

2nd Annual review
Florence 14th November 2013

WP7 - SHIELD applications

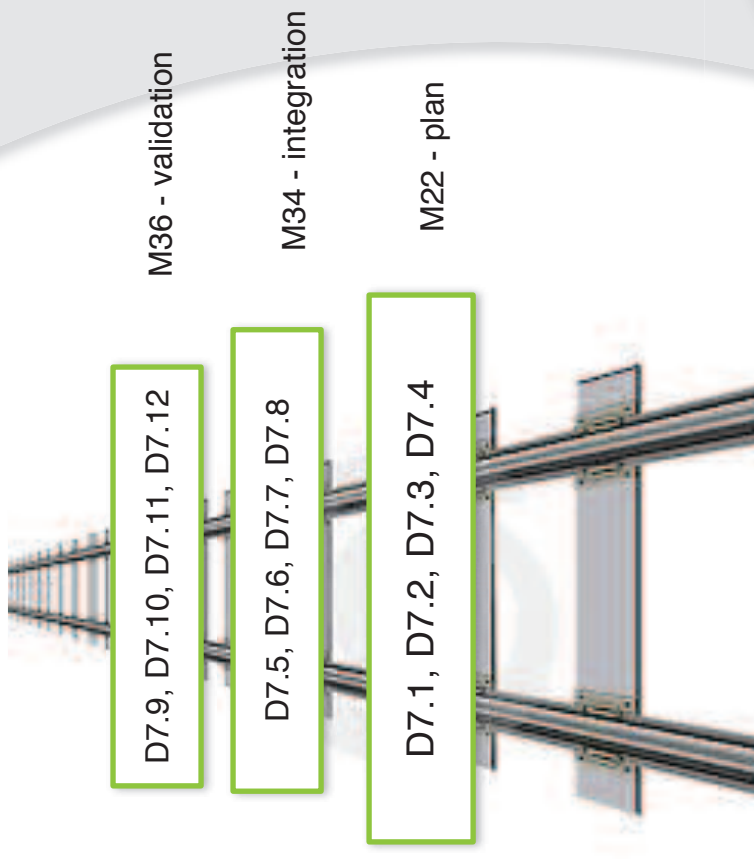


September 1st 2012 – August 31st 2013
Josef Noll, Movation

WP7 objectives

- Application scenarios
 - Railway security
 - Voice/Facial recognition
 - Integrated Modular Avionic (IMA) platform
 - Social mobility, Smart phone integration, Eco-design on future infrastructure
- Proof of concept for a wide range of applications
- Heterogeneous infrastructures with diverging objectives
- Common: SPD enhanced functionalities integrating business and social worlds.

The scope is to validate the nSHIELD platform on real application demonstrators



WP7 tasks and deliverables

- T7.1 (Lead partner ASTS Partner THYIA TELC S-LAB Movation ISD HAI SES AT)
- T7.2 (Lead partner ETH Partner UNIGE TUC S-LAB ISD TECNALIA)
- T7.3 (Lead partner SES Partner Alfatroll UNIGE SESM S-LAB HAI SES)
- T7.4 (Lead partner Movation Partner THYIA TUC SknFnd S-LAB ISD HAI SES)

- 3 sets of deliverables: Plan (x1...4), Integration (x5...8), Validation (x9...12)

	Title	Due month	Lead partner	Dissemination level
D7.1	Railways security demonstrator - integration and validation plan	M22	ASTS	Restricted
D7.2	Voice/Facial Recognition demonstrator - integration and validation plan	M22	ETH	Restricted
D7.3	Dependable Avionic System demonstrator - integration and validation plan	M22	SES	Restricted
D7.4	Social Mobility and Networking demonstrator - integration and validation plan	M22	Movation	Restricted
D7.5	Railways Security - integration Report	M34	ASTS	Public
D7.6	Voice Facial recognition - integration Report	M34	ETH	Public
D7.7	Dependable Avionic System demonstrator - integration report	M34	SES	Public
D7.8	Social Mobility and Networking demonstrator - integration report	M34	Movation	Public
D7.10	Voice/Facial Recognition demonstrator - Validation and Verification Report	M36	ETH	Public
D7.11	Dependable Avionic System demonstrator - Validation and Verification Report	M36	SES	Public
D7.12	Social Mobility and Networking demonstrator - Validation and Verification Report	M36	Movation	Public
D7.9	Railways Security - Validation and Verification Report	M36	ASTS	Public

WP7 objectives

- Validate nSHIELD platform on real application demonstrators, including
 - Railway security
 - Voice/Facial recognition
 - Integrated Modular Avionic (IMA) platform
 - Social mobility, Smart phone integration, Eco-design on future infrastructure
- Proof of concept for a wide range of applications
- Heterogeneous infrastructures with diverging objectives
- **Common:** SPD enhanced functionalities integrating business and social worlds.

WP7 Status

- Railway security
 - on track, excellent applicability of SHIELD approach
- Voice/Facial recognition
 - excellent product, “measurable security” (identification)
 - capability to become standard
- Integrated Modular Avionic (IMA) platform
 - on track, system oriented
 - has potential for break-through in certification
- Social mobility, Smart phone integration, Eco-design on future infrastructure
 - Social Mobility with Smart phone integrated remains as focus
 - Novel partner (SknFnd): secure integrated platform
 - focus on secure product prototype with feasibility of SHIELD

delayed

WP7 Outlook - Impact in Industry

- Intensified discussion of “applicability” with industry
 - ABB - representative of supply industry for process automation
 - Security industry: ARM Ltd, Ericsson Research
 - Norwegian Oil and Gas - Industrial Association of
 - IFEA - The Association for Electrotechnics and Automation in Industry (Statoil, ABB, Siemens, Aker, Krohne,...)
 - Internet of Things Network(.no)
- SHIELD is 4-10(!) years ahead of time as compared to state of (process) industry
- Focus on introduction of security (and the cloud)
 - “security is a differentiator”, “we need to have security in place”
- Thereafter: measurable security
- Thereafter: Composable SHIELD security

Concluding remarks



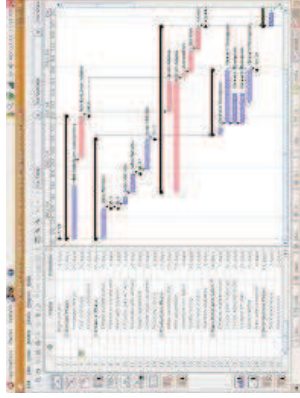
- 3 of the 4 use cases are on track, excellent novel solutions
- major challenges in T7.4 due to change of project partners & duties
- Recovery through new partner Seek and Find
- Expect that T7.4
- SHIELD is 4-5 years ahead of time as compared to state of (process) industry
 - Focus on introduction of security (and the cloud)
 - Thereafter: measurable security
 - Thereafter: Composable SHIELD security
- ready for validation in three use-cases, assessment in 4th use case

Background information WP7

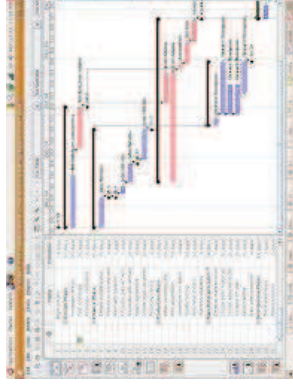
ADDITIONAL SLIDES

- OIL AND GAS
- SOCIAL MOBILITY

Norwegian Oil and Gass (GLM - ISO 15926): Integrated Lifecycle Assets Planning (ILAP) standard

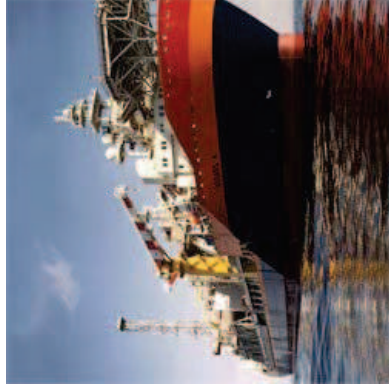


*Transfer and
integration of
plan data*

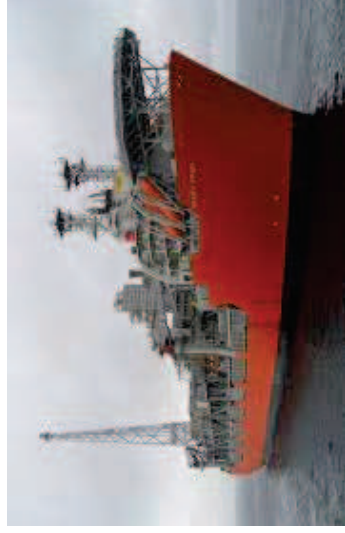


Planning efficiency

25%



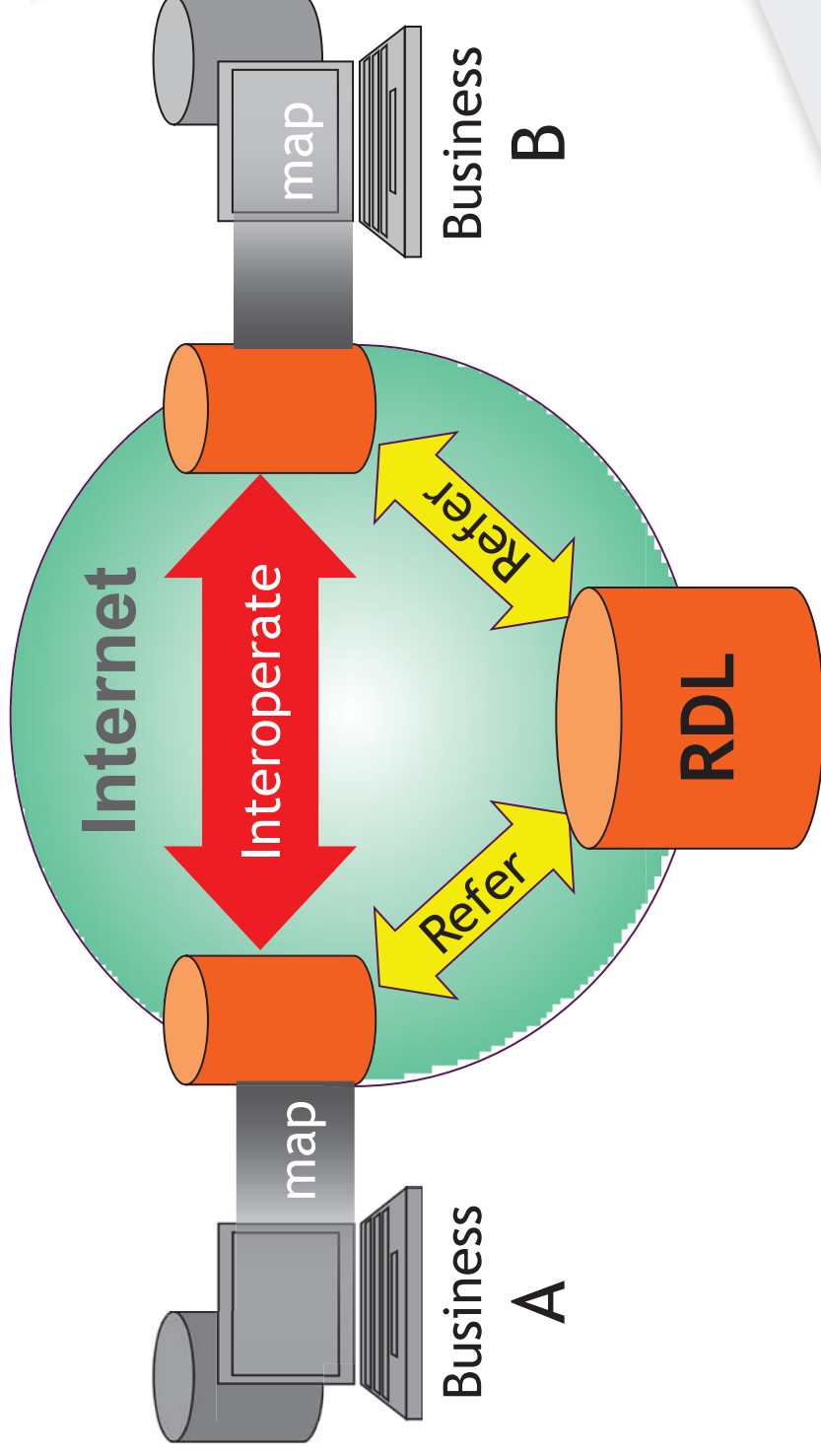
*Transfer of
experience*



Planning effectiveness

NOK 5 billion per year

GIM interoperability at its simplest

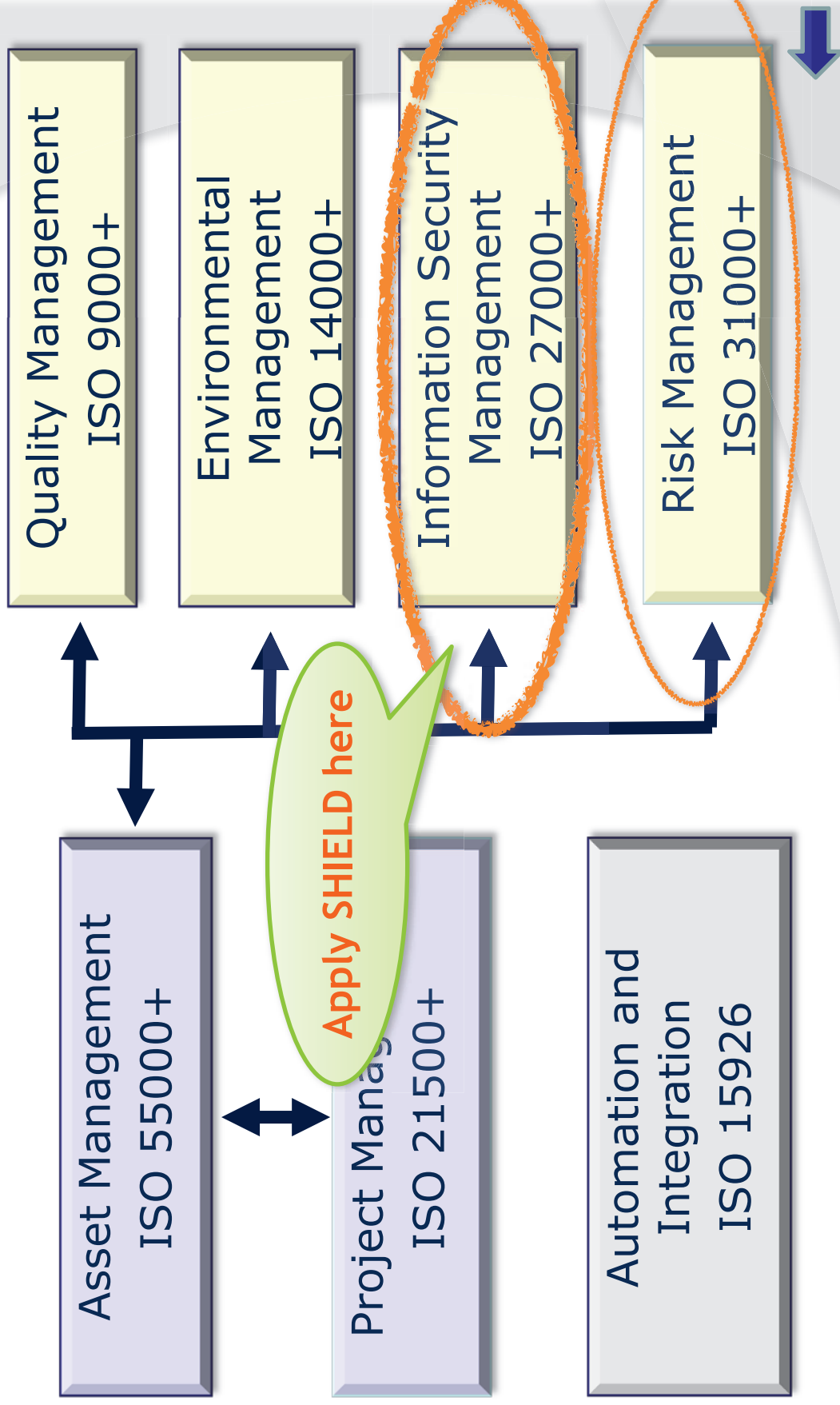


Using *standard shared references* & sharing references used,
reduces business ambiguity & reduces *mapping overheads*.

Makes interoperability easier and reduces risk & cost

[source: Thor Langeland, 2013]

Asset Management in ISO



[source: Thor Langeland, 2013]

Objective of Social Mobility

- Socialtainment
 - Entertainment -> Infotainment -> Socialtainment
- Smart phone integration
 - devices as sensors and comm. devices
- Eco-design on future infrastructure
 - ~~partners?~~

Status

- Prototypical implementation done

Expected outcome

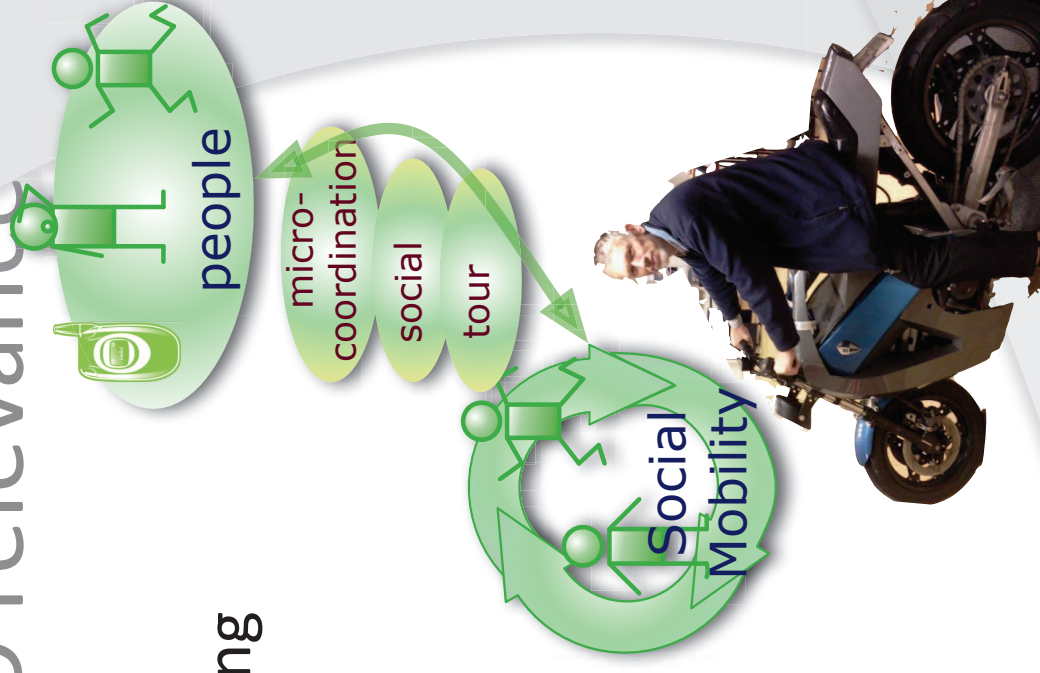
- Proof of concept
- Heterogeneous infrastructures with diverging objectives

- **Common:** SPD enhanced functionalities integrating business and social worlds.



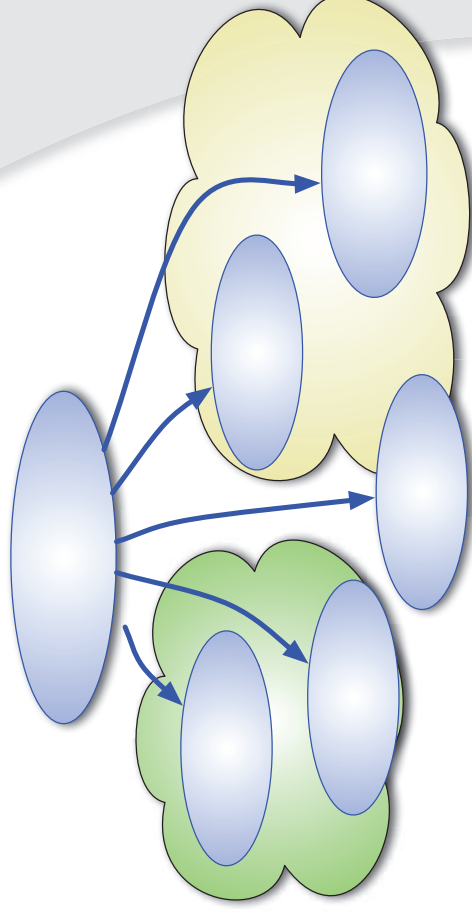
Requirements & nSHIELD relevance

- Privacy
 - Preserve privacy while commuting
 - Merging physical and social networks
- Dependability
 - Situation (context-) aware
- Embedded systems (ES) driven
 - context-awareness from ES
 - automated processes



Ongoing developments

- Ontology development for **privacy** enhanced user profiles
- Dependability: content- and **context-aware**
- Rules inferring security tokens



Attributes: roles, access, device, reputation, behaviour, ...

$canOwn(?person, ?attributes) \cap withHold(?token, ?attributes) \cap (Person(?SecurityTokenIssueTo(?token, ?person)$

[token]	principal
◆ BasicToken_1	◆ Carol
◆ BasicToken_2	◆ Alice