Technology Assessment Which relation with the high-speed train technological development?

strategic intelligent management tool

Ponto de situação de tese

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Diagram 2009-2012

Problem

High-speed trains: difficulty in market uptake of innovative solutions

Research auestions

High-speed train tech. development process: is TA applicable?

TA theoretical review: Dominant perspective? Sector evidence?

> Desk research Interview Rip

HS-Train sector review:

Supply-chain? Dominant actor? Relations? (Taxonomy? Tech. system? Development processes? Commercial processes? Organizational structure?)

> Desk Research Interviews (qualitative)

Results 2009-2012

Constructive Technology Assessment

Target

- Market Integration
- Admissibility by regulations
- Acceptance by

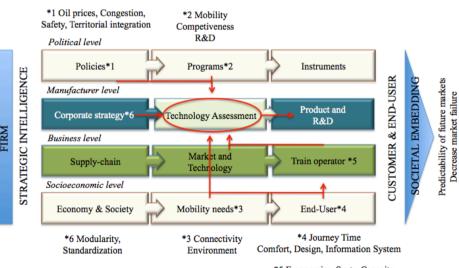
Product C. Process

- Strategic intelligence / Programs, Market & Technology, Mobility
- Organization intelligence scanning structures. external experts, lead users & suppliers, homebased int. TI, technology
- Inno. System / Universities
- Product System / non-core technologies
- Commercial trajectory local informers

Activities

- Collaborative research
- Scientific papers
- Conferences
- Workshops
- Tradeshows
- Training sessions
- Consultations in social networks

Strategic Intelligence



*5 Ergonomics, Seats, Capacity, Luggage space, Speed, Material, Weight, Drivers desk, Environment, Energy, Speed, Comfort, Operation Costs, Availability

Market uptake of new technologies

Reference Publication

S. Moretto, A. Moniz, A. Pastrana (2012) Constructive Technology Assessment in Railways: The case of the High-speed Train Industry. International Journal of Railway Technology

Diagram 2012-2014

High-speed train: market uptake of innovative solutions

Research questions

High-speed train tech. development process: TA model?

CTA theoretical review:
Technical paradigm? Sociotechnology paths?
Technology transitions? Product-use
combination?

HS-Train sector review:

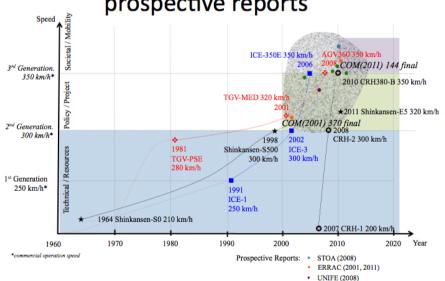
Mutual dependencies among actors? Construction
of socio-technical scenarios? Model?

Desk research
Co-writing with Robinson

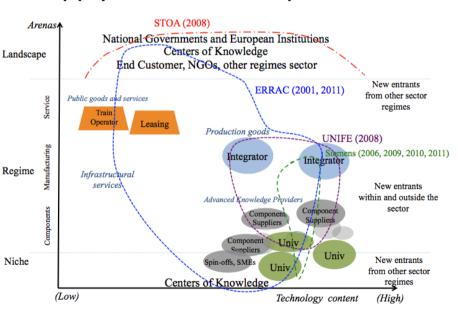
Desk Research Interviews (qualitative)

Results 2012-2014

Vehicle generations and prospective reports



Supply-chain and Prospective



Reference Publication

S. Moretto, D. Robinson, A. Moniz (2013) Study: Futures in high-speed trains technological transitions: a landscape, regime and niche analysis. Target Journal TF&SC

Siemens (2006, 2009, 2010, 2011)

Achievements

published scientific papers & articles 2009-2012

- S. Moretto, D. Robinson, A. Moniz (Study 2013) <u>Futures in high-speed trains technological</u> <u>transitions: a landscape, regime and niche analysis</u>. Target Journal TF&SC.
- S. M. Moretto, A. P. Palma, A. B. Moniz, (2012) "<u>Constructive Technology Assessment in the High-speed Train Industry: evidence from a case stud</u>y", in J. Pombo, (Editor), International Journal of Railways Technology Volume 1 Issue 2, Civil-Comp Press, Stirlingshire, UK, 2012.
- Paper with peer-review: S. M. Moretto, A. P. Palma, A. B. Moniz (2012) "<u>Technology</u> <u>Assessment in the High-Speed Train Manufacturing Industry: Evidence from a Case Study</u>", in J. Pombo, (Editor), "Proceedings of the First International Conference on Railway Technology: Research, Development and Maintenance", Civil-Comp Press, Stirlingshire, UK, Paper 167, 2012. doi:10.4203/ccp.98.167.
- Paper with peer-review: S. M. Moretto (2011) "<u>Societal Embedding in High-Speed Train</u>
 <u>Technology Development: dominant perspective from a case study</u>", Enterprise and Work Innovation Studies, 7, IET, pp. 57 73.
- Paper with peer-review: N. Boavida, S. M. Moretto (2011) "<u>Innovation Assessment of a Portuguese railway branch of a foreign multinational: A case study</u>", Proceedings of the XIV Congreso Latino-Iberoamericano de Gestión Tecnológica ALTEC 2011 (19-21 October 2011), Lima, Perú, Asociación Latino-Iberoamericana de Gestión Tecnológica, Pontificada Universidad Católica del Perú, Pages 339-587, 2011. ISBN 978-612-4057-48-9
- Paper with peer-review: N. Boavida, N. Cabrita, S. M. Moretto (2010) "<u>Análise do processo de participação pública no projecto da Alta Velocidade Ferroviária</u>". IET Working Papers Series, WPS06/2010:25. Universidade Nova de Lisboa, IET- Research Center on Enterprise and Work Innovation, Faculty of Science and Technology, 2010.

Thank you

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