



FastPass – A reference system for next generation ABC systems

WORLD e-ID
CONGRESS

September 23-25, 2014 – Marseille, France

Presented by
Markus Clabian (Coordinator)
Senior Engineer, Safety & Security Department,
AIT Austrian Institute of Technology, Austria

Overview

- **Motivation and Objectives**
 - Overall objectives
- **Innovation Approach**
 - Combination of heuristic and deterministic approaches
- **Work Package Structure and Status**
- **Timeline and ResultS**
 - Current Systems
 - Next Generation Systems and new Processes
- **Summary**

Motivation

Challenges :

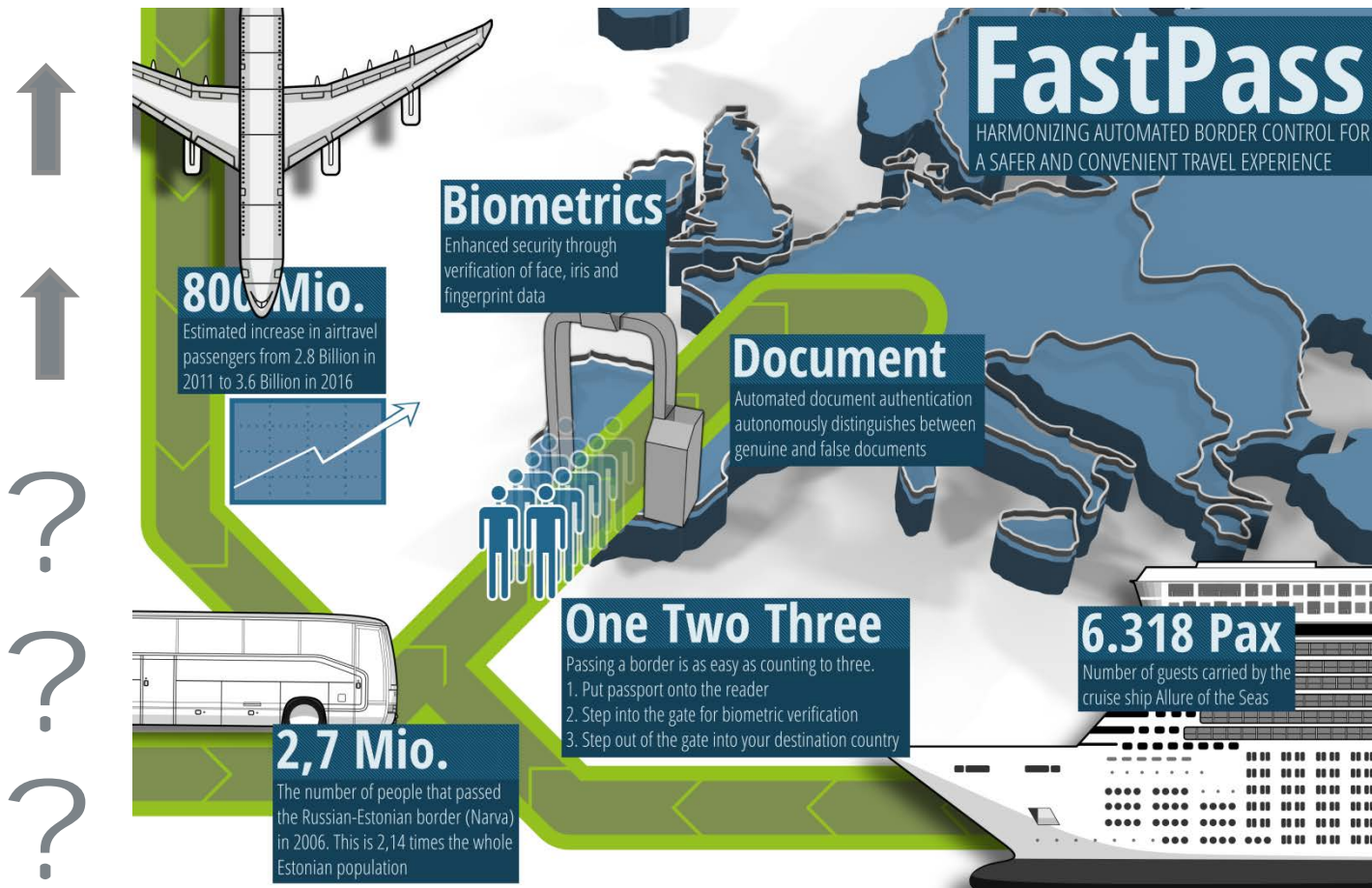
Passenger flow

Requirements on the border control process

System risk assessment

Harmonization

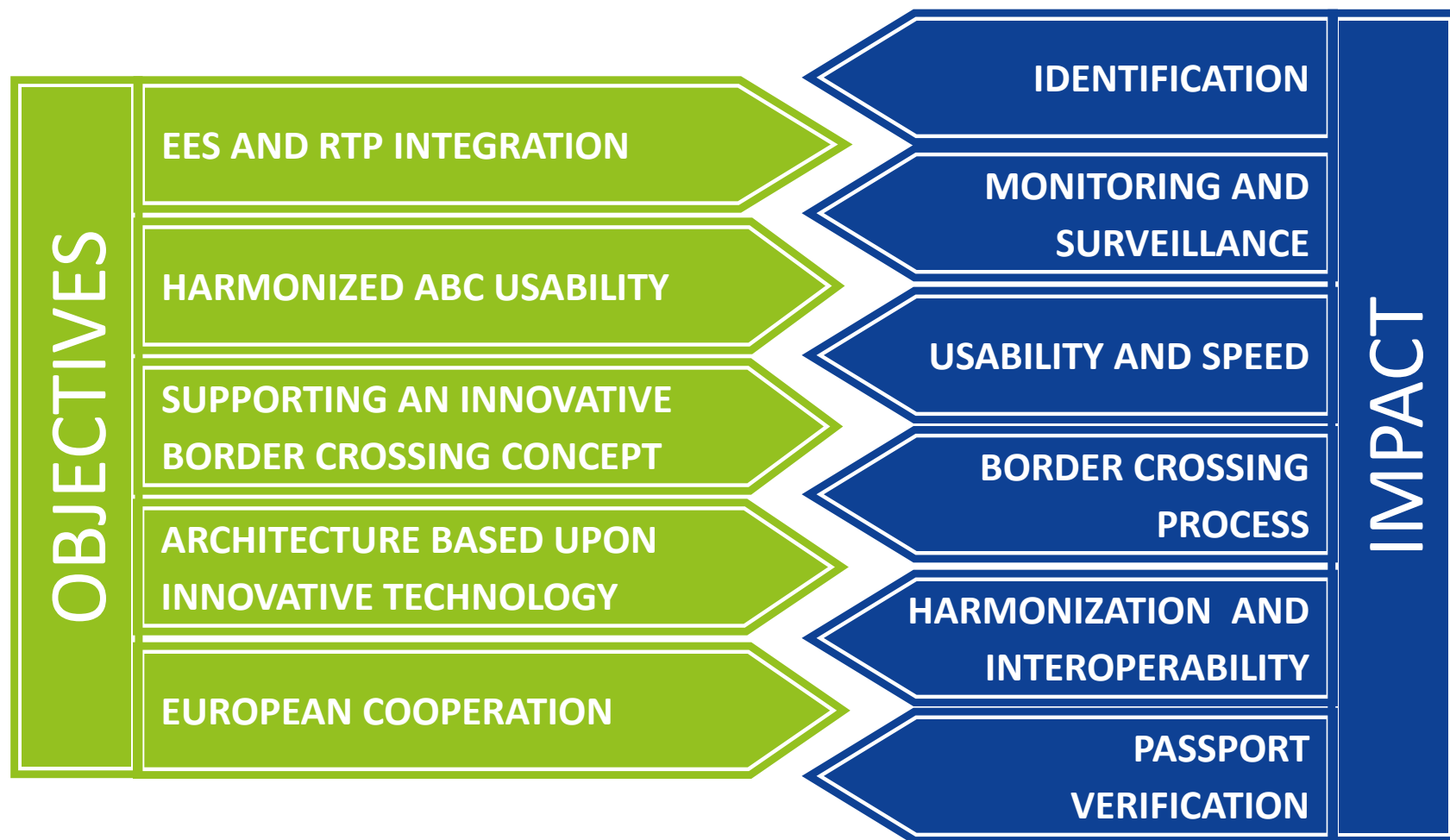
Variety in usage



22.09.2014

3

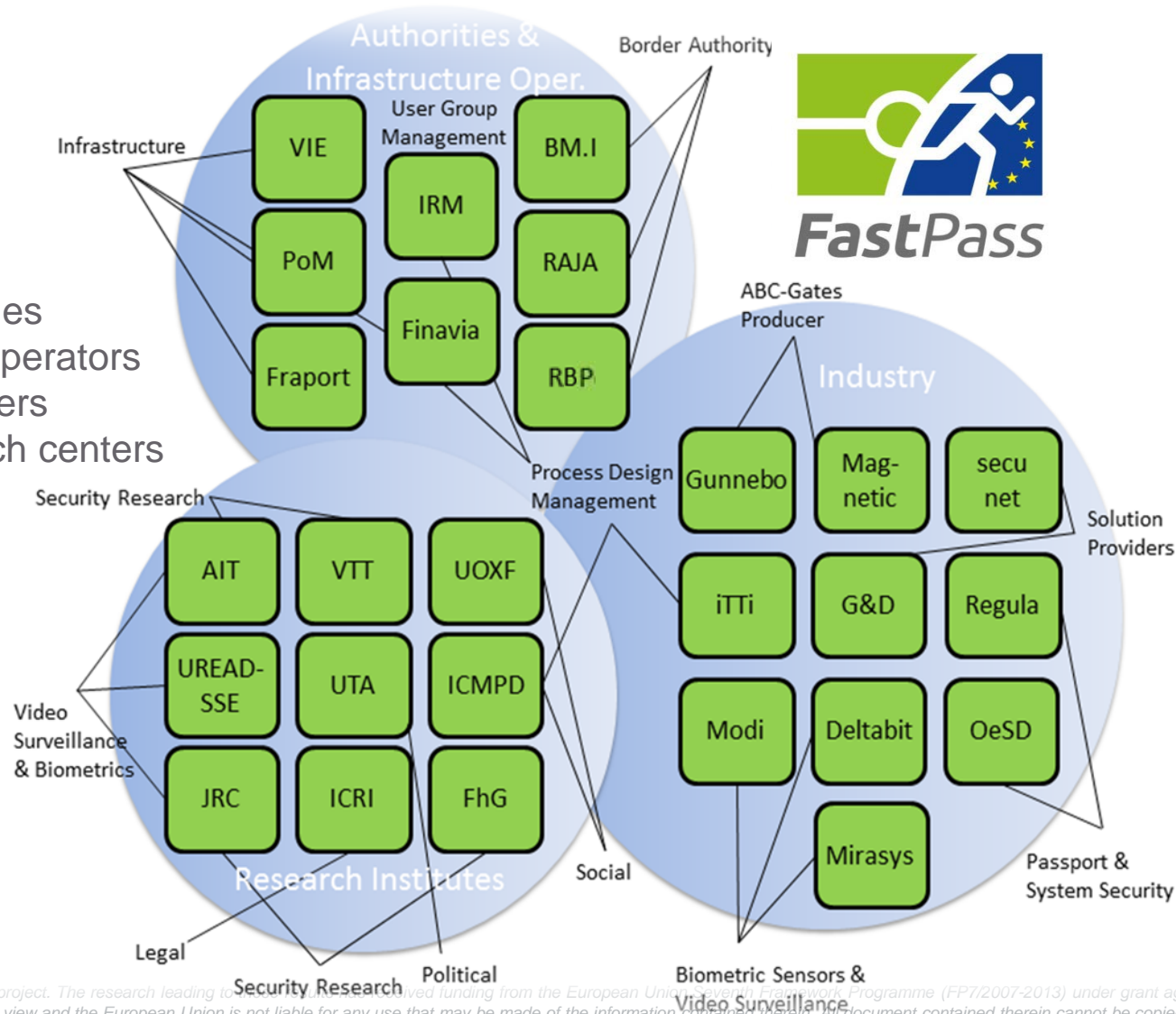
FastPass Objectives



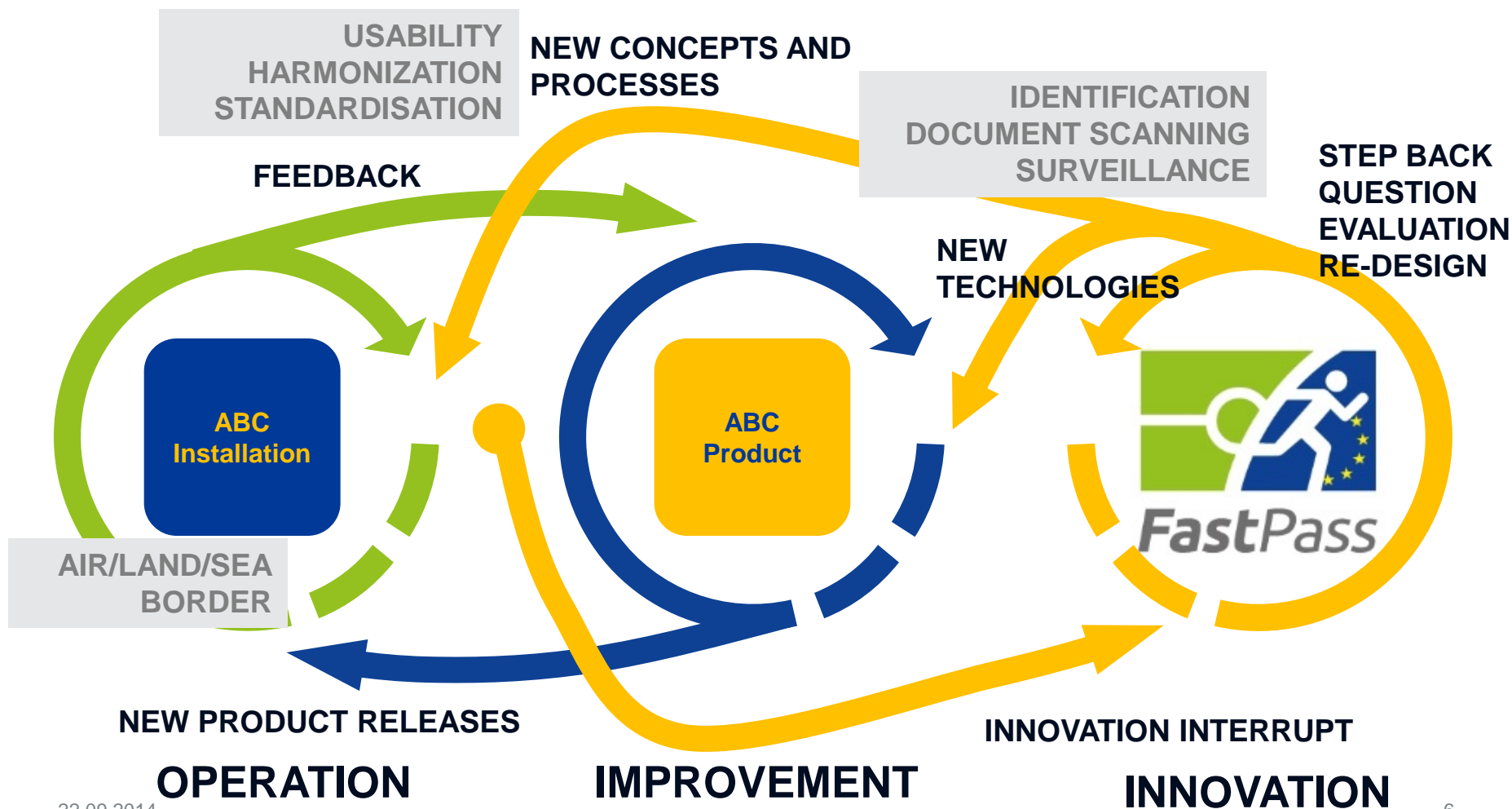
FastPass - Consortium

27 partners:

- 3 border authorities
- 4 infrastructure operators
- 11 industry partners
- 5 applied research centers
- 4 universities

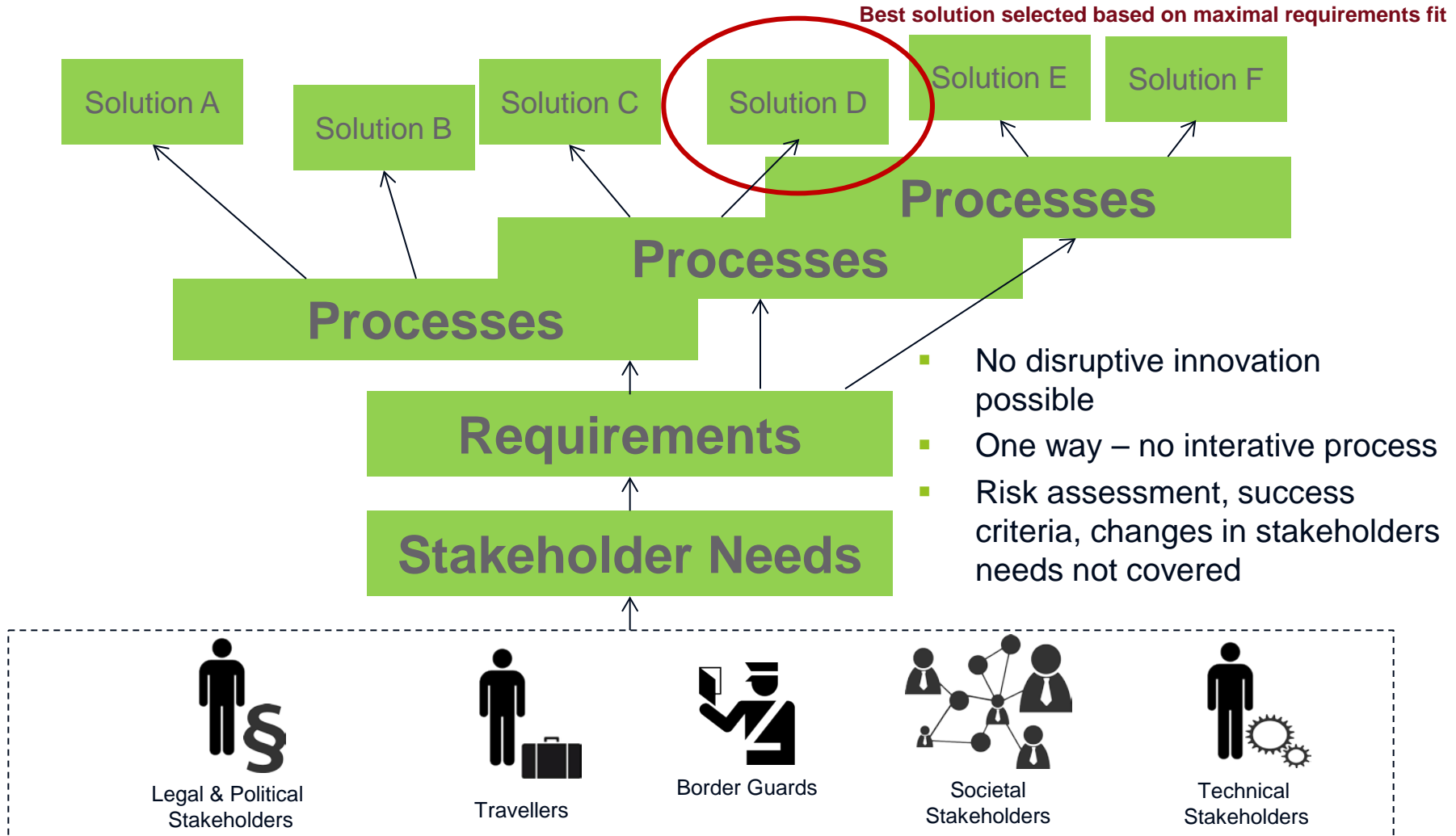


Science to solution – Expected outcome

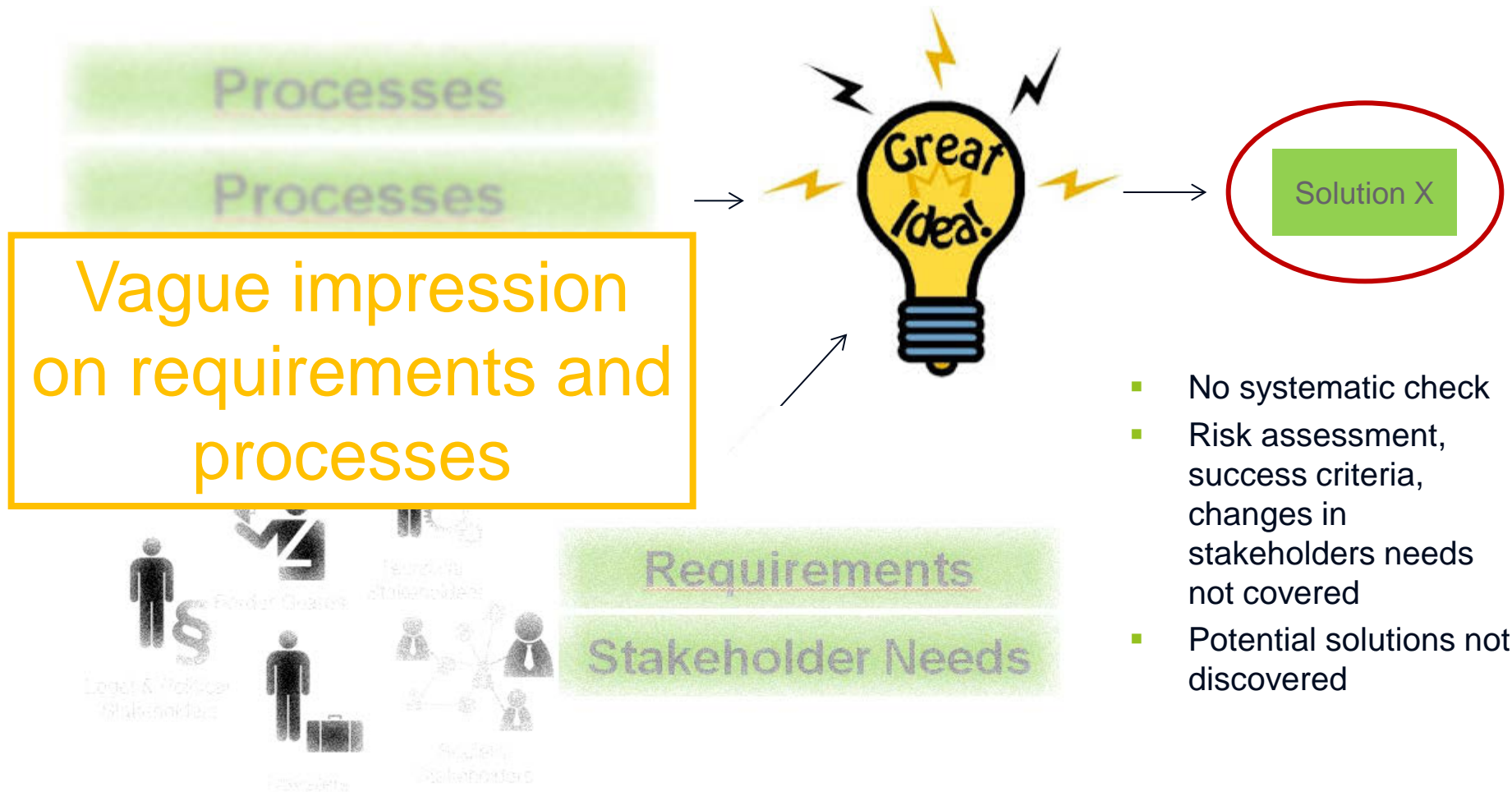


22.09.2014

Systematic approach to innovation



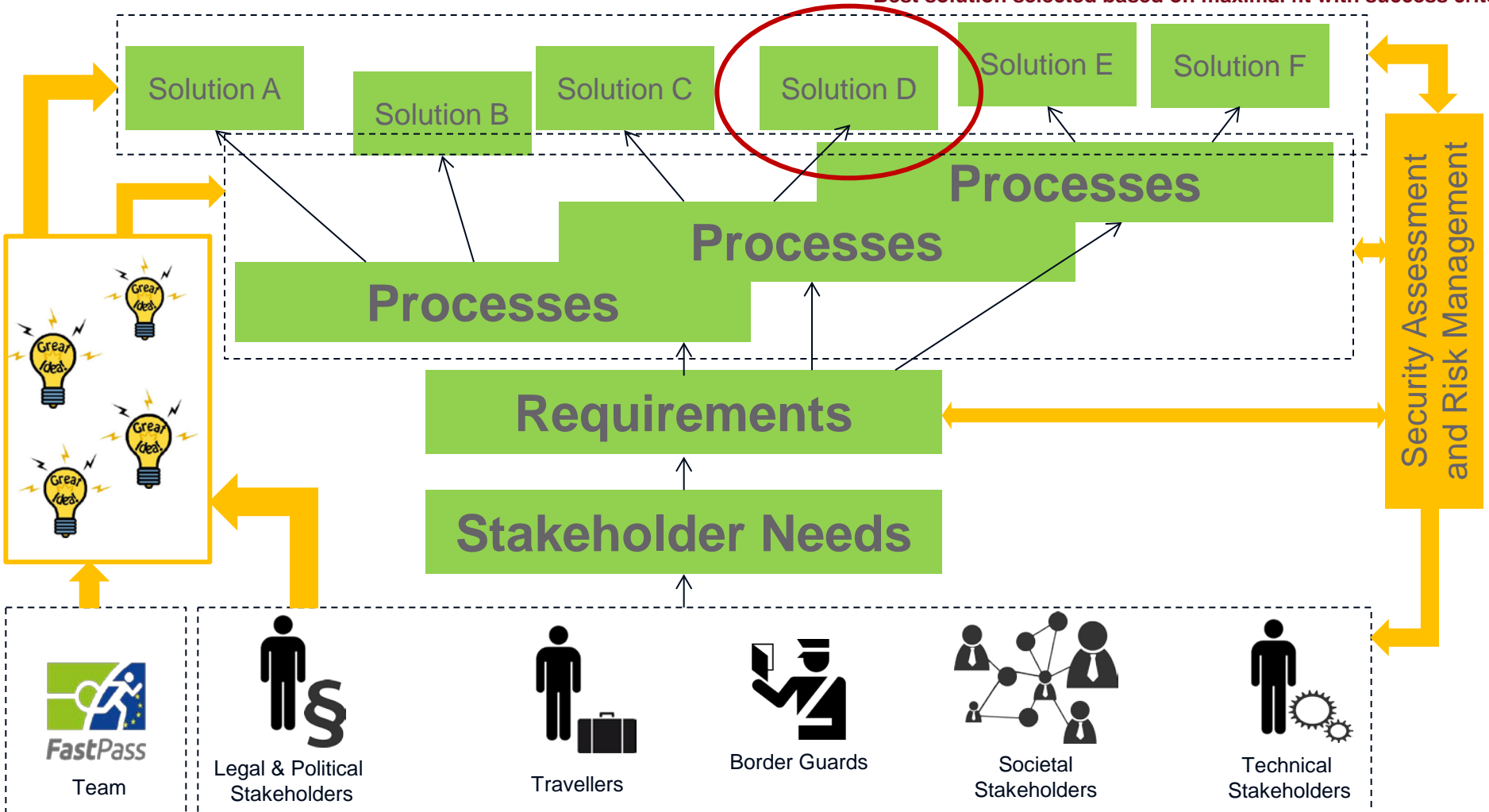
Heuristic approach to innovation



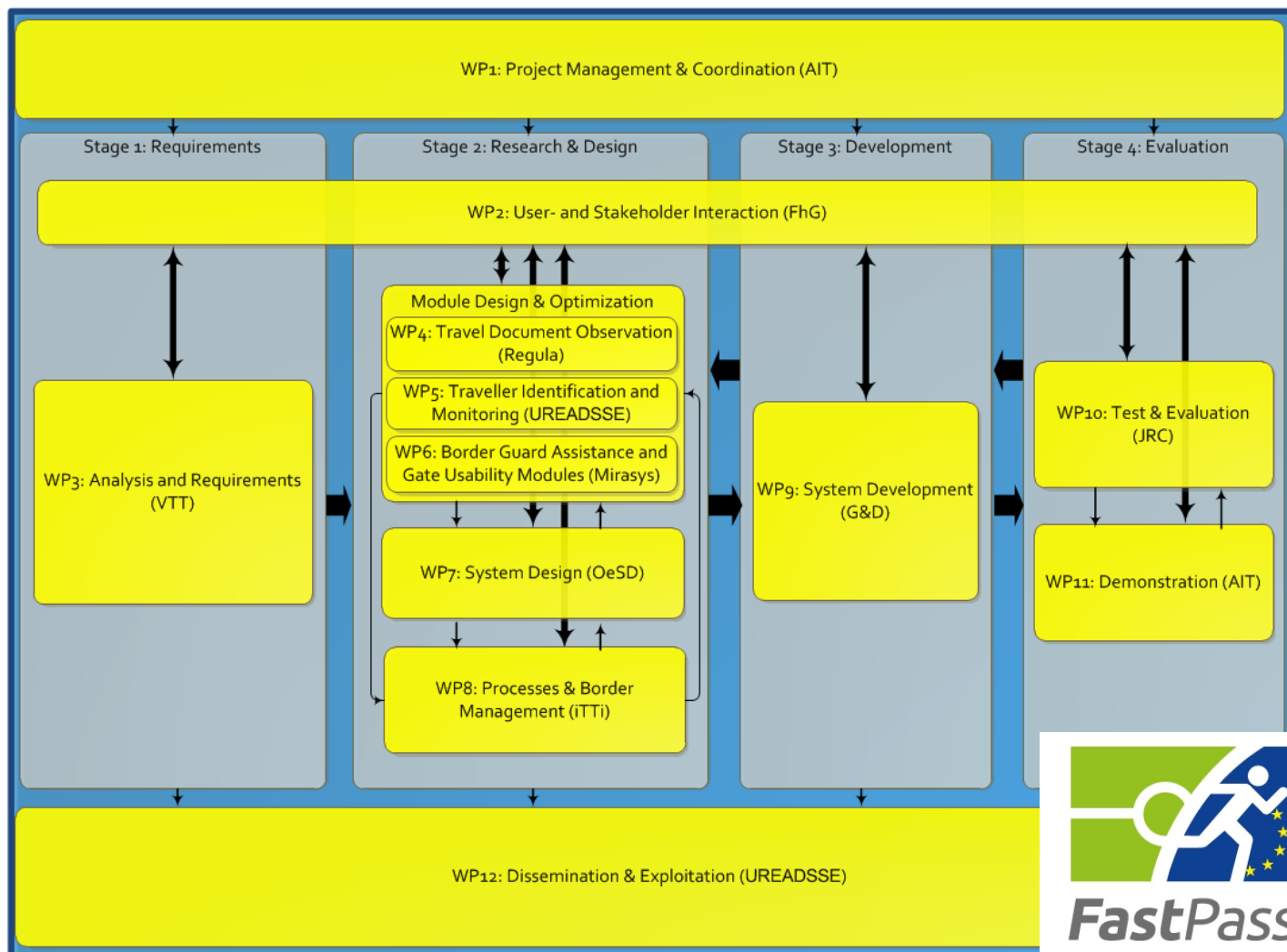
- No systematic check
- Risk assessment, success criteria, changes in stakeholders needs not covered
- Potential solutions not discovered

FastPass approach to innovation – heuristic AND systematic

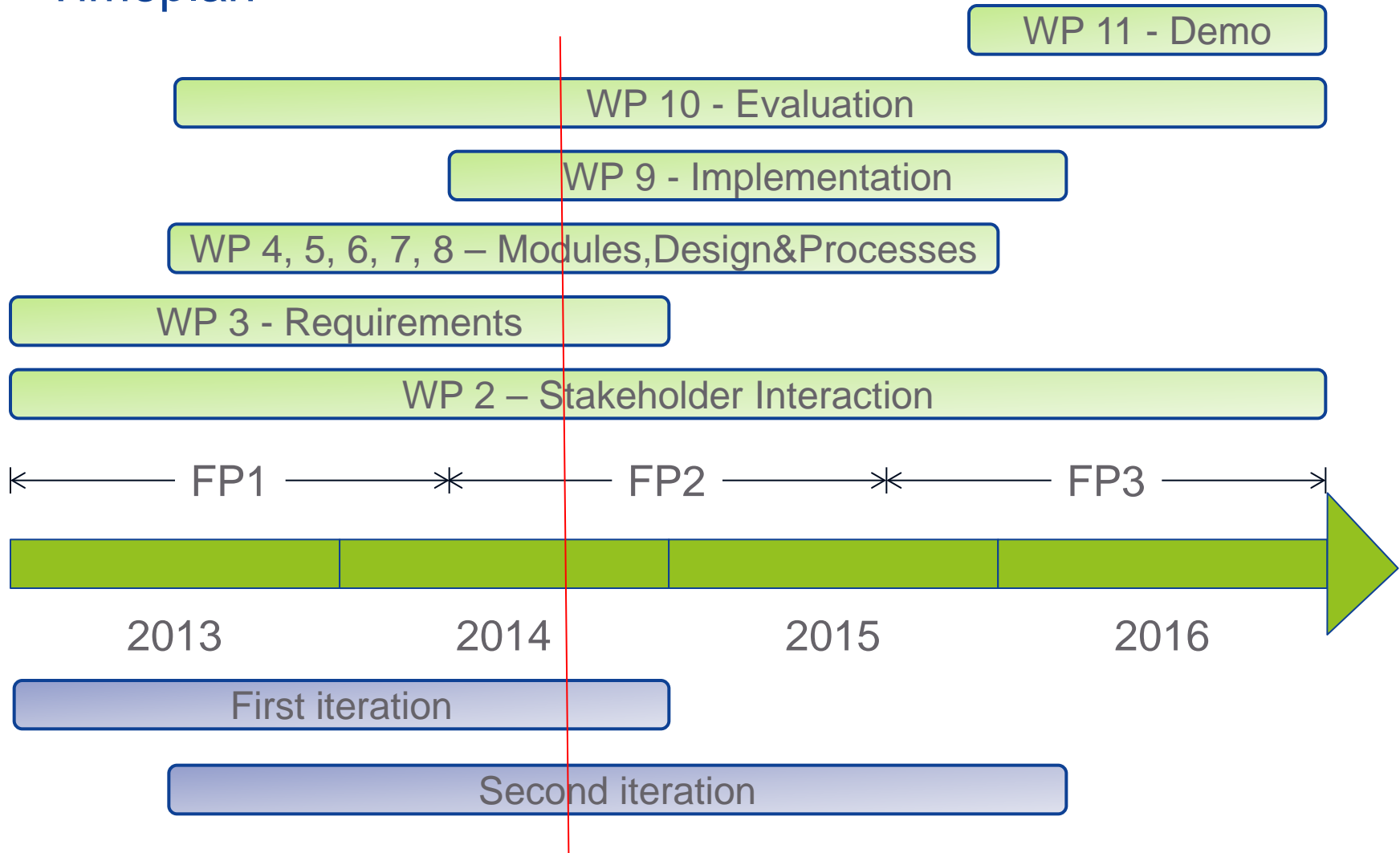
Best solution selected based on maximal fit with success criteria



Work package structure, deliverables and progress



Timeplan



22.09.2014

11

Timeplan Results

WP 10 – Evaluation

WP 9 – Implementa

WP 4, 5, 6, 7, 8 – Modules, Design & Processes

WP 3 – Requirements

WP 2 – Stakeholder Interaction

← FP1 *

2013

2014

Document attack analysis

Stakeholder needs

Face spoofing

Set-up of user groups

Face recognition „on the fly“

Scenario description

Set-up of communication infrastructure

First Border Guard Module

Process Analysis

Kickoff Meeting Vienna

Requirements

First Designs (SW and HW)

22.09.2014

12

Innovations for current ABC systems

- Border guard user interface for better usability
- Advanced video surveillance modules
 - Queue length detection
 - Anomalous behaviour detection
 - Person separation
 - Left object detection
 - Dynamic passenger flow optimization
- Mirror based face capture unit for long distance capture while passenger moves
- Advanced passport inspection module
- Face spoofing detection

Next Generation Processes and Systems

- Demonstration for technologies in following advanced processes
 - sea border control with shared responsibilities between cruise-line operators and border guards to enable minimal border crossing time
 - control of passengers inside a car on land borders, with RTP like passenger and vehicle pre-registration
 - various processes on air borders such as face as token or RTP system with specific privacy preserving token
- Contribution to future processes
 - third country nationals transits and the possible inclusion into ABC process
 - clarifying open challenges of the smart border package (EES and RTP integration)
 - possible impacts and challenges of including VISA holders into ABC process
- Security and Risk Analysis with vulnerability list

FastPass – the system/technology, that

- **...is secure**
 - Resistent
 - to latest attacks on document scanner,
 - to biometric spoofing
 - Risk Assessment, Security Assessed by dedicated methodology
- **...you like**
 - UI developed with extensive feedback from different European border guards
 - Process and procedures developed with extensive evaluation from traveller groups
 - Respects privacy and data protection (Data protection impact assessment – DPIA)
- **...is harmonized – and shows new processes and scenarios**
 - ONE reference architecture serving many processes
 - First European solution for cars at land border with ABC
 - First solution for cruise ships
 - Real comparison of different approaches

Thank You !

Contact information

www.fastpass-project.eu

Email: FastPassCoordinator@ait.ac.at

