C4R

Capacity for Rail

WP11 progress

SP6 Dissemination meeting, Brussel – 3rd November 2016

SP1 Plenary meeting, SYSTRA, Paris – 7th December 2016

Pierre-Etienne GAUTIER

SP1 leader

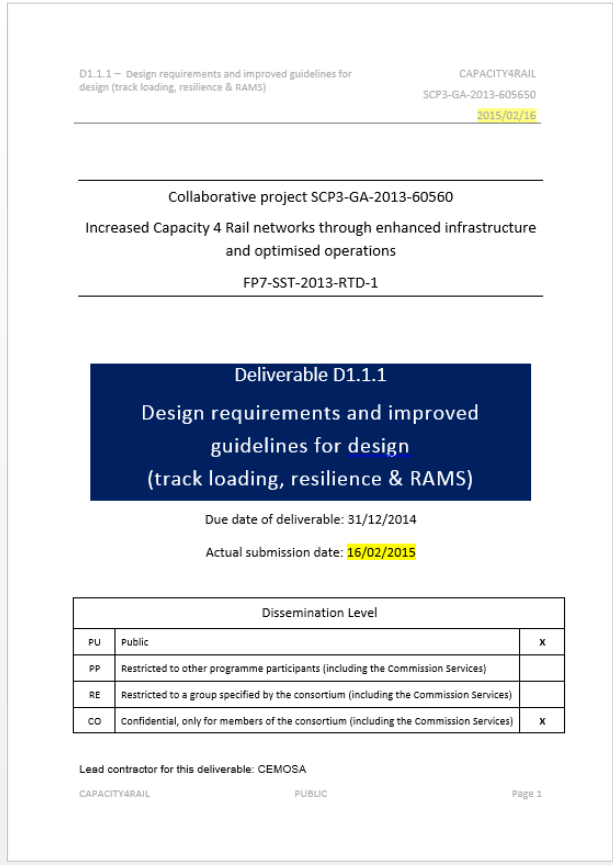
UIC

SEVENTH FRAMEWORK PROGRAMME

Task 1.1.1

- Design requirements and methodology

This task was completed in the first period and the related deliverable (D11.1) was delivered on 28/05/2015.



D1.1.1 – Design requirements and improved guidelines for design (track loading, resilience & RAMS)

CAPACITY4RAIL
SCP3-GA-2013-605650
2015/02/16

Collaborative project SCP3-GA-2013-60560

Increased Capacity 4 Rail networks through enhanced infrastructure and optimised operations

FP7-SST-2013-RTD-1

Deliverable D1.1.1

Design requirements and improved guidelines for design (track loading, resilience & RAMS)

Due date of deliverable: 31/12/2014

Actual submission date: 16/02/2015

Dissemination Level		
PU	Public	x
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)	x

Lead contractor for this deliverable: CEMOSA

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Task 1.1.2 & Task 1.1.3

Capacity for Rail

- New slab track concepts, generation, design, prototyping and testing

Both concepts are not patented yet so it is no possible to give more information at that time.

Modular track

- RAMS oriented design
- All elements are precast
- Asphalt subgrade
- Easy parts replacement
- 2 stiffness levels

Co-owners

SYSTRA

acciona

ineco

cemosa
Ingeniería y Control

Ladder track

- LCC oriented design
- All precast elements
- Asphalt subgrade
- Continuously supported rail

Co-owners

SYSTRA

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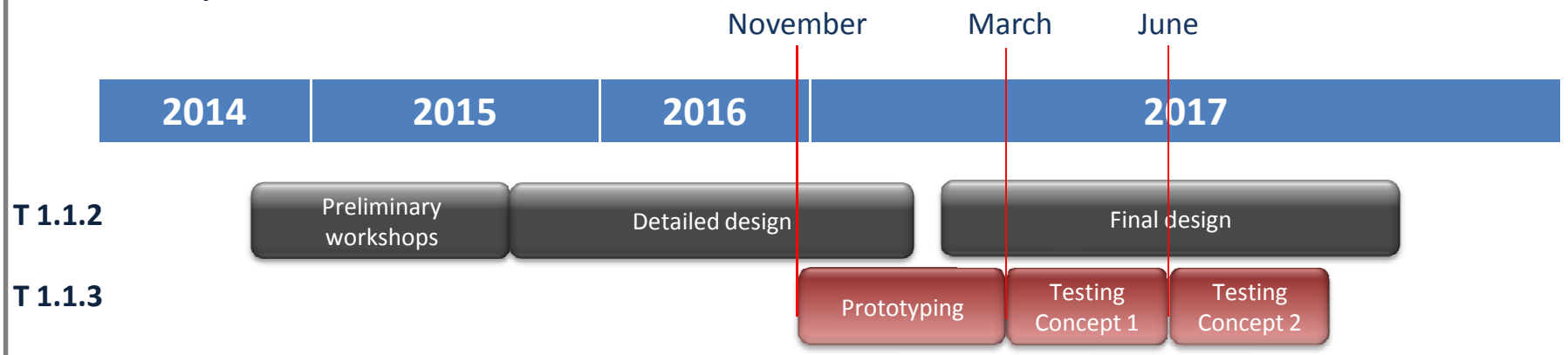
SEVENTH FRAMEWORK PROGRAMME

Task 1.1.2 & Task 1.1.3

- New slab track concepts, generation, design, prototyping and testing

Roadmap



Possibility of testing on plain track ?

Task 1.1.4

- Upgrade infrastructure to meet new freight demand

This task was completed in the first period and the related deliverable (D11.4) was delivered.

- **Main chapters contents**:
- Type of changes (loadings , longer trains…)
- Substructure: role of track stiffness, measurement techniques: GPR, resistivity …)
- Substructure improvement methods (deep mixing, jet grouting, stabilizing berms, precast slab on piles, soil nailing, vibrocompaction, columns,…)
- Bridges (refined calculations, change X section,change static system, prestressing, external bonding with FRP…), metallic, masonry…
- Tunnels
- Track and switches (damage laws for rails, switches,…)
- Maintenance routines

Thank you for your kind attention

Pierre-Etienne GAUTIER

SP1 Leader

SYSTRA

pegautier@systra.com