



Network-Enabled Air Portal Information Service

Prepared for the 7th ICNS Conference
May 2, 2007

By
Christopher Smith, Sensis Corporation

Overview

- What Is It?
 - Sensis' Understanding And Concept Interpretation Of A Framework To Support Secure Information Sharing
 - Supports Airport, Airline, ANSP, And Stakeholders Within An Airport-Metroplex
- Why Do It?
 - Experiment and Evaluate The Feasibility And Challenges of Information Flow
- When And How?
 - Sensis' Has Deployed The Information Services As A Part Of The Distributed NextGen CNS Test Bed At CLE

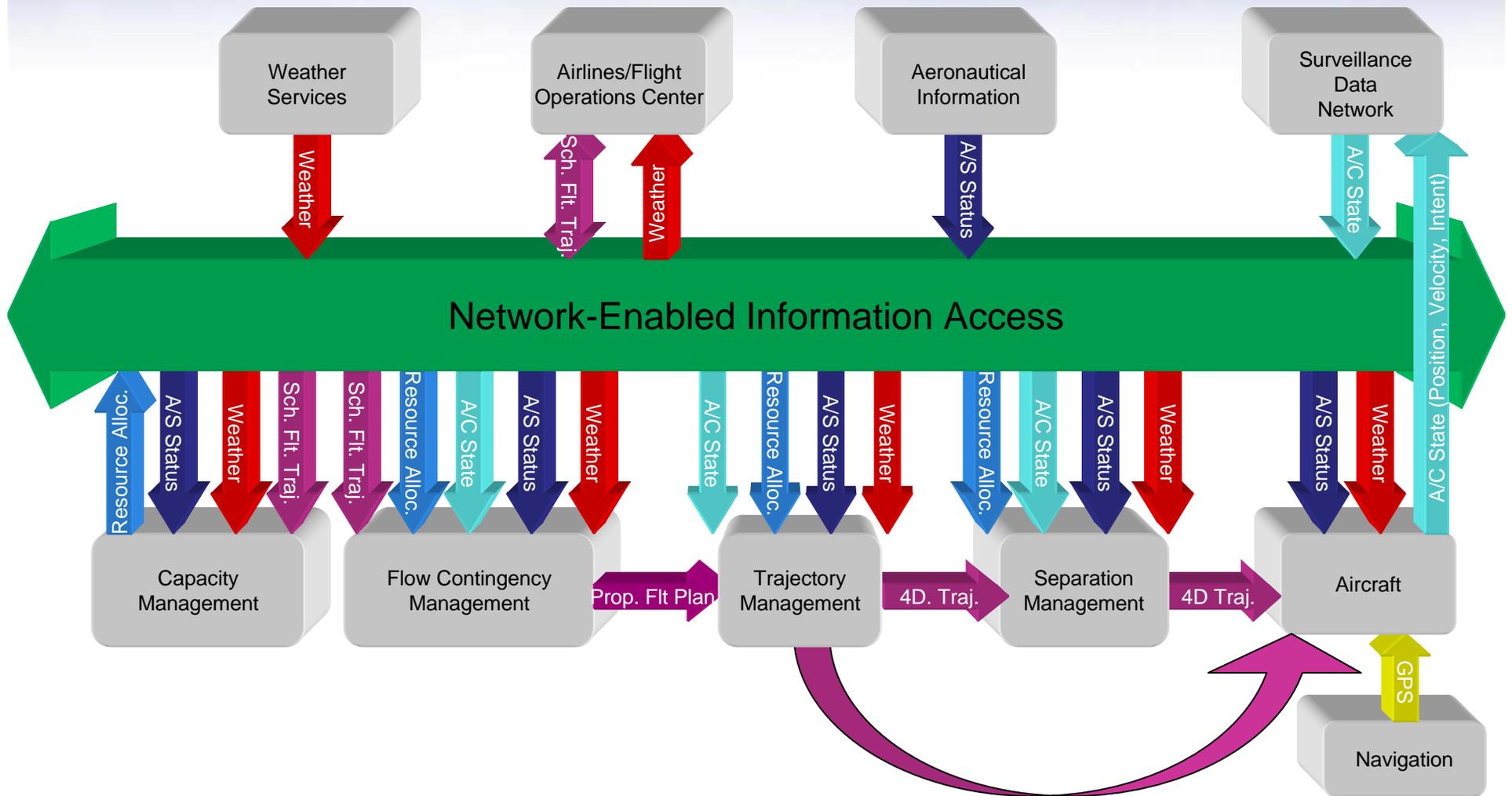
Concept Definitions

- Network-Enabled
 - Provide Transparent, Seamless Access To Content From Across Limitless Domains Securely, Quickly, And Reliably
- Airport-Metroplex (Air Portal)
 - Summation Of Stakeholders And Their Surrounding Airspace Necessary To Deliver Planes From The Top Of Decent To The Gate And Back
- Information
 - Data Necessary To Effectively And Efficiently Enable CDM
- Service
 - Provides A Secure Open-standard, Flexible, And Scalable Infrastructure
 - Provides Standards-based Messaging, Mediation, And Security Services
 - Includes Registration, Discovery, Publication, And Subscription Of Information Via Role-based Access Control (RBAC)

Network-Enabled Information Sharing

- Enables Collaboration In A Seamless Secure Information Infrastructure
- Provides Open Standards That Allow Interoperability Across Domains
- Enables Secure Discovery And Collaborative Use Of Information For The Purpose Of Effective And Efficient Operation

ATM Information Flow



Concept Objective Overview

- Establish A CNS Research Center For Development, Integration & Experimentation
- Establish A Framework That Provides Secure Information, Identity, Access, And Broker Services
- Provide A Framework That Eliminates
 - "Stovepipe" Operations
 - Inability To Collaborate
 - Lack Of Standards
- Framework Validation

CNS Research Center

National Test Bed for Next Generation Air Transportation System

Lorain County Regional Airport (LPR)
• No Tower
• General Aviation Activity



NASA Glenn Research Center



Cleveland Hopkins International Airport (CLE)
• Continental Airline Hub
• Commercial Airline Activity

Downtown Cleveland

BKL



Burke Lakefront Airport (BKL)

- Contract Tower
- Business Jet Activity

LPR

CLE

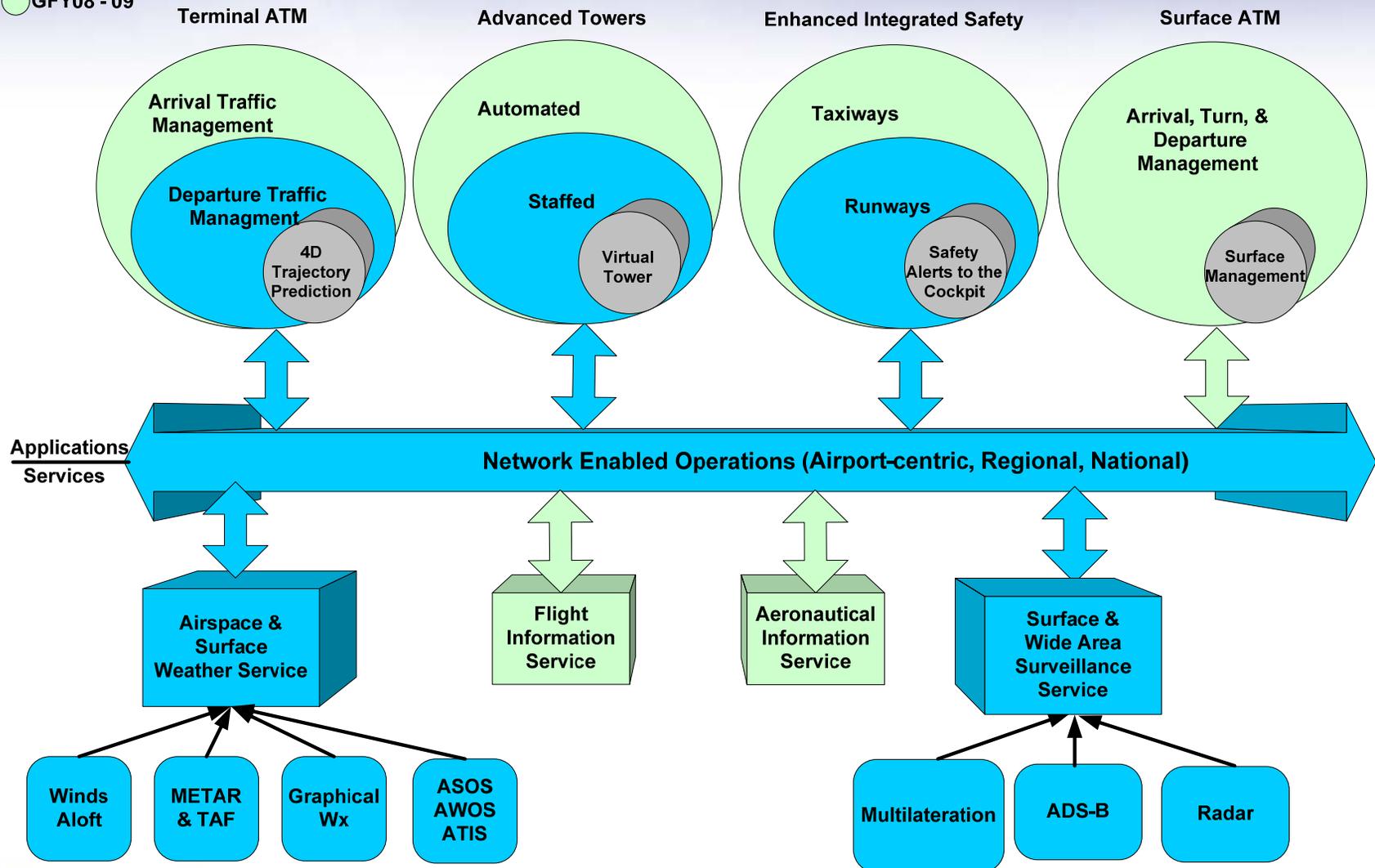
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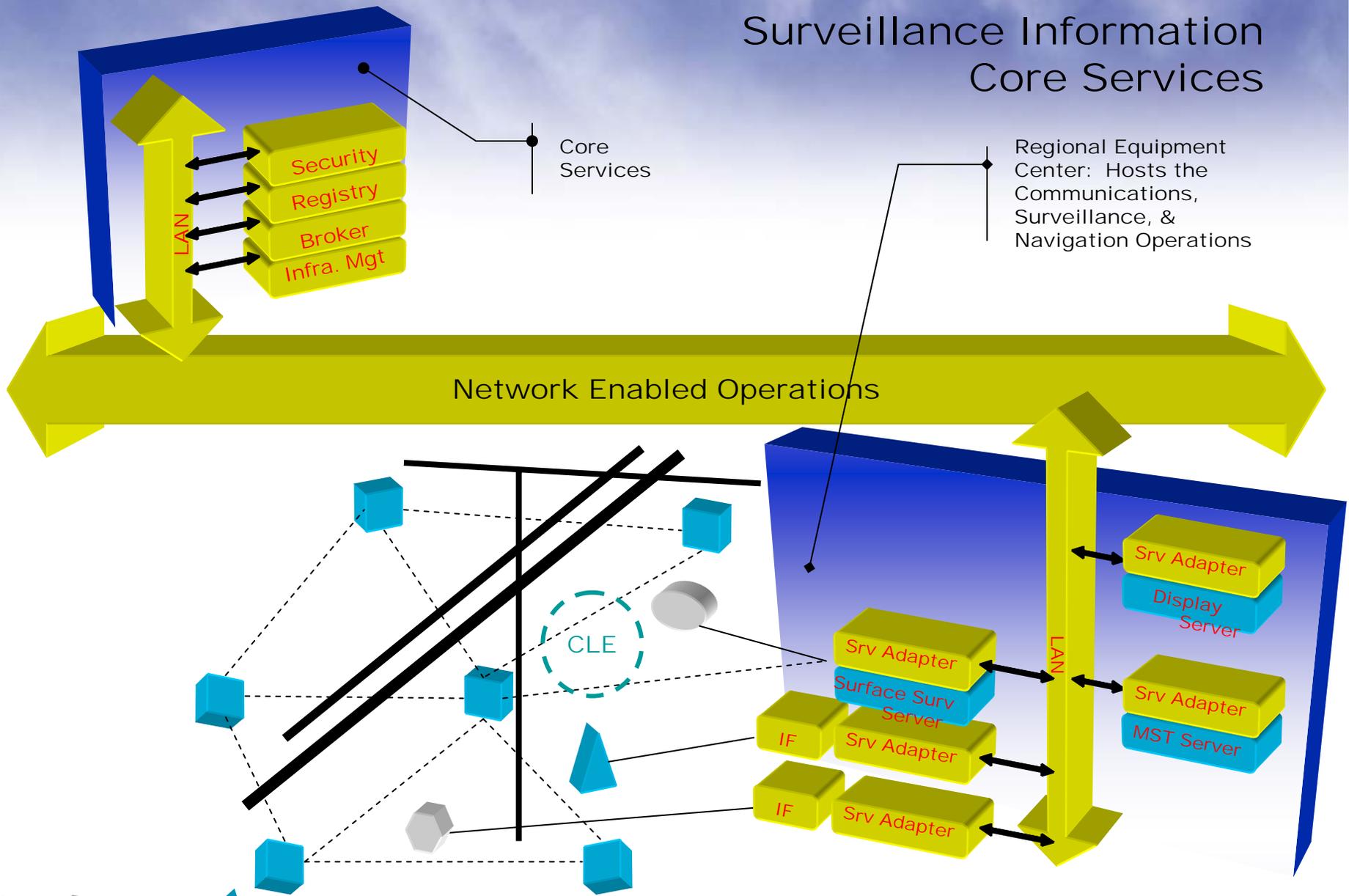
Three Northeast Ohio Airports networked together with NASA Glenn Research Center

NextGen CNS Test Bed Information Sharing

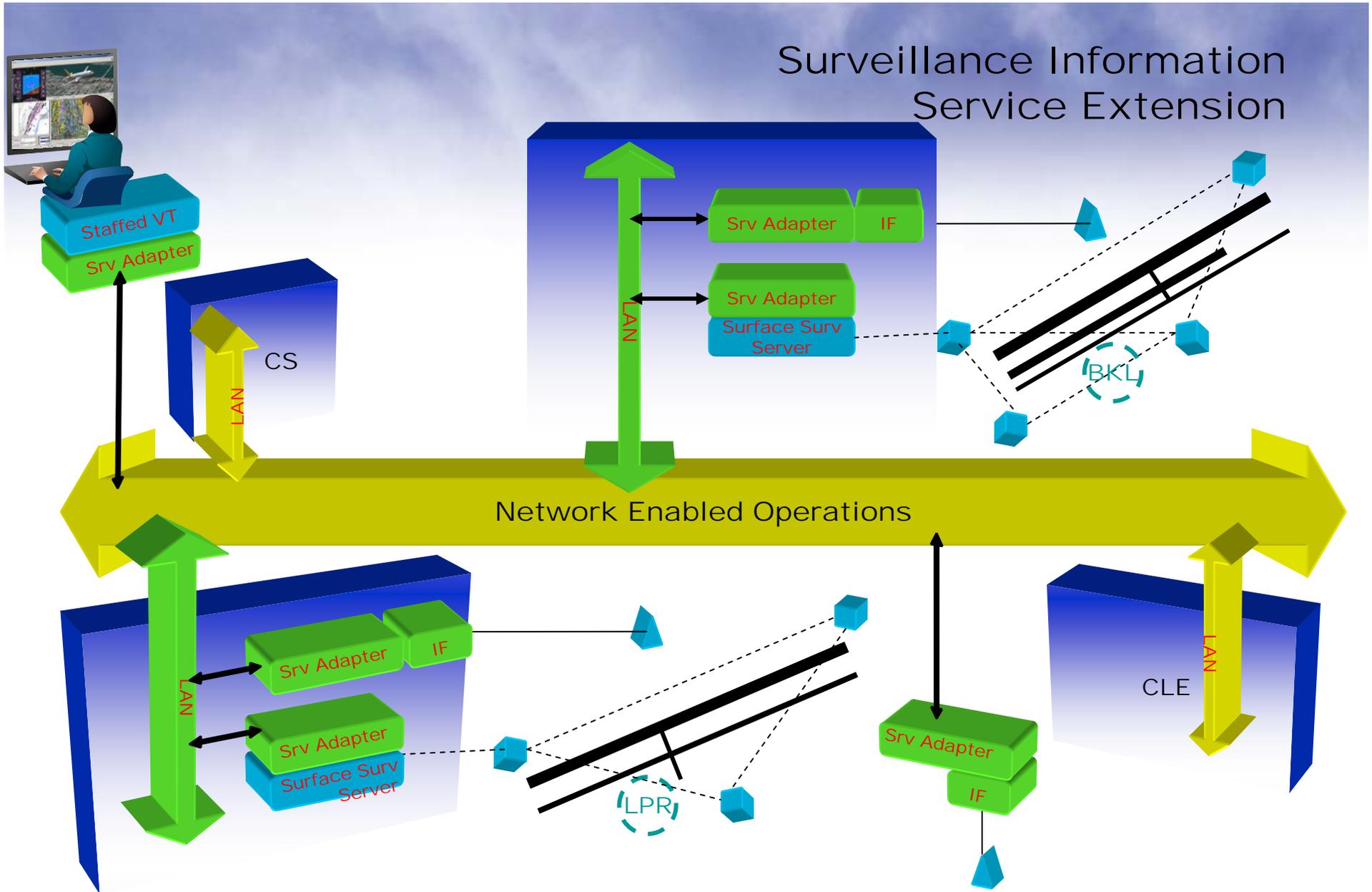
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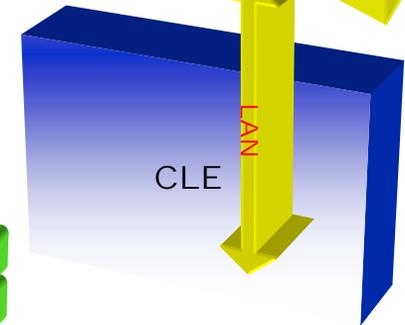
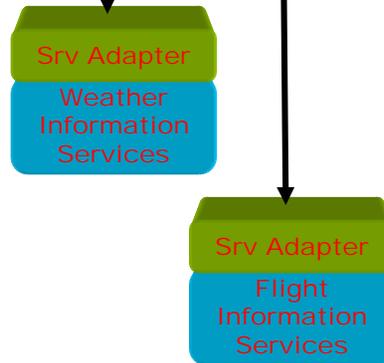
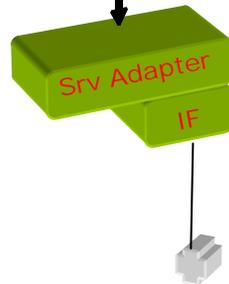
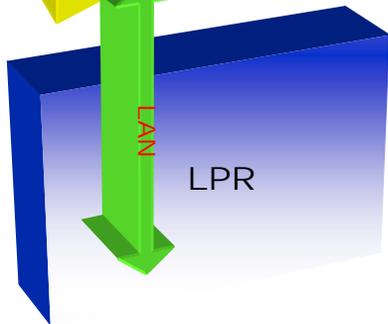
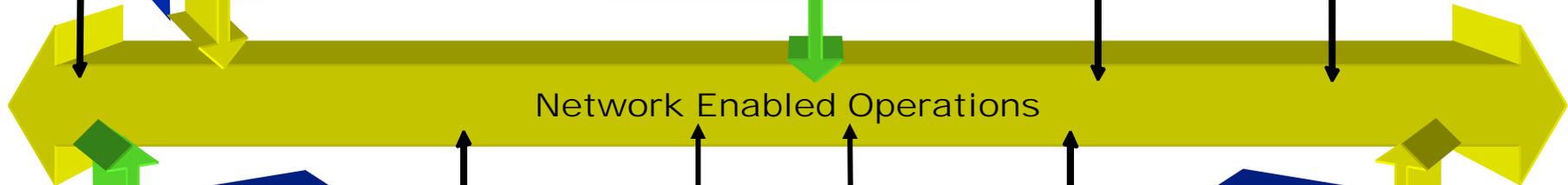
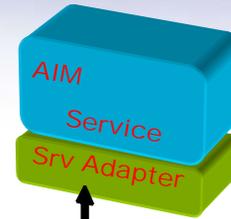
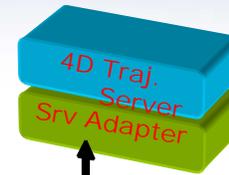
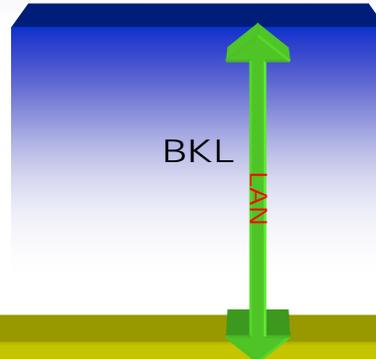
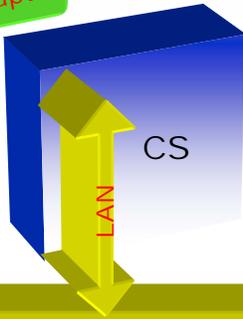
Surveillance Information Core Services



Surveillance Information Service Extension



Network-Enable Air Portal Information Service



Conclusions

- Established;
 - Framework that provides Secure Information, Identity, Access, and Broker Services
 - Air Portal Surveillance and Weather Information Service
 - Site for Development, Integration & Experimentation
- Deployed An Infrastructure To Validate/Achieve New ATC Concepts
 - Collaborative Decision Support
 - Seamless Gate to En Route Coverage
 - Staffed Virtual Tower
 - Publish/Subscribe Data Distribution
 - 4D Trajectory Management

Next Steps

- Collection of Operational Metrics
 - Reliability
 - Bandwidth
 - Security
 - Interfacing
 - Format Standards
- Partner Collaboration
 - Operational Concepts Demonstrations
 - Technology Evaluation
 - Concept Validation