Case Study:
Telecommunications Cell Towers
Worker Safety

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Client Situation

The wireless tower construction industry in Australia has grown dramatically from 2016 to 2021. Rising transmission speeds, increased coverage of 4G mobile networks, and the early rollout of the latest 5G mobile networks have boosted consumer demand for mobile devices able to access the internet. These devices include smartphones, tablets, video game consoles, smart TVs, and smart watches.

Major telecom companies have also increasingly invested in fixed wireless services as an alternative to the NBN in select metropolitan areas across the country, further supporting the construction of wireless towers.

Wireless cell tower workers need to feel safe in all working environments. Work is physically and mentally demanding, isolating, and high risk. A workforce performance system is important to protect, locate, and analyse key performance data of team members. Damstra's Solo application connects and protects workers and creates a safer, more productive work experience.

Challenges

The wireless tower construction industry is facing the following key challenges:

- **Worker Visibility**
  The need to identify workers entering restricted areas, accessing multiple work sites, and supervising attendance and productivity.
- **Mobile Workforce**
  With team members moving constantly, the need to safeguard the mobile workforce was critical for lone worker safety and emergency management.
- **Ease of Use**
  The need for one solution that worked easily for everyone across diverse locations.

Damstra Solution

With Solo, cell tower team members feel protected, connected, and informed while creating a safer and more productive environment. Four modules comprise Damstra's Solo platform for worker safety:

Lone worker safety for mobile team members

- Check ins, interval reporting and location
- Duress and panic alarms
- Real-time alerts when a worker overstays the activity or misses a check-in
- Minimise risks faced by lone workers
- Reduce exposure to significant work, health, and safety fines
- Business rules supporting geofenced zones on smartphones and watches

Biometrics

- Active monitoring of a user's heart rate
- Detection and recording of steps taken during a session
- Detection of active and inactive metrics
- Detection of abnormal results and notifications
- Trending and benchmarking of worker biometrics

Fall Detection

- Autoalert notification and location on detection of a fall
- Advanced algorithms detect up to twenty-two types of falls
- Messaging to avoid false positives
- Utilizes Samsung Galaxy watch accelerometres
- Communicate directly across sites and teams

Continuous Connectivity

- In vehicle wireless mobile router
- Seamless switch to Satellite when out of standard coverage
- Start, pause, and resume a session
- Raise or cancel alerts
- Driving behaviour

Solo can assist telecommunications cell tower working environments by:

- Improved driver behavior and safety
- Boosting worker engagement with real-time data for safety management protocols
- Providing one application that all team members could use on their mobile device
- Embracing a culture of health and safety among team members

Outcomes

Post implementation of Damstra's Solo Platform, industry professionals can expect increased safety performance, improved worker visibility, and effective emergency management.

ABOUT DAMSTRA TECHNOLOGY

Solo is a module in Damstra Technology's Enterprise Protection Platform (EPP). This comprehensive platform helps organisations maximize performance, safety, and profitability by orchestrating disparate processes and technologies.

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