European – Severe Weather Management & Communications

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Introduction

- U.K. - The 2009/10 winter was the 3rd coldest in the last 50 years and the four weekly period of mid December to mid January was the coldest since 1986. Temperatures plummeted to minus 22° celsius and fresh snow depths of up to 50 cms were experienced through to the end of March.
- The Netherlands – Similar conditions brought several important rail hubs to a standstill – promoting a high level review and subsequent creation of a dedicated “Weather Office”.
- Sweden – An increase of 150% in cancelled trains and daily passenger information calls rose from 12,000 to 100,000. Actual snow depths hit 130 cms and 30 tonnes of ice accumulated on the over head lines between Gothenburg and Stockholm, a distance of 500 kms.
- Norway – Dedicated snow coordinators utilised to assess local alert procedures as temperatures dropped to minus 50° celsius!

Business impact

- A huge variety of key performance indicators can be quoted to demonstrate the wide-ranging business impact across central and northern Europe. Examples are:
  - Increased service train cancellations
  - Decreased fleet availability
  - Decreased performance
  - Increased mitigation cost
- The Operating, Engineering, & Commercial impacts listed above were also compounded by the resultant loss of customer confidence and subsequent reputational damage to infrastructure maintainers and train operators.

Mitigation review process

- Numerous review processes currently exist across Europe. These processes are owned by a variety of organisations such as:
  - Infrastructure maintainers
  - Train operators
  - Rolling stock suppliers
  - Professional Organisations
  - Governmental institutions
- Solutions to Operating & Engineering issues have been identified and are being adopted accordingly.
- However, the solutions to a loss in customer confidence and subsequent reputational damage to infrastructure maintainers and train operators requires a more complex set of deliverables. In order to identify these deliverables, the subject matter was raised at EIM & UIC level so that a coordinated response across Europe was obtained.

First steps

- It was immediately recognised that managing customer expectations and defining key roles and responsibilities within the management and subsequent communication of information during severe weather events was pivotal to minimising the subsequent reputational damage.
- This area of discussion was explored further via agenda items at the following meetings:
  - **17 June 2010 Helsinki** FTA-EIM Workshop on “Winter Preparedness”.
    - Initial teleconference to discuss the merits of integrated forecasting communications.
  - **15 September 2010 Paris** UIC Workshop on “Winter & Railways”.
    - “European Severe Weather Management & Communications” accepted as one of several areas to develop further.
  - **17 September 2010** EIM “Behind The Lines” quotation.
    - “EIM will continue to act as a coordinator for its members in the framework of the work on the climate change adaptation. For example, Network Rail‟s proposal on a EU wide forecast web tool could be of interest to other EIM members. Moreover, it would be worth setting up an ad-hoc communication strategy in order to be ready to react promptly in the press to any possible winter problems in the coming months.”

Initial proposal

- I accepted an action at the UIC meeting on 15 September to create an initial proposal that furthered the development of “European Severe Weather Management & Communications”.
- My proposal has foundations associated with an existing project that I have delivered in the U.K. This project identified the requirement to have a single source of forecasting information for the U.K. rail network, plus appropriate automated alerts linked to company thresholds.
- The above is now an embedded process across the U.K. rail industry via the following web site: www.smtweather.co.uk (username “ukrail” password “smt”).
- Enhancements for a European model could include:
  - Report & Review library
  - Key operating personnel contact database
  - Recognised supplier contact database
  - Prompt actual weather data from shared weather stations
  - Live communications forum in times of severe weather disruption
- The following slide depicts a “Quadrant of Aims” to help demonstrate the benefits of this initial proposal.

European Severe Weather Management

Forecasting – Informing – Advising – Delivering – Reviewing

Purpose

- To provide forecast risk to ***all*** European countries in times of severe weather disruption, promoting cross border communications.
- To share forecasting and communications resources.
- To provide a platform to share weather management knowledge and associated reviews.

Intended Customers

- European professional organisations
- National infrastructure maintainers
- Rolling stock companies
- Associated train operating companies
- National media organisations
- Regional media organisations
- End user passenger information systems

Outcomes & End Products

- A single forecasting web site that is recognised and accepted as the primary resource across all European rail systems.
- An integrated network of shared weather stations and open forum.
- A collective repository housing severe weather event reviews, investigative reports, and management processes.

Success Criteria

- The resultant model becomes a recognised informer of severe weather events and an integrated management tool.
- Refined operational response through heightened awareness of impending forecast risk and robust cross border dialogue.
- Improved confidence and reputation via transparent processes that deliver a reliable single journey experience to the customer.