Impact of a new technique such as Behavior Detection on human factors in security operations

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IMPACT OF A NEW TECHNIQUE ON HUMAN FACTORS

Introducing new techniques / technologies in aviation security:

- Not a guarantee for an increased performance
- Arouses new expectations from the operators
- Impact on Human Factors

The introduction of Behavior Detection in France is one example.
BEHAVIOR DETECTION

Doc 8973 - 11.3.6
Assessing threat posed by persons through behavioural detection

• Risk-based approach to aviation security
• Identify persons who may pose a threat
  ➔ Additional security measures
• Recognition of behavioural characteristics
• Can be applied to the general public, passengers and other
BEHAVIOR DETECTION IN FRANCE

- 2009: Pilot project at Paris - Charles de Gaulle Airport
- 2011: extension to Paris - Orly Airport
- Based on the TSA BD Programme: SPOT
- Objective: to adapt SPOT in a different culture and organisation
- Complementary measure at the checkpoint
BEHAVIOR DETECTION AND HUMAN FACTORS

Two major considerations:

1. Designing a new set of tasks, with dedicated staff:
   ➔ An opportunity to reconsider Human Factors good practices

2. Behavior Detection relies 100% on the human competency:
   Raises the question of efficiency and reliability
   ➔ Need of careful thinking on:
     • the staffing
     • overseeing of activities
     • performance evaluation
BEHAVIOR DETECTION AND HUMAN FACTORS

1. Consideration given to Human Factors good practices
   - Interest in the task
   - Responsability, autonomy
   - Professionnal reward
   - Work identity
   - Perception of control by passengers
   - Change in role
   - Team work
   - Feed-back activities

Further investigations:
- Fatigue management
- Monotony
BEHAVIOR DETECTION AND HUMAN FACTORS

2. Technique relying 100% on the human competency
- Observation, decision making, investigation:
  ➔ What to observe? How to decide?
- Human factor: strength or weakness?
  ➔ What can be observed, what human limitations?

Two axes for answers:
- Grounded premises: provide a framework
  ➔ Validity of the disposal
    Ex. « Terrorists don’t fear to die but to fail their mission »
- Thorough work on the professionnalisation and the implementation conditions
  ➔ Selection, training, monitoring, decision-support tools

Further investigations:
What measurement of performance?
BEHAVIOR DETECTION AND HUMAN FACTORS

Key factors for success:

• Rely on academic studies
• Ensure close follow-up of the operations

➡ Support the construction of this new activity