



**ENHANCING AVSEC
OPERATIONS EFFICIENCY**

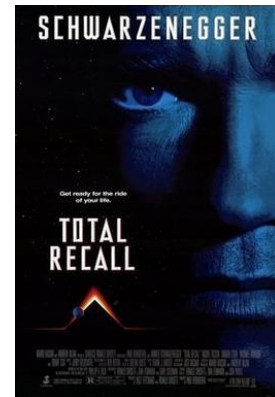
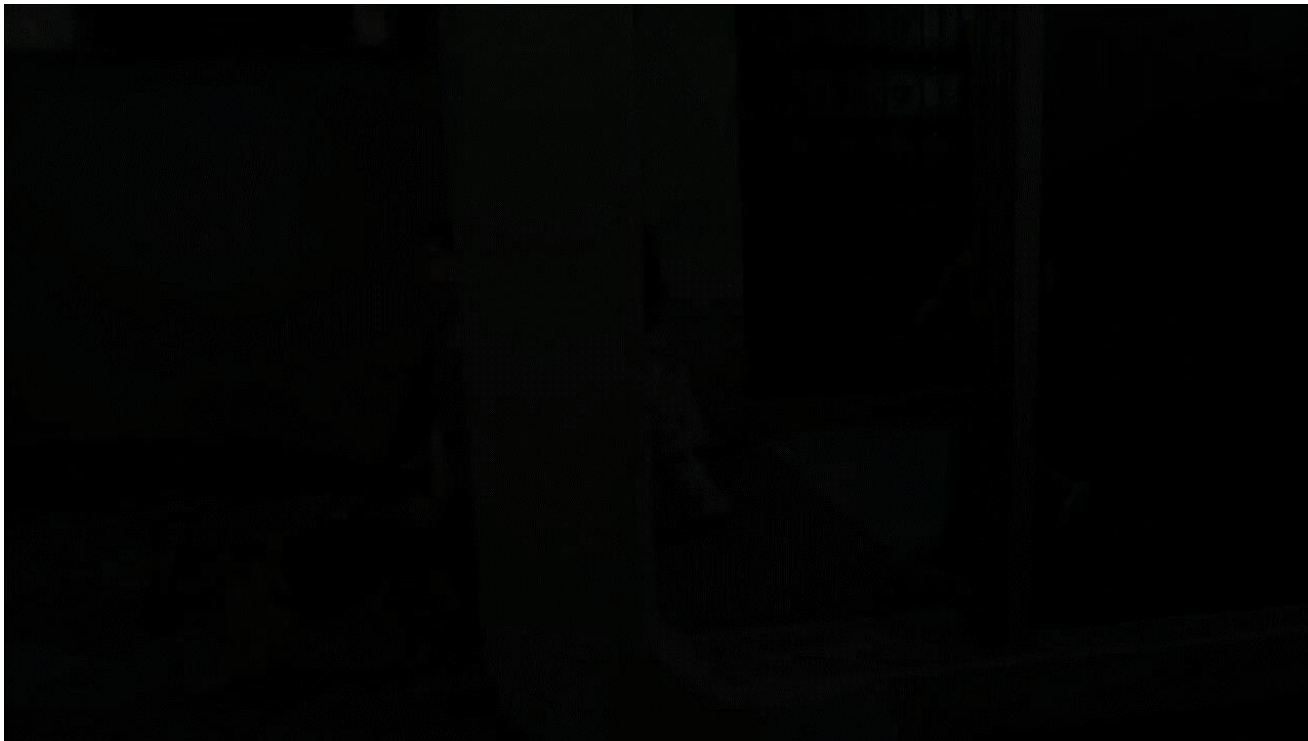
***BRINGING
INNOVATION INTO
OPERATION***

WAC | SEPT 9, 2026



THE FUTURE OF PASSENGER SCREENING -

WHAT WAS EXPECTED FOR THE YEAR 2084...



Source:
Total Recall (1990)

YEAR

2084

Can what recently seemed futuristic become reality?

THE FUTURE HAS ALREADY BECOME REALITY IN FRA

THANKS TO INNOVATION, INGENUITY AND COLLABORATION



360° WALK-THROUGH PASSENGER SCREENING

THE QPS WALK2000



NO STOP AND POSE ✓

- No difficult postures and halt
- Screening while walking at natural posture and speed
- Real-time, high-volume screening

INCREASES EFFICIENCY ✓

- Speeds screening and throughput to higher levels
- Eliminates need for removal of outerwear in future with “low divest”

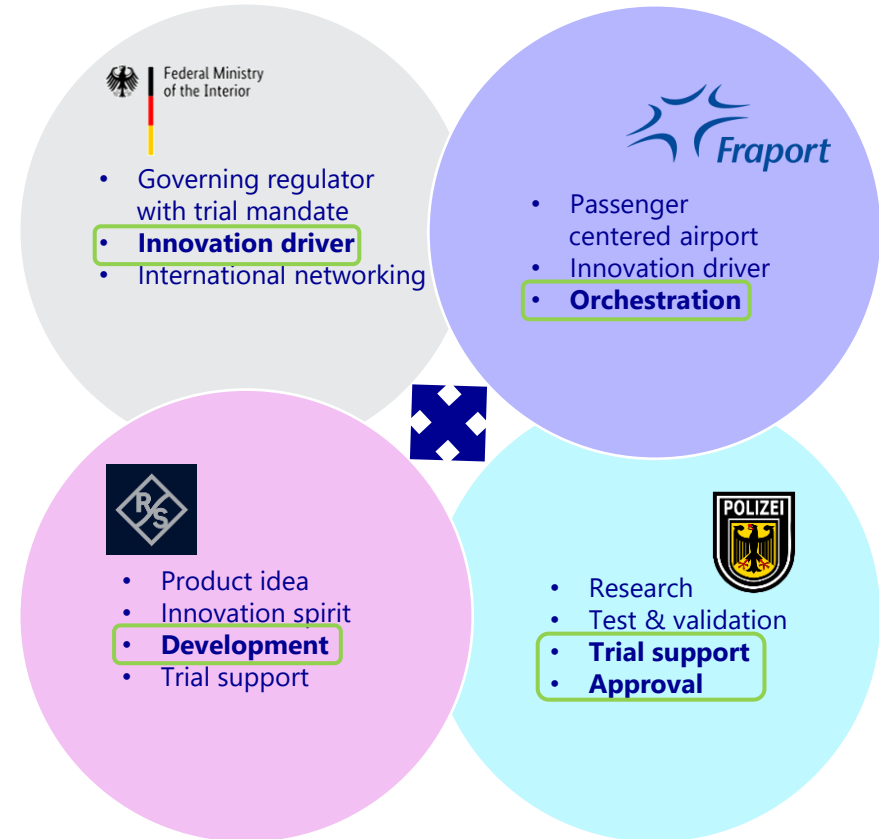
The ECAC CEP Management Group, reviewed and endorsed the test results, confirming that the tested SSC configuration¹ meet the ECAC/EU Standard 2.1² performance requirements.



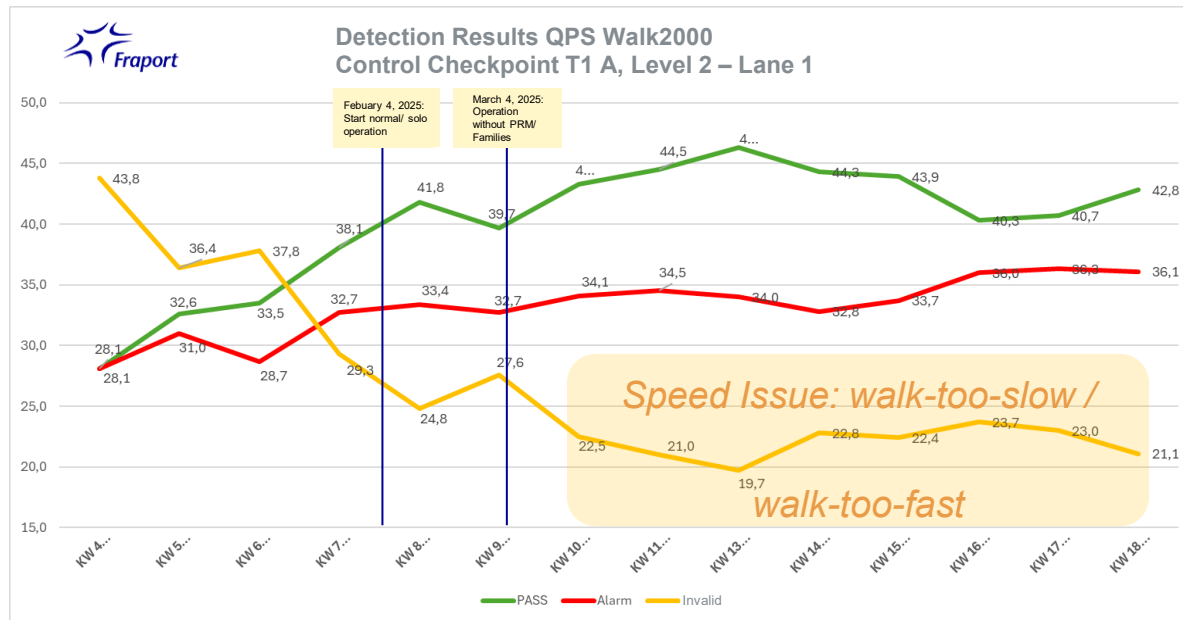
INNOVATION AS A STRONG JOINT EFFORT -

LONG WAY FROM IDEA VIA TESTING TO IMPROVEMENT AND CERTIFICATION

- For over a year, **Fraport, Rohde & Schwarz** and **German Federal Police** worked together intensively to test and evaluate the first version of the walk-through scanner.
- We continuously learned from **practical experience**, improved systems and tried new approaches - ensuring the scanner met the **highest standards of security, comfort and efficiency**.
- Close cooperation was **key for achieving certification** and **approval for day-to-day use**.
- A **successful PPP-partnership** enabled us to move from the pilot phase to Avsec-certification and full implementation, making **Frankfurt Airport** the **world's first** to regularly use this advanced technology for passenger screening.



FIRST RESULTS FROM TEST PHASE – UNSATISFACTORY AND SET THE SCENE FOR CHANGES



RESULTS NOT SATISFACTORY

- During silent trials, 20-40% of scans were **inadequate**, the main reason was **walk-too-fast**
 - persons are expected to walk in a **“natural way”**
 - walk should take **~4-5 steps** or **2–3 sec.** depending on body size
- 50-60%** of passengers needed **manual search** or even full pat down

MEASURES FOR IMPROVEMENT

- „Instructors”** were **essential** to guide passengers on walking speed and directly affect the pass rate.
- Visual aids** like stop lines, footprints and signs **helped improve result**. An animated instructional video was implemented as well.

FROM OPTIMIZATION TO BREAKTHROUGH

INTRODUCING QPS WALK2000 P2

1 OPTIMIZING



Requested optimizations

- Faster data acquisition
- Walking speed more “natural”
- Less motion blur
- Improve system usability

P2 makes the system easier and more natural to use

2 PROVING



Implemented improvements

- 1.4 m/sec top speed
- No more “walk too fast”!
- Pass-rate now up to 53 %
- LEDs and sound now default

Authority approval turns pilot into market ready product

3 SCALING

Photo: Frankfurter Allgemeine Zeitung
Rohde & Schwarz equips new Terminal 3 at Frankfurt Airport with security scanners

On April 22, 2020, Frankfurt Airport has opened its state-of-the-art Terminal 3, which aims to serve up to 10 million passengers per year with three boarding gates. To get the terminal ready for operation, new security lanes were also equipped with millimetre-wave scanners from Rohde & Schwarz. The decision to select the QPS201 and QPS Walk2000 models promises not only faster passenger flows but also the latest in both security and comfort.



Security scanners from Rohde & Schwarz are now also in use at Frankfurt airport, says Terminal 3. The new major airport section is one of the most advanced infrastructures in Europe. In addition to clear routing, digital services and improved public transport links, operator Frankfurt Airport is focused on the efficiency of security lanes. Rohde & Schwarz also provides comprehensive support in the use of the QPS201 security scanners and the QPS Walk2000 scanners in the terminal's security lanes.

Rollout at FRA-Terminal 1 and 3

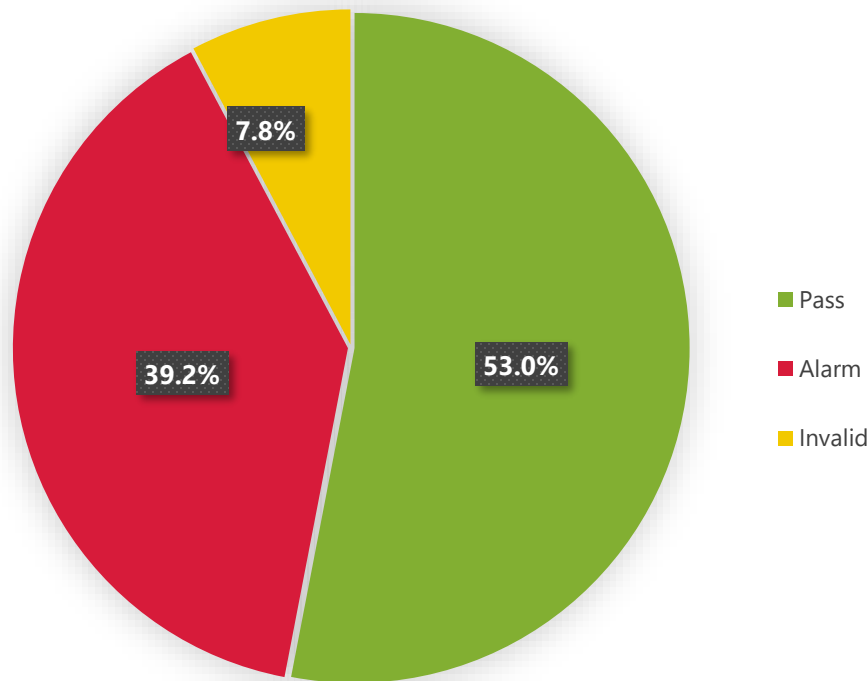
- 360° scanning live at FRA
- Rollout started with T3 opening
- Deployment in T1 coming up
- Very positive passenger feedback

World's First Airport to use Walk-Through scanning for passengers

LIVE OPERATIONS CONFIRM PROGRESS

RESULTS FROM FRA TERMINAL 3

Detection Results T3 QPS Walk2000 P2



PROGRESS ACHIEVED



- Data from **Live-Operations** show that the implemented **improvements** are **effective**
- Invalid scans have been **reduced substantially**, supporting a more **stable** and **passenger-friendly** screening process

NEXT STEPS



- Further optimization will focus on **improving** detection and alarm performance

KEY LEARNINGS –

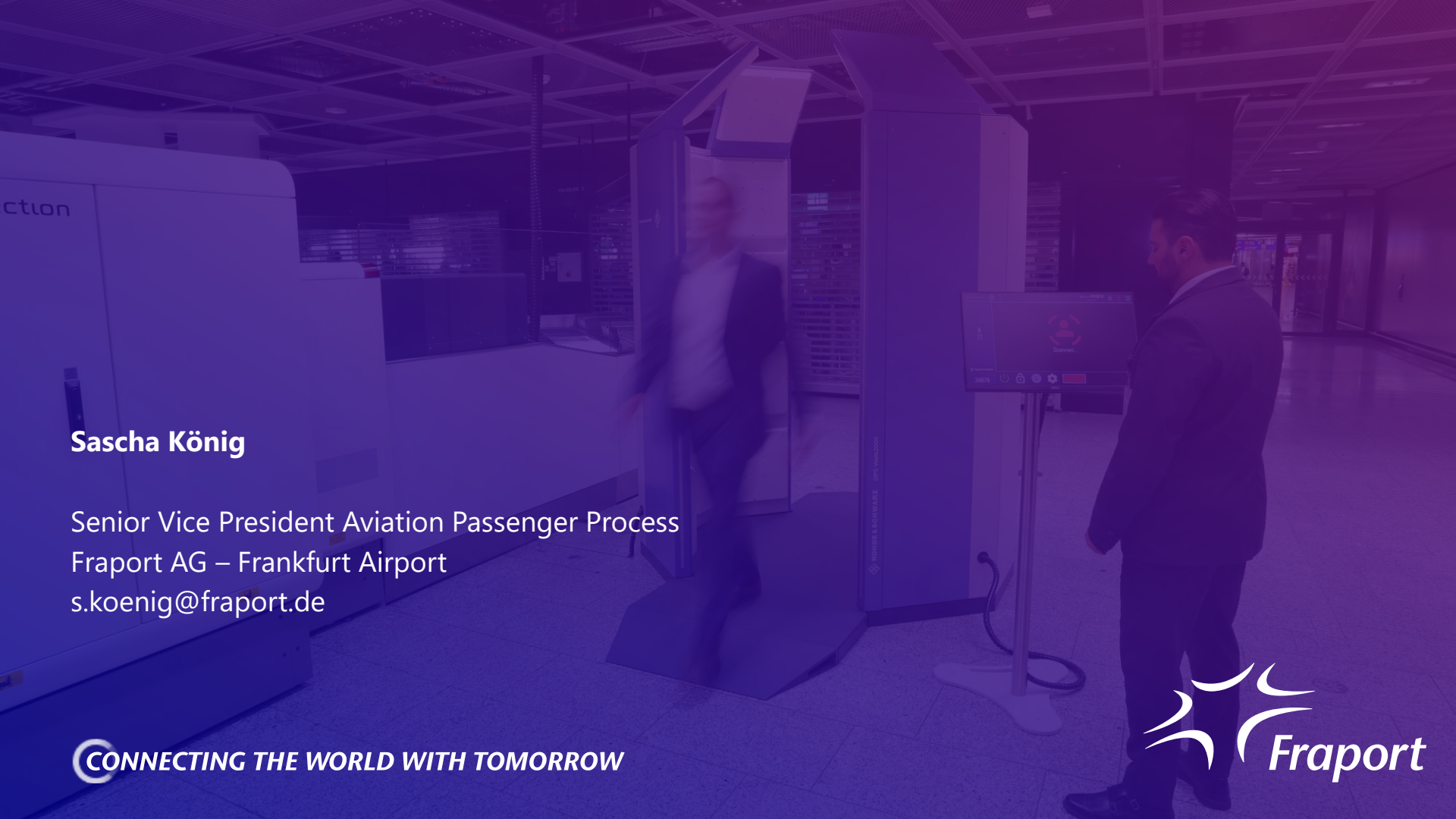
COOPERATION ACCELERATES AVSEC INNOVATION

- **Innovation spirit** creates joint vision and ambition
- **Collaboration** in PPP are key to bringing innovation to market
- **Lab to field** requires realistic ops environment for evaluation
- **Regulator support** plays key role in Avsec development
- **WIN – WIN – WIN relationship:**
 - **Airport** optimizes passenger journey, throughput and employee satisfaction
 - **Regulator** facilitates faster and more convenient security screening and raises level of aviation security
 - **Manufacturer** benefits in technology advancement and product differentiation
- **Next steps:** detection and usability ↑ plus alarm rate ↓



JOINT INITIATIVE WAS A SUCCESS

FRAPORT, ROHDE&SCHWARZ AND NATIONAL
AUTHORITIES CREATED THE WORLD'S FIRST
WALK-THROUGH SCANNER FOR PASSENGERS



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 **CONNECTING THE WORLD WITH TOMORROW**

 **Fraport**