

Enhancing the transfer of ITS innovations to the market



FINAL REPORT Attachments

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Contributors:	
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PROJECT FINAL REPORT

Grant Agreement number: 314263
Project acronym: T-TRANS
Project title: ENHANCING THE TRANSFER OF INTELLIGENT
TRANSPORTATION SYSTEM INNOVATIONS TO THE
MARKET
Funding Scheme: Support Action (SA)
Period covered: from 01/09/2012 to 30/11/2014

Name, title and organisation of the scientific representative of the project's coordinator:

Leal Xavier, Mr, Universitat Autònoma de Barcelona

Tel: +34-93-7287758, +34-653256834 (Mobile)

Fax: +34-93-7287753

E-mail: xavier.leal@uab.cat

Project website address: www.ttransnetwork.eu

Final publishable summary report

1.1 Project Logo



1.2 Project beneficiaries

The project is co-ordinated by UAB
Coordinator:

Mr. Xavier Leal
Universitat Autònoma de Barcelona
Telecommunications Department
Unit of Logistics and Aeronautics
C/ Emprius 2
08202 Sabadell
Spain
Tel: +34 93 7287758
Fax: +34 93 7287753
E-mail: Xavier.leal@uab.cat

LGI
Lagrange SARL
Mrs. Eva Boo

ATOS

ATOS Spain S.A.

Ms. Alicia García

KEMA

KEMA Nederland BV

Mr. Teun Ploeg

SERNAUTO

Asociación Española de fabricantes de equipos y componentes para la Automoción

Mrs. María Luisa Soria

Fraunhofer CML

Fraunhofer Center for Maritime Logistics and Services

Mrs. Susanne Kellberger

UNITS

Universita degli Studi di Trieste

Mr. Lorenzo Castelli

INTELSPACE

Intelspace Technologies Kainotomias AE

Mr. Isidoros Passas

TTI

Transport and Telecommunication Institute

Mrs. Irina Jackiva

1.3 Relevant figures, pictures and graphic materials

1.3.1 WP1 Management

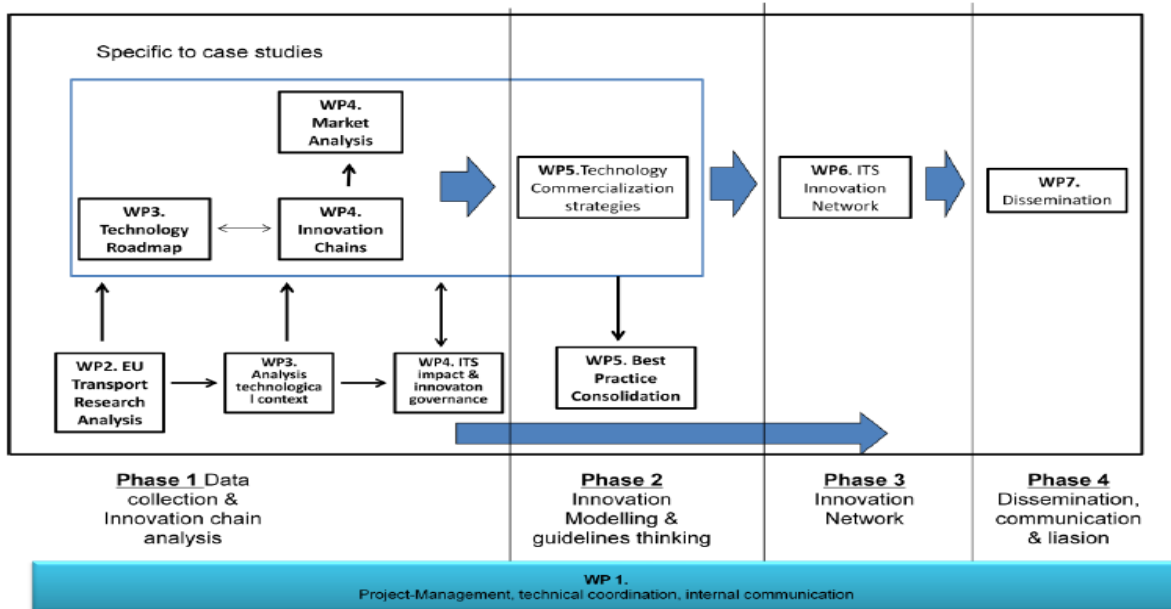


Figure 1: T-TRANS overall strategy of the work plan (From Annex I)



Picture 2: T-TRANS Kick off Meeting, Sabadell 27th of September 2012



Picture 2: T-TRANS progress and PMB meeting, Trieste 22nd January 2013



Picture 3: T-TRANS progress and PMB meeting, Paris 22nd July 2013



Picture 4: T-TRANS progress and PMB meeting, Thessaloniki 7th October 2013



Picture 5: T-TRANS progress and PMB meeting, Hamburg 6th May 2014



Picture 6: T-TRANS progress and PMB meeting, Riga 16th July 2014

1.3.2. WP3 Technology Mapping

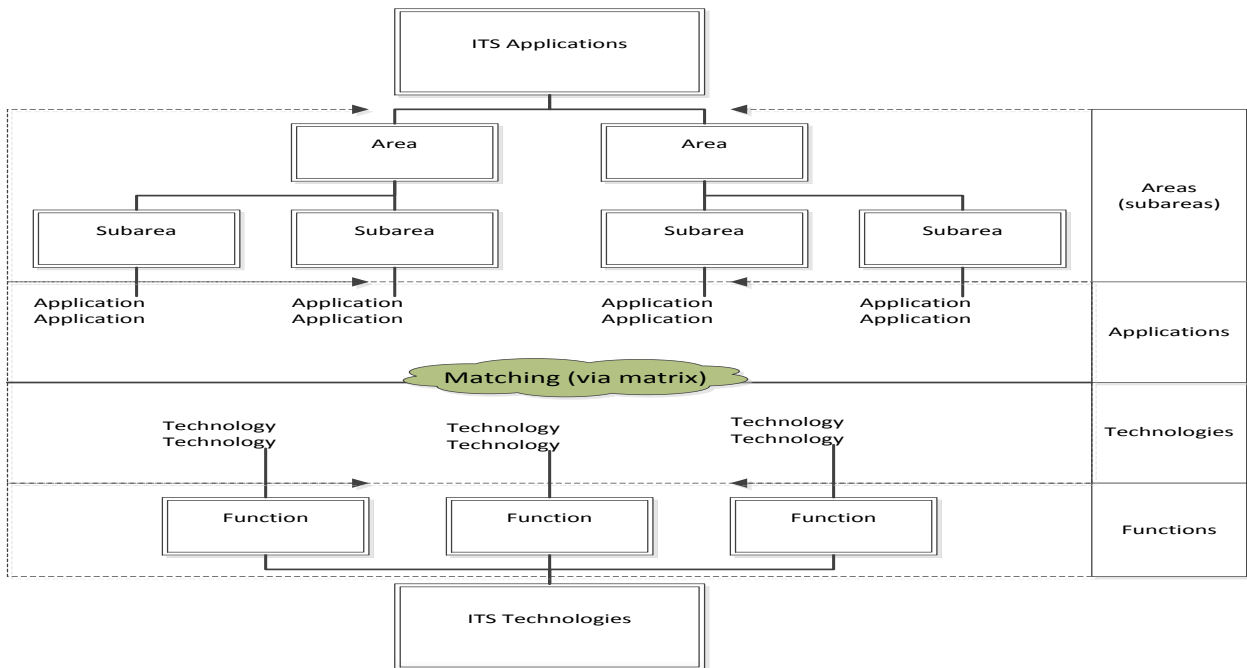


Figure 3: T-TRANS ITS Ontology scheme (from T-TRANS D3.1)

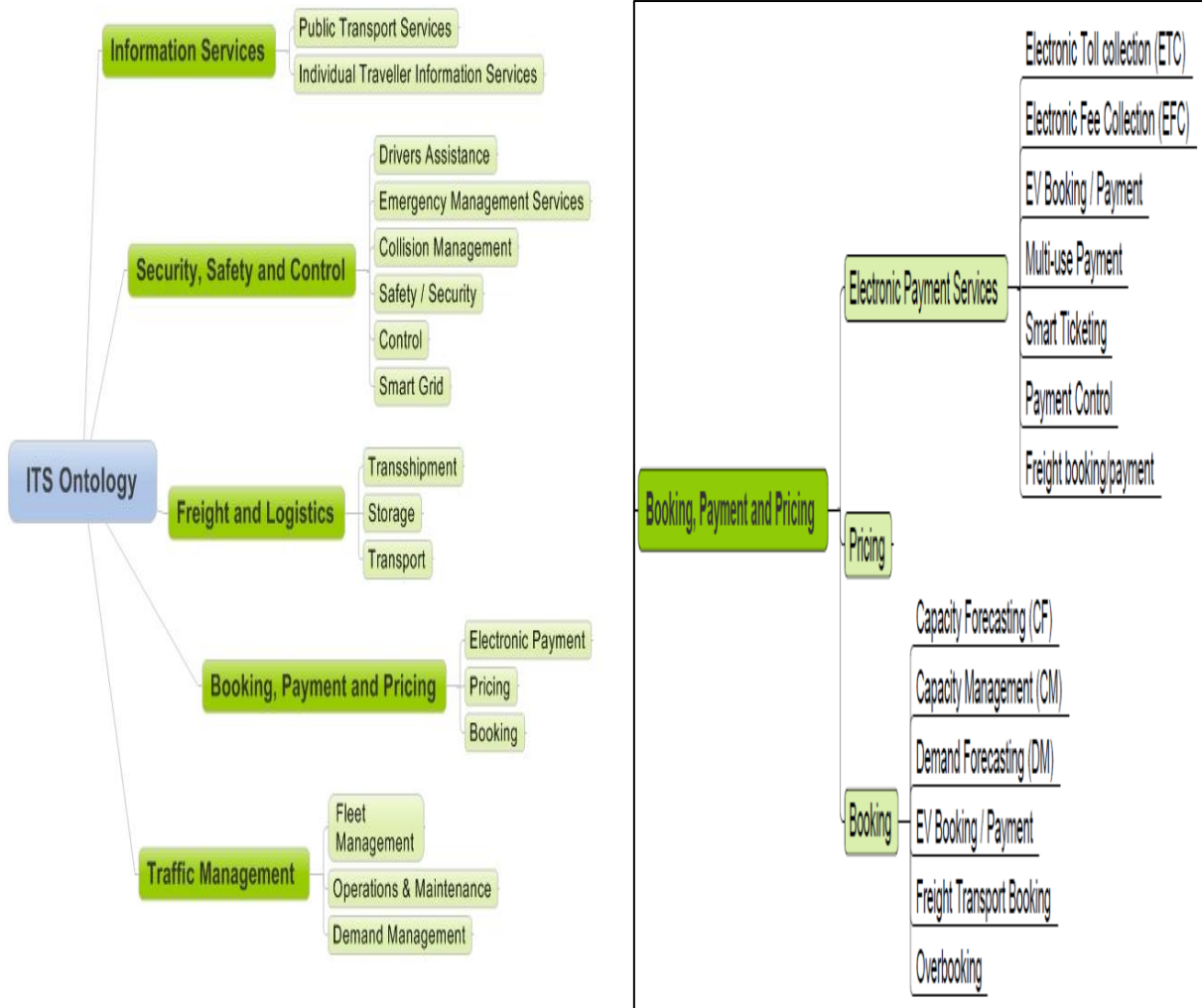


Figure 4: ITS Areas & ITS applications for "Booking, payment and pricing" (from T-TRANS D3.1)

No.	Main Function	Technologies	1	2	3	4
			Emerging	Adolescent	Early adoption	Mainstream
1	Communication technologies	Bluetooth				x
		Dedicated Short Range Communication		x		
		Ethernet II-class SAP		x		
		GSM/GPRS/EDGE (2G)				x
		UMTS/HSPA (3G)				x
		LTE (4G)			x	
		GSM-R Antenna			x	
		GSM-R Radio			x	
		HomePlug GreenPHY Technology		x		
		Infrared Data Transmission				x
		Line-side Electronic Unit (LEU)				x
		Open Charge Point Protocol (OCPP)			x	
		Radio Block Centre (RBC)			x	
		SECC Discovery Protocol (SDP)		x		
		SLAC Process			x	
		Specific Transmission Module (STM)		x		
		V2GTP			x	
Ultra Wide Band (UWB)			x			
Zigbee			x			
WiMax			x			
WLAN/WiFi				x		
2	Hardware infrastructure	CBI Computer			x	
		Computer Clusters for High Performance Computing (HPC)			x	
		On-Board Computer			x	
		Scanning Devices				x
		Smartphones and mobile computing devices				x
	Software infrastructure	Cloud Computing (SAAS, PAAS, IAAS, NAAS)				x
		Decision Support Systems (DSS)				x
		E-Commerce Platforms				x
		Electronic Booking System				x
		Electronic Data Interchange (EDI)				x
4	Algorithms	Revenue Management (RM)			x	
		Routing			x	
5	Positioning technologies	Balise				x
		Global Navigation Satellite Systems (GNSS, i.e.GPS, Galileo)				x
		Real time Locating Systems (RTLS)			x	
		Odometer pulse generator				x
		On-Board Antenna - Receive-and-Forward Unit				x
6	Sensors (monitoring and detecting)	Axle Counters				x
		Digital Video Camera				x
		End-of-Train Device		x		
		Inductive Loop			x	
		Temperature, acceleration, light, gyroscope, piezoelectric sensors				x
		Thermographic or Infrared Camera				x
7	Identification technologies	Track Circuits				x
		Charge Cards			x	
		Optical Character Recognition (OCR)			x	
		Mifare				x
		Near Field Communication (NFC)			x	
		Radio Frequency Identification (RFID)				x
		Barcodes				x
Biometrics				x		
8	Energy related technologies	Smart Cards				x
		Fast-Charger Plug			x	
		Type-1 Plug				x
		Type-2 Combo plug				x
		Type-2 Plug				x
		Energy Harvesting			x	

Figure 5: Technology readiness level of all case studies relevant ITS technologies (from T-TRANS D3.1)

		Market requirements					
		R1	R2	R3	R4	R5	R6
CS4		Accurate location of all trains	Real-time rescheduling tool	Simple control interface for the dispatchers	Continuous ATP/ATC system	Real-time com. between control centre and driver's desk	Simple real-time timetable interface on the driver's desk
Technological solutions	T1 - GNSS	2,2/1,0,4					
	T2 - GSM-R					2,2/2,0,3	
	T3 - ETCS Level 2				2,2/3,1,5		
	T4 - ETCS Level 3				3,3/5,5,2		
	T5 - Driver Assistance Systems						2,3/3,2,4
	T6 - Rescheduling Algorithms		3,2/2,5,5				
	T7 - Train Control Centres		2,3/4,0,3	2,3/4,0,3			

Figure 6: Case study 4 Gap Analysis table (from T-TRANS D3.2)

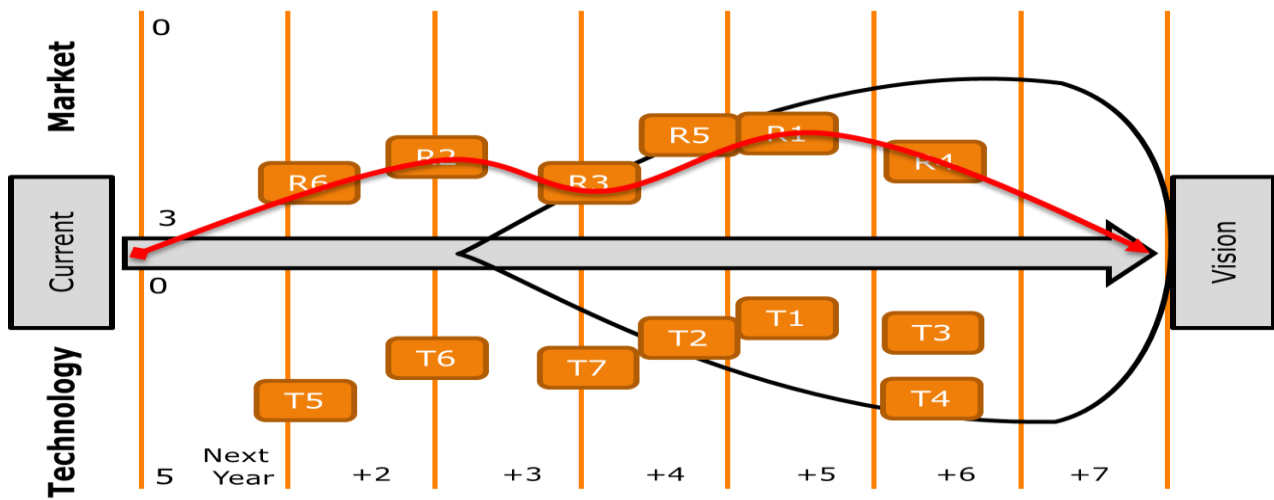
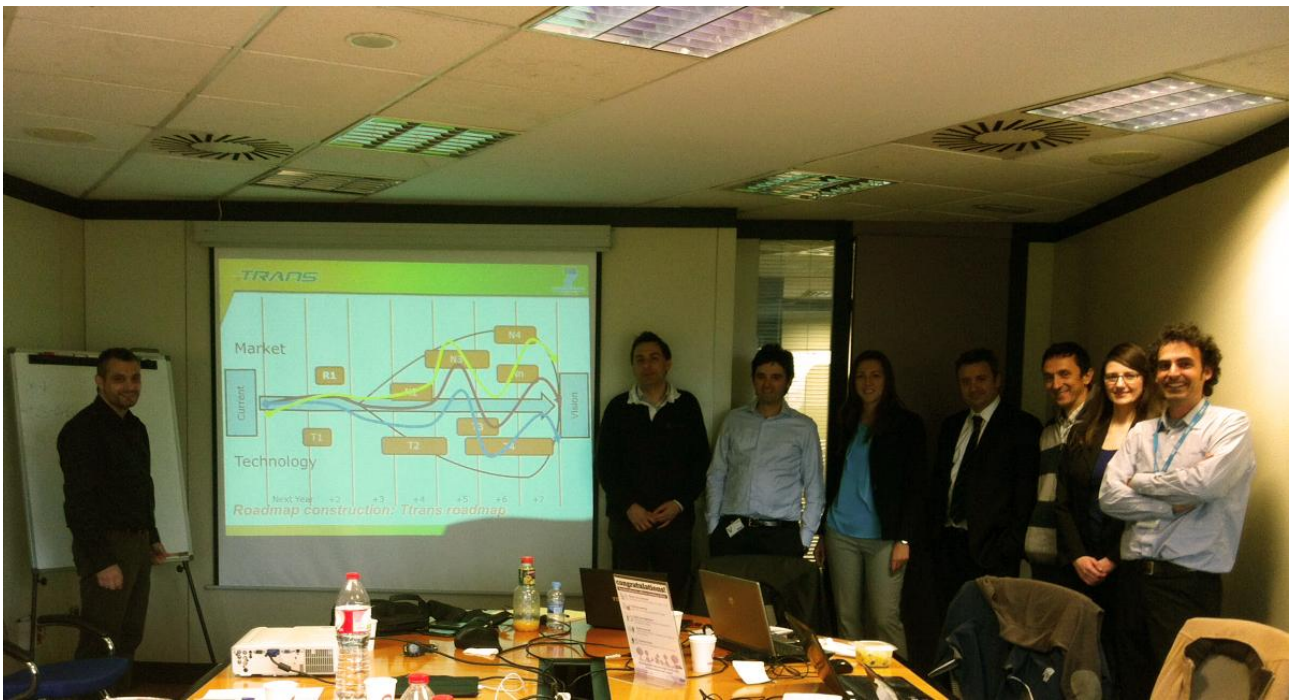


Figure 7: Case study 4 roadmap representation (from T-TRANS D3.2)



Picture 7: WP3 special working meeting, Barcelona 25th April 2013

1.3.4 WP4 Market roadmap

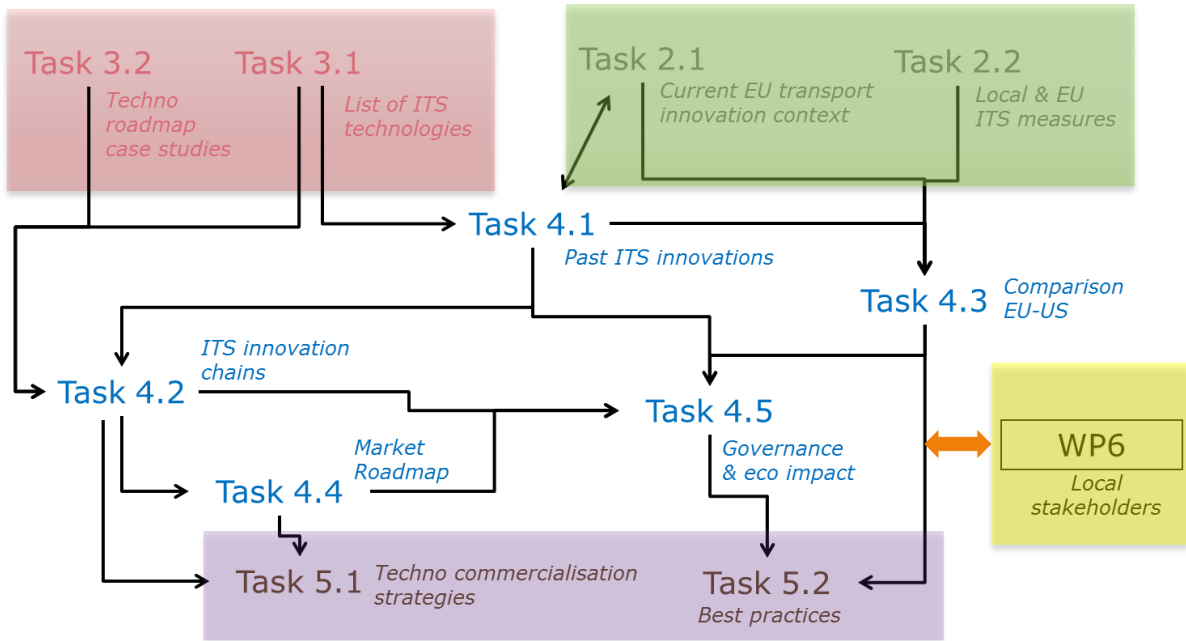


Figure 8: Interrelation between WP4 and other T-TRANS activities

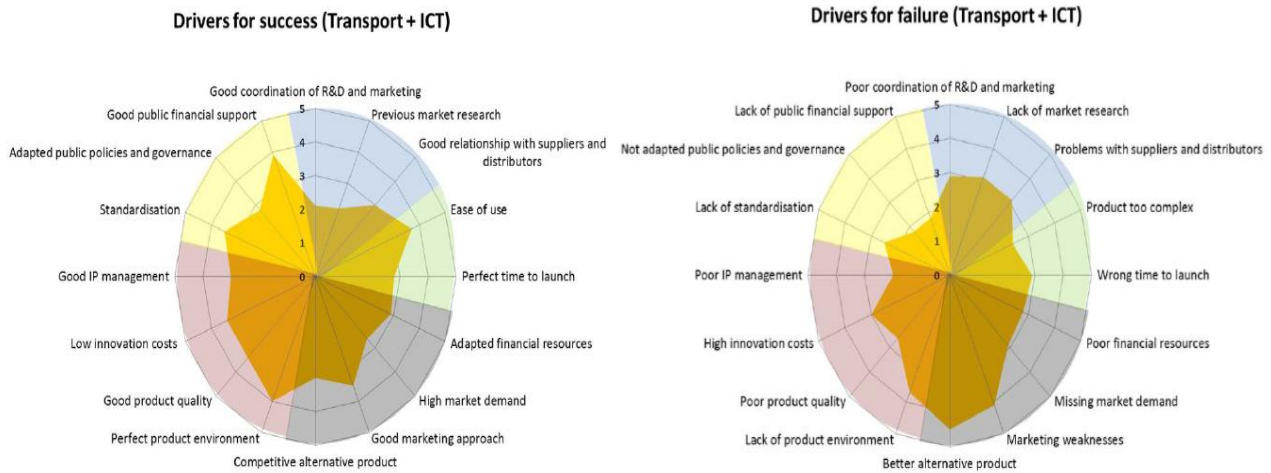


Figure 9: Drivers for success and failure (from T-TRANS D4.1)

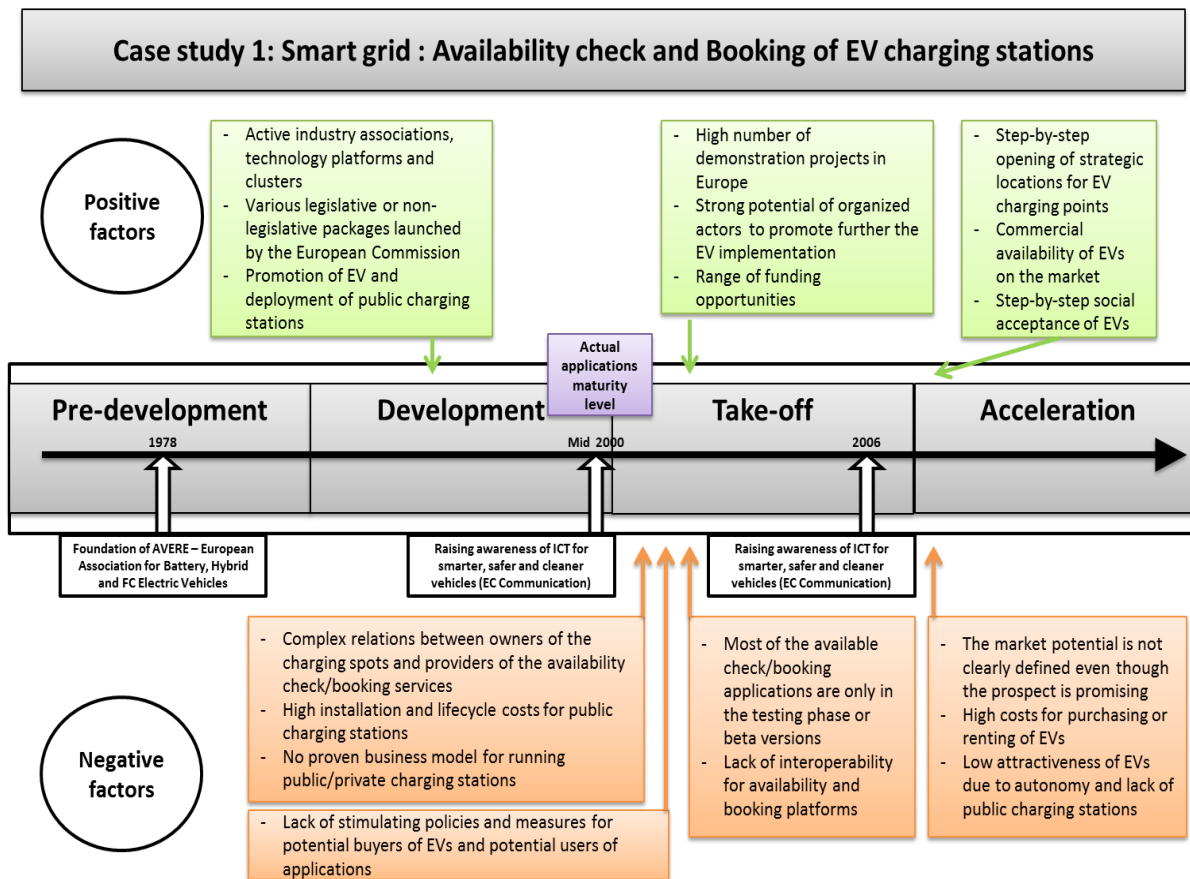


Figure 10: Case Study 1 Innovation Chain

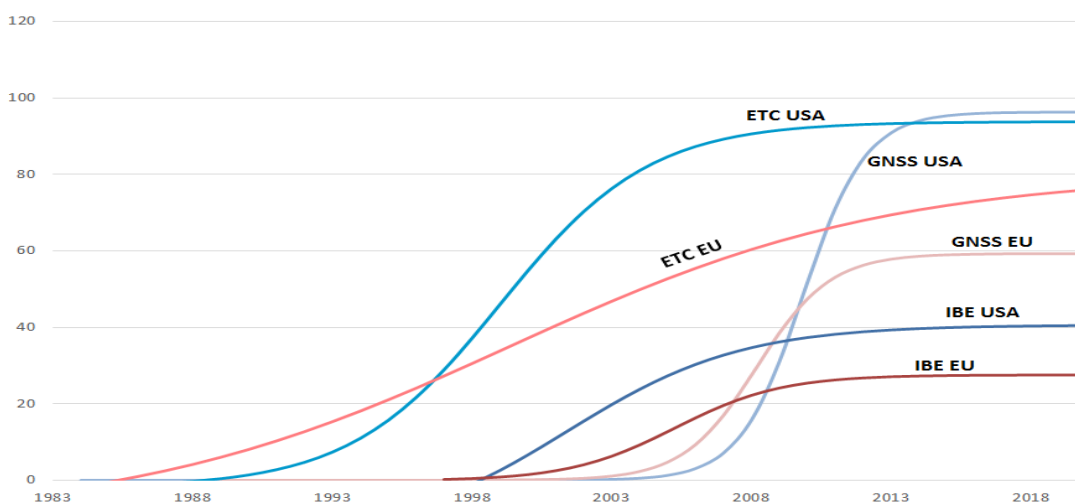


Figure 11: Comparisons of penetration rate US-EU (from D4.3)

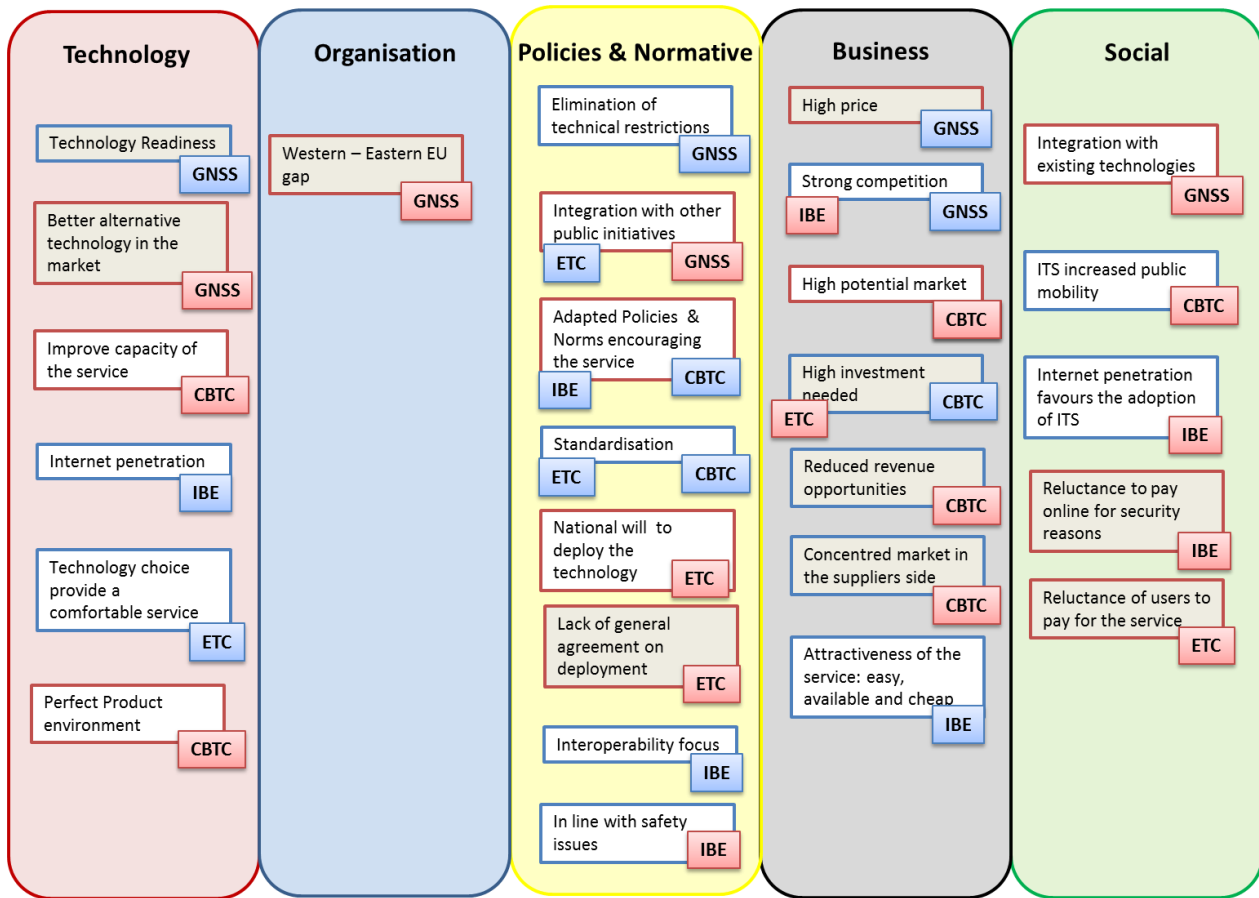


Figure 12: Market drivers and blocking mechanisms affecting EU-US technology diffusion

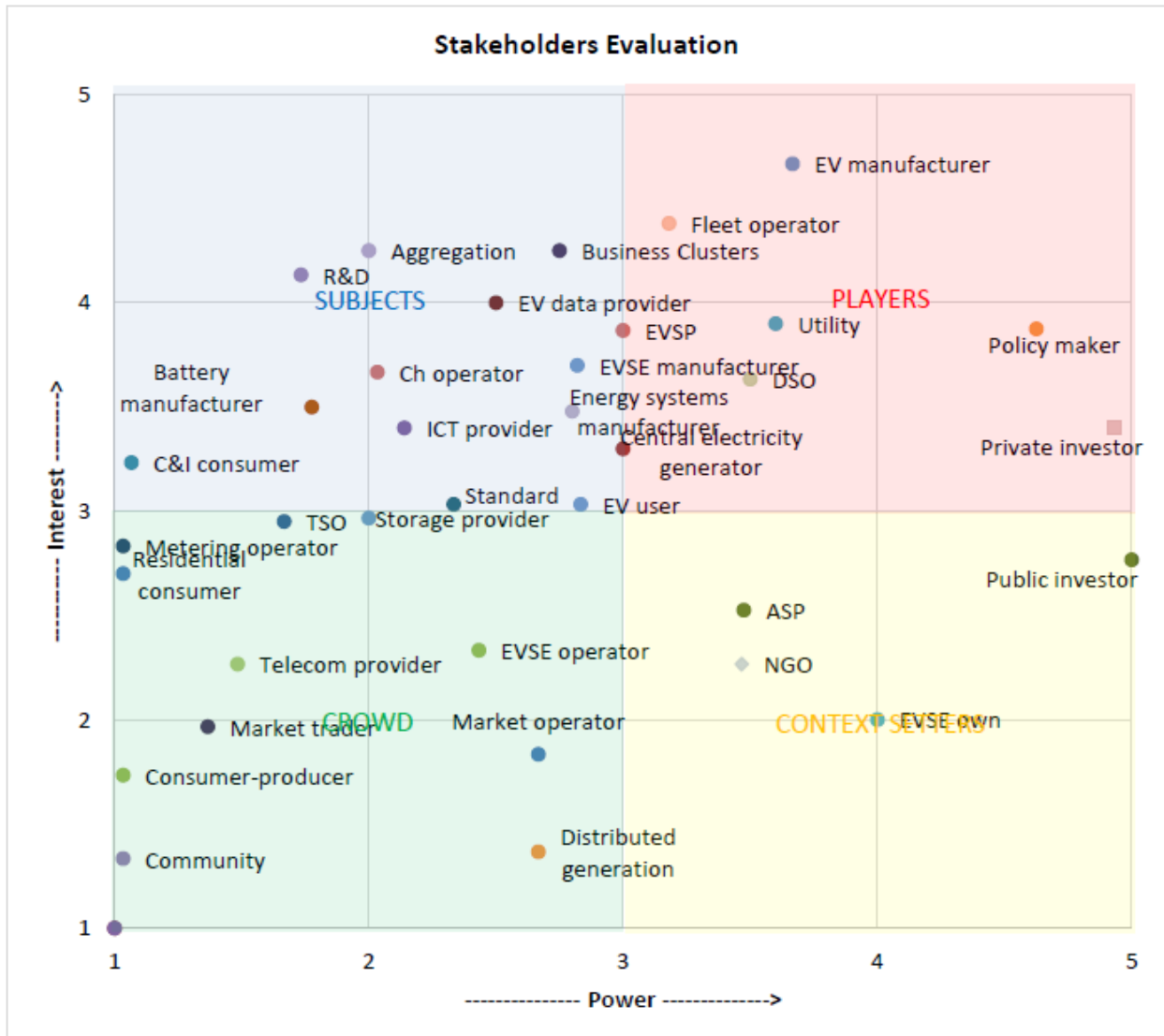


Figure 13: Matrix of power vs. Interest of stakeholders, CS1 (from D4.4)

1.3.5 WP5 Guidelines for market optimization



Picture 8: WP5 Second seminar Barcelona 30th April 2014



1.3.6. WP6 Innovation Network for ITS

T-TRANS *upbringing innovative ITS products and services to the market*

Home About T-TRANS Partners The network News – Events Publications EU related projects

The network

- Directory of entities
- Geographical Map
- Search the network

We would love to have you as a member to our network

Click here to register your organisation

T-TRANS Network members

- LGI Consulting, France**

[Profile - Contact](#)

Type: Company
 Focused on: Automotive, Other
 Serving the following market(s): Business
<http://www.lgi-consulting.com>
- Tool Alfa, Spain**

[Profile - Contact](#)

Type: Company
 Focused on: Multimodal, Other
 Serving the following market(s): Private, Public
<http://www.tool-alfa.com>
- MSC-LES Modeling & Simulation Center - Laboratory of Enterprise Solutions, University of Calabria, Italy**

[Profile - Contact](#)

Type: Academia Technology know how provider
 Focused on: Multimodal, Other
 Serving the following market(s): Private, Public, Business
<http://www.msc-les.org/>
- IMAUT, España**

[Profile - Contact](#)

Type: Academia Technology know how provider
 Focused on: Air, Automotive, Rail
 Serving the following market(s): Private, Public, Business, Other
<http://www.imaut.com>
- DNVKEMA, Netherlands**

[Profile - Contact](#)

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Geographical map of the network

Clustering the members of the T-TRANS network based upon there distance in pixels

The Cluster strategy lets you display points representing clusters of features within some pixel distance. You can control the behavior of the cluster strategy by setting its distance and threshold properties. The distance determines the search radius (in pixels) for features to cluster. The threshold determines the minimum number of features to be considered a cluster. By hovering over a cluster on the map you can see details about it.

Cluster details: 5 members are included in this cluster

Set clusters features

Distance in pixels: | Threshold: |

Members registration form

After the submission and approval from the T-TRANS consortium of the following form your organization will be listed in the T-TRANS network members list and your location identified on the respective map.

The accuracy of the information that you will present are of your sole responsibility. At this stage you won't be able to edit online your info after submission of the form. In case you want to change anything please download the template and provide all the info.

T-TRANS consortium will attempt to verify the information but this does not mean that we are responsible for the content.

Contact

Your Name **(required)**

Your Email **¹(required)**

Organization/Company name **(required)**

The logo of your company / organization.**²**

No file selected.

Address

Street

City

Country **(required)**

Tel.:

Webpage [<http://www.xxxxxx.xxx>]**(required)**

Figure 14: T-TRANS network section on website screenshots

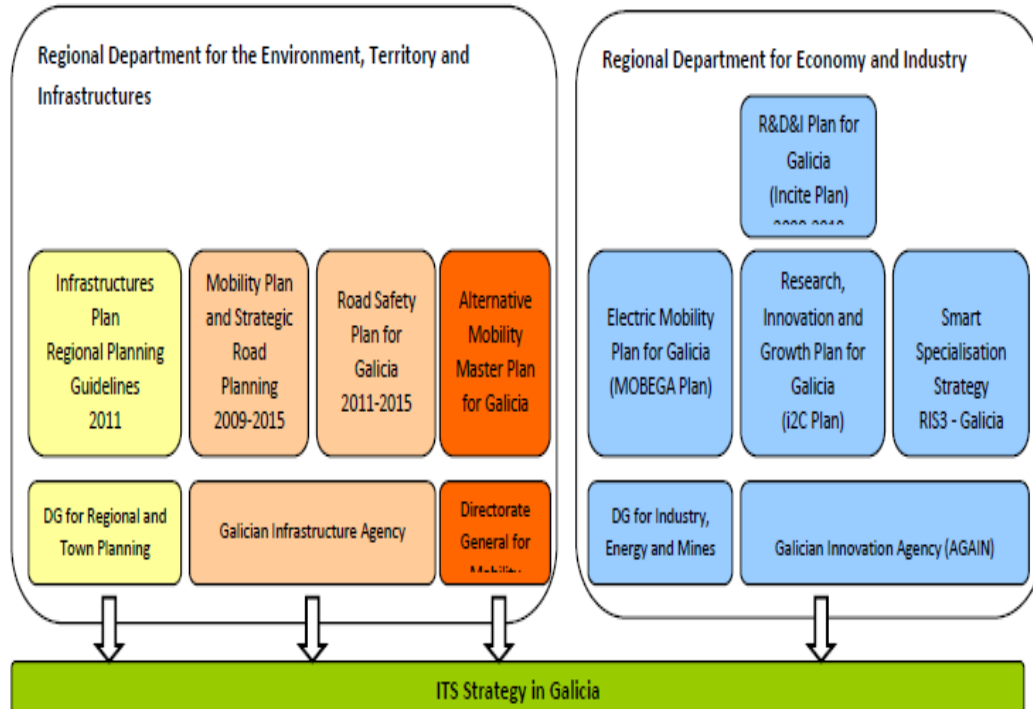




Figure 15: ITS strategy in Galicia

3.1.1.7 Detailed description of the initiative


How it works




1. Vehicle approaches to the deck.




2. Driver inserts entry permit for verification.




3. Taking the entry ticket.



4. Waiting for free parking space.



5. Confirming parking place.



6. Opens bar and entrance of the vehicle into site.



Smart Gate

Figure 16: How smart gate works, commercial application of EPIKINONIA Ltd.

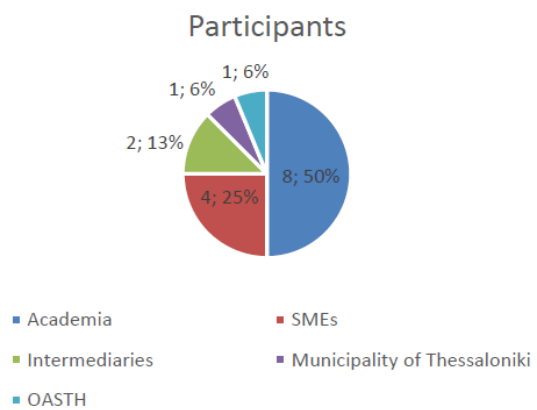


Figure 17: Attendants to second workshop in Thessaloniki, extracted from D6.2.



Figure 18: Attendants to second workshop in Vigo, extracted from D6.2.

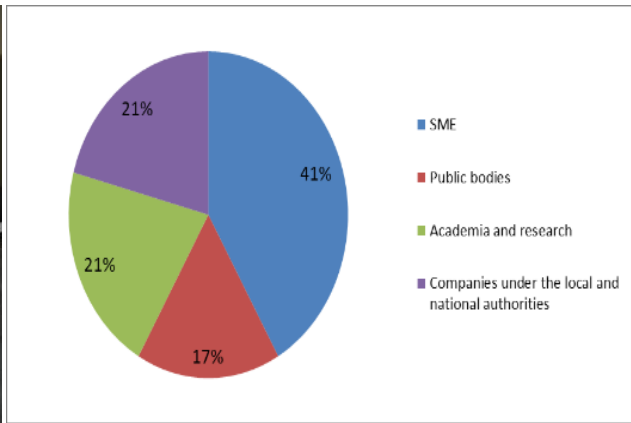


Figure 19: Attendants to second workshop in Riga extracted from D6.2.

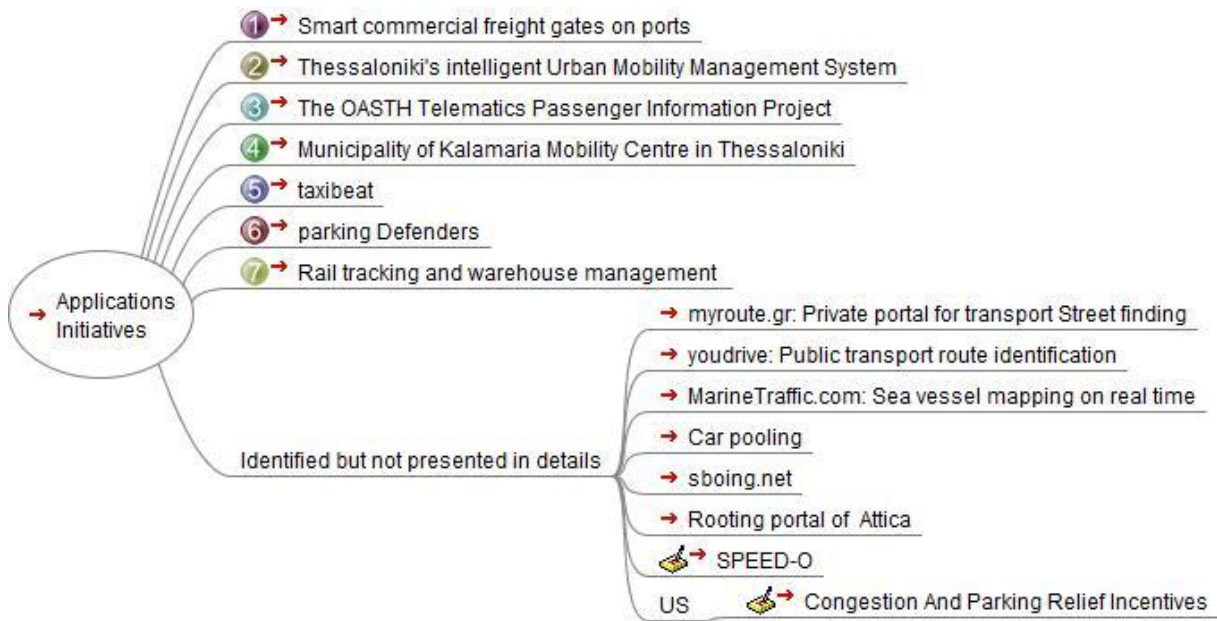


Figure 20: Identified applications/initiatives in Central Macedonia, from D6.2.

1.3.7. WP7 Dissemination

The screenshot shows the T-TRANS project website front page. At the top is the T-TRANS logo and tagline: 'upbringing innovative ITS products and services to the market'. Below the logo is a navigation menu with links: Home, About T-TRANS, Partners, The network, News – Events, Publications, and EU related projects.

The main visual is a world map with glowing blue lines connecting various global locations, representing the T-TRANS network. Below the map is the text: 'Your organization – company can be part of the T-TRANS Network'.

On the left side, there are three news items:

- Deliverables:** Roadmap Report, October 17th, 2013. The aim of this document is to develop a roadmap process for each preselected (from proposal stage)[...]
- Sixth Conference on Transport Research in Greece:** October 10th, 2013. The Institute for Sustainable Mobility and Transport Networks (LMET) and the Institute of Transport[...]
- TIPS:** Transport Innovation Workshop of the EU project TIPS, October 4th, 2013. Title: "From research to the market – key factors on innovation" Date: Thursday, 24 October 2[...]

On the right side, there is a 'T-TRANS Benefits' section with the following text:

- Assess the current situation of EU transport and ITS research
- Provide best practices and guidelines for strategies in ITS innovation commercialization
- Set the basis for the European ITS e-innovation network

Below this is a call to action: 'We would love to have you as a member to our network' with a 'Click here to register your organisation' link and a 'Read more...' link.

At the bottom of the page, there are links for 'Contact', 'Legal disclaimer', and 'Login'. Copyright information: 'Copyright © 2012 T-TRANS - All Rights Reserved. Designed by INTELSPACE S.A.'. The page is powered by 'WordPress & Atahualpa'. There are also logos for 'COOPERATION' and the European Union flag.

Figure 21: T-TRANS project web front page, version 2



Figure 22: T-TRANS leaflet



Figure 23: T-TRANS poster (version 2)



Figure 24: T-TRANS newsletter (version 1)



Figure 25: T-TRANS video, available in Youtube

https://www.youtube.com/watch?v=1jMF52AbIRk&list=PLvZvbwAr8eP8ZH_K1I3



Figure 26: T-TRANS article in Projects Magazine



Picture 9: T-TRANS final event, Barcelona 4th November 2014



Picture 10: T-TRANS final event, Barcelona 4th November 2014



Picture 11: T-TRANS final event, Barcelona 4th November 2014