



## WHO WE ARE

- Less than **10%** of all technical roles are held by females
- **50%** of organisations record ethnic diversity
- Engineering roles makeup **21%** of technical roles
- Trade roles makeup **48%** of our technical roles
- Distribution sector has **27%** of the engineering roles
- Trainees make up on average **10%** of our technical workforce
- Distribution sector has **26%** of the engineering trainees
- Consulting sector has **49%** of the engineering trainees
- **21%** of the total technical workforce is over 55 years old
- **31%** of technicians and project managers are over 55 years old



## QUALIFICATIONS AND RECRUITING

- 34%** of engineering graduates in 2019 came from Canterbury University followed by overseas at **18%**, University of Auckland at **16%** and AUT at **13%**
- 90%** of participants believe graduates are prepared for the future
- 80%** of people in engineering roles have a bachelor's degree or higher education
- 66%** of people in trade roles have a hold a level 4 certificate
- 14%** of participants say project management qualifications are **very important** and **13%** for Operations/ controllers
- 81%** of participants are finding it difficult to recruit technicians, **78%** for recruiting engineers



## COMPETENCE

- 60%** of participating organisations have a competency framework implemented for **operations staff**
- 60%** of participating organisations **don't** have a competency framework in place for **engineering staff**, that equates to nearly 600 engineers



## BEHAVIOURAL COMPETENCY

Top **50%** of behaviours that organisations rate as very important are;

1. Technical aptitude
2. Communication
3. Critical thinking and problem solving
4. Relationship management
5. Customer service
6. Stress management



## FUTURE ROLES

**Strong focus** and view on next 2 years and BAU activities  
**Strong requirement** of skilled people in the next 2 years in;

- Line mechanics
- Protection engineers
- Communication technicians
- Protection technicians
- Data scientist

**Strong requirement** of skilled people 2 – 5 years' time;

- Line mechanics
- Asset managers
- Electrical engineers
- Project management
- Cable jointers
- Contract managers

**Strong requirement** of skilled people 5 years or more;

- Line mechanics
- Live line personnel
- Mechanical engineers
- Software and program development
- Artificial intelligence

*Note: these are based on a very small sample size*



## OUR CURRENT DEVELOPMENT APPROACH

- **Engineers approach** to development is more likely to be self-learning and formal course.
- **Project managers approach** to development is more likely to be self-learning and informal understudy
- **Trades employees' approach** to development is more likely to be on internal onsite course
- **Technicians approach** to development is more likely to be formal courses
- Formal coaching and mentoring is used **less than 20%** across all role types
- **70%** of participants **don't** set training hours targets
- Of organisations that set training hours targets the average is **24hrs** per person, per year, around 1.2% of available work hours



## TRAINING AREAS

Top **5** training areas for **all roles** are;

- Health and Safety
- Safety in design
- Project management
- Introduction to electrical networks
- Asset management
- Risk Management

## SPECIALIST TRAINING AREAS (by sector<sup>1</sup>)

	Distribution	Consultant	Contractor
Substation and switch-yard design	y	y	y
Cable selection and specifications	y	y	y
Communication systems	y	y	y
Overhead line design	y	y	-
Strategic management	y	y	-
Electrical protection systems	y	-	-
Distribution generation	y	-	-
Electrical network planning and design	y	y	-
Maintenance in electrical equipment	-	y	-
Renewal and maintenance optimisation	-	y	-
Transformer specification and selection	-	y	-
Project management	-	y	-
Design	-	y	-

*Note 1: Insufficient data from Generation sector to provide a sector view*