Project no. TIP5-CT-2006-031415

INNOTRACK

Integrated Project (IP)

Thematic Priority 6: Sustainable Development, Global Change and Ecosystems

D7.1.6: Summary of dissemination and training – lessons learnt

Due date of deliverable: 2009-10-31

Actual submission date: 2009-11-30

Start date of project: 1 September 2006 Duration: 40 months

Organisation name of lead contractors for this deliverable: M Bailey (UNIFE) and B Paulsson (UIC)

Final version

Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)		
Dissemination Level		
PU	Public	PU
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Table of Contents

Glossary

Abbreviation/acronym	Description
CER	Community of European Railways
ERA	European Railway Agency
EIM	European Rail Infrastructure Managers
IM	Infrastructure Manager
KMS	Knowledge Management System
LCC	Life Cycle Costing
LICB	Lasting Infrastructure Cost benchmarking an UIC project that started 1997
PoSE	Panels of Structures Experts an UIC group dealing with bridges, substructures and tunnels
RAMS	Reliability Availability Maintainability Safety
TEG	Track Expert Group an UIC expert group dealing with tracks
TSI	Technical Standard for Interoperability
UIC	Union of International Railways
UNIFE	Association of the European Railway Industries
WP	INNOTRACK Work Package

1. Executive Summary

Too many R&D projects create good results that are not implemented in everyday operations. Instead of being used, crafted reports end up as shelf warmers. To avoid this in INNOTRACK, a multitude of activities have, currently are, and will be carried out. These activities are described in this deliverable.

It is also a known fact that dissemination and training is crucial for the long-term success of research and development (R&D) projects. This has to be accounted for in a planned and professional way. A project like INNOTRACK has an end point. Therefore all activities must be planned before this instant in time so that the implementation phase becomes a natural continuation of the project. This also means that resources for implementation have to be allocated in advance.

The fact that the railway community is very complex with different target audiences makes the situation even more complex. These target audiences have to be identified. When this is done, adapted media of communication have to be produced for the different targets.

The first part of this deliverable describes the communication plan with the different target audiences. Then the plan of communication including how the target groups will be addressed is described.

In a dedicated chapter the media of communication are described. This chapter also describes how these media are interconnected.

This deliverable also describes in detail different dissemination and training activities carried out within INNTORACK.

All large projects like INNOTRACK introduce new challenges, not only technical but also regarding implementation of results. Particularly in the railway sector, there have traditionally been difficulties in implementing new innovations in a short time. The reason for this has often been discussed and debated. One main reason is that the railway infrastructure often is old and very complex. However, egardless of the reason, every step to overcome the implementation threshold is important. In the chapter “lessons learnt”, how this has been and should be addressed is described.

2. Introduction

Dissemination and training has been an ongoing activity throughout the project. It is important to take into account that INNOTRACK is a project that has a starting date and an end date. This means that organisations outside of INNOTRACK must act to support it.

To put together the input to INNOTRACK took several years. From the beginning INNOTRACK was drafted as two separate projects. The project ideas and plans were written down in the Description of Work (DoW). This document has been updated and adjusted during the project.

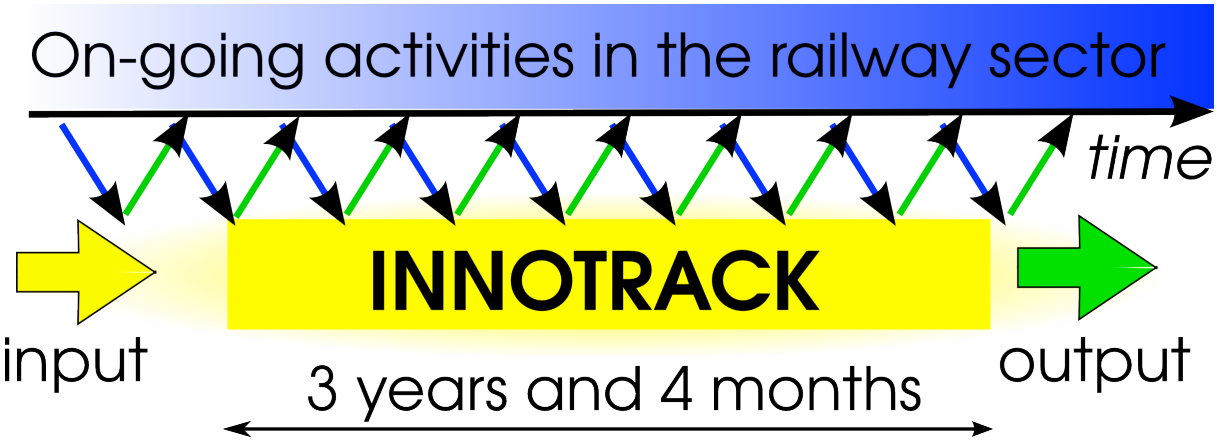


Figure 1 INNOTRACK is a project with a start and an end point.

During the project execution, a lot of activities have been going on. Many of these activities made the implementation easier. One example is the review process, which has the following background.

- Ensure a sound scientific basis
- Ensure “implementability”
- Pave the way for implementation
- Assure quality
- Ensure traceability of corrections and validations
- Streamline the quality assurance process with limited efforts.

Implementation also has to be planned in advance at a rather early stage of the project. In this document one can see a lot of examples of this. The documentation has to have high quality and be easy to understand. Otherwise implementation will be more difficult.

Another demand to make the result useable is that it must be easy to find background documents. This is to answer the question of what the conclusions and recommendations in INNOTRACK are based on.

A question now solved is how to maintain the results. A dedicated project within UIC will take care of this.

3. Communication Plan

This chapter describes the different target audiences and how they are addressed.

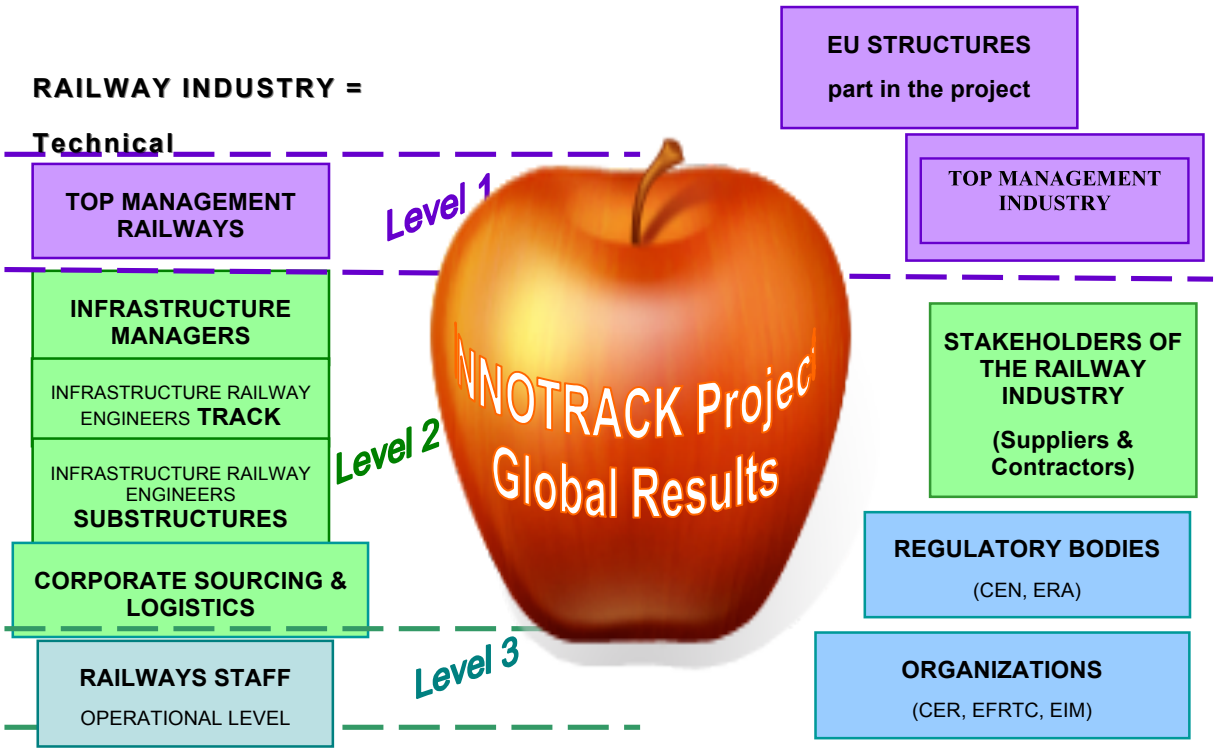


Figure 2 Target audiences identified in INNOTRACK

3.1 EU structures

3.1.1 European Commission

The European Commission has a role to ensure that INNOTRACK is performing according to the contractual agreements. Therefore it is important to have an open and informative dialog with the European Commission, represented by the Project Officer. During the project the Project Officer has unfortunately changed four times. This has put more pressure on the INNOTRACK project to inform in a good way.

On two occasions, whole day presentations have taken place. All parts of INNOTRACK have been presented and discussed. In order to make the presentation and discussion more fruitful, deliverables have been sent in advance. The major part of the discussion has dealt with produced deliverables.

The last review meeting took place on the 16th of December 2009. On this meeting the conclusions from INNOTRACK were presented.

The project officer has always been invited to the Kick Off meetings, General Assemblies/workshops and Seminars.

To enhance an open dialogue, several more informal meetings have taken place with a small number of persons from INNOTRACK. On these meetings, information has been given and questions have been brought forward. Another important task for these meetings has been to inform on planned activities in advance. The meetings have also been an opportunity for INNOTRACK administrative people to present themselves.

3.1.2 Other EU-projects

Throughout the project, links have been formed with other EU-projects, most notably Urban Track, but also InteGRail and the UIC LICB project.

Urban Track – INNOTRACK joint forum on LCC

There is a close association with the Urban Track project, which is a sister project to INNOTRACK focused on urban rail infrastructure applications but with similar objectives, particularly regarding LCC target reductions. Established in mid 2007, collaboration between INNOTRACK and Urban Track was initiated to foster links between the two projects, in particular to:

- Pursue common approaches or "cross-standardisation" on LCC between the two projects
- Work towards a minimal comparability of LCC results of the projects
- Serve as a general "link" between the projects on the innovative methods/technologies under development

Since the initiation four meetings have been held, with more to follow up until and beyond the life of the project. The achievements can be summarised as follows:

- In-depth critique of LCC tools, product and cost structures for each project
- Undertaking of LCC assessment using each tool on examples from the other project for comparison of tools
- Appreciation of socio-economic factors towards LCC reductions for the INNOTRACK project
- Production of a joint "Position Paper on Life Cycle-Costing in Rail Infrastructure"

3.2 Infrastructure Managers

3.2.1 Top management among infrastructure managers

The information to the top management has been, and will be, carried out in two ways.

First of all, presentations have been given at the Infrastructure Forum at UIC during the project. Here information has been given twice a year during the entire duration of the project. On the last meeting on the 21st of October 2009, extra time was given for INNOTRACK information.

Since all top management representatives cannot be reached through the Infrastructure Forum, this group will also be addressed with special information material. The proposal today is to produce a newsletter combined with a video. The content will be the summary of the Concluding Technical Report (CTR).

The objective with the top management reporting is to inform on what INNOTRACK has achieved and which effects the result of INNOTRACK can offer to an IM. The top management report shall also answer how statements and effects in the INNOTRACK project description have been met.

The quality of this report has to be high. If the results are not well explained to the top management it will be difficult to get support to implement the result.

3.2.2 Infrastructure mangers – high technical level

This group is not homogeneous. The media of communication targeted towards this group is mainly the deliverables, guidelines and the Concluding Technical report.

During the time of the project, this group has been addressed in different ways, as in conferences and seminars.

Special offers have been given to the railways. See section 3.2.6.

3.2.3 Railway engineers – track and structure

This is a more homogeneous group and easier to identify in the railways. The media for this group is mainly deliverables, guidelines and the Concluding Technical report, but also presentations at workshops, seminars and conferences.

The UIC track expert group (TEG) and the UIC panel of structure experts (PoSE) have continuously been informed. TEG has been informed at all of their meetings and they have been very active with reviewing deliverables.

Two special workshops have been arranged to inform these groups in detail. These workshops have taken place on the 14/10 2009 and 15/10 2009. See more in chapter 6.

3.2.4 Railway staff working with corporate sourcing & logistics

This group is not easy to identify and find in the different railways organisations. Different railways place this staff in different places in the organisation. It is not yet fully solved how to address this category.

EIM, CER and EFRTC have taken an initiative and formed three joint groups. The groups have started to work on four of the Seven Success-Critical Areas identified in WP5.1:

- A – Market strategy
- B – Long term funding, planning and contracting
- E – Contracting strategy
- F – Rules and regulations

Since the questions above are more specific it has been easier to find the responsible staff in the IM organisations. See also D5.2.1.

3.2.5 Railway staff on an operational level

Railway staff on an operational level will be mainly addressed through the training centres and through national track experts. Further they will be indirectly affected by the INNOTRACK results from the influence they will have on national codes, regulations and practices.

Since the level of understanding of English is often low for this category, translation of key INNOTRACK reports and results is important.

Meetings with some training centres are planned. Most training centres where also invited to the seminars on the 14th and 15th of October 2009 where results of INNNOTRACK's SP3, 4 and 5 were presented.

3.2.6 Visit to strategic railways – "ERIKSGATAN"[1]

In order to make implementation easier for the IMs, special meetings have been and will be arranged with the IMs (mainly those involved in INNOTRACK) on their "home ground".

The purpose was and is to spread a better understanding of INNOTRACK and on how implementation of result can be supported.

[1] The old Swedish kings went around the country to become accepted after they had been elected. The age of Eriksgatans is unknown. The first documented Eriksgata was done by Magnus Eriksson 1335. The older law of Västergötland mentions Ragnvald Knaphövde who shall have ridden the Eriksgata in 1125-26. He did not reach longer than Falköping and Skara before he was killed by Västgötarna because he had not taken any hostage.

In this context one must be aware that a lot of track experts within the IMs have a very clear opinion and are very doubtful to new R&D findings – especially when INNOTRACK states that savings in the order of 30% are possible in the area that is covered by INNOTRACK. Therefore it is very important to have face-to-face meetings where the background to the INNOTRACK results can be explained and discussed.

Meeting with Network Rail

On the 22nd of September, an INNOTRACK meeting was arranged at Network Rail. 13 persons participated. The meeting turned into a quite open dialogue where pros and cons of the INNOTRACK solutions were discussed. The meeting gave a good input as to how implementation can be supported.

Meeting with Prorail

On the 31st of September, an INNOTRACK meeting was arranged at Prorail in Utrecht. 15 persons participated. The meeting was quite informal already from the beginning and we had an open dialogue. The meeting also gave a good input to how implementation can be enhanced. More activities for 2010 were proposed by Prorail.

Meeting with DB

On the 6th of October, an INNOTRACK meeting was arranged at DB in Frankfurt. 6 persons participated. The meeting was very informal. The meeting gave a good input as to how implementation can be enhanced. After the meeting a list of proposed activities was handed over from DB. Also areas where international cooperation should be beneficial were defined.

Meeting with RHK

On the 5th of November, an INNOTRACK meeting was arranged at RHK in Helsinki. 32 persons participated from different organisations. The meeting was a seminar where the participants had the opportunity to put questions. After the meeting a list of proposed activities was sent to INNOTRACK.

Meeting with Banverket

On the 18/11 and the 19/11, a two day training and planning meeting was arranged. At the meeting 25 persons from BV participated. On the first day, information was given about the project and also proposals for activities to implement the result form INNOTRACK 2010 and 2011. A dedicated budget has already been assigned for this purpose. Also, areas where international cooperation is beneficial were discussed. The meeting also resulted in a draft implementation plan. This plan will be justified and be a base for activities 2010 and 2011.

Meeting with ADIF

On the 3rd of December, an INNOTRACK meeting was held with ADIF in Madrid. 11 persons participated at the meeting. Results, mainly from parts of INNOTRACK where ADIF had not been directly involved, were presented and discussed. Implementation, in particular in areas where international cooperation is beneficial, was discussed.

More meetings in the pipeline

Similar meetings with several other IMs have been discussed. The IMs currently addressed are SZDC, SNCF, RFI, Banedanmark and Infrabel. There are also discussions and advanced plans to extend the “Eriksgata” to include also the railway industry, se section 3.3.

3.3 Stakeholders of the railway industry

3.3.1 Top management in industry

This group will be addressed via the top management summary report (the same documents intended for the top management among IMs), which is a summary of the Concluding Technical Report (CTR).

The publications will be delivered to the top management directly via the UNIFE high-level committees (UNIRAILINFRA – UNIFE's strategic/business infrastructure committee, Strategy committee, Presiding Board) and will be available at UNIFE's offices and at association events held throughout the year. Top management among contractors of infrastructure outside of UNIFE will be addressed through the EFRTC at their committee meetings and General Meetings.

3.3.2 Supply industry

The media of dissemination to the supply industry will be the Concluding Technical Report (CTR), the top management summary report and guidelines, depending on the level – management or operational.

Rail and component suppliers will be addressed both within UNIFE committees and forums and via training workshops organised within the project.

3.3.3 Rail contractors

The media of dissemination to the contractors will be the Concluding Technical Report (CTR), the top management summary report and guidelines, depending on the level — management or operational.

Rail contractors will be addressed both within UNIFE committees and forums and via the EFRTC (European Federation of Rail Trackwork Contractors) through UNIFE's involvement in their committees and General Meetings. Further, contractors will be invited to attend training workshops where relevant.

EFRTC through their office in Paris has been very active in SP5 (WP5.1 is the result of their work) and the results of INNOTRACK have been promoted throughout the life of the project and will be beyond.

3.4 Organizations & regulatory bodies

3.4.1 UIC

Since UIC have led and managed INNOTRACK, continuous information has been given to different groups in UIC. Together with UNIFE, UIC also has the main responsibility for the dissemination of INNOTRACK.

UIC will also maintain the results of INNOTRACK.

UIC activities 2010

Five training courses to implement the result from INNOTRACK are proposed to take place in UIC under 2010.

- Subgrade improvements
- Recommendation on S&C
- Rail grades
- Minimum action rules and maintenance limits
- LCC calculations

In the “Eriksgata” more areas have been proposed. For all courses at least two railways are responsible. As an example, SNCF and BV are responsible for Subgrade improvements and so on.

The UIC-TEG will also have an important role in how the results are eventually implemented.

3.4.2 UNIFE

While the main dissemination target group is the railway community (Infrastructure Managers), there is a supply chain within the industries. Therefore Guidelines and the Concluding Technical Report will be of interest to the industries and will support the entry of their products and services into the market.

UNIFE continually briefs its strategic and technical committees on INNOTRACK progress. Further, it distributes material at its annual and joint research events throughout the year.

UNIFE is in close association with the national industry associations also a point of dissemination to the industries outside of the project.

INNOTRACK will be presented at the InnoTrans 2010 event in Berlin. It will be part of an infrastructure themed stand (within the proposed UNIFE research stand) along with the Urban Track project and other infrastructure-related projects. This will be a unique opportunity to showcase the results before all segments of the rail sector.

3.4.3 CEN

CEN is an important player in Europe to produce standards. They have a Technical Committee 256 for Railway Applications. INNOTRACK has been in contact with them at two occasions.

INNOTRACK was presented to the CEN/TC 265/SC1 in Helsinki the 2nd of April 2009. After the presentation an interesting discussion took place. The discussion was on what actions and obligations an EU-project like INNOTRACK has. This discussion ended with a promise from the Project Manager to meet the secretary of CEN/TC 265 Railway Applications Mr Udo Sonnenburg. A meeting was arranged in Kassel on the 17th of July 2009. On that meeting more detailed information exchange took place. This information exchange resulted in the conclusion that one or two meetings must take place in the beginning of 2010.

INNOTRACK has already supplied CEN with base material for the standardization of hollow sleepers. More material will be supplied. The identification of such suitable material is on-going.

3.4.4 CER and EIM

CER and EIM have taken over some parts in SP5 in a very positive way. See 3.2.4.

3.4.5 ERA

ERA is a somewhat closed organisation and contacts must be taken through selected organisations, namely UNIFE, CER and EIM. Since few organisations are represented, there is a risk that the modern and new knowledge and techniques that have been derived in INNOTRACK are unable to influence the new TSIs at the top level. However UNIFE, who maintains close contact with ERA through its networks of experts and representation from the industry in TSI Working Parties, is well placed to ensure the results from INNOTRACK are given attention and where possible influence the TSIs in a positive way. UNIFE is undertaking this task with cooperation from UIC and with support from its fellow represented associations EIM and CER.

UNIFE is undertaking a review of the Infrastructure CR TSI against the INNOTRACK products and methodologies. This is to ensure that the TSI does not preclude INNOTRACK innovations and that the target systems specified support the outputs of INNOTRACK.

3.4.6 ELGIP

ELGIP is European Large Geotechnical Institutes Platform. It is very difficult to reach the geotechnical experts in the railways since there in many railways are very few such experts. Therefore INNOTRACK has invited ELGRIP members to the seminar in Paris on the 15th of October 2009. This is one of the reasons why the seminar was a success.

4. Mediums of dissemination

The following mediums of dissemination are employed, each described later in more detail.

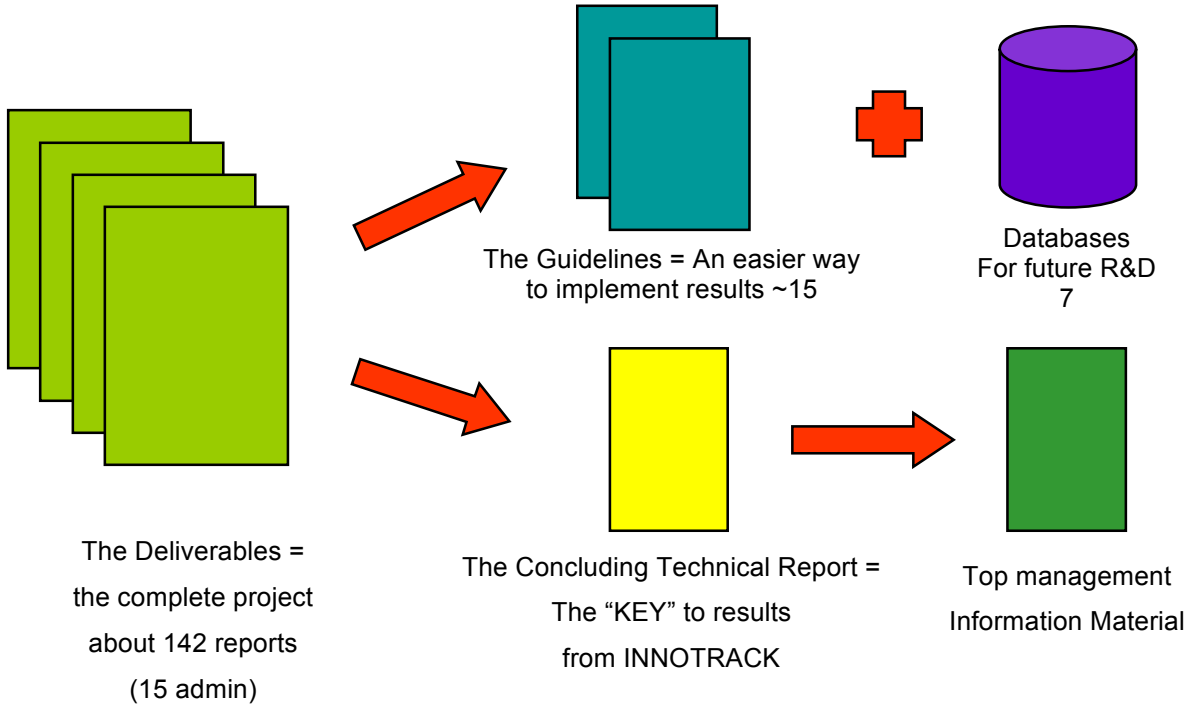


Figure 3 How the different documents in INNOTRACK are linked together.

4.1 Deliverables

INNOTRACK will generate around 142 Deliverable reports. 15 of these are administrative. The rest are technical and present the results of INNOTRACK.

The deliverables are aimed at reflecting what is promised in the Description of Work being thorough, stringent and complete. They are therefore delivered to the European Commission in order to fulfil the contract.

The target groups for dissemination of deliverables are:

- EC to fulfil commitment in contract
- Industry
- Infrastructure mangers – technical high level
- Railway engineers – track
- Railway engineers – substructure
- IM staff working with logistics
- Contractors in the area
- Universities and R&D institutes in the area

4.2 Guidelines

INNOTRACK is also committed to implementation. To this end, guidelines are needed. These focus on practical implementation and application, clarity and straightforwardness.

Guidelines are deliverables that give clear recommendations. The idea has been to identify future guidelines as early as possible in the process so that they are shaped as guidelines from the beginning.

The number of guidelines in INNOTRACK will be 15. The target group for dissemination of guidelines are:

- Industry
- Contractors in the area
- Infrastructure manger – technical high level
- Railway engineers – track
- Railway engineers – substructure
- Railway staff
- Regulatory bodies

There are different types of guidelines, as exemplified with the following three guidelines:

D2.2.8 *Guideline for subgrade reinforcement with columns* is an overview of technical applications and requirements. It is designed like a checklist that can be adopted when you use vertical and/or inclined columns.

D3.2.2 *Functional requirements for hollow sleepers for UIC60 and similar type switches*. The guideline is a specification for geometry, functional requirements, requirements in terms of availability and reliability. This deliverable is already handed over to CEN.

D4.2.6 *Recommendations of, and scientific basis for minimum action rules and maintenance limits*. In this 126 pages thick guideline a “minimum action” is the least action needed to ensure that the track remains safe, reliable and operational. The guideline proposes minimum actions in different areas and supports the recommendations with technical background material and a scientific basis.

Many guidelines will be translated into German and French.

4.3 Databases

In INNOTRACK there are 7 databases:

- Actual vehicles [to be maintained]
- Generic vehicles [to be maintained]
- Track recording car data [not to be maintained]
- Geotechnical investigations [to be maintained]
- Site monitoring data [to be maintained]
- On-line survey of logistics, track problems etc [not to be maintained]
- The KMS [to be “cleaned” and maintained]

In the first step the databases has been gone through and potential users identified. Today it is decided that UIC will maintain five of databases as indicated in the list above. These five are those that are of relevance for future studies.

4.4 Concluding Technical Report

INNOTRACK is committed to dissemination. The CTR is part of this by providing a compact overview of INNOTRACK results. It is not really a part of the work outlined in the DoW but rather a help to implement the result.

The CTR is the “key” to reach the INNOTRACK result. It summarises the work and results that have been presented in the close to 14 000 pages of the INNOTRACK deliverables. Thus, the information is not on a level of detail to be used for implementation. Rather, the CTR gives an overview and references to where more information is available.

The contents of the CTR:

1. Summary including Top Management Report
2. INNOTRACK – why an how
3. Cost drivers and how they are addressed in INNOTRACK
4. Track support and superstructure
5. Rails and welding
6. Switches & crossings
7. Improvements in logistics and IM–contractor relationships
8. Technical & economical assessment
9. Overall cost reduction and best practice
10. Dissemination and implementation of results
11. Concluding remarks

The appendices to the CTR

1. List of partners
2. List of deliverables
3. Databases
4. Guidelines
5. Publications and presentations
6. Implementable result

The CTR will be a book of about 250-300 pages. A lot of efforts will be put into layout and printing in order to make it a good conclusion of the project.

4.5 Top management report for IMs

The major content of the top management report comes from the summary in chapter 1 of the CTR. It is therefore especially important that this section is professionally compiled and of high quality.

4.6 Top management report for the industry

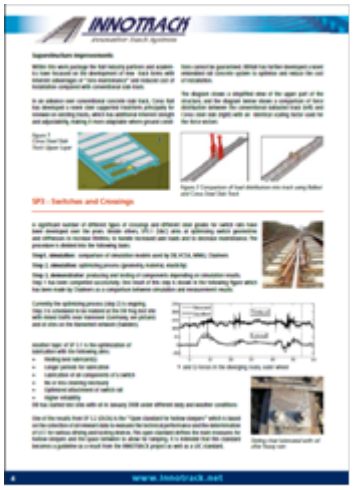
The major content of the top management report comes from the summary in chapter 1 of the CTR.

4.7 Flyers – Newsletters

In addition to the running project flyer (produced in September 2008) and the project mid-term newsletter, a Project Summary Flyer will be produced, based on the content of the CTR (Concluding Technical Report) and the top management report. It will be an attractive A4 size open (4-page) flyer with photos and diagrams focussed on the results by product/methodology rather than SP.

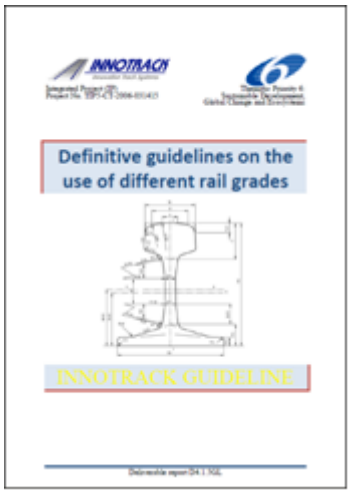
The purpose of the flyer will be to draw attention to the project and refer interested parties to the other (more comprehensive) documents: TMR, CTR, Guidelines and Deliverables.

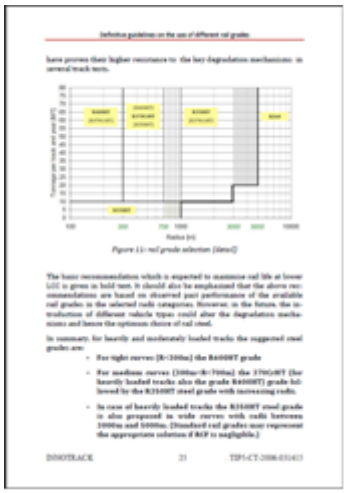
Examples of dissemination material / media



2008 project midterm newsletter

Mid-term flyer





Example of INNOTRACK Guideline: Definitive guidelines for the use of different rail grades

5. Dissemination and training activities

5.1 Training activities

There is a strong link between dissemination and training activities; both often employ the same media (such as the Concluding Technical Report – as a means of instruction and information; or dedicated visits to IMs – primarily for dissemination of results but also for an instructional purpose). Training activities (those that have taken place already and those that are planned) are addressed and described in deliverable D7.2.2 *Report on training needs and plan for training programmes*. This document should be referred to for a detailed account of training activities. As an example of training activities, one could take training in Banverket: On the 18/11 and the 19/11 a two day training and planning meeting was arranged. More information was given above.

An example of upcoming training activities is the courses planned for 2010: It is now decided that several courses will be arranged by the UIC. Each is intended to be a two-day activity, where the first day is a thorough presentation of the scientific background to the conclusions of INNOTRACK. The second day will be more of a workshop and a decision on how to proceed. Each course will be led by two to three railways. The result will be reported to the TEG. The planned courses (and responsble IMs are):

- Subgrade improvements (SNCF and BV)
- Recommendation on S&C (DB and BV)
- Rail grades (NR and SNCF)
- Minimum action rules and maintenance limits (BV, NR and Infrabel)
- LCC calculations (DB and NR)

The above courses can be slightly modified and new courses may be added.

5.2 Dissemination concept

A dissemination concept has been prepared for 2010. This summarises the different activities and events planned for the first year of the implementation phase following the project. Many of the activities are already in progress and some have taken place; however the majority of workshop dissemination and training events are still to take place or are to be repeated on different subjects and/or to different audiences.

The dissemination concept was developed in conjunction with the project Steering Committee which has given its full support for the implementation. The Steering Committee and Coordination Groups at a joint meeting agreed to continue their cooperation through an “INNOTRACK Implementation Group”, which will meet biannually to review the implementation of the INNOTRACK results, and dissemination and training activities (including the development of the dissemination concept).

The dissemination concept is presented in tabular form on the following pages.

INNOTRACK Dissemination Concept

Organizer	Activity	Place / time	Participants
UIC	INNOTRACK GENERAL ASSEMBLY AND WORKSHOP with Focus on Management and Cost (with SP4 presentation)	Paris, 19.01.2010	EC, UIC, UNIFE, Consortium partners
UIC / UNIFE	INNOTRACK PRESS CONFERENCE - official handing over of final report to EU - addresses by EU, UIC, UNIFE - press briefing - questions & answers - handing over of press files (multi-language)	Brussels, April	EC, UIC, UNIFE Selected partners (IM's and industry) Invitees: general & economic media, railway magazines
EC DG TREN, UIC, UNIFE, Consortium partners	Link to INNOTRACK website and/or own INNOTRACK Report on own homepage (with interactive banner)	February	Same as organizers
UIC	INNOTRACK DOCUMENTATION (print and electronic) - Final Report (full version) - Executive Summary: incl. importance of LCC/RAMS application strategies for sustainable competitiveness of the rail system - Guidelines and Leaflets on the specific deliverables - Practical Summary: Recommendations for implementation - Outlook: Future LCC/RAMS development topics - Video Languages (English, German, French, Spanish, Italian, others? – to be defined)	February to June 2010	UIC, UNIFE Addresses: EC, ERA, Associations, All European Railways/IM's: - Top Managements - Technical - Financial - Procurement - Track Engineers
UIC	(LIMITED) ACCESS TO - UIC DATA BASES (to be defined) - LCC Software Application Tool (to be defined)	Establishment : 1st quarter 2010	Authorized users (to be defined)

UIC / UNIFE	JOINT INNOTRACK LCC DISSEMINATION / WORKING GROUPS with - CER - EIM - ERA - EFRTC - Relevant Standardisation Authorities	Establishment: 1st quarter 2010	Exact procedures to be defined
UIC / UNIFE / Leading consortium members (IM's and industry)	TRAINING COURSES - SP1 – SP6 - As already proposed by Björn	Paris, 2 days each, ongoing activity in 2010	Invitees: key technicians and LCC experts (multipliers in their organisations)
UIC / UNIFE / Leading consortium members (IM's and industry)	"ROAD SHOWS" (visit of all European IM's in their home countries) to - Present the relevant LCC/RAMS results for SP's individually - Discuss specific questions - Drive the application of innovative products & services on the basis of specific user benefit	"European Tour", ongoing activity	To be individually agreed upon
UIC / UNIFE / interested IM's and industry	PROMOTION of INNOTRACK RESULTS and LCC/RAMS PROCEDURES at - Trade shows - Conferences - In other own communication	Ongoing activity, special focus e.g. INNOTRANS Berlin	General business public
UIC / UNIFE	CONTINUING COOPERATION between SC Members (after official end of INNOTRACK only informal): - Receipt of progress reports - Advise and review regarding a.m. topics	Meetings from time to time	SC Members

6. Important presentation events

6.1 Kick Off meetings, General assembly's/Workshops and Seminars

On seven occasions, important Kick Off meetings, General Assembly's/Workshops or Seminars have been taken place. For all occasions, a wider audience has been invited. It has been an ambition from the project to have a wide dialogue not only with the participating organisations but also the whole railway society.

6.1.1 "Political" Kick Off on the 21st of September 2006 in Berlin

The kick off meeting was separated into two meetings. One was held in Berlin in connection to InnoTrans. This meant that high-level staff from IMs and industry had an easy opportunity to participate. At the meeting there were about 60 persons attending. The meeting was held at DB headquarters, Potsdamer Platz 4 in Berlin on the 25 floor with a wonderful view over Berlin.

The message was to call attention to the fact that it is very important with R&D in the area of track and substructure since this is the dominating part of the railway's maintenance costs. Another important message was that INNOTRACK did not start from scratch and emphasised the importance of using existing knowledge.

All information material is on the website.

6.1.2 Technical Kick Off on the 5th and 6th of October 2006 in Paris

The technical kick of was held in Paris at the UIC headquarters and gathered about 85 persons. At the meeting, the message was to explain the project in detail and the importance of coordination. INNOTRACK is not a traditional technical project but a matrix project. If INNOTRACK should make success, coordination was crucial. At the meeting, nearly all participating organisations where present.

All information material is on the website.

6.1.3 General Assembly/Workshop on the 28th of November 2007 in Paris

This was an occasion to present the situation after one year. It was also a way to get feedback on the website and other administrative routines.

At the meeting it was decided that this combined form to have the General Assembly together with a workshop was a good way for the participating organisations to be informed about INNOTRACK in the future.

At the meeting about 80 persons participated. All information material is on the website.

6.1.4 General Assembly's/Workshops on the 25th of November 2008 in Brussels

This was an occasion to present the situation after two years. This was the first occasion to present operational results.

At the meeting, it was pointed out very clearly that now there was one year left and the importance to keep time schedules and to ensure good quality of the result.

At the meeting, about 75 persons participated. All information material is on the website.

6.1.5 Technical Seminar focused on rails and S&C on the 14th of October 2009 in Brussels

The seminar was more technical and focused on rails and S&C. It was arranged in connection with the UIC-TEG meeting on the 13th of October. The seminar gathered about 70 persons from 17 different IMs, 10 different industries, 2 universities and 2 organisations.

All information material is on the website.

6.1.6 Technical seminar focused on substructure on the 15th of October 2009 in Paris

The seminar was more technical and focused on substructure. It was arranged in Paris, mainly since SNCF have been leading this subproject. The seminar gathered about 70 persons from 15 different IMs, 6 different industries, 10 different R&D institutes/universities and 3 organisations.

All information material is on the website.

6.1.7 19th of January 2010 GA/workshop – focused on horizontal parts like asset management, economical impact, cost drivers, LCC, RAMS and logistics

The General Assembly and Workshop was focused on the horizontal parts like asset management, economical impart, cost drivers, LCC, RAMS and logistics. It also started with a small part of General Assembly part with administrative information.

It was arranged in Paris. The seminar gathered about 70 persons from 13 different IMs, 6 different industries, 6 different R&D institutes/universities and 5 organisations.

All information material is on the website.

6.2 Important conferences and publications

INNOTRACK has been presented at the following important conferences:

WCRR 2006 in Montreal: INNOTRACK ideas were presented in a poster session.

CM2006 in Queensland: INNOTRACK ideas and specific items within INNOTRACK were presented.

IHHA 2007 in Kiruna: The ideas and special presentations of INNOTRACK were presented.

WCRR 2008 in Seoul: INNOTRACK was well described and presented. At this conference three other papers from INNOTRACK was presented.

INNOTRANS 2008 in Berlin: INNOTRACK was separately presented with a special newsletter.

IHHA 2009 in Shanghai: There was an overall presentation and several other papers from INNOTRACK were presented. The overall presentation on INNOTRACK has been invited to a special issue of the Journal of Rail and Rapid Transit.

CM2009 in Florence: An overview of INNOTRACK and at last eight papers from INNOTRACK were presented. The reason for the vague figure is that at this stage the INNOTRACK results had been merged into the scientific body. There were thus papers presented that took off from INNOTRACK results and/or contained parts of INNOTRACK research. We believe this is very positive and hope for the same trend in the field of technical implementation.

INNOTRACK results have further been presented in a vast number of scientific papers. In particular it should be mentioned that there will be a special issue of the Journal of Rail and Rapid Transit devoted to INNOTRACK (planned as issue no 4, 2010). Further, INNOTRACK is presented in publications

targeted more towards the rail sector. As an example, an article on INNOTRACK in the January 2010 issue of Railway Gazette.

6.3 Infrastructure Managers events

UIC Infrastructure Forum is an event that is held twice a year. At all meetings since and including 2006 INNOTRACK has been presented.

6.4 Industry events

INNOTRACK was separately presented at InnoTrans 2008 in Berlin at the joint UNIFE-UIC research stand. The event coincided with the release of a project mid-term newsletter and renewed flyer.

INNOTRACK will be presented at the InnoTrans 2010 event in Berlin. It will be part of an infrastructure themed stand (within the proposed UNIFE research stand) along with the Urban Track project and other infrastructure-related projects.

7. Lessons learnt

What has been a success and what has not been working well?

A three year project is far too short if you have an ambition to really implement results within the project. There are two important factors that influence this. The first is that the IMs are (and shall be) slimmed organisations. The second is that regulations the IMs don't have influence over can result in very slow processes. One such example is the acceptance of track tests.

In INNOTRACK care has been taken of this in a good way but it is impossible to change this as fast as needed.

Another important lesson learnt is that even excellent solutions need several years to go from idea to product. Add to this that very few ideas are completely developed in all details when the development starts.

INNOTRACK has been a major leverage in implementation mainly due to the fact that most solutions have been developed in cooperation between the industry, IMs and universities/institutes. This creates further trust in the solutions and recommendations.

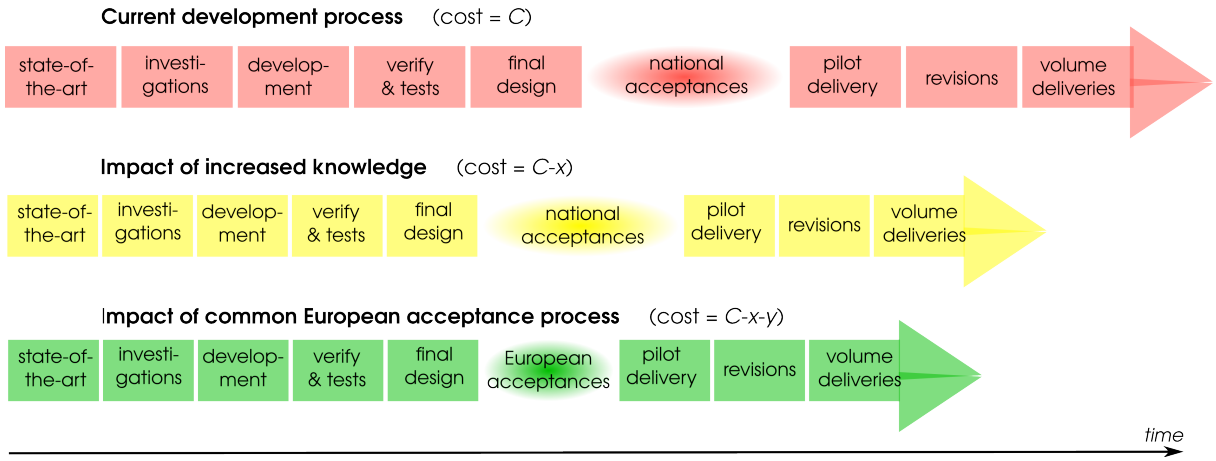


Figure 4 *The ambition in INNOTRACK. Adopted from a picture shown at the kick-off meeting in Paris.*

8. Conclusions

The implementation activities in INNOTRACK have been a big step forward. A lot of implementation/dissemination/training actions have been effectuated. Some of these are innovative and have been possible e.g. through the aid of UIC groups. The existing networks (e.g. UIC, UNIFE and the scientific network) have been an enormous help to ensure the quality and implementability of the outcome of result of INNOTRACK.

By having bodies like UIC and UNIFE involved, it has been possible to have implementation and dissemination activities targeted not only towards the railways participating in INNOTRACK, but also towards other members. Further, since the members in UIC and UNIFE represent nearly all European countries, more or less all railways have had the chance to get information from INNOTRACK. Many railways outside of the INNOTRACK consortium have taken this opportunity.

In INNOTRACK the planning of implementation has been carried out in advance. This means that the current operational implementation of results is a natural next step. Resources have been allocated in different IMs and in the industry.

The crucial factor is now to allocate competent staff in the railways.