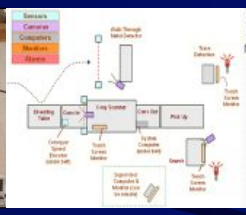
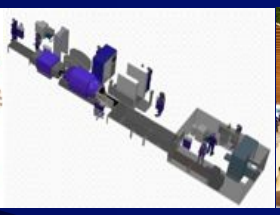
Historic and Recent Work on Checkpoint Technology Integration


Steve Wolff
President, Wolff Consulting Services

Co-founder, Association of Independent Aviation Security Professionals

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Consultancy services
- **Strategic marketing, business planning**
- **Industry introductions/ connections**
- **Product development / testing**
- **Simulation, modeling and optimization**
- **Marketing communications development**

Background
- **InVision Technologies Startup team**
- **30 years security systems development**
- **Team lead: IATA Checkpoint of the Future**
- **Aviation Security Int'l – Editorial board**
- **AIASP cofounder**

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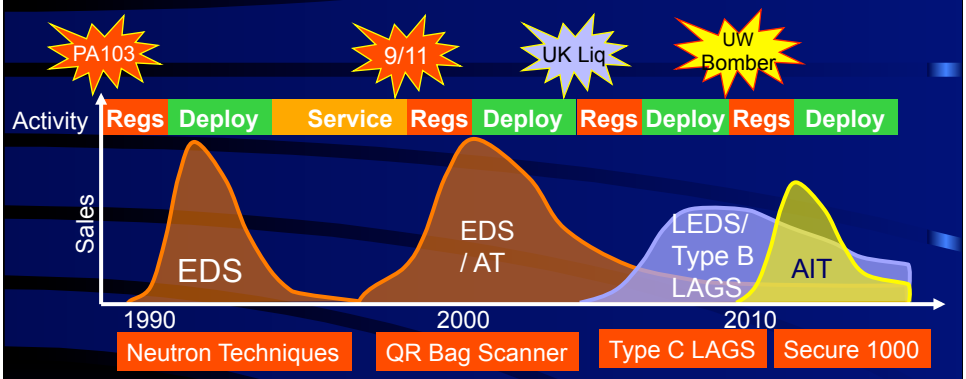
AVSEC History - Reacting To Events



- **Boom-bust cycle is unstable, unpredictable**
- **Market risk scares investors so Govt pays development**
- **Long development/ adoption cycles: 20+ years**
- **Extremely high performance needed**

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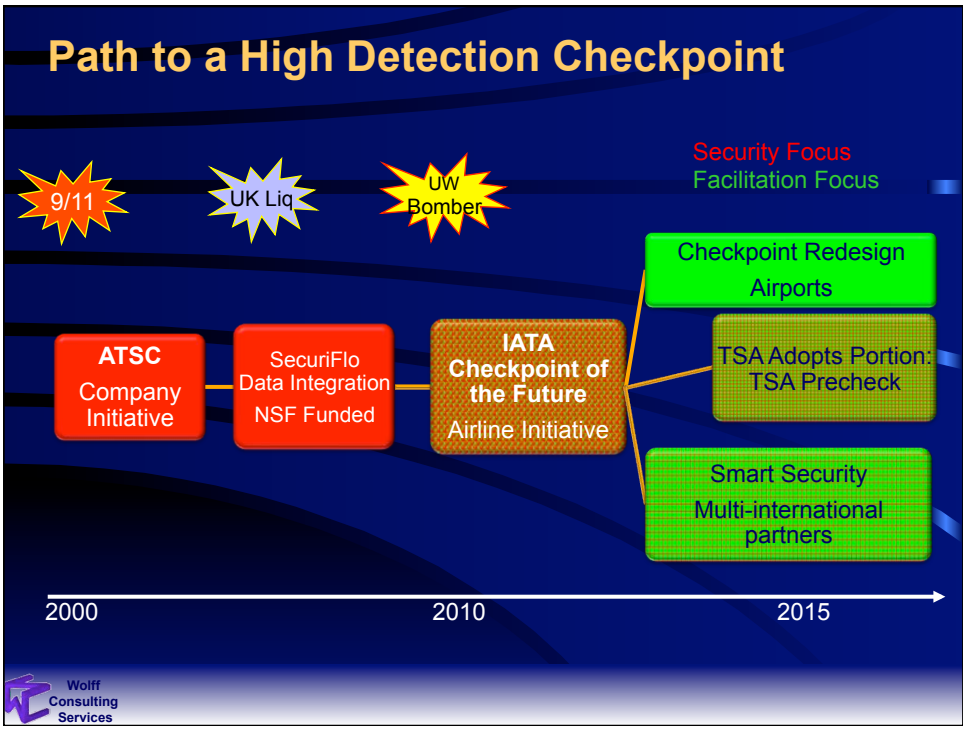
Path to a High Detection Checkpoint



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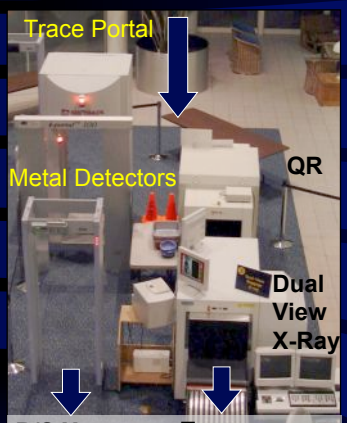
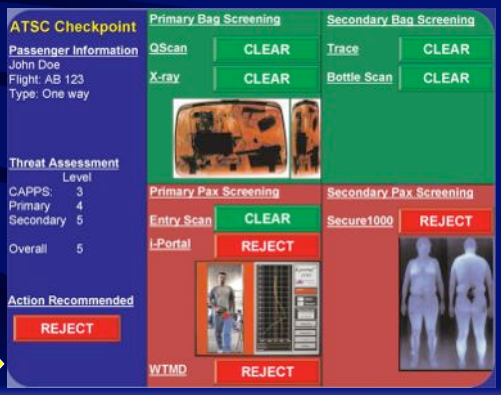
1) 2002: The ATSC



ALL DATA/ IMAGES

Advanced Technology Screening Checkpoint:

- 2002 Private Industry Initiative
- Complementary technologies
- Operational (MCO), detection trials (LLNL)



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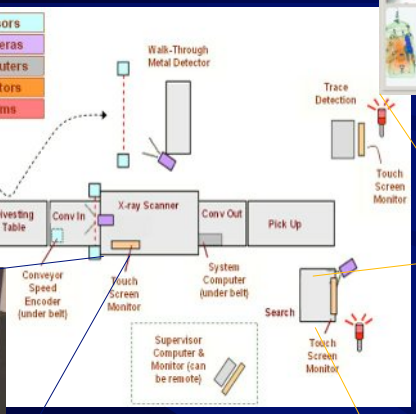
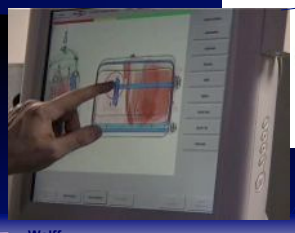
2) 2008: SecuriFlo Integrated Checkpoint

- Pax/ bag tracking, data integration
- But: used old checkpoint technology





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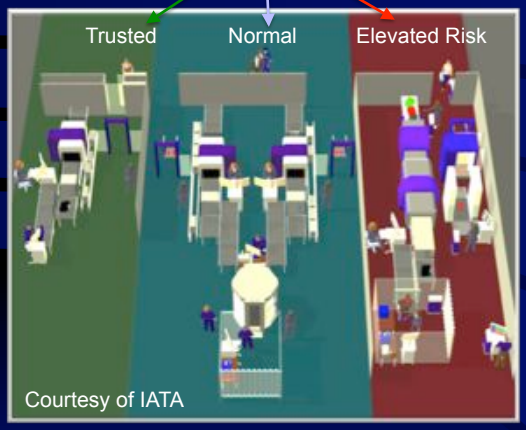
3) 2010/11: IATA Checkpoint of the Future

Passengers
sorted by risk category



Passengers Exit

Risk-Based Screening

- **Improved efficiency**
- **Better detection**
- **Less space**
- **Lower 5 yr costs**

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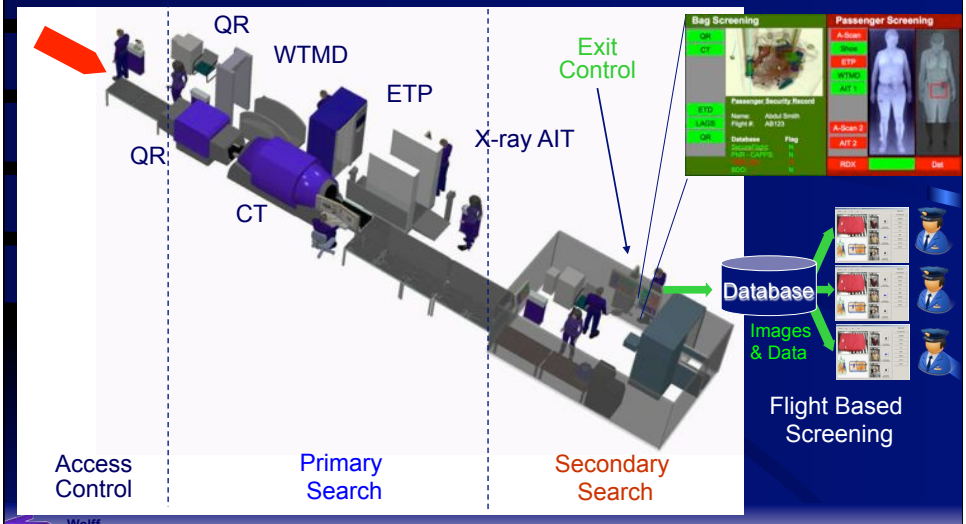
IATA: High Security Lane Concept

Thorough but polite screening of bags, passengers



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Detection Model Predictions

- **2011 Technology Performance Estimates**

Lane	Bags	Passengers	2003 ATSC (Actual)
High Security	85%	77%	78%
Normal	59%	40%	
2011 US lane	39%	30%	
2011 Eu lane	31%	17%	35%

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High Security Lane Technology Options

- **New technology available today = better detection**

	ATSC Post 9-11	2010	2015+
Primary Search	**B: QScan 2000S** **B: Rapiscan 520DV** **P: EntryScan 3** **P: i-Portal-100** **P: CEIA WTMD** **P: Secure 1000**	**B: QR+ AT +** **B: QR + CT** **P: Gen 2 ETP** **P: Active mmW** **P: B/S X-ray** **P: Zonal WTMD** **P: Shoe Scanner**	**B: LAG (type C, D+)** **B: XRD, CT** **P: QR Portal** **P: Active mmWave** **P: Limited TR+B/S X-ray** **P: Zonal WTMD**
Secondary Search	**B: LiquiScan** **B: BCT 2000** **B: EDT**	**B: LAG (Type B)** **B: EDT** **P: Active mmW** **P: B/S X-ray** **P: Full TR X-ray** **B: Neutron (TNA)** **P: QR Wand[1]**	**B: LAG (Type B)** **B: EDT** **P: Full TR X-ray** **B: Neutron (TNA, FNA)** **P: QR Wand[1]**

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Checkpoint of the Future Knock-on effects

- Congress, Administration briefings
- IATA, ICAO, TSA, ACI embrace RBS
- TSA adopts PreCheck
- 2 IATA reports
- Design method applied to 2 airports
- IATA + ACI cooperation / trials

✗ ✔ ✔

But….

- ➢No High Security Lane
- ➢Vulnerabilities remain

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Schiphol, Others – Improving Facilitation

- Faster processing
- Improve environment
- Exploring new scanners

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4. Where Might This Be Heading?

- IATA etc. vision: “invisible”, non-invasive security
- Long-term vision: technology needed!

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Are There Other Approaches?

Can we achieve security that is

- Mobile
- Decentralized
- Multi-layered:
  - Screening
  - Behavior detection
  - Document screening
  - 2 way passenger-screener dialog
  - CCTV/ face recognition

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Mobile Security Beyond Checkpoints

A/V Robot

Short range Detectors

Scanners

WiFi/ VPN

Remotely staffed capable of

- Audio visual dialog + BDO +face recognition
- Mobile detection
- Document/ biometrics readers

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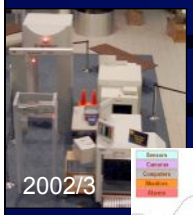
Summary



- High security demonstrated in 2003
- Risk-based sortation proven
- Improving passenger facilitation
- Efficiency but vulnerabilities remain
- Future: different approaches?

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Thank You

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