

EADS Innovation Works



Workshop „Security of Mass Transportation“

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1. Mitigating High Consequence Risks
2. Leading Information Assurance
3. Advancing the Security Baseline
4. Building Security Force Multipliers
5. Expanding Partnerships for Security Enhancement

1. Mitigating High Consequence Risks

High Consequence Risks:

- Underwater and underground infrastructure;
- others unspecified

Measures:

- deter and prevent attacks (visible deterrence)
- New methods for robust detection
- blast mitigation (resilience of structures)
- emergency response (secure communication, fast, mobile medical care)

2. Leading Information Assurance

Enable immediate communication of time-sensitive classified threat information:

- alert and e-mail notification system
- secure video conferencing system

Building Security Force Multipliers

Well trained employees are a security force multiplier for security efforts implemented by transit agencies

Visible Intermodal Protection and Response (VIPR) teams

- Federal Air Marshals
- Explosive detection canine teams
- Aviation Security Inspectors
- Transportation Security Officers

3. Advancing the Security Baseline

Protection of high risk underwater/underground assets and systems
→ CBRNE & weapon detection

Other high risk assets identified through system-wide assessments
→ Focus countermeasure resources on highest risk, highest consequence assets;
→ Reduce burden on security manpower
 → Smart CCTV systems in remote locations
→ Segregate critical security infrastructure from public access
 → Intrusion detection systems

Use of visible, unpredictable deterrence:
→ Understanding terrorist behavior patterns
→ Explosives detection canine teams
→ Mobile screening or detection equipment

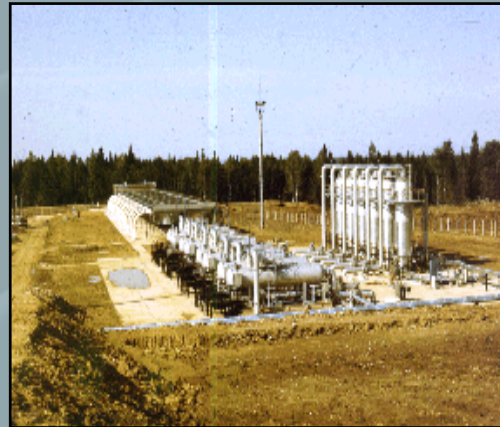
Targeted counter terrorist training for key frontline staff

Emergency preparedness drills and exercises

Public awareness and preparedness campaigns.



3. Advancing the Security Baseline From Space to...



3. Advancing the Security Baseline

...early fire detection in Stockholm subway

Expand functionality to CBE security threats



2001

- EADS RST and Firefly signed a contract of cooperation for advanced development of the “electronic nose“ to an early fire detector for the use in public transport tunnels and stations.

2001 till 2007

- Intensive testing and verification of electronic nose technology under realistic conditions in Stockholm

2008 subway.

- Stockholm subway places order for fire detection system based on EADS RST supplied SamDetect FF2 detectors.
- The order covers the equipment of 56 stations and 60 kilometres of tunnels.
- EADS and Firefly create first state of the art reference system worldwide.

3. Advancing the Security Baseline Different Scales of Video-Surveillance

- Persistent trend towards automated functions in video-surveillance
- Still existing need for more robust and stable system solutions
- Required approach is highly dependant on operational scenarios
 - Supervised / quasi-protected area (parts of airport)
 - Freely accessible areas (railway station / subway stations)
 - Scale of surveillance (individuals vs. crowds)

3. Advancing the Security Baseline

Different Scales – Different Boundary Conditions



Surveillance
of individuals



Surveillance
of crowds

Differences mainly due to:

- Available time for tracing and detecting
- Different magnitudes of person-/ crowd-flows
- Required computational resources for automation

3. Advancing the Security Baseline

Different Scales – Different Boundary Conditions

Problems and questions arising due to the dissimination of automated video surveillance functions:

- technological reliability
- certification
- social acceptance
- protection of personal rights
- preventive application
- forensic usability



BKA Research Project „Foto Fahndung“

Need for detailed and comprehensive investigation and R&T effort for both, technological and socio-economical challenges

3. Advancing the Security Baseline Different Scales – Different Boundaries



Mobile Systems for Security



TransHospital

- Mobile medical care system for different treatment levels



Mobile CT

- Mobile Computer Tomography
- Autopsy capability



Decontamination

- Decontamination of personnel in disaster areas



C2 Center

- Shelterized fully autarkic C2 center for security missions

"Are we able to make these systems available ?"

Main Findings

- Focus on **High risk, High consequence**
 - Develop **New, robust technologies**:
 - Smart CCTV systems in remote locations
 - Hazardous materials / CBE detection networks
 - Resilience of structures
 - Use of visible, **unpredictable deterrence** in crowded areas
 - Security manpower, canine explosive detection teams
 - Mobile explosive detection & screening
 - Develop **emergency processes**
 - Awareness and preparedness of security stakeholders
 - Secure communication networks
 - Mobile emergency response, hospitals...
- New Requirements for open systems: Need for **NEW Technologies & Networking Means**. Program shouldn't be only about Scenarios!
- Business case for industry depending on regulations and/or **"Convergence" !**