



Public Submission Cover Sheet

Please complete this sheet and submit with any attachments to the Sustainable Health Review Secretariat

Your Personal Details	
<i>This information will be used only for contacting you in relation to this submission</i>	
Title	Mr <input checked="" type="checkbox"/> Miss <input type="checkbox"/> Mrs <input type="checkbox"/> Ms <input type="checkbox"/> Dr <input type="checkbox"/> Other <input type="checkbox"/>
Organisation	NGIS Australia Pty Ltd
First Name(s)	Oliver
Surname	Looker
Contact Details	██████████
Publication of Submissions	
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Submission Guidance	
<p>You are encouraged to address the following question:</p> <p>In the context of the Sustainable Health Review Terms of Reference listed below, what is needed to develop a more sustainable, patient centred health system in WA?</p> <ul style="list-style-type: none"> • Leveraging existing investment in Primary, Secondary and Tertiary healthcare, as well as new initiatives to improve patient centred service delivery, pathways and transition; • The mix of services provided across the system, including gaps in service provision, sub-acute, step-down, community and other out-of-hospital services across WA to deliver care in the most appropriate setting and to maximise health outcomes and value to the public; • Ways to encourage and drive digital innovation, the use of new technology, research and data to support patient centred care and improved performance; • Opportunities to drive partnerships across sectors and all levels of government to reduce duplication and to deliver integrated and coordinated care; • Ways to drive improvements in safety and quality for patients, value and financial sustainability, including cost drivers, allocative and technical efficiencies; • The key enablers of new efficiencies and change, including, research, productivity, teaching and training, culture, leadership development, procurement and improved performance monitoring; • Any further opportunities concerning patient centred service delivery and the sustainability of the WA health system. 	

Submissions Response Field

Please type your response into the field below. Alternatively you may provide your submissions as a separate attachment (Suggested Maximum 5 pages).

NGIS (www.ngis.com.au) helps solve business problems using location and mapping technology (geographic information systems), operating in many different sectors, offering a unique viewpoint to health service challenges.

Mapping technology provides the ability to know the location of information, for example, integrating information about a patient, where they live, work and what other environmental factors exist in their neighbourhood, to better understand their needs and more efficiently provide services.

Mapping technology is used to some degree in Health, however, with increased awareness and adoption, could further help address many significant health issues ranging from disease management to improved connectivity of services, providing a better patient experience and improving efficiencies and saving costs within the WA health system.

Possible opportunities from using location intelligence and mapping technology include:

1. Improved Logistics

Using real-time crowdsourced location/GPS data, such as Google Maps, enables an accurate and timely understanding of the road network to improve the logistics of transporting patient's medicine and pharmacy needs, ensuring resources are delivered at the right location just in time.

Refer to the following links for more information:

<https://enterprise.google.com/maps/transportation/index.html>

<https://enterprise.google.com/maps/customers/fleetminder.html>

Benefits:

- Drivers spend less time on the road, with employee overtime reduced by 25%
- Customers can track details about driving habits, which led to a 50% decrease in inefficient driving
- Companies have been able to reduce the number of deliveries to incorrect addresses by 20%

NGIS are Google Premier Partners.

2. Identifying Health Trends

Mapping technology offers WA Health with the ability to identify health related trends and more thoroughly target healing efforts based upon those results. With the number of chronic diseases such as cancer, diabetes, and heart disease rising rapidly, mapping technology provides a method in which healthcare professionals can systematically address where certain diseases are more likely to

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or already have become prevalent and begin proactively implementing preventative strategies or staffing health worked skilled in specific medical specialties.

Mapping technology also provides the ability to use geography and other environmental inputs to identify where diseases are most likely to spread next. Data such as this can be essential to local government or emergency operations working to protect lives because it enables them to prepare in advance for a disease or condition and can severely limit the impact.

3. Wearables

The collection of large quantities of accurate personal data is expected to reveal a great deal about personalised healthcare, but it can also greatly impact regional treatment plans. Wearables represent a powerful tool for information input into mapping technologies due to their ability to inform statistical studies. They have the potential to uncover long-term geographic trends in the health of certain demographics of people or of individuals living within certain areas of the State.

Wearable technology is capable of collecting a very broad amount of healthcare information such as average heart rate, sleeping patterns, and exposure to the sun. Adding this data to geography and environmental information could help determine if the average heart rate or sleeping patterns of individuals varies over geographic areas or environmental conditions. If such patterns do exist, discovering why could open new area of healthcare research and put in motion preventative measures when certain thresholds are met.

4. Incorporating Social Media

In a similar manner to wearable tech that can be used to gather input data, social media can also play a significant role. Twitter, for example could be queried for tweets indicating sickness. Using terms such as 'flu,' or 'mosquito' and 'medication' and geographically located where the tweet was sent from. By adding this data to a map, researchers can visualise the status of the medical condition.

5. Improving Patient Services

Mapping technology can be integrated with patient services (e.g. Aged Care) to enable community leaders and developers to work more closely with hospitals to take larger steps in addressing State healthcare needs. The system can help identify which local government and suburbs are in greater need of specific health services such as more rehab centres or aged care facilities. Analysis of patient demographic data can help answer these questions, and better locate services to patients that need them.