestacies impact on timeliness of administration. Two key instruments assist in the orderly management and transfer of wealth: a well-drafted will and an enduring power of attorney (EPA) giving a trusted person the authority to make personal and financial decisions. Efficient administration of estates allows assets to be put to best and most effective use.
2. Support for ageing population – as they age, a significant proportion of adults will become less mobile and their capacity will diminish. Objective: to facilitate older Queenslanders to live with dignity and comfort. Some will prefer to move to aged care facilities. The majority want to continue to live in their own homes: support services will be in high demand. Government can play a vital role in ensuring service providers help older Queenslanders stay at home and in encouraging the creation of EPAs.
3. With age comes increased vulnerability and risk of financial abuse – the Queensland Government has a real interest in having strong social and legal systems to prevent and prosecute abuse.

Dr Andrew Johnson, Principal of Johnson & Associates Strategic Consulting

Over coming decades, the challenge for humanity will be to simultaneously enhance economic prosperity, whilst sustainably providing water, food, energy, housing and transport for nearly 9 Billion people and protecting the natural environment upon which economic activity and societal wellbeing depends. These drivers are most acutely expressed in the global tropics and will directly impact on the trajectories of our immediate region and of northern Australia. There is an important role and enormous opportunity for the Queensland Government in supporting industry and the community in navigating increasingly complex economic and environmental performance issues so that as a State we can respond with agility and wisdom to the rapidly accelerating pace of disruptive innovation and global shocks.

THRIVING REGIONS

Professor Sandra Harding, Vice-Chancellor and President, James Cook University

The global importance of the Tropics was clearly highlighted in the first Report of the State of the Tropics Project, a world-defining, international project convened by JCU. The Report clearly reveals a new global dynamic: the future of the world belongs to the Tropics.

By the early 2040s, more than half of the world's population will live in the Tropics. By 2050, around 67 percent of the world's children will live in the Tropics. Economic development is proceeding at a faster rate than the rest of the world and coupled with a large and growing middle class, this means that there is a growing demand across the tropical world for goods and services of the type Queensland can supply.

There is also a hunger for education, better health and good governance, and a strong desire to reap the benefits of new knowledge and innovation. Sustainable infrastructure and food security will be key to regional and global security. These needs coincide neatly with TIQ's Priority Sectors, and yet the Tropics are not currently a specific focus for that organisation's activities.

Yet the Tropics are being recognised as looming large for global development. On 14 June 2016, the United Nations General Assembly resolved without dissent to inaugurate an International Day of the Tropics. The date chosen was June 29, commemorating the launch by Nobel Laureate Aung San Suu Kyi of the inaugural State of the Tropics Report on that date in 2014. The UN's 2030 Agenda, replacing the Millennium Development Goals, will largely play out in the Tropics.

With three Trade and Investment Commissioners located in the Tropics and four Regional Advisers in Tropical Queensland, TIQ is attentive to some markets, but our push needs to be redefined and asserted through a dedicated Commissioner focussing on the larger tropical opportunity to leverage Queensland's distinct advantage in tropical science, knowledge, expertise and business know-how.

Mr Dominic McGann, Chairman of Partners, McCullough Robertson

To develop a working group comprising the State of Queensland, Indigenous People, other landowners, the broader community and proponents, to ensure that Queensland has a clear understanding of the need for and elements of an efficient carbon economy.

Professor Jan Thomas, Vice-Chancellor and President, University of Southern Queensland

Building diverse and sustainable regional cities across Queensland. Economic diversification and building digital and physical infrastructure to enable development of services sector (including education and training) across regional Queensland should be a priority. Universities can play crucial role with partnerships with State Government and regional communities to become resilient and strong. Regional Queensland will not be resilient in the face of changing climate and global economies without strong human capital and robust social systems that support self-organisation and capacity to change. This includes embracing of new forms of digital infrastructure and technology. Queensland should focus on developing regional communities that are focussed specifically on small business sustainability, skilling for enterprise and entrepreneurship, supporting better health awareness and lifestyles, and nurturing wellbeing of people and communities. To not do so risks loss of young people from regional cities escalating challenges in both capital cities and regional cities alike.

Mr Trent Twomey, Chairman, Advance Cairns

The key issue that Advance Cairns believes if addressed by the Queensland Government, that would greatly contribute to the future social and economic growth of Queensland is an internal policy change to align Government departmental boundaries. Currently there is a distinct variation of boundaries across a wide range of industries, including Health, Roads, Police Services, Economic Development Agencies, etc) which limits the ability for all industries to work collaboratively from a regional growth and future planning perspective. An alignment of departmental boundaries across all industries would empower Local Governments to work "hand in glove" in the strategic planning of economic and social growth across all regions of Queensland.

QFI 2030 ENERGY VISION

Queensland in 2030 is a global leader in *low cost, low carbon, high-efficiency* energy systems that deliver highly customised solutions to diverse customers across an unmatched variety of geographies and climactic conditions.

Powered by a continually expanding range of integrated energy sources, energy solutions and creative business models, these advances have propelled Queensland to become Australia's Cleantech leader and an international hub of collaboration and commercialisation.

GUIDING PRINCIPLES

The following three principles will guide Queensland Futures Institute – Energy Committee efforts to enable realisation of the above 2030 Energy Vision.

1. Actively navigate the energy transition

Queensland will lead the nation and the South East Asian region in the structured transition from legacy energy models to the low cost—low carbon—high efficiency energy systems that underpin Queensland's economic competitive advantage in 2030 by:

- Forging bold and engaging visions through collaboration and co-design that guide the state's proactive leadership in navigating the energy transition;
- Championing whole-of-system transformation using best-practice tools, the best global applied science and fostering a culture of continuous organisational learning;
- Applying evidence-based metrics to make visions and transition plans tangible and progress measurable;
- Engaging policy makers and regulators throughout the journey to resolve 'rail gauge' issues, accelerate removal of historic roadblocks and expand the new competitive landscape; and,
- Continually expanding system flexibility and continuous improvement while maintaining system reliability and resilience.

2. Collaborate and commercialise globally

Queensland will be recognised as a hub of global energy solutions collaboration, commercialisation and new industry development by:

- Building world class platforms for national and global collaboration spanning customers, industry, academia and government;
- Developing and demonstrating solutions suitable across the state's unparalleled diversity of metropolitan, regional, remote and tropical applications and extreme weather conditions;

- Focusing on core strengths and step-change improvements including whole-of-system integration, climactic resilience and disaster recovery
- Fostering new institutional capacities for supporting both new energy enterprise incubation and workforce skills development; and,
- Capitalising on Queensland's proximity to Asia and Oceania together with its outstanding physical and cultural environment as a global drawcard.

3. Excite and empower the community

Queensland's energy systems transitioned from infrastructure-centric networks to highly adaptive platforms that enable a new generation of customer-centric-energy 'apps' and unleash a dynamic ecosystem of vibrant existing and new energy businesses. This will be underpinned by:

- Enabling equitable energy access for all Queenslanders through the most fit-for-purpose solutions for a given region, community and customer base;
- Propelling Queensland business, advanced manufacturing, mining and agriculture forward through access to the nation's most customisable and competitive energy sources;
- Leading the implementation of fair and simple signals that 'just make sense' in helping households and enterprises to make intelligent energy investments and usage decisions;
- Empowering whole-of-society energy stewardship and deep engagement in the state's growing profile as a global Cleantech powerhouse and employment driver in an advanced economy.

PARTNERS AND MEMBERS



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COMMITTED TO IMPROVING THE STATE OF QUEENSLAND

For further information on the Queensland Futures Institute,
please contact Steve Greenwood,
CEO 0488 721 156.

Please see our website www.qldfutures.com.au