



Organisation making submission: **Urban Circus**

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Thank you for your interest in the smart use of ICT in the design and planning and infrastructure.

Urban Circus are an Australian based Digital Planning company who have provided digital planning solutions for over \$70bn CAPEX of infrastructure across the country. We have been in business for 10 years and have worked on mainly public infrastructure projects in most States.

### Identify innovative technology for the mapping, modeling, design and operation of infrastructure

We have built 3d modeling software to speed the planning and communication of infrastructure and city places. The software has been developed over 10 years and has been in heavy use on State government infrastructure projects over the last five years.

We have enabled a series of outcomes, specifically:

- Reduction in infrastructure planning costs.
- Reduction in infrastructure planning time.
- Improved communication and understanding.
- Capability development within regulation and delivery agencies.

### Centre of Excellence Example

Melbourne (via the Victorian Government) is the national 'centre of excellence' in utilizing smart technology, and it has been created and driven by our company.

We have created a unique process to leverage and innovate with standard government geospatial data to convert it into a powerful planning and communication medium.

Over 10 years we have built a piece of software to allow project proponents to use their existing geospatial data in an intuitive, easy to use 3d platform. Data examples are LiDAR, TINs, DEMs, aerial photography, photomeshes and data that sits inside GIS and government coffers.

We play a role across state government agencies in Melbourne to facilitate the conversation between projects, projects and spaces, planning and infrastructure development, adjacent projects and between Councils and state, even to the point of community groups such as cycling groups.



We provide a digital 3d platform and approach that facilitates rapid understanding and development of the proposals.

#### Planning and Development

- We have built tools that are based on Australian standards to help create road, rail, footpath and bike path as well as building envelopes, in a few short clicks in a 3d urban context space. That is, planning studies that took tens to hundreds of thousands of dollars of engineering consulting and months of work, is now done live, in 3d, in a workshop or meeting – or in a few hours.

#### Communication

- The same tool is used for communicating complex integration and interfaces to a stakeholders

In Melbourne, our company and technology directly supports with the same digital planning platform a suite of agencies, projects, councils and organisations.

Our aim is to maximize the return to the government/s on their data acquisition and ensure the considered, quality built environment outcomes across requirements for long term prosperity and productivity.

Examples of projects that have shared the same 3d model in our platform include:

- Western distributor, Transurban
- Melbourne metro, MM1,
- Level Crossings Program (50 Level Crossings)
- East West Link
- Regional Rail Link
- State Planning Agency (> 700 applications)
- Local Government city models – City of Port Phillip, Maribyrnong
- Major urban renewal precincts – Fishermans Bend
- Port of Melbourne
- Flinders Street Station Design Competition

The Digital Melbourne Round Table was formed 5 years ago, an initiative by our company, to have senior managers professionals from disparate agencies working in overlapping geographies to sit together and understand what each other are doing. The digital 3d tool is used to help drive rapid communication of concepts.

The Melbourne Infrastructure community are so advanced, that building and infrastructure proposals are supplied in formats they can be one-click imported into this digital planning platform for independent review within their spatial context. This reduces analysis time.

Further, we are now leveraging the data to further reduce the time and costs of bid development for all, which is ultimately borne by the government and thus the community.



1. We have a created 3d base model for use across projects, utilizing geospatial 3d survey information
2. We provide this to the government to support reference design optioneering and stakeholder engagement within the 3d context using smart click-and-drag planning tools. This saves millions of dollars and years of work.
3. We give that very same platform to the contractors and bidders (with or without the reference design) to put their own engineering designs into – saving them doing it all again and saving hundreds of thousands of dollars on bid costs as well as improving design responsiveness
4. These are submitted back to the client to make it easier to assess the bids using a 3d smart planning platform
5. The same tool may be used for further communications and stakeholder engagement.

We support capability development within government agencies. There are multiple staff now operating on a full time basis with advanced smart planning capability within Victorian government. We have trained and enabled these capabilities.

### Examine the productivity benefits of smart ICT

Our value proposition is focused on two major outcomes – the improvement of productivity with the reduction in time and costs in the planning and construction phases of major projects.

Our State and Local Government clients have said the following about our software and services:

- “from nine months to nine minutes” – has been the transformation in negotiations in major urban projects.
- “digital planning workshops have saved me 9 months and hundreds of thousands of dollars in consulting fees to optioneer road design solutions” – Road engineering Managing Director for WA.
- “helped us unblock 18 years of planning stalemate for grade separations in local towns in Western Sydney”
- “we just spent \$11m and 12 months on a road engineering plan, and now we see it, it was a waste of money – we should have used you first and spent a tenth that in a few weeks to come up with the right plan” WestConnex Delivery Authority CEO – planning stage.

We may actually be a globally leading example of best practice in digital planning with both technology and stakeholder engagement for efficient decision making to get to detailed design.

We have done this without any grants and in spite of the massive engineering houses and federally funded research centres who essentially compete with small businesses like ours.



Consider means, including legislative and administrative action, by which government can promote this technology to increase economic productivity

**Our recommendation to further this field**

There are several barriers to further development in this space.

As the committee seems to be aware from previous evidence, that the advances in survey and mapping have accelerated to the point where accurate 3d information can be produced at modest costs. Whole cities and infrastructure corridors can be scanned in 3d. We would say 3d survey is becoming commoditized.

However, governments often protect and encase this data in regulation and protection. Even the “open data” States like Queensland do not open their 3d geospatial data, such as 3d lidar or contours.

We recommend that the Australian Government :

- Ensure that 3d geospatial data be made available to Australian owned companies.
- Ensure that this data be treated like other ‘open source’ data and be made available for companies like ours to innovate and experiment with – with suitable conditions (eg do not give or sell the raw data to third parties without partnership royalties etc)
  - o Geoscience Australian and CSIRO and NICTA or CRCs do not share their data openly and have unfair advantage with huge capital injections from the Federal Government and competing with small companies on an uneven playing field
- Not impose standardizing data formats and details – we can use any format available.