Smart Airports
Discussion Outline

- OST Background
- The Complex Aspect of Civil Aviation
- Smart Airport Eco-System
- Our Value Proposition
- Conclusion
Who We Are

WHO WE SERVE
80% Federal Government
20% State and Local Government

TOP SECRET
Facility Clearance

CERTIFICATIONS & APPRAISALS
CMMI Level 5 | CMMI Service Level 3
ITIL V3-1 | SAFe/Agile/DevSecOps | AWS Cloud
ISO:9001:2008 | ISO standards 27001, 20000, 10002

OUR KEY CUSTOMERS
- Federal – Army, Air Force, Navy, FAA, FEMA, FTA, DOE, IRS,
- State & Local: DC, MD, VA, PA

CENTER OF ENGINEERING & INNOVATION
- Cyber and Smart Initiatives
- Engineering Complex Solutions
- Disruptive Transformation & Innovation

Supporting Federal, State, Local

AI/Machine Learning
Data Fusion, Correlation & Visualization
Anomaly Detection
Cyber Security
Asset/Resource Management
OST’s Key Presence

OST brings over 19 years of DOT and FAA experience with in-depth knowledge of their programs, requirements and procedures

☑ 125+ FAA contracts (task orders)
☑ Shared Services for the CIO’s Office supporting 50+ Mission Critical Systems, Maintaining & Transitioning Data Centers
☑ IMS/Budget Support to NextGen Office (ANG)
☑ Supporting the Enterprise Network Operations (ENOCC) & Cyber Security
☑ FAA Asset Management (Real & Personal property - $9+ Billion)
☑ Engineering Services to support the NAS including Spectrum Management, VOR/MON, DME/DME, etc.
☑ Financial & Capitalization Support Services
☑ Airports Subsidies and Grants process

Over a decade of DHS experience (FEMA, CBP, IECRS)

☑ FEMA – Disaster Management, Risk Mitigation, Cyber Security, IT Solutions, Legacy Modernization
☑ CBP – Network modernization efforts to provide secured and un-secured network segmentations.
☑ IECRS - Architected IECRS Infrastructure for Public Agencies world-wide (911, NG911, NENA).

10 Years experience in Private Financing / Public Private Partnership (P3/P4)

☑ Working closely with financial partners to determine the feasibility and structure for P3 initiatives
☑ Bring unique combination of innovative technology and financial solutions
☑ Provide solution with best value proposition to the Customer - for the Customer
The Complex Aspects of Civil Aviation

- International Competitors
- Cyber Security
- Congested Skies
- Growth & Innovations
- Skilled Workforce
- CO2 Emissions
- Protecting Passenger Rights
- Drones
- Airlines
- Social Dialogue
- Passengers
- Maintaining High Safety Standards
Aviation Facts…
A need for smarter airports

Passenger traffic growth 2015-2040
(Compounded Annual Growth Rate)

Global forecast CAGR-4.3%

Passenger traffic to double to over 14 billion by 2029

International passenger traffic
will surpass domestic traffic after 2028 Passenger Billions

Future growth in air passenger traffic
will originate from emerging markets

Emerging
62%
2040
50%
2024
44%
2015

Advanced
38%
2040
50%
2024
56%
2015

Long-term cargo and movement growth
(CAGR 2015-2040)

Total Air Cargo 2.3%
Total Aircraft Movements 2.5%
Smart Airport Ecosystem
Airlines, Airports, Cargo & Passengers

Environmental Sustainability
- LED Lighting
- Smart Poles
- Green Buildings
- Sensors: Air, Noise, Video, Light monitoring

Safety & Security
- Video/Scene Analytics
- Smart Resiliency planning
- Flood Abatement
- Smart Health Services

Operational Optimization
- Smart Parking
- Advanced Network architecture
- Personalized Wayfinding
- Central operations management platform

Financing Solutions
- Up to 100% of capital investment
- Assist in obtaining International, Federal & State grants
- Reduce expenses
- Revenue generation
Features and benefits

- Smart Poles with Integrated Solutions
- Smart LED Lighting & Wi-Fi / Li-Fi
- Renewable Energy – EV, Solar, WTE, CoGen Plants, etc.
- LEED Certified – Centralized HVAC/Chillers, Glass Panels,
- Intelligent Transportation Management System
Safety & Security

Features and benefits

- **Reactive, Proactive, Predictive, Preventive**
- Better emergency preparedness (Faster response)
- Automated Inspections – Aircraft, Terminal, Runway,
- Integrated Cyber and physical security solutions
- Video Analytics (AI/ML)
  - Static object detection, Suspicious packages, etc.
  - Machine learning based analytics
  - Foot traffic analysis
  - Queue detection
  - Facial recognition
  - Traffic monitoring
  - Incident analysis
  - Vehicle counting
  - License plate readers
Operational Optimization

Features and benefits

- Horizontal IoT platform
- Critical infrastructure monitoring and control
- Real time reporting and analytics
- Improved decision maker response time
Unified Platform for Smart Airport
(Advanced Analytics - Monitoring and Controlling)

Presentation Layer

- **Real Time Control Panel**
- **Datawarehouse / BI Tool**
- **Rules Service**
- **Custom Dashboards**
- **Asset Monitoring**
- **Open Data**

Cloud Layer

(Structured, Un-structured and Semi-Structured Data)

**IoT Platform**
(Advanced Analytics, Artificial Intelligence & Machine Learning)

Integration Layer

- **Subsystem**

Legacy & Modern Systems

- Airlines
- Cyber
- Drones Inspection
- Incidents Reporting
- Passengers
- Environmental
- Flood
Our Value Proposition

Centre of Excellence & Innovation
- Collaboration with HEIs (HBCU’s, AAU & APLU)
- Partnership with leading global non-profit organizations
- Capabilities:
  - Artificial Intelligence
  - Machine Learning
  - Smart Infrastructure
  - Aviation (CDRA with FAA)

Team of established vendors
- Covering Technical, Engineering, Financial, Advisory, Socio-Economic, & Educational domains

Private Investment
- Up to 100% Capital Investment (5 to 30 years)
- Reduced expenses and new revenue generation
- Billions already committed for Smart Infrastructure Projects

Uses service model
- “Solution as a Service”
- No cost technology upgrades
- Increased quality of service to citizens

Leverage Federal Grants & Subsidies
- Assist in obtaining Federal grants and subsidies from federal agencies - DOT, DOE, EPA, DHS, etc.
Thank You

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