



FLYSEC: A Comprehensive Control, Command & Information (C2I) System for Risk-Based Security



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This work was performed within the FLYSEC Project (Optimizing time-to-FLY and enhancing airport SECurity), with the support of the European Commission and the Horizon 2020 Programme, under Grant Agreement No. 653879





FLYSEC project



GA-NUMBER — 653879 — FLYSEC
*Optimising time-to-FLY and enhancing
 airport SECURITY*
 39 month R&I Action
 Start: 01/05/2015
 End: 31/07/2018
 EU Grant: 4,089,500.00 €

<http://www.fly-sec.eu/>



Coordinator

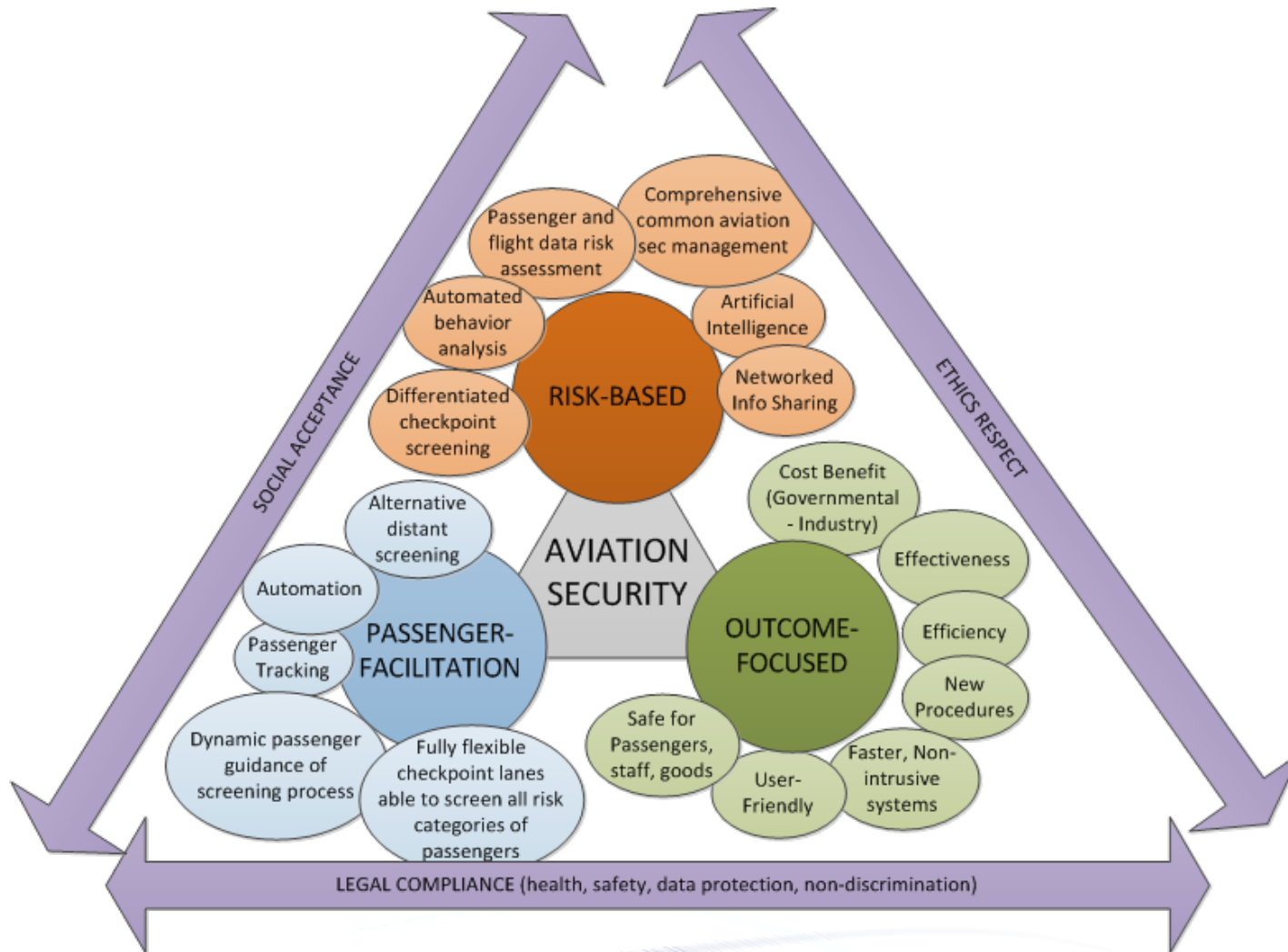


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FLYSEC Security Overall Concept





Key Objectives

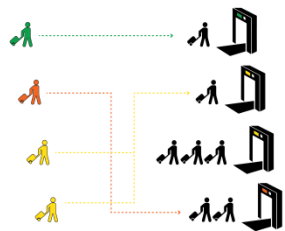
- Innovative processes facilitating *risk-based screening*
- Deployment and integration of *new technologies* and repurposing existing solutions towards a *risk-based security paradigm shift*
- Improvement of passenger facilitation and customer service, bringing *security as a real service at the airport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



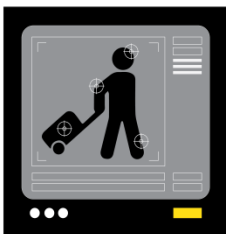
FLYSEC Secure Tunnels



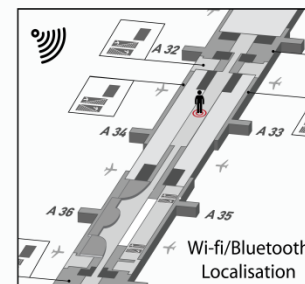
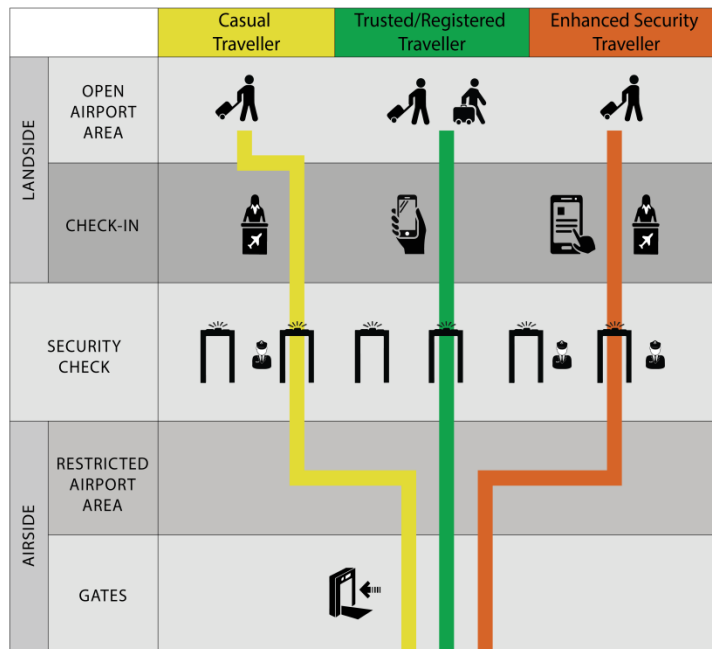
Mobile App Wayfinding



Dynamic Passenger Flow Management



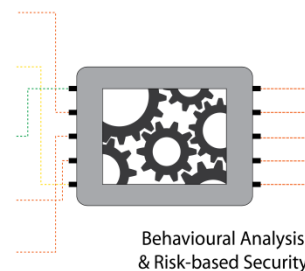
Intelligent Visual Surveillance



Wi-fi/Bluetooth Localisation



RFID Luggage Tracking



Behavioural Analysis & Risk-based Security

Separate Queues Mixed Queues



FLYSEC innovations

- Airport security continuum
 - Secure tunnels: end-to-end airport security
 - Dynamic passenger queue management
 - Intelligent Surveillance and Localisation: passengers, luggage
 - Human as a sensor with FRAPP
 - Passenger behaviour and innovative security checkpoint simulation
 - C2I FLYSEC Web Portal with embedded crowd & operations simulation capabilities
- Risk based security
 - Passenger behaviour analysis and profiling
 - Registered/frequent traveller programme
 - Data Protection & Ethics by Design
- “Security as a service”
 - Passenger experience and security not necessarily a trade-off model
 - Passenger Mobile app: optimising passenger time management in airport while enhancing/facilitating security
 - Improve passenger experience while increasing security check-points throughput



FLYSEC Timeline and Milestones

- “In Vitro” Validation System based on AIA “Eleftherios Venizelos” Satellite Terminal Model and Visualisation System (May 2016)



- Operational Test research test bed and Proof of Concept site: General Aviation Airfield Schönhagen (Feb 2017)



- FLYSEC System 2nd version, Athens Workshop, NCSR D Premises, July 2017
- Final Field Test LuxAirport, International Airport of Luxembourg (Feb 2018)



FLYSEC Final Dissemination Event

Place: Brussels

Date: 28 June 2018

Admission: By Invitation Only

Information & registration:

<http://www.flysec.info/home.html>



Integration & Validation Process

- Preparation of **FLYSEC Integration Concept**
- Complete **Integration Plan** based on the integration concept
- Establishing, configuring and operating **FLYSEC Integration Lab** for internal verification
- **Integration and testing** according to FLYSEC integration concept and appropriate test procedures
- **Docker based integration**
 - Package an application with all its dependencies into a standardized unit for software development (called a container)
 - Docker containers wrap up a piece of software in a complete filesystem that contains everything it needs to run: code, runtime, system tools, and system libraries – anything you can install on a server.
 - This guarantees that it will always run the same, regardless of the environment it is running in.
- **Validation** of the system compliance with security operational requirements in two field tests (Schönhausen & Lux Airports)



Validation

Αντίγραφο του PoCValidation_v4.xlsx [Μόνο για ανάγνωση] - Excel

Είσοδος

Κοινή χρήση

Αρχείο Κεντρική Εισαγωγή Διάταξη σελίδας Τύποι Δεδομένα Αναθεώρηση Προβολή Foxit PDF Πείτε μου τι θέλετε να κάνετε

No	use case	step	Component(s)	Description	Passenger and/or Security personnel Actions	QA Means of Verification	Control Center Actions	Status (V/X/partly)	Comments
Proof of Concept Validation									
Operational Use Cases - technical validation									
5	TV.1	1	(1) 1,2,1,2.2	ICTS TravelDoc / CPM readers	Scan passengers' documents and send data to back-end (ingestion server)	1) Passenger Scan Doc	1) Data entry to back-end 2) Date is displayed in admin portal		
6	TV.2		(1) 3	Mobile App	Mobile App retrieves the Boarding Pass information (destination, departure time, gate)	1) Passenger is using the Mobile App to see his Boarding Pass information	1) Data display in Mobile App		
7	TV.3		(1) 4, 21, 22	Mobile App / i-beacons	Mobile App sends passenger's localization data to the Management System: approximate location (beacons)	Passenger (logged to the app.) pass near a specific beacon.	1) Location and time data displayed in Admin Portal DM		
8	TV.4		(1) 6.1,6.2	Mobile App	Security personnel perform behavioural checks in passengers by using the Sec. Pers. portal mobile app	1) Security personnel update the behaviours indicators to a specific checked passenger by using the app. 2) Behavioural data is presented in the Fusion Center DB	1) Behavioural Data indicators are stored in the DB (accessible on request)		
9	TV.5		(1) 7	Fusion center	Fusion Center assigns for each passenger classify the passenger in a risk category (trusted, casual, enhanced security)	no action	1) passenger's classification is updated	1) passenger's classification is displayed in the Web Admin	
10	TV.6		(1) 8, 9, 13	Fusion center	Fusion Center assigns for each passenger a specific timeslot for the security control: the assignment is performed according to the departure time, gate, and anticipated congestion	1) Passenger see notification to go to the security control in the Mobile App.	1) Time to security check point displayed to mobile app		
11	TV.7		(1) 10	Fusion center/ SmartQ	The Management System send the security check point category and the assigned timeslot to the SmartQ System	no action	1) SmartQ database updated		

Use Case Validation | System Validation | User Validation - Evaluation



Thank you



- ✓ Faster check in
- ✓ Better security
- ✓ Ethical by design

