

ACT Government Chief Engineer

STRATEGIC DIRECTIONS 2019-21



ACT
Government

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Introduction

The Role of the Chief Engineer

The Chief Engineer, was appointed in 2019, to provide the ACT Government with strategic advice on the development and delivery of key infrastructure projects including stage 2 of the city wide light rail network, upgrades at the Canberra Hospital precinct and the capital works program in ACT schools.

The appointment of a Chief Engineer provides an opportunity to develop and promote an innovative and skilled engineering workforce in the ACT, as well as having strategic infrastructure planning and processes in place for the future of Canberra.

The Chief Engineer works closely with the Government Architect, various peak engineering bodies, the ACT Government and the broader Community to ensure infrastructure in the ACT is robust, fit for purpose and meets community needs.

Objectives

The initial primary objectives of the Chief Engineer are:

- Develop a workforce plan for engineers in the ACT Government
- Provide strategic advice on infrastructure planning and processes

Mission

To provide high quality advice, supporting the ACT Government in the delivery of important infrastructure for the Canberra region.

The Chief Engineer will:

- Engage with industry to facilitate collaboration across all parts of the infrastructure supply chain to achieve shared goals.
- Foster community engagement and education to promote the value and complexity of infrastructure and its links to wellbeing.
- Provide an advisory role to assist in the delivery of an engineering registration scheme in the ACT.
- Promote the advantage of digital technology and innovation in infrastructure planning, design and delivery.
- Support the safe delivery of infrastructure.
- Advocate for engineering in its broadest sense, including STEM, engagement with Universities, and high tech industries (such as aerospace).
- Provide leadership on sustainability in the built environment.

A Message From the Chief Engineer



Adrian Piani

As the ACT Government Chief Engineer, I have a responsibility to ensure the ACT Government can make informed and objective decisions in relation to key infrastructure projects and the broader built environment, enabling the government to support the community through the delivery of robust and fit for purpose infrastructure.

In many ways, 2018-19 was a landmark year for infrastructure delivery in the Territory with a number of major projects finished, and many new initiatives commenced. The ACT Government's Infrastructure Plan sets out a \$14 billion blueprint for new infrastructure, including \$3 billion already committed by the ACT Government.

The role of the Chief Engineer is a relatively new one within the ACT Government. However, as we continue to embark on the delivery of more infrastructure projects the importance of this role has never been more critical. A key component in delivering the role is to develop a strong foundation across government, professional stakeholders and the broader community. I intend to engage with my stakeholders widely and often to ensure I can deliver the best outcomes for government.

The technical age is very much upon us and this is no different in the field of Engineering. There are many advances in the delivery of infrastructure and the possibilities are seemingly endless. This creates an exciting opportunity for government to utilise technology to support the planning and design of our infrastructure, providing greater insight and information regarding the maintenance of these assets into the future and to support Smart City concepts. I am committed to championing innovative and technical solutions for government, and I look forward to exploring how this can advance the built environment.

Finally, supporting our engineering workforce is of critical importance. It is my goal to bring together engineers across government to recognise and promote their value. To do this this I have embarked on developing a workforce plan specifically to identify and support this cohort. Additionally I will be involved in delivering the government's commitment to implement a registration scheme for Engineers in the ACT.

I look forward to working with all areas of government and the Community into 2019-21 and beyond.

A handwritten signature in blue ink, appearing to read 'A. Piani', written in a cursive style.

Strategic Directions 2019-21

Over the next two years, the Chief Engineer will:

- Lead innovation and digital engineering;
- Assist in the development of a registration scheme and workforce plan for Engineers;
- Be an expert source of value-added analysis and advice to support infrastructure;
- Advocate for engineering and STEM;
- Provide advice on sustainability and the environment; and
- Be a trusted partner for industry



Innovation and Digital Engineering

The Chief Engineer will investigate the development of an innovation platform, digital engineering, 3D design and Building Information Modelling (BIM) on behalf of the ACT Government. BIM is a 3D digital platform that provides insight and tools to more efficiently plan, design, construct, and manage buildings and infrastructure. The development of a digital engineering/BIM platform aligns with the ACT's vision of being a high tech innovation centre.

To achieve this the Chief Engineer will work in partnership with the ACT's Chief Digital Officer, to lead the ACT in the development of a digital engineering strategy. This will include engagement with other Jurisdictions through forums like the Australasian BIM Advisory Board to share learning and co-opt expertise.



Provision of Strategic Advice to Government

The infrastructure life cycle includes three main elements of decision making:

1. Development (deciding what to invest in and how best to deliver)
2. Delivery (delivering the solution through design and construction)
3. Management (managing the asset over its lifecycle including operations, maintenance and renewal)

The Chief Engineer will support the ACT Government to achieve optimal infrastructure outcomes through the provision of early well evidenced and strategic advice in all of the phases of decision making, including through membership on key infrastructure related committees, such as:

- Infrastructure Planning and advisory Committee (IPAC);
- The Utilities Sub Committee; and
- Planning and Construction Industry Chief Executive Reference Group (PACICERG).



Engineering advocate and STEM

The engineering profession is broad, encompassing all areas of human endeavor. This includes areas such as biomedical, aeronautical, advanced technology and manufacturing. Although the role focuses on infrastructure, it must also broadly represent the entire profession, and the different sectors engineers work in.

This also incorporates STEM, and engineering/ construction courses in the ACT. The workforce plan will outline the engineering degrees available in the ACT, and how that supports (or inhibits) our local engineering workforce.

The Chief Engineer will also develop positive relationships with local engineering departments of the Australian National University (ANU) and the University of New South Wales to act as an advocate for engineering and to foster and promote the ACT Government as an employer of choice for engineering graduates. This will include supporting the ANU in the expansion of their engineering offering.

The ACT Government is committed to delivering an engineering registration scheme, the Chief Engineer will partner with the lead Directorate and provide a leadership role in the development of the scheme.

A key objective of the role is to develop a workforce plan for engineers within the ACT Government. This will aim to ensure the government has the right engineering skills to support the delivery of the ACT Government's vision. The workforce plan will enable engineers within the ACT Government to:

- Provide strategic advice on ACT's infrastructure needs and delivery options, including within the greater ACT region;
- Successfully manage the delivery of infrastructure, including design and construction; and
- Successfully plan and undertake required operation maintenance and asset renewal.

Sustainability and Environment



Sustainability and environmental performance is a foundational element of the engineering process. The Chief Engineer will seek to influence the profession, and the total infrastructure supply chain to both deliver infrastructure in a sustainable and environmentally enhancing way, and to then also create infrastructure that by its very nature promotes sustainability and environmental outcomes.

The ACT Government also has a strong sustainability agenda, and infrastructure has a significant part to play in creating a sustainable, low carbon future. As an example the ACT Government has updated its climate change strategy, and has committed to achieving net zero emissions by 2045. The Chief Engineer will support decision making to ensure that the delivery of infrastructure can support the Government in delivering this outcome.



A Trusted Partner for the ACT Government

The Chief Engineer will support the ACT Government and the community by:

- Supporting a wellbeing and prosperity agenda;
- Supporting Triple Bottom Line decision making by providing a balanced approach to environmental, social and economic aspirations;
- Providing practical and pragmatic advice;
- Optimising solutions, having regard to competing needs, community and stakeholder's views and any identified constraints; and
- Representing the ACT on the cross jurisdictional Chief Engineer's Forum.

SNAPSHOT

Committed to, enhancing the ACT Government's built environment across a a broad range of activities.

Working towards the 2021 mission, The Chief Engineer will continue to deliver a innovative and skilled engineering workforce that can continue to provide important input into the development of infrastructure to support the Territory now and into the future .

The work undertaken to date includes:

Workforce Planning

Engineering Forums

Forums are being conducted across all Directorates, to seek Engineers views of their work and the value they contribute to government.

The workforce plan for Engineers is expected to be delivered by 30 June 2020.



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Engineers across a range of Directorates have attended the forums in 2019.

To inform the development of the workforce plan a survey has been issued to seek the views of our engineers across the service.



Advice to Government

The workforce plan will define the roles of engineers and provide forward looking advice regarding the needs of the workforce into the future.

Communications

Acting as an advocate for infrastructure, engaging actively with the public to ensure these views are well represented within government.

Quarter Four 2019

A communications and media engagement plan will be developed to provide strategic direction and facilitate public communications.

This will include the development of a dedicated Intranet and Internet page designed to provide regular updates on work undertaken by the Chief Engineer.

Utilities Working Group

Fostering a Dialogue with Utilities Providers

The Chief Engineer as the Chair will continue to convene a working group to discuss a range of issues such as:

- Residential encroachment on utility assets.
- Planning for city growth, strategically and operationally.
- Technical Guidelines.
- Achieving carbon neutrality by 2045 and the potential impacts on the utilities sector.
- Working with key utilities organisations to discuss the relationship and any impact of the ACT Infrastructure Plan with utility services.



Quarter Four 2019

The first meeting of the Utilities Working Group was held in November.

Representatives from a range of utilities providers attended the first meeting. The Working Group is currently undertaking a master planning exercise in the City Precinct to support the work on a range of projects expected to commence in this area including Light Rail Stage 2.

Digital Engineering

- Work has commenced to facilitate the first Chief Engineer's Innovation Forum, designed to explore the best ideas from industry and the public sector. The forum will be held in the first quarter 2020.



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