



FLYSEC - Optimizing time-to-FLY and enhancing airport SECURITY Project Overview

A Research Project funded by the European Commission under the Horizon 2020 Work Program - Secure Societies

Project Coordinator:
National Center for Scientific Research Demokritos

Research Topic:
H2020-DRS-2014 Critical Infrastructure Protection
Improving the aviation security chain

Duration: May 2015 – April 2018
Budget: EUR 4.141.375
Website: www.fly-sec.eu



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FLYSEC Project Executive Summary

FLYSEC is an ambitious research and innovation project that aims to develop and demonstrate an innovative, integrated, end-to-end airport security process for passengers, airports and airlines. FLYSEC's primary goal is to enable a guided and streamlined procedure from the landside to airside and into the boarding gates, while offering an operationally validated innovative concept for end-to-end aviation security. The project will gather excellence and expertise from Industry, SMEs, Research and Academia including stakeholders and end-users such as major airport operators.

FLYSEC ambition is based on a well-structured work plan that includes:

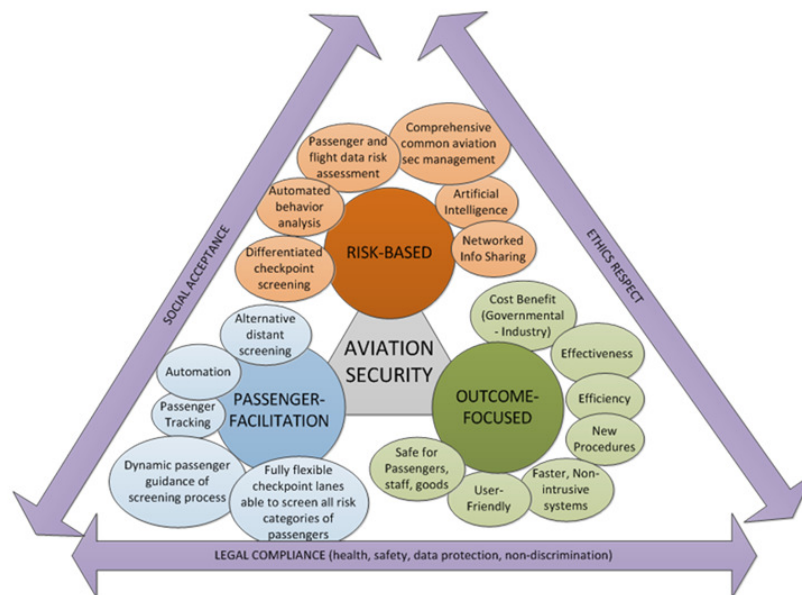
- Innovative processes facilitating *risk-based screening*
- Deployment and integration of *new technologies* and repurposing existing solutions towards a *risk-based security paradigm shift*
- Improvement of passenger facilitation and customer service, bringing *security as a real service* in the airport of tomorrow
- Achieving *measurable throughput improvement* and a whole new level of Quality of Service.

On the technical side, FLYSEC achieves its ambitious goals by integrating new technologies on video surveillance, intelligent remote image processing and biometrics combined with big data analysis, open-source intelligence and crowdsourcing. Repurposing existing technologies is also one of FLYSEC's objectives, such as mobile application technologies for improved passenger experience and positive boarding applications (i.e. services to facilitate boarding and landside/airside way finding) as well as RFID for carry-on luggage tracking and quick unattended luggage handling.

FLYSEC aims to implement a seamless risk-based security process combining the aforementioned technologies with behavioural analysis and innovative cognitive algorithms. A key aspect in the design of FLYSEC risk-based security is applying ethical-by-design patterns, maximizing the efficiency of security controls through passenger differentiation ranging from "unknown" to "trusted", while remaining ethical and fair in the process. Policy, regulatory and standardization aspects will also be examined in the context of FLYSEC innovative security concept.

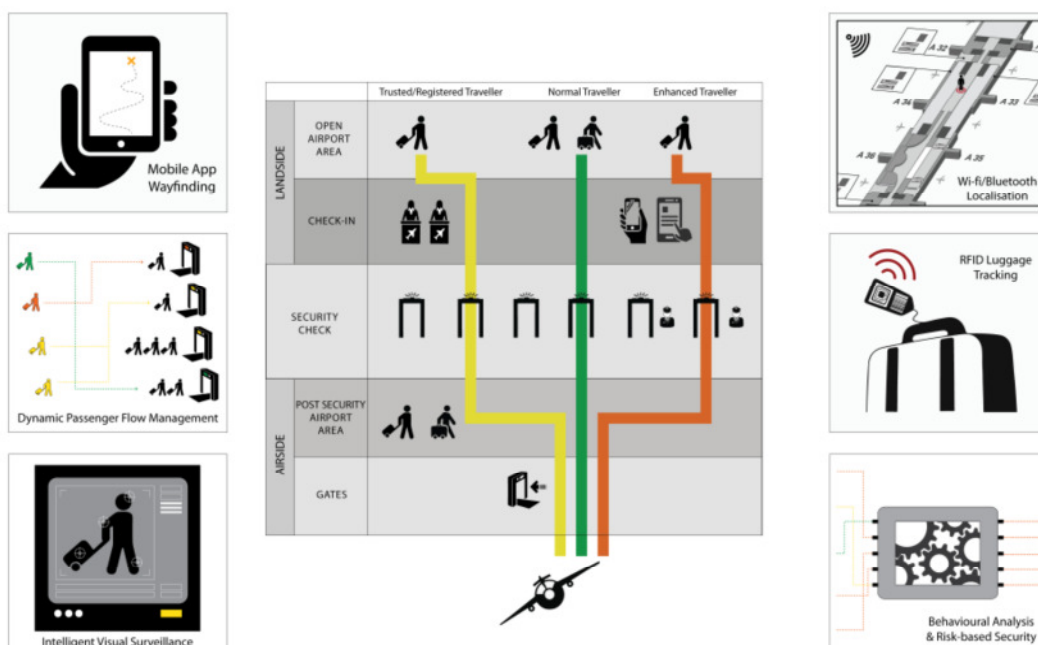
FLYSEC involves technologies from different Technology Readiness Levels (TRL), including in-project prototype development, as well as adaptation and extension of more mature solutions or re-purposing of commercial products. FLYSEC will validate the operational value of the provided solution through pilot test in real operational environment.

FLYSEC Overall Security Concept

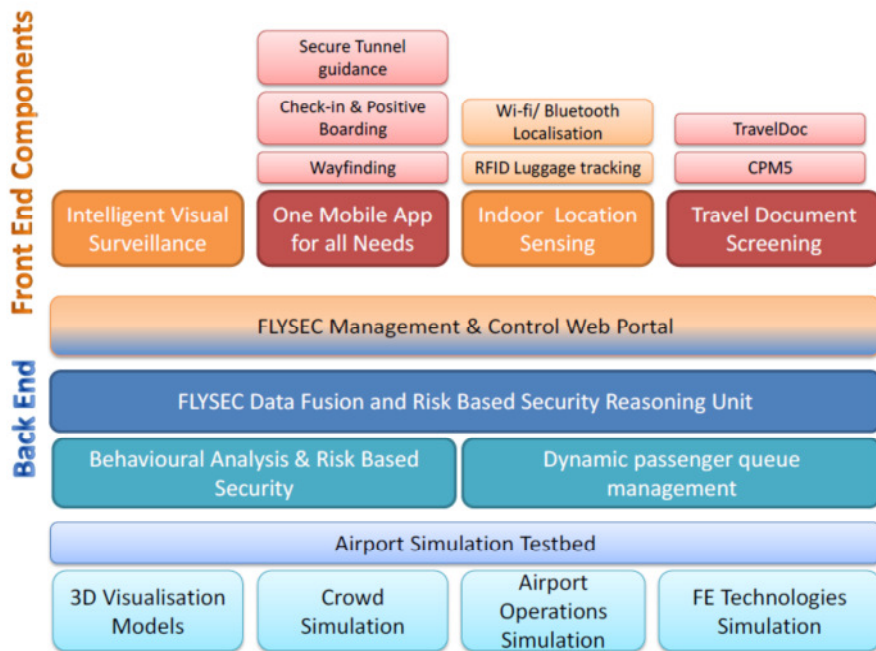


FLYSEC aims to provide an innovative concept for airport security based on (i) passenger facilitation, (ii) risk-based security and (iii) outcome-focused results. The three core points are surrounded by the Social Acceptance, Legal Compliance and Ethics respect lines which set the social, political, legal and anthropological framework.

In the FLYSEC Secure Tunnels scenario the passengers are differentiated to Trusted/Pre-Registered, Normal and Enhanced screening passengers. The tunnel is implemented as a virtual path from the landside, through the security check and to the airside where technological components offer intelligence and risk-based security correlations through passive tracking and intelligent analysis.



FLYSEC System Architecture



The Overall Strategy of the FLYSEC Work Plan is based on the agile development of FLYSEC components and system centered around the validation and operational testing methodology: from the simulation fast-track test-bed to the operational testing and Proof of Concept, and to the final field test in a real operational environment.

FLYSEC Work-packages overview

