

1. WHICH OF THE PROJECTS YOU HAVE BEEN INVOLVED IN DO YOU THINK HAD A STRONG MARKET UPTAKE? WHY?

- FP5 INTERFACE: the project solution helped CD (Czech Railway) in cross-border data exchange with OBB. The solution was used at all rail cross-border connection in the Czech Republic. Strong market uptake - IT company and railway operator. - Marusicova (ACRI)
- RailCom: start of harmonisation process within EU.
- SILENCE (FPG): technical solutions to decrease the noise are feasible.
- Probably the key factor has been putting together a consortium that involved the whole supply chain, including the end user, eg ALJOIN. - Davenport (TWI)
- TRANSLO: it determined transport ened/policy and produced a transport research gender to address the real needs. - Robinson (NEWRAIL)
- ROSIN: because it was a demonstration project based on a pre-standard (TCN) to show its feasibility. All competitors were interested in showing the stakeholder the benefit at using the standard. No IPR issues. No competition issues. - Goikoetxea (CAF)
- Virtual test track with MMU/urgent need for track model to use vehicle dynamics packages. (John Amooore)
- Internal Dupont project/project was market driver, joing new technology. Maier (DUPONT)
- Railcom, Modcom, Integrail → software/communication standard based. Built around emerging standardisation need in the “new technology” field.
- Sustainable bridges/ green train programme → implementation is emerging.
- None unfortunately despite 20 years of effort to introduce cargospeed. Brown
- System to help the traffic operators in public transport (tram, metro and buses). Hatat (INRETS - ESTAS)

- Regional Development Agency funded project in UK - developed a new rail study in 18 months (unfortunately taking longer to put it in track). Why - addresses a key rail life issue. - Jayswal (CORUS)
- SAFETRAM, TRAINCOL, SAFETRAM, EURPAC. Good consortium, objectives well defined, problems well identified.

2. WHAT ARE THE LESSONS LEARNT FROM THE PROJECTS YOU TOOK PART IN THAT YOU THINK ARE RELEVANT TO ENSURE MARKET UPTAKE?

- Industry interest/clearly identified end goals/requirements for investment to implement results must be low.
- Strong need/clear benefits/easy implementation.
- The methods used to disseminate and share information are important. Publishing of report and putting it on a website somewhere is not enough.
- Project which end up with a price reduction on the product.
- Need to secure and foster end user involvement throughout the project.
- Champions/forward thinking eg. business case looking at implementation, strategy for market uptake. - Moisiso (RSSB)
- You need industry commitment because they (industry) and the stakeholders that will share knowledge, implementation etc. in products, services...
- Close collaboration between supplier (incl. Universities) and rail. - Jayswal (CORUS)
- Necessity to include the European Railway Regulations in the work.
- Industry stakeholders are honest about their expectations from the project and do not have any hidden agendas to bring the results.
- Ensure those who will be doing the “uptaking” are involved in the project or have bought into it (i.e. have given some form of approval of it) from the outset.
- Really important: involvement of final user. Companies with a real need and with huge interest in the development of the research. Clear intellectual property agreements.
- Have representative stakeholder/get the agreement of the stakeholder on the result/agreed on quantitative objectives: e.g. decrease the severity of accident by 50% + improve the reliability of equipment by 30%.
- No competition issues, no IPR issues by focusing on either: A. isolated WP led by a single industrial partner (as example Railenergy); B. definition of standards but starting from new work (as ModTrain). - Goikoetxea (CAF)
- FP5 - FACT: the project help to cover Czech network insight the European ;ain railway network. - Marusicova (ACRI)
- It doesn't work because they need the industrial transports. - Hayat (INRETS - ESTAS)
- Build smart but small teams of experts for different parts of the project, have one person being responsible. - Maier (DUPONT)
- Crucial to have an end-user to push the project to market. Sometimes political support is essential. - Robinson (NEWRAIL)
- Balance and well represented consortium. Good structure and clear deliverables. Strong leadership and champion.
- Too often vested interests negate innovation. Terminal operators so heavily invested in lo-lo container handling equipment they see ro-ro system cargospeed as jeopardising their investments - Brown

3. DO YOU HAVE ANY GENERAL RECOMMENDATION FOR THE FUTURE OF THE WORK OF THE EVALUATION OF RAIL RESEARCH PROJECTS CARRIED OUT BY THE ERRAC ROADMAPS WP06?

- Define an objective. This is missing from some of the UK roadmaps. Without an objective it is hard to know how to get there.
- When carrying out the gap analysis, take note of whether other industry sectors have already partly provided solutions.
- To ask workshop member to propose what projects they would recommend for evaluation - Marusicova (ACRI)
- A matrix or road-map of linked projects may be useful - Robinson (NEWRAIL)
- Examine how projects map onto a roadmap/Is there clustering around key topics? (John Amooore)
- To analyse the technical content and determine the timeframe (theoretically) to be uptaken by the market: short-term, mid-term, long-term. - Goikoetxea (CAF)
- It should not be assessed whether there was a market uptake; but for each case (especially for those which failed) individual reasons for success/failure should be evaluated. - Bauer (Railistics)
- Help SME to carry out the R&D and Innovation Programme.
- To promote a common grid of analysis for ERRAC Roadmap results concerning the distance between research results and the market, considering the development if needed.
- Are any technical or standardisation networks created by the project which endure after the end of its work/budget?
- Have a broader scope of team members, not only concentrate on rail experts, profit from a larger knowledge. - Maier (DUPONT)
- Individual discussion with concerned railway actors/compare the differences of results between EU Countries; World.
- Assess the financial or safety impact in an objective manner. - Jayswal (CORUS)
- It needs the cost benefit studies. - Hayat (INRETS - ESTAS)
- Have more examples of national evaluations (like UK) and make comparative analysis between the ERRAC results (W06) and national findings.
- To express more the result in a quantitative way.
- Devote efforts to develop a clear picture of the different roadmaps with the identification of the different research phases: concepts, new methods; tools, development; feasibility, Product development; Market analysis; Examples: light wash materials - design aspects, production quality, safety, maintenance.
- Evaluation of projects' needs to identify "Best Practice" and then ensure (if project of EU economic benefit) The EU and Governmental fund development to introduction level - Brown

4. ARE THERE IN YOUR OPINION ANY OTHER BARRIERS FOR R&D PROJECT TO REACH MARKET UPTAKE? WHICH?

- No follow-up of practical implementation/less benefits.
- Industry partners would offer more small scale “near-to-market” projects if their IPR rights were better defined and understood.
- E.C. R&D projects must identify best practice (see answer to 3) - Brown
- Economic constraints, keep it as it was “mentality”/listen to VOC (voce of the customer) - Maier (DUPONT)
- Barriers: no clear route to introducing innovation in most mainline railways; easier to do it in tramways. - Jayswal (CORUS)
- Differing national: laws, rules, regulations, homologations, restrictions, etc.
- Competition/IPR/lack of dissemination/lack of stakeholders/lack of funding after the end of the project/lack of internal (at company level) dissemination. - Goikoetxea (CAF)
- Barriers: risk averse.
- Researches in general aren’t deeply **(convinced?)** in their research. The project for them in general are only to get money to their firms. - Hayat (INRETS - ESTAS)
- Barrier: to focus GLOBAL not only LOCAL. Rail activity is a world wide activity.
- Demonstration: prototypes appear to be “unwelcome” in the EU projects due to pre-competitive nature.
- Issues regarding getting ownership at an early stage.
- Sometimes the pre-competitive R&D still requires more funding than is available to create a commercial product.
- Commercial interests of the participants.
- Barriers due to **oy** Fear of importing risk by do nothing option may seem like safe option of structure of IMs & RUs does not encourage entrepreneurs.
- Not to have the right consortium /lack of industrial strategy for prior project phase.

5. WHICH ONE OF THE LESSONS LEARNT PRESENTED SEEMS TO YOU MOST RELEVANT? WHY?

- A business case is vital to make sure that the “customer” is in the focus which finally leads to market uptake. - Bauer (Railistics)
- UK experience: a good case for us. - Marusicova (ACRI)
- The need to involve the final users. It was very interesting the comparative ERRAC-UK done.
- Develop business case/involve right stakeholders/agree on communication strategy.
- Stakeholders - Nothing works without a clear route to market. Mark
- Solve a problem! and involve the problem owners.
- Ensure involvement of the right stakeholders because a lot of consultants/companies/universities “forget” when preparing proposals that “end-users” and “problem-owners” have to be happy to use the results and that you cannot “force” anybody to accept results if not having had the chance to influence beforehand.
- Define scope, build teams of experts. Maier (DUPONT)
- Business cases as an essential financing tool/post-project review and work - Moisis (RSSB)
- To check first whether our project is already made by some other.
- Real “business” case study as a part of project - validation.
- Uptake must industry lead.
- Work on a strategically important issue.
- Take into account/ directed to the benefits of the railway.
- Need for technical or implementation “champion”/partner from DAY 1 of the project.
- Anticipation for the future. Only to help our children. - Hayat (INRETS - ESTAS)
- Review of past RTD projects to see what has relevance for the future of E.C. - Brown
- “Market uptake” is sometimes very reducing look more broadly to “impact”.

6. OTHERS

- Part of the funding embedded in the projects should be directed for post-project implementation. - Vaglio (TRENITALIA)
- ERRAC meeting general: keep an eye on safety! Emergency questions! Fire! Maier (DUPONT)
- Don't engage in (EU) funded research which you would not otherwise have done anyway!
- Scope of project is often (always!) determined by "boundary conditions" of EC (e.g. funding limit etc.). This usually limits the intended scope & outcome (e.g. if too little money for demonstrations).
- Policy of funding to promote R&D and Innovation.
- Standards: what is the right level of standards for them to be cost reducing and not cost increasing?
- I have the feeling that a number of applicants became very sophisticated in writing good applications, but not in actually managing the project afterwards. - Bauer (Railistics)
- EC should fund demonstrations more heavily and actively paying for resources for the infrastructure managers at least. - Jayswal (CORUS)
- Research = risk. Some projects however well aligned with strategy, business cases, focused, right patterns will in the end not deliver results that can be measured on a commercial and slick. How or what is the acceptable hit rate from an ERRAC perspective?
- Projects are not necessarily industry lead as it was mentioned. In some cases or in some parts of projects it would be desirable.
- Would it be a good idea to review how market uptake results produced in the past to see if the timing now for the implementation is right? If yes then how to organize a practical point? FP7 calls?