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UIC WEBINAR

Sharing Railway Response to the Iberian Power Outage: Impact on Railway Systems and lessons learned

Hernán Jiménez Caldevilla Eusko Trenbideak, Basque Railways SA Adaptation of the Contingency Plan to the new scenario





- Operator
 - Rail Services
 - Tram Services
 - Funicular
 - Road Services (Buses)

Deficiencies detected

Communication

- Mobile equipment
 - TETRA external communications system only in the cab
 - TETRA communications system dependent on main battery
 - Mobile network saturated or without coverage
 - Public address system on trains dependent on main battery
- Other working personnel
 - Saturation of internal lines at the Control Centre.
- Users
 - Passenger information systems at stations without power supply.
 - Lack of staff at small stations and halts to provide information

Deficiencies detected

Rolling stock

- Some trains are halted in complex areas
 - Single-track trains, viaducts, etc.
 - Difficulties in evacuating all passengers easily
- Complications in relieving drivers
- Evacuated trains stopped on the tracks exposed to graffiti and vandalism

Deficiencies detected

Procedural

- Local contingency plans.
 - Company-wide resources are focused on one area.
 - It is not anticipated that resources will be required in all areas and from all parts of the company.
- Lack of resources to respond to a general, long-term contingency

Measures

Technical

- TETRA terminals with batteries or separate train batteries for auxiliary services (TETRA, air conditioning, etc.). In progress.
- Install batteries on trains to enable short journeys.
 - Objective 1: Be able to leave danger zones
 - Objective 2: Reach stations
- Incorporation of batteries into passenger information systems at stations (supplemented with solar panels to increase autonomy)
- Provision of autonomous megaphones as equipment in each station

Organisational measures

Organisational

- Division of the network into zones and establishment of secondary control centres coordinated by the primary centre
 - Improvement of communication channels. Saturation is avoided
 - More manageable plans
 - Meeting points for mobilisable resources
 - When one zone is finished, it can support other zones with resources
- Creation of a single action plan (customised for each zone)
 - Information for users
 - Support and relief for driving personnel
 - Evacuation of trains
 - Protection of assets

Organisational measures

Organisational

- Plan to mobilise off-duty workers to improve response times.
 - Define communication channels (SMS, social media, etc.)
 - (Volunteer staff)
- Plan to mobilise transport resources to send support to mobile equipment
 - Company cars
 - Construction vehicles (4x4)
 - (Private cars)
 - Alternative means

Conclusions

- We were not prepared to face global and long-lasting threats
- Users behaved in a fully cooperative manner
- High level of commitment from employees

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THANK YOU FOR YOUR PARTICIPATION!