



Collaboration from the Depths of Sydney's Tunnels

Kurt Foster

Fire & Rescue NSW

Rail Fire & Emergency (RFE)

- Specialist team within Sydney Trains
- Dedicated to ensuring the safety and resilience of the rail network
- Provide SME advice on the rail network to other emergency services



130 Years of Service



2019/20 Bushfires

- Deployed to protect rail infrastructure from Blackheath to Lithgow
- No access to other agencies radio channels
- Lack of situational awareness and fire location
- Fire overrun situation due to not being able to safely communicate
- Working alongside RFS and FRNSW to protect homes



Integration of Technology

Review of other agencies communication systems

FRNSW preferred technology

Communications equipment integration

Formalised MOU

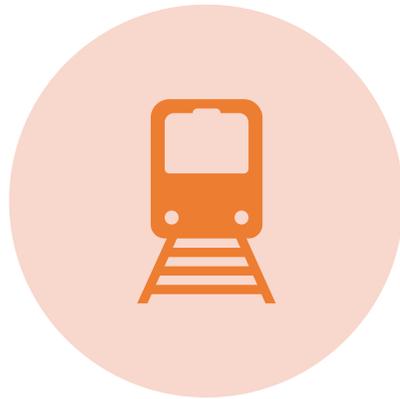


Testing the Integration



- RFE deployed to the Hawkesbury floods
- Undertook building impact assessment and cleanup
- Test of critical communications integration
- Cross agency communication with SES and RFS

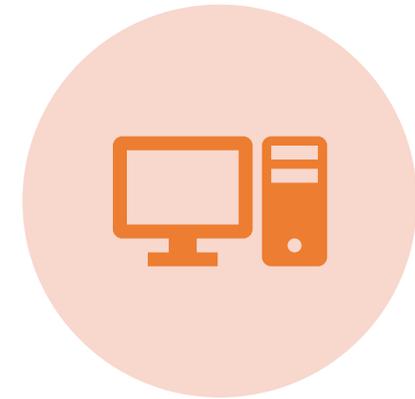
Alternate Technologies



LEGACY RAIL TUNNELS DENIED
OF LTE AND PSN COVERAGE



COLLABORATION ESTABLISHED
TO REVIEW IBC OPTIONS



MESH TECHNOLOGY
IDENTIFIED AS A SOLUTION

Motorola SmartConnect

Firefighters stay connected beyond the PSN Network

No special behaviour or commands

No requirement to manage separate talkgroups or configurations



Hypha Mesh



hypha
CAP



- Small compact solution easily transportable
- Backhaul into the PSN network
- Smartconnect via Motorola APX radios
- Provides both data and voice communications

Tunnel Deployment



St James Rail Tunnel's built in 1926

Used as public airaid shelters during WWII

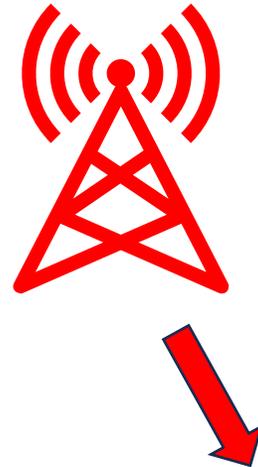
Designed with 7 chambers each with 4m deep concrete

No PSN or LTE network

Hypha Mesh deployed

TfNSW Wi-Fi

- TfNSW Wi-Fi being used as a secondary network
- Motorola APX radio connects via SmartConnect
- User's experience no change in functionality



Working Together

