

SUNSHINE COAST INTERNATIONAL BROADBAND SUBMARINE CABLE CASE STUDY



HEALTH AND WELLBEING INDUSTRY

The health and wellbeing industry is the Sunshine Coast's largest employer, providing an estimated 20,170 jobs (NIEIR, 2017). There are almost 2,000 healthcare related businesses registered in the region, providing the foundation for a dynamic and fast-growing industry (ABS, 2018).

The Sunshine Coast Health Precinct includes the Sunshine Coast University Hospital, Sunshine Coast Health Institute, Sunshine Coast University Private Hospital and adjacent Health Hub and the new town centre. This state-of-the-art tertiary teaching hospital precinct is a significant contributor to the economic development of the Sunshine Coast and provides a catalyst for health, medical, commercial and residential development in surrounding areas.

The Sunshine Coast University Hospital provides world-class research facilities along with a 21st century clinical and patient care environment. Healthcare is becoming increasingly reliant on the internet to support and provide medical services. According to the *Impacts of 5G on productivity and economic growth* working paper by the Bureau of Communications and Arts Research (April 2018), digitally-delivered healthcare is expected to be even more important in the future as new technologies emerge.



The future
is here

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The report, *Impacts of 5G on productivity and economic growth*, says fast and intelligent networks, connected devices, back-end services and extremely low latency mean that 5G will have more potential uses in delivering healthcare. The Sunshine Coast International Broadband Submarine Cable and associated infrastructure will offer similar benefits to those outlined in the report's examples.

Will affect	...by building on existing mobile health applications...	...which will have impacts on patients, providers and the economy
Availability of healthcare services	The greater speed and lower latency of 5G will allow for more effective video conferencing and remote diagnostics. It may also allow for remote procedures to be carried out in areas that lack access to health professionals.	<p>Patients and their families may no longer have to travel as far for some health services, and may be able to choose from a wider range of health professionals.</p> <p>Health professionals may be able to better reach patients.</p> <p>Greater availability of health services may enable a healthier, more productive workforce.</p>
Reliability of healthcare services	5G is expected to be more reliable than existing mobile technology. The use of 5G to enable the 'internet of medical things' will also allow medical equipment to be more effectively monitored and maintained, avoiding breakdowns and down time.	<p>Patients and providers may be able to more frequently use telehealth solutions, without fear of dropouts or outages. As medical technology proves more reliable over 5G, more cost-efficient procedures may be carried out remotely as a matter of routine away from more costly hospital settings.</p> <p>More reliable access to healthcare means that medical interventions can be timely and targeted, which could reduce overall costs on health budgets.</p>
Quality of healthcare services	As 5G allows for more ubiquity of fast, mobile internet connections, practitioners will have better access to patient data and tests. As wearable technology becomes more widespread, a greater wealth of more timely medical data will become available.	<p>Patients will contribute to their own wellbeing by collecting medical data, which should shift medicine towards more early intervention solutions rather than treatments. 5G devices can monitor and remind patients of treatment - potentially reducing repeat visits to doctors and insurance premiums.</p> <p>Health professionals will have better access to richer data, enabling better treatment of patients as well as more information to improve medical research.</p> <p>Higher quality healthcare leads to better health - an important determinant of wellbeing.</p>
Costs of healthcare services	5G can help save costs for hospitals, with fewer admissions, and for patients, with self-management approaches. The cost reduction will depend on how quickly practitioners and patients are prepared to adopt 5G-enabled healthcare. There will be initial costs to purchase new 5G-enabled technology, which will vary depending on the technology.	<p>Despite the costs of upgrading technology, the pervasive healthcare provided by 5G will result in less expensive hospital-based care and fewer readmissions, and therefore be more cost-effective.</p> <p>As 5G enables a better management of chronic diseases, this will lower the economic burden and social costs associated with these diseases.</p>

Source: Table 7. Productivity benefits of 5G on mobile healthcare. Reproduced from *Impacts of 5G on productivity and economic growth* working paper, Bureau of Communications and Arts Research (April 2018). Licensed from the Commonwealth of Australia under a Creative Commons Attribution 4.0 International licence.

Sunshine Coast companies are perfectly positioned to leverage two game-changer projects, the \$5 billion Sunshine Coast Health Precinct and the Sunshine Coast International Broadband Submarine Cable, and benefit from the ripple effects digital connectivity and the region's strong innovation framework will have on the businesses and services of the future for national and international markets.

