



Keeping Passengers Safe

Biometrics for Transportation

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Biometrics For Transportation

Hype versus Reality

- Infrastructure Vulnerabilities
- Biometrics Solutions
- Case Studies
- Biometrics For Transportation: Today
- Biometrics For Transportation: The Near Future
- Conclusions

Infrastructure Vulnerabilities

Air, Truck, Rail, Maritime

“Front End”

- ☞ Public Facility
- ☞ Passengers
- ☞ Baggage
- ☞ Employees
 - Crew, Airport

Most Attention

“Back End”

- ☞ Restricted Access
- ☞ Cargo
 - Shippers, Carriers
- ☞ Outside Suppliers
 - Food, Fuel, Maintenance, etc.

Biggest Threat

Biometrics Solutions: Travel & Transportation

Urgency of Solution
● Very High
● High
● Medium
● Low

Physical Access

employee, crew, suppliers

Logical Access

Secure Data
personal, corporate, public

Financial Transactions
purchase tickets

Identity Confirmation

passport, trusted traveler

Time & Attendance

Surveillance

public, private

	Air	Rail	Maritime	Truck	Bus	Auto	Travel Services
Physical Access	●	●	●	●	●	●	●
Logical Access	●	●	●	●	●	●	●
Financial Transactions	●	●	●	●	●	●	●
Identity Confirmation	●	●	●	●	●	●	●
Time & Attendance	●	●	●	●	●	●	●
Surveillance	●	●	●	●	●	●	●
	●	●	●	●	●	●	●

Biometrics Solutions: Travel

Facilities – Airport, Seaport, Train Stations, Bus Terminals, Auto Rentals, Border Crossings

Vehicles – Airplanes, Ships, Railroads, Buses, Rental Cars

Urgency of Solution		Facility Perimeter	Facility Public Access	Facility Private Access	Vehicle	Passengers	Facility Employees	Crew	Outside Suppliers	Baggage	Cargo & Mail	Transport Employees	Travel Services
Physical Access employee, crew, suppliers		●	●	●		●	●	●	●	●	●	●	-
Logical Access Secure Data personal, corporate, public		-	-	-	●	●	●	●	-	●	●	●	●
Financial Transactions reservations, ticketing		-	-	-	●	●	●	●	-	●	●	●	●
Identity Confirmation passport, trusted traveler		-	-	-	●	●	●	●	-	●	●	●	●
Time & Attendance		-	-	-	●	●	●	●	-	-	●	●	●
Surveillance public, private		-	-	-	-	●	-	●	-	-	●	●	●
		●	●	●	●	●	●	●	●	●	●	●	●

Biometrics Solutions: Cargo

Facilities – Airport, Seaport, Docks, Rail Yards, Warehouses, Border Crossings

Vehicles – Airplanes, Ships, Railcars, Trucks

Urgency of Solution
● Very High
● High
● Medium
● Low

Physical Access
employee, crew, suppliers

Logical Access
Secure Data
personal, corporate, public

Financial Transactions
reservations, ticketing

Identity Confirmation
passport, trusted traveler

Time & Attendance

Surveillance
public, private

	Facility Management Company	Facility Perimeter	Facility Public Access	Facility Private Access	Facility Employees	Transportation Companies	Transportation Workers	Vehicles	Cargo – Containers, Trailers, etc.	Contractors & Outside Suppliers
Physical Access	● High	● Very High	● Medium	● Very High	● Very High	● Very High	● Very High	● Very High	● Very High	● Very High
Logical Access	● Very High	-	-	-	● High	● High	● High	-	-	● High
Financial Transactions	● High	-	-	-	● Low	● High	-	-	-	● Medium
Identity Confirmation	-	-	-	-	● Very High	-	● Very High	-	-	● Very High
Time & Attendance	-	-	-	-	● Very High	-	● Very High	-	-	● Very High
Surveillance	-	-	-	-	● Medium	-	● Medium	-	-	● Medium
	● Very High	● Very High	● Very High	● Very High	● Very High	● Very High	● Very High	● Very High	● Very High	● Very High

Case Studies

Organization/Location	Application	Biometric	Status
Ben Gurion Airport	Identity Confirmation - Immigration Trusted Traveler	Hand	Deployed F
Schiphol Airport	Identity Confirmation - Immigration Trusted Traveler	Iris	Deployed F
St. Petersburg - Clearwater Airport	Cooperative Surveillance	Face	Deployed F
O'Hare Airport & ATA	Logical Access - Electronic Supply Chain Manifest	Finger	Testing B
Union Pacific Railroad	Logical Access - Rail Car release	Voice	Deployed B
Canadian National Railways	Physical Access - Outside Suppliers	Finger	Deployed B
Rotterdam Seaport	Physical Access - Outside Suppliers	Hand	Deployed B
Schiphol Airport	Physical Access - Employees	Iris	Planned F/B
DOTs TWIC	Employee Physical Access	Finger & Face	Planning F/B
IATA, Visa,	Identity Confirmation - Immigration Trusted Traveler	Considering	Concept F

Biometrics & Transportation: Today

- ☞ Focus on “Front End” in Airports
- ☞ Tests & Pilots for Large Scale “Back End”
- ☞ Small Closed Loop Applications
 - Well constrained
 - Less than 50,000 users
- ☞ Government Projects Slow Going
- ☞ No Action on Travel Services

Biometrics & Transportation: The Near Future

- ☞ Highly Integrated Systems
- ☞ Ubiquitous Use of Biometrics
- ☞ Legislative & Regulatory Control to Protect Privacy
- ☞ Projects: TSA, Silicon Valley Blue Ribbon Panel. IATA
- ☞ Focus on End-to-End Transportation
 - Across all Modes of Transport - Air, Land, Maritime
 - Expedite Passengers & High Security
 - Origin to Destination Monitoring of Cargo

Conclusions

- ☛ Re-architecting of Public Transportation Spaces for High Security is a BIG PROBLEM
- ☛ Industry Not Waiting For – And in Some Cases Pushing - Government
- ☛ Incremental Steps To Solve Specific Problems Then Large-Scale Integrated Systems
- ☛ Operational Efficiency & Process Improvement Drive Adoption
- ☛ 3 –5 Year Before Biometrics Are Ubiquitous



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