Reduction of economic and environmental impact using MAINLINE results

Björn Paulsson, UIC/Trafikverket
My basic view on Research and Development projects is “Result must be used – no Shelf Warmers”

Therefore the important question is “How do we use the MAINLINE result in reality?”
In Deliverable 6.3: Dissemination and implementation of MAINLINE results

- Dissemination in MAINLINE has been a driven process.
- Workshops and dedicated presentations have in several cases been presented to standardisation bodies.
- Some deliverables have been transformed into practical guidelines, a manual and a book.
In Deliverable 6.3: Dissemination and implementation of MAINLINE results

- Selected partners representing universities, infrastructure managers and industry
- The MAINLINE project has been very active in dissemination

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In Deliverable 6.3: Dissemination and implementation of MAINLINE results

Some examples of conferences:
- TRA in Athens and Paris
- FIRM 13 FEHRL in Brussels
- Many conferences
- Mini Symposium, IABMAS 2014 with 8 papers
- Continuously informed UIC groups TEG and PoSE
In Deliverable 6.3: Dissemination and implementation of MAINLINE results

Some examples of workshops:

- Two workshops in Paris 2013 and 2014
- Workshop targeted to Central and Eastern Europe in Budapest 2014
- Training sessions LCAT
- In London and in Paris 2014
A book “Project Results” that summarises MAINLINE in a condensed way. All deliverables are available on www.mainline-project.eu.
A draft version was delivered already in June 2014 for important deliverables so we could finalize and disseminate in time.
Examples from different WPs

Implementation and use of MAINLINE result from different WPs
Four Reports on Life Extension

Benchmark, D1.1
Assessment Methods, D1.2
Case Studies, D1.3
Guideline, D1.4

MAINLINE

MAIntenance, renewal and Improvement of rail transport Infrastructure to reduce Economic and environmental impacts
Collaborative project (Small or medium-scale focused research project)
Theme SST.2011.5-2.6: Cost-effective improvement of rail transport infrastructure

Deliverable 1.4:
Guideline for application of new technologies to extend life of elderly rail infrastructure
Grant Agreement number: 285121
Start date of project: 1 October 2011
Lead beneficiary of this deliverable:
Due date of deliverable: 30 June 2014

Dissemination Level
PU Public

Project co-funded by the European Commission within the 7th Framework Programme

Draft version 0.1, 2014-05-08
Example WP1

- The results will be used in our education and training of students in basic and advanced courses.
- The results will be used as background knowledge for our research. Three PhD students will do further work on strengthening by post-tensioning, assessment and strengthening of metallic bridges and assessment and strengthening of prestressed concrete bridges.
- The LCAT will be used for rail infrastructure in Luleå Railway Research Centre.
- WP1 will be used as input to Shift2Rail.
In WP2 four deliverables have been produced.

- Important input to LCAT
- The deterioration model can be used by those who are developing Eurocodes on assessment of existing structures
- By introducing deterioration models it is possible to improve Asset Management
- Will be used in In2Rail/Shift2Rail
FOUR DELIVERABLES IN WP3

- D3.1 Benchmark production and replacement of railway infrastructure
  - Benchmark of new technologies and methods used across Europe
- D3.2 and D3.3 Development of new construction methods and technologies for replacement
  - Development of new construction methods to replace old infrastructure
- D3.4 Guideline for replacement of elderly infrastructure
Presentation of Guideline and Background information to PoSE and TEG

• The guidelines will support everyday work for asset managers
• Future enhancement will be carried out with feedback from UIC groups
• Input to projects like In2Rail/Shift2Rail
Input LCAT

• Reliable and comparable data will be given to LCAT with focus on cost for replacement activities
The result from WP4 shows how Monitoring and Examination (M&E) techniques helps to enhance degradation models first in D4.1 and D4.2 and also proven in the Case studies in D4.3
How do we work now with LCAT WP5

LCAT will be used (examples)

- Surry University aims to introduce the use of the LCAT tools into the modules when teaching MSc students on Infrastructure Management and Bridge Engineering. (over 30 per year full time and at least twice as many part-time)
- Will be used in Capacity4Rail and Shift2Rail
How do we work now with LCAT

The working group will be established to carry on the work. The working-group will be open for IMs, industry and academia. The group will:

• Develop additional parts
• Enhance todays developed parts
• Collect data from many members – (the most important part)
I have given some examples on how to go on tomorrow and after. There are of course more examples but it gives you a brief picture.
Thank you!