

In Confidence

Office of the Minister for Land Information

Cabinet Expenditure and Regulatory Review Committee

Southern Positioning Augmentation Network – September 2024 report back

Proposal

- 1 This paper is a routine update to Cabinet on the progress of the Southern Positioning Augmentation Network (SouthPAN) since the last update in April 2024 [CAB-24-MIN-0120 refers]. This update includes the delivery of infrastructure, procurement, benefits realisation, finances and risks.

Relation to government priorities

- 2 SouthPAN contributes to the following Government priorities:
 - 2.1 Lifting New Zealand's productivity and economic growth to increase opportunities and prosperity for all New Zealanders.
 - 2.2 Making New Zealand a participant in major global and regional developments, not a spectator.
 - 2.3 Enhancing New Zealand's bilateral relationship with Australia, including through progressing work on the Single Economic Market agenda.

Background

- 3 SouthPAN is a long-term joint Land Information New Zealand (LINZ) and Geoscience Australia (GA) initiative to deliver a satellite-based augmentation system to Australasia. SouthPAN will improve the accuracy of Global Navigation Satellite System signals, such as GPS, from 5 to 10 metres down to sub-metre accuracy, and in some cases, as little as 10 centimetres.
- 4 SouthPAN is an enabler of a modern economy as the improved accuracy of positioning information will support innovation across transport, agriculture, construction, forestry, and horticulture. The quantified economic benefits are estimated to be at least \$864m over the next 20 years.
- 5 An Australia-New Zealand Joint Governance Board provides governance oversight of the project and owns and manages risks pertaining to SouthPAN delivery, financial management and system security.
- 6 Development of the SouthPAN system commenced in 2022 and will continue until full operational capability is achieved in 2028. In September 2022, early open services for SouthPAN commenced using existing infrastructure.

Progress of SouthPAN since the April 2024 update

- 7 Progress has been made on the delivery of ground-based infrastructure and uptake of early open services has begun.

Awarua uplink centre actively contributing to the delivery of SouthPAN services

- 8 On 26 July I visited the Awarua, Invercargill uplink centre to mark the site becoming operational. This was delivered to schedule and is the first piece of dedicated SouthPAN infrastructure in New Zealand. The Awarua uplink centre, along with its partner centre in Uralla, New South Wales, will link to satellites and the network of ground reference stations as they come online.

- 9 The Awarua uplink centre creates local employment opportunities, with the creation of at least six new skilled roles as part of the team operating and monitoring the system 24-hours a day.

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Leases for the ground reference stations are being acquired

- 11 SouthPAN requires five dedicated ground reference stations across New Zealand, of which two leases have been entered into. The remaining New Zealand leases are on-track to be confirmed by the end of 2024 to enable construction to commence in 2025, and commissioning by mid-2026.
- 12 Construction of SouthPAN infrastructure commenced at the ground reference station at Scott Base, Antarctica in November 2023. The site is expected to become operational in early 2026.

Benefits realisation remains a key focus

- 13 LINZ is prioritising increasing awareness of SouthPAN services and supporting uptake. Quantitative evaluation of benefits will occur over time as usage increases and LINZ works towards full operating capability.
- 14 Examples of user uptake of the free early open services include:
- 14.1 **Agriculture** – Ravensdown is using SouthPAN on aerial fertiliser aircraft in the hill country, improving accuracy of application and optimising costs with nutrient input and fuel consumption.
 - 14.2 **Local and central government** – Wellington City Council is exploring using SouthPAN as a more cost-effective option than manual surveying to accurately capture and update asset location data for its Underground Asset Register platform.
 - 14.3 **Maritime** – Port Phillip Sea Pilots (Australia) have completed a Proof-of-Concept trial of SouthPAN for use in marine piloting and safety

navigation applications. SouthPAN has been proven to be fit for purpose and will be integrated into their operations.

15 The second satellite payload (SGP-02) is being procured (led by GA). Subject to this procurement activity, SGP-02 is expected to be launched and operational by 2028, which represents no change to long-term milestones and therefore the delivery of SouthPAN, however this is being monitored.

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Delivery of SouthPAN is tracking in line with the project's approved budget

17 The total approved New Zealand funding (as of Budget 2024) consists of:

17.1 **Operating funding** of \$757.6 million, and

17.2 **Capital funding** of \$10.0 million.

18 Of this, the spend to 30 June 2024 is \$94.4 million.

19 As key milestones have been achieved, some cost uncertainty has reduced and therefore the need for full contingency funding. As part of Budget 2024, LINZ returned \$1.3 million per annum from SouthPAN by scaling back contingency funding. LINZ has retained contingency funding for ongoing project risks

Risks and mitigations

20 SouthPAN is a complex, long-term project which spans several critical contracts. Risks related to integration, system performance and security are being managed carefully to ensure the project's success.

21 Identified and monitored project risks include:

21.1 Delay to near-term milestones as a result of extended market engagement and design updates. This includes some forecast delay to some near-term design milestones for the first satellite payload and the SouthPAN system design. These risks are being managed and while there are near-term delays being experienced, at this stage there is no forecast impact to long-term milestones (such as full operating capability) and the delivery of SouthPAN services.

21.2 Ongoing resourcing challenges, including vacancies where specialist expertise is required. Short-term specialised resource has been

acquired to mitigate the risk and support delivery, and longer-term resource is being recruited.

21.3 Active financial management to mitigate the risk of foreign exchange rate fluctuation impacts. LINZ, working with the Treasury, is actively managing this risk by putting in place forward contracts for foreign exchange rates.

22 In addition to the project risks identified by the Joint Governance Board, a range of independent assurance activities have occurred. These include an independent review undertaken in 2022 and an Australian National Audit Office review in 2023/24.

23 Upcoming assurance activities include a review of the project schedule, alongside technical support and expertise as part of the system design and certification processes.

Next steps

24 I recommend Cabinet invite a further update on SouthPAN in September 2025. I will update Cabinet on the delivery of SouthPAN, including the procurement of SGP-02, and the acquisition of leases and construction of the five New Zealand based ground reference stations.

Cost-of-living Implications

25 This paper has no cost-of-living implications.

Financial Implications

26 This paper has no financial implications.

Other Implications

27 This paper has no legislative, human rights or population implications.

Consultation

28 LINZ consulted the Treasury, the Department of the Prime Minister and Cabinet, Ministry of Transport, Ministry for Primary Industries, MBIE, Ministry of Foreign Affairs and Trade, and the Department of Conservation.

Communications

29 Regular announcements are made on project milestones, as well as industry articles and presentations to priority sectors.

Proactive Release

30 I propose to release this paper proactively, subject to a due diligence process and redactions as appropriate under the Official Information Act 1982.

Recommendations

The Minister for Land Information recommends that the Committee:

- 1 **note** that in March 2024 Cabinet invited the Minister for Land Information to report back on the Southern Positioning Augmentation Network (SouthPAN)'s progress in September 2024 [CAB-24-MIN-0120 refers];
- 2 **note** that SouthPAN is on-track to meet long-term milestones within Budget;
- 3 **invite** the Minister for Land Information to provide an update on SouthPAN's progress in September 2025.

Authorised for lodgement

Hon Chris Penk

Minister for Land Information

Proactive release