Digital rail skills demand – five-year outlook

National Transport Commission ntc

The rapid expansion and digitisation of Australia's rail networks means that 13,000 more workers will be required by 2027. Nearly 40% or 33,975 existing existing rail workers will need to learn new skills to do their jobs and 84% more specialist digital roles will be needed to design, build and run new interoperable systems. Adding to the workforce challenge is the expected loss of a large number of key workers approaching retirement.

2027 forecast growth in total workforce and specialist digital roles:

- Total workforce increase - by %
- Specialist digital roles increase – by %
- Specialised digital roles increase - by number

WA ↑20% ↑74% ↑74
METRONET

NT ↑19% N/A N/A

SA ↑14% ↑78% ↑18

QLD ↑19% ↑94% ↑244
Queensland Train Manufacturing Program
Cross River Rail

Inland Rail
Sydney Metro
Moorebank Logistics Park

ACT ↑23% N/A N/A
Removal of level crossings
Melbourne Metro Tunnel
Suburban Rail Loop

NSW ↑17% ↑79% ↑362

VIC ↑17% ↑86% ↑207

TAS ↑17% N/A N/A
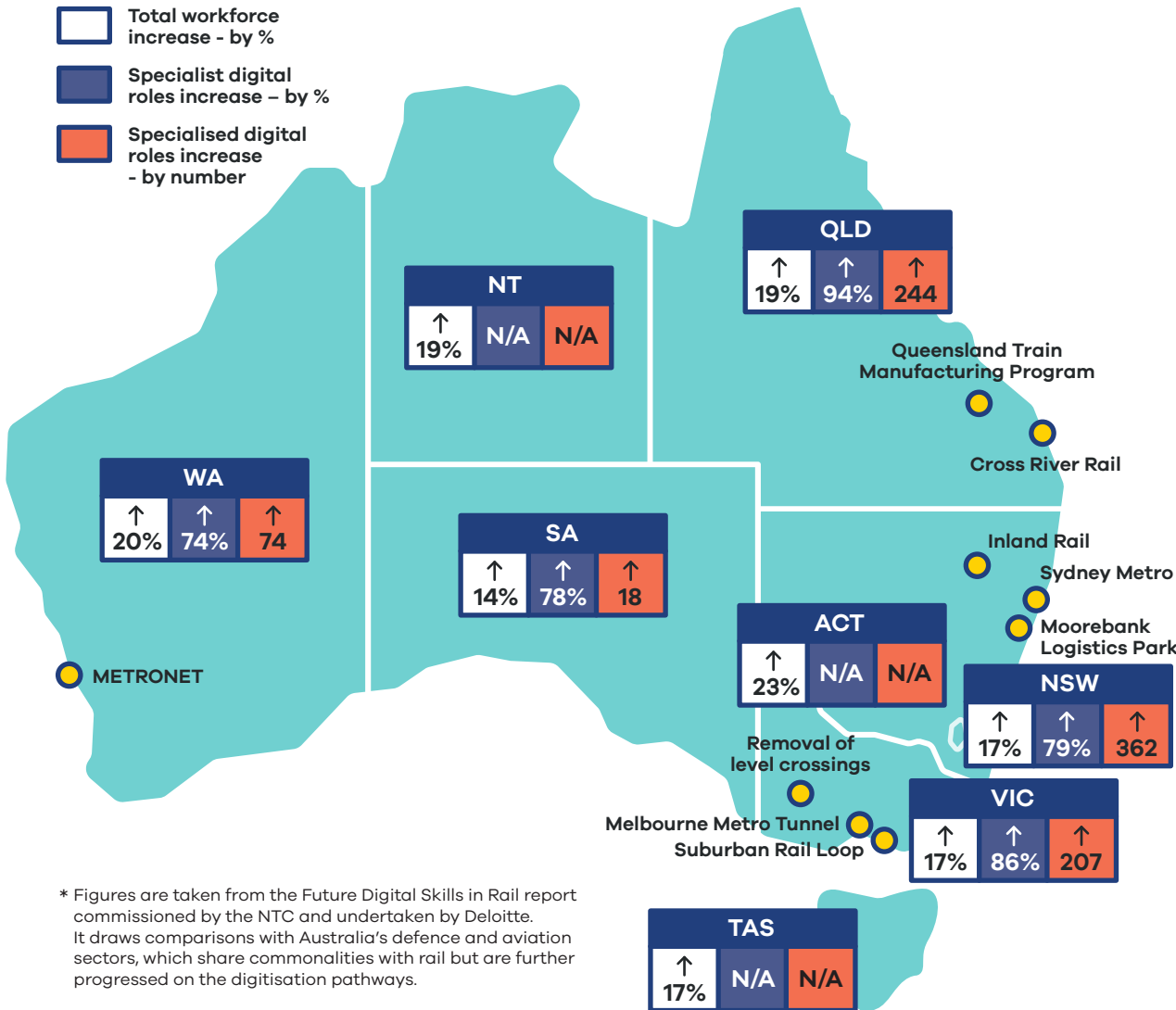
* Figures are taken from the Future Digital Skills in Rail report commissioned by the NTC and undertaken by Deloitte. It draws comparisons with Australia's defence and aviation sectors, which share commonalities with rail but are further progressed on the digitisation pathways.

By 2027:

40% of today's rail workforce will be impacted by digitisation

21 Job categories will be affected

>100 rail skills units of competency need updating to include digital skills

84% more specialised digital workers will be needed

Specialist digital roles	2027 workforce	% increase on 2022
ICT Analysts and Security Specialists	386	176%
Network/Systems Administrators	199	66%
Systems Analysts	140	56%
Network/Systems Engineers	193	74%
Software Engineers	384	112%
Developer Programmers	209	94%
ICT Support Engineers	42	45%
Customer Service Managers	434	43%
TOTAL	1,987	84%

Key workers to retire by 2027:

Train Driver	Electrical Engineer	Railway Signal Operator	Railway Track Worker
16%	**10%**	**12%**	**13%**
5,512	289	467	1,783