Partners:

National Center for Scientific Research "Demokritos" (GR)
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Elbit Systems Ltd. (IL)
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European Aviation Security Center e.V. (DE)
Luxembourg Findel Airport (LU)
University of Luxembourg (LU)
Embry - Riddle Aeronautical University (DE)
Epsilon International SA (GR)

Project Facts:

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Topic 5: Improving the aviation security chain

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FLYSEC
## *Optimizing time-to-FLY and enhancing airport SECurity*

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.

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 repur posing 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.

FLYSEC System Architecture
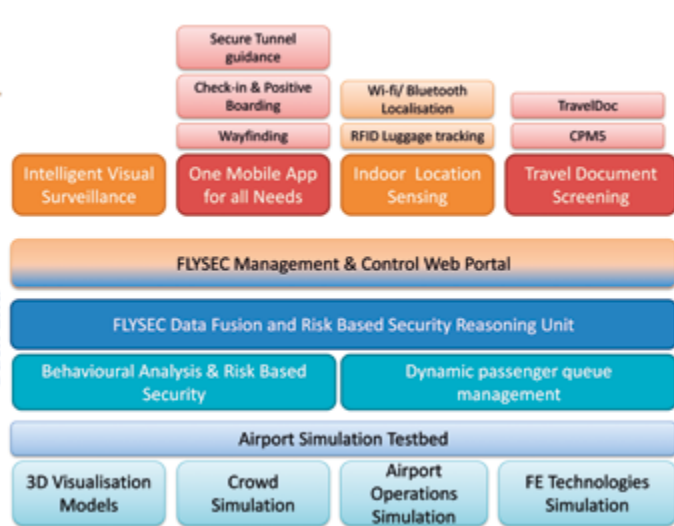
On the technical side, FLYSEC achieves its goals by integrating new technologies on video surveillance, intelligent remote image processing and biometrics combined with big data analysis, open-source intelligence and crowdsourcing. Repurposing existing technologies is also one of FLYSEC´s objectives, such as mobile application technologies for improved passenger experience and positive boarding applications as well as RFID for carry-on luggage tracking and quick unattended luggage handling.

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.

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.
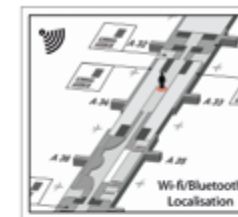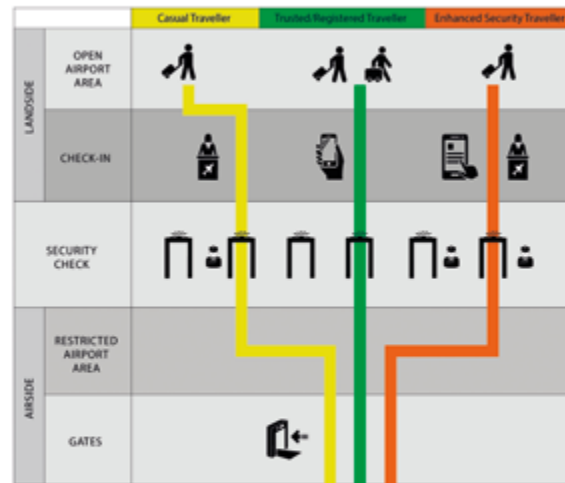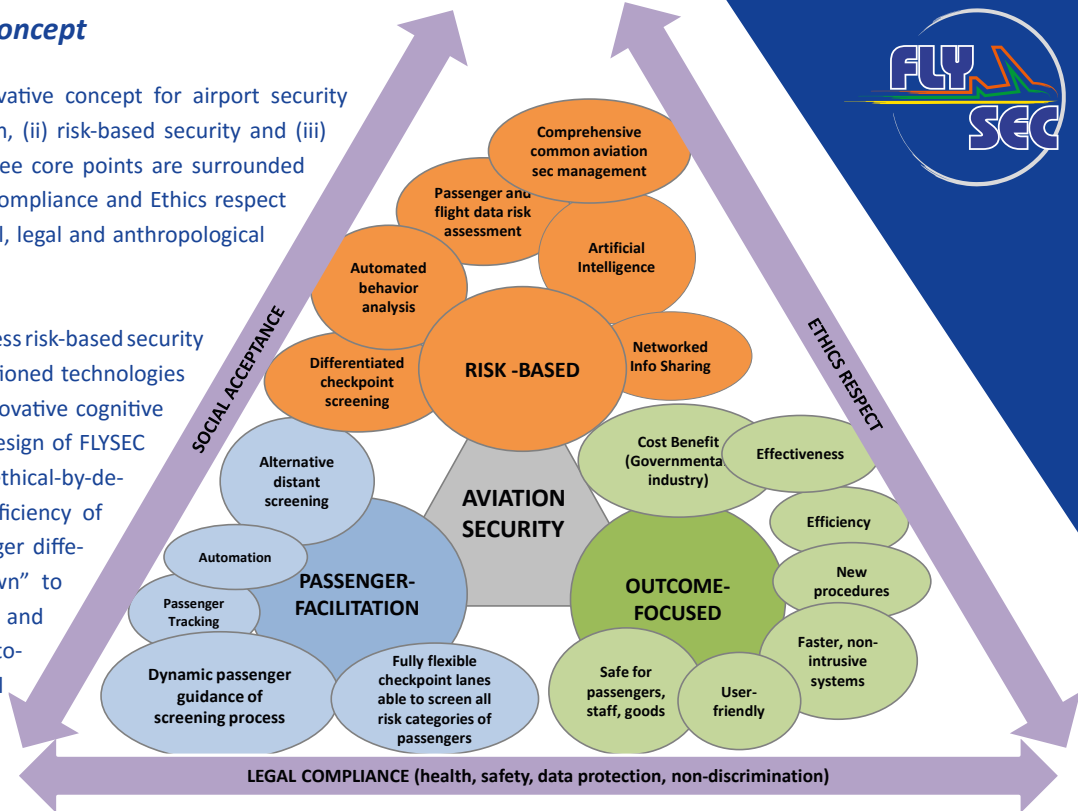
FLYSEC Secure Tunnels Scenario Overview

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.