



INTERNATIONAL UNION
OF RAILWAYS

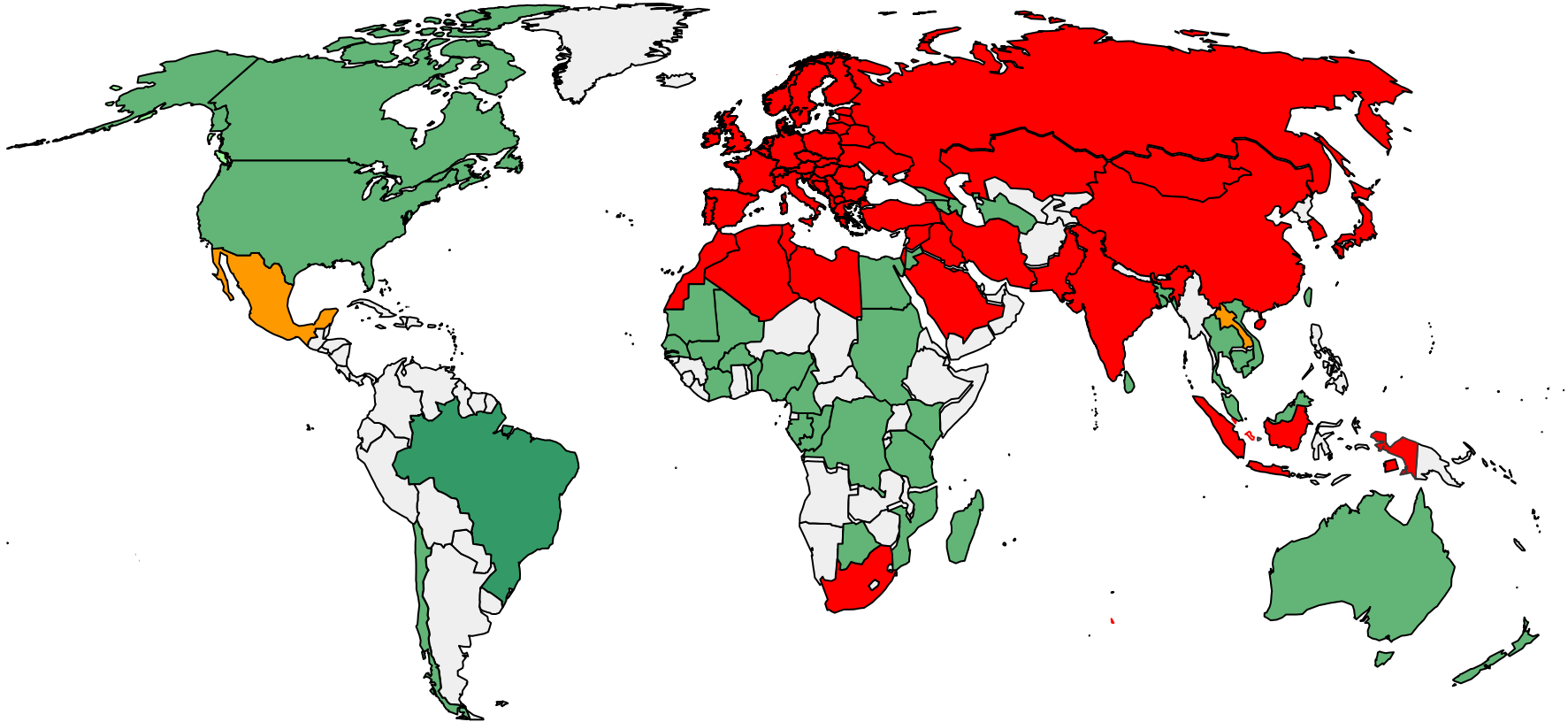
unity, solidarity, universality

Adapting Rail Infrastructure to a Changing Climate – Public private collaboration

Alexander Veitch
Head of Unit – Sustainable Development
OECD, Paris, 11th May 2012

UIC: The International Union of Railways

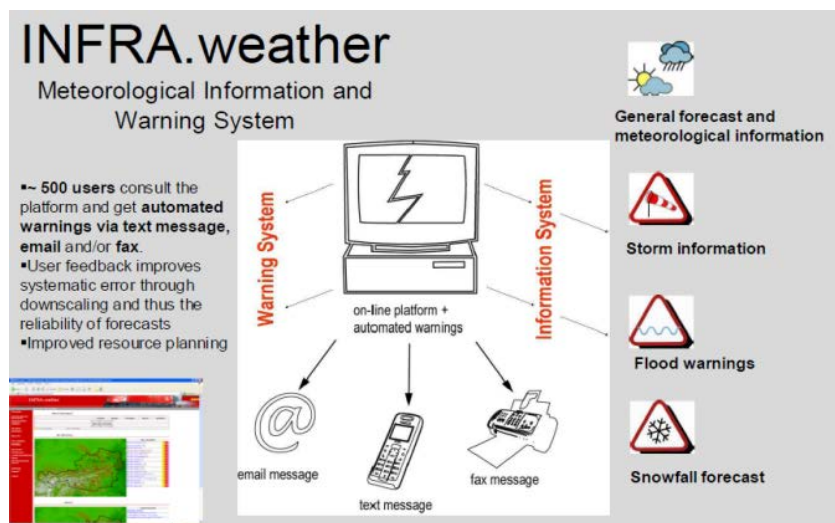
200 members worldwide website: www.uic.org



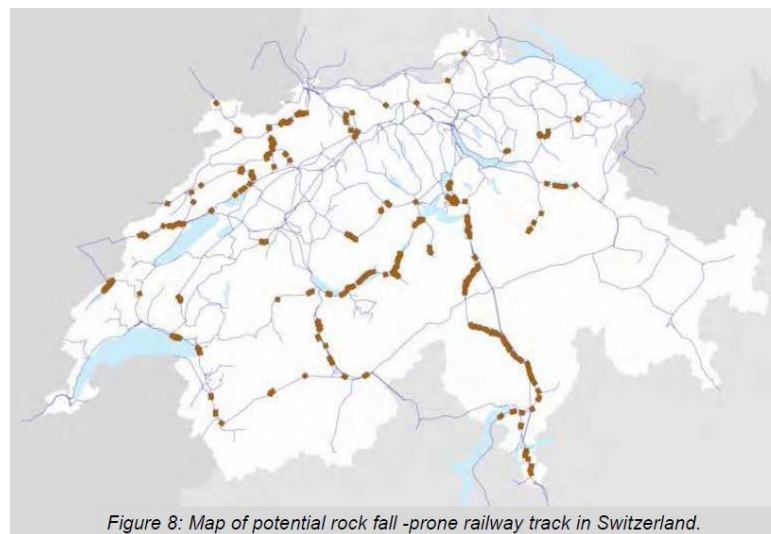
Members ■ Active ■ Associate ■ Affiliate

Railways actions – from 2010 to 2012

- In 2010, the UIC ARISCC project reported on integrated weather event and natural hazard management and CC Adaptation – see www.ariscc.org
- We found many good examples of weather warning, vulnerability mapping, and risk assessment, but few examples of future climate models being used
- In just two years the position has changed and in 2012 many more railways are developing detailed adaptation plans, using the latest climate model info.



Austria – weather warning system

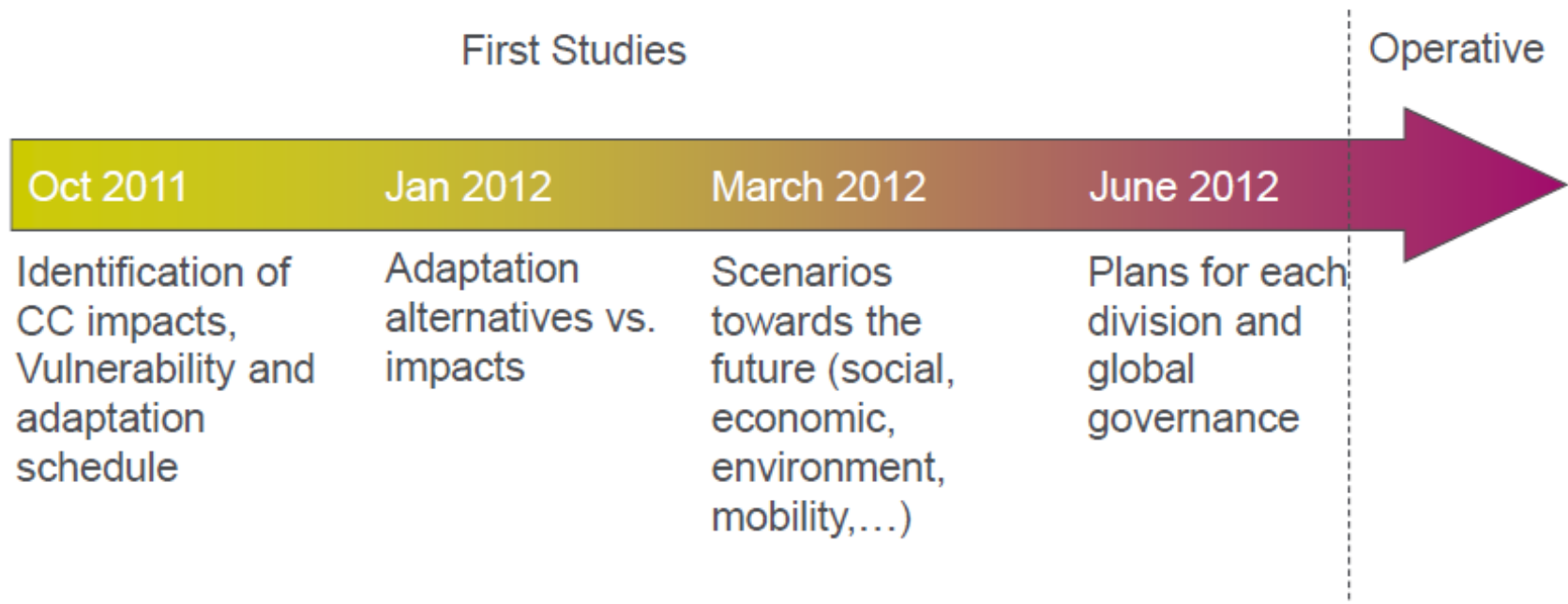


Switzerland – rock fall prediction map

Case Study - SNCF

CLIMATE CHANGE FOR A SUSTAINABLE MOBILITY OPERATOR

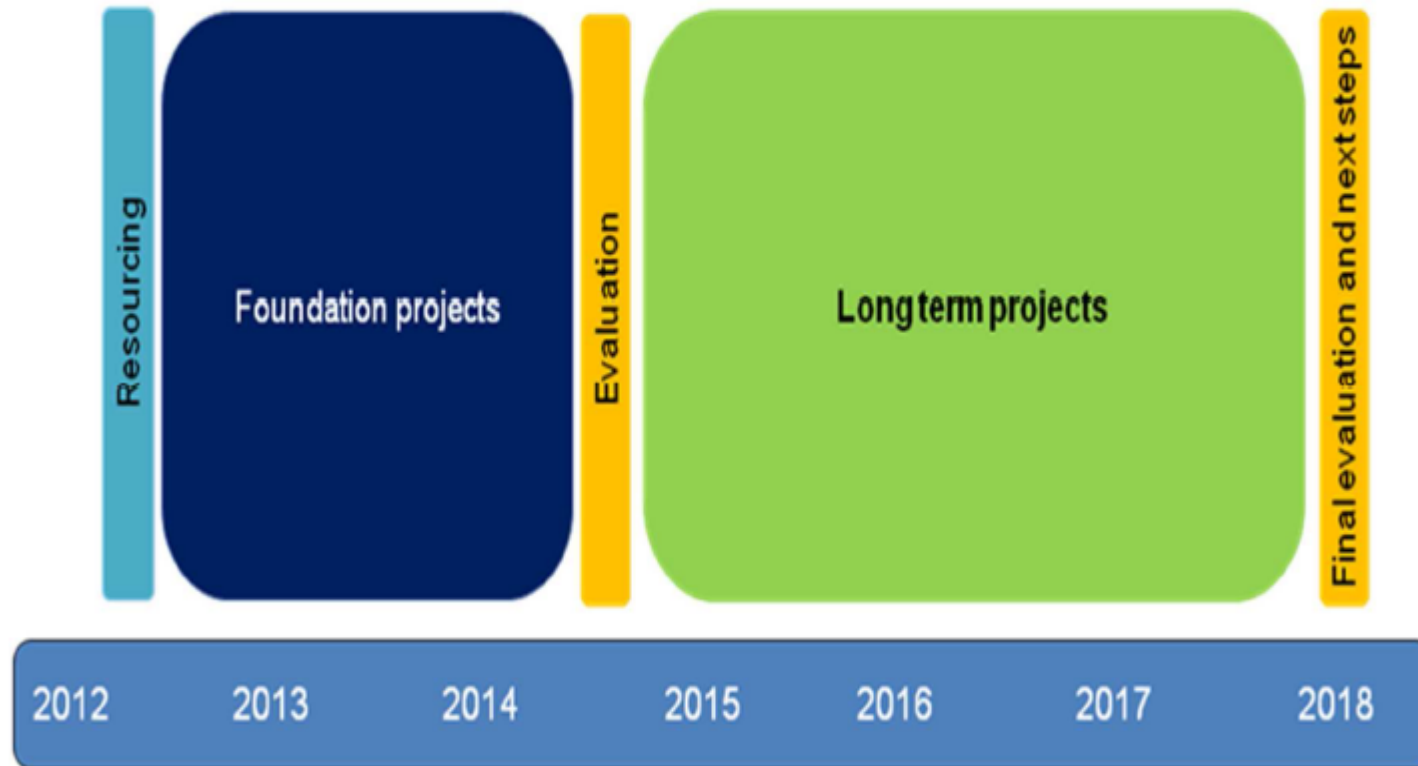
CLIMAT D-RAIL PROJECT



Case Study – Network Rail



Proposed Programme



The proposed work will be sponsored by RSSB's Research Programme – currently this is subject to approval



Case Study – JR East



JR East's strategy

Long-term Tendency

**Climate
Change**

Possibly.
But difficult to
specify what,
where, when, how
often.

Natural Hazards



- Some disasters can be predicted. But we cannot predict accurately enough.
- It is important to take measures based on possible scenarios of damage.

Conclusions – Public Private Partnership

- The modern rail sector is a varied mix of private operators, public service franchise contracts, and nationally owned companies
- A key requirement is strong cooperation on climate forecasting :
 - Adaptation of infrastructure needs detailed information about impacts at the local level
 - Rolling stock has a long lifetime, so manufacturers need to know the operating conditions for 30, 40 even 50 years ahead
- The broader issue is making the railways resilient to climate change
 - Updated standards are needed for new infrastructure. A greater challenge is existing infrastructure which may be over 100 years old!
 - Railways are now working on detailed, costs and plans for adaptation, and additional investment may be required



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Thank you for your kind attention

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