

Intelligent Energy  Europe



TRAINER

Energy Efficiency Days
Tours, France

Friday 25th September 2009

Peter Wilbers
SenterNovem
Agency of the Dutch Ministry of Economic Affairs

Coordinator



Contents

- Project
- Partners
- Components
- Behaviour
- Opposition
- Points of interest
- Monitoring
- Workshop
- Contact details
- TRAINER film

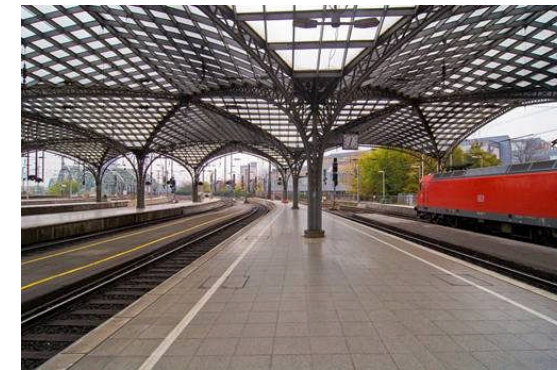




TRAINER

Intelligent Energy  Europe

Project (1)



- **TRAINER**
 - ❑ **TR**Aining programmes to **I**ncrease **E**nergy-efficiency by **R**ailways
- **EU project**
 - ❑ Intelligent Energy Europe
- **Running period**
 - ❑ 2nd Nov 2006-1st Nov 2009
- **Collaboration**
 - ❑ FP6 Railenergy (www.railenergy.org)
 - ❑ UIC
- www.iee-trainer.eu



Project (2)

Long Term Agreement (LTA)
Energy Management Systems (EMS)
Green entrepreneurship

- Behaviour (ecodriving)
- Technology (rolling stock and infrastructure)
- Organisation (planning and logistics)





Partners

- | | |
|--|-------------|
| • SenterNovem (coordinator) | Netherlands |
| • Centre for Renewable Energy Sources (CRES) | Greece |
| • Ente per le Nuove Tecnologie l'Energia e l'Ambiente (ENEA) | Italy |
| • Solvera Lynx | Slovenia |
| • VVCR Europe b.v. (VVCR) | Netherlands |
| ✓ Nederlandse Spoorwegen (NS)(3,000) | Netherlands |
| ✓ OSE Hellenic (600) | Greece |
| ✓ Slovenske Zeleznice (1,200) | Slovenia |
| ✓ Trenitalia (14,850) | Italy |
| ✓ Zeleznická Spoločnosť Cargo Slovakia (ZSSK CARGO)(1,800) | Slovakia |

Total 21,450 train drivers



Components (1)

1. Inventory of good practices
2. Demonstration tours on site
 - Oct 2007: NS + DB
 - March 2008: ÖBB, Slovenske Železnice + ZSSK Cargo
3. Development backbone
 - Basis for national training programmes
4. Development national training programmes
 - Netherlands, Slovenia, Slovakia, Greece + Italy



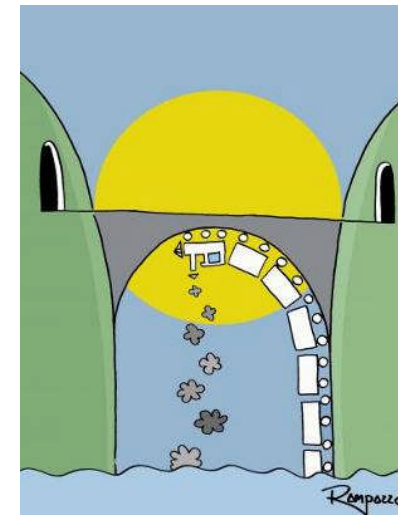


Components (2)

5. Implementation national training programmes

- 5-25% savings
- Subsequent presentations
 - Slovenske Železnice/
Mr Bojan Dremelj
 - ZSSK Cargo/
Mr Branislav Krigovsky
- TRAINER workshop

6. Evaluation and exchange of national experiences, knowledge and know-how





TRAINER

Intelligent Energy



Europe

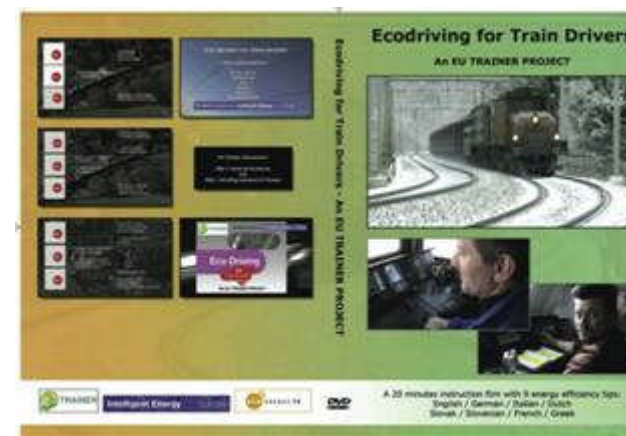
Components (3)

7. 'Universal' manual

- Train drivers, station and cleaning staff, management
- Energy efficient driving, train operation and maintenance
- DVD (including instruction film)
- Internet

8. Instruction film

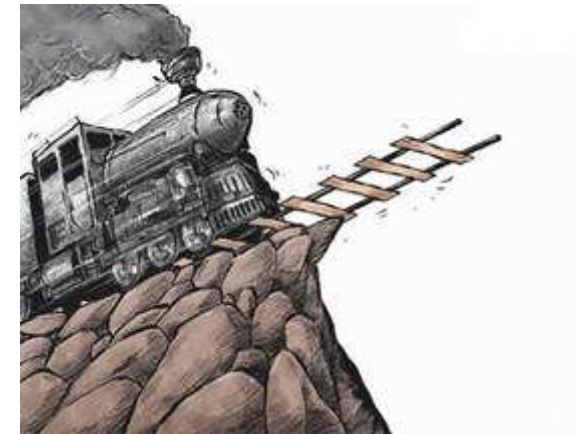
- Management + train drivers
- First performance at end of presentation
- DVD
- Internet





Behaviour

- Challenge
- Training programmes
 - Theory
 - Practice: on track, simulator
- Supporting tools
 - GEKKO
 - Routelint
 - Rail pocket (PDA)
 - UZI card
- Combination has added value





Opposition

- Punctuality and safety
- 'It's all known and done'
- 'Why should I care'
- Learner drivers vs. experienced drivers
- Train driver distraction
- 'Them'
 - Dispatchers, infrastructure managers
- The other 'them'
 - Trade unions
- Marginal energy saving potential
- Lack of support from managers
- Theory is not practice





Points of interest

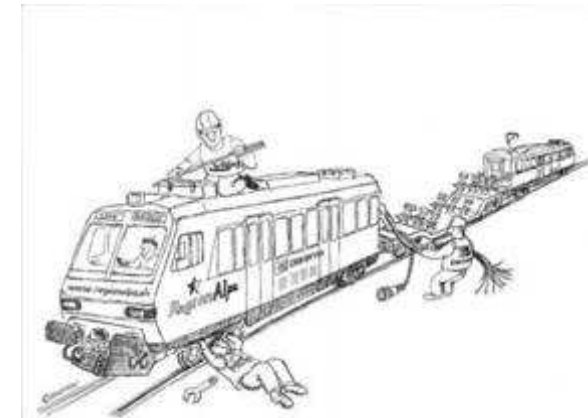
- National, cultural and ‘company cultural’ specifics
- Freight and passenger
 - Partly differing approaches and topics
- Tone of voice
 - Addressing the professional
- Deploying ‘comrades’, train-the-trainer
- Try out
 - Check on acceptance and interests
- Environmental interest not to be underestimated
- Varying training approaches
 - Workshops, lectures, in cabin, on simulator, etc.
- Internal and external communication





Monitoring

- Data from
 - Trained train drivers: 21,450
 - Other data partners
 - Devices trains
 - Good practices
 - UIC data
 - Hits and downloads instruction film + universal manual
- Between 0.5 and 1.0 Mton CO₂ emission reduction in 2012





Workshop

- Hereafter
- How to implement ecodriving in your railway company?
 - Didactics and points of interest/ Paul Offerman, VVCR
 - The why and how at NS/ Jan Hoogakker, NS
 - The experiences of TRAINER railway companies/ Luigi Contestabile, Trenitalia





TRAINER

Intelligent Energy  Europe

Contact details

Peter Wilbers
SenterNovem

T +31 30 239 35 01

F +31 30 231 64 91

E p.wilbers@senternovem.nl

www.ecodrive.org

www.treatise.eu.com

www.fleat-eu.org

www.senternovem.nl/ta

www.iee-trainer.eu



Enjoy the TRAINER film!