

# Advanced Systems & Development

## Transitioning to an Enterprise Ground System



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SMC/ADY



# BLUF

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- **SMC/AD is generating a plan for the transformation of AFSPC Ground Systems**
- **Technical and program discussions ongoing with key stakeholders**
- **Transition Plan to AFSPC/CC planned for the end of April**

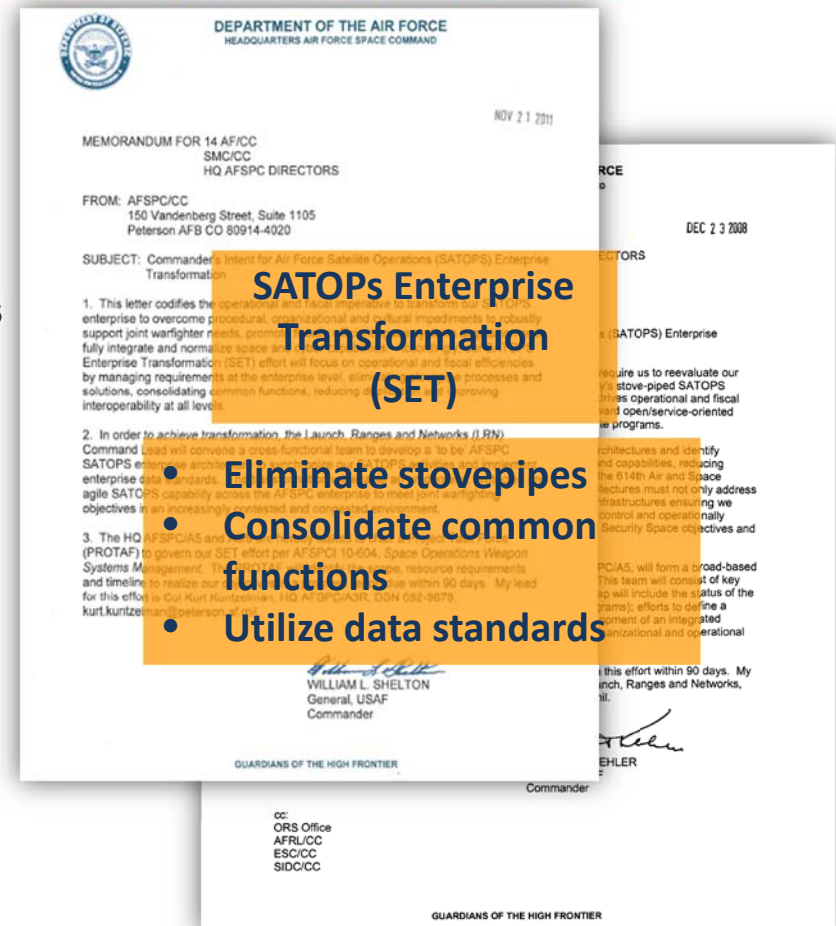




# Motivation For SATOPs Evolution

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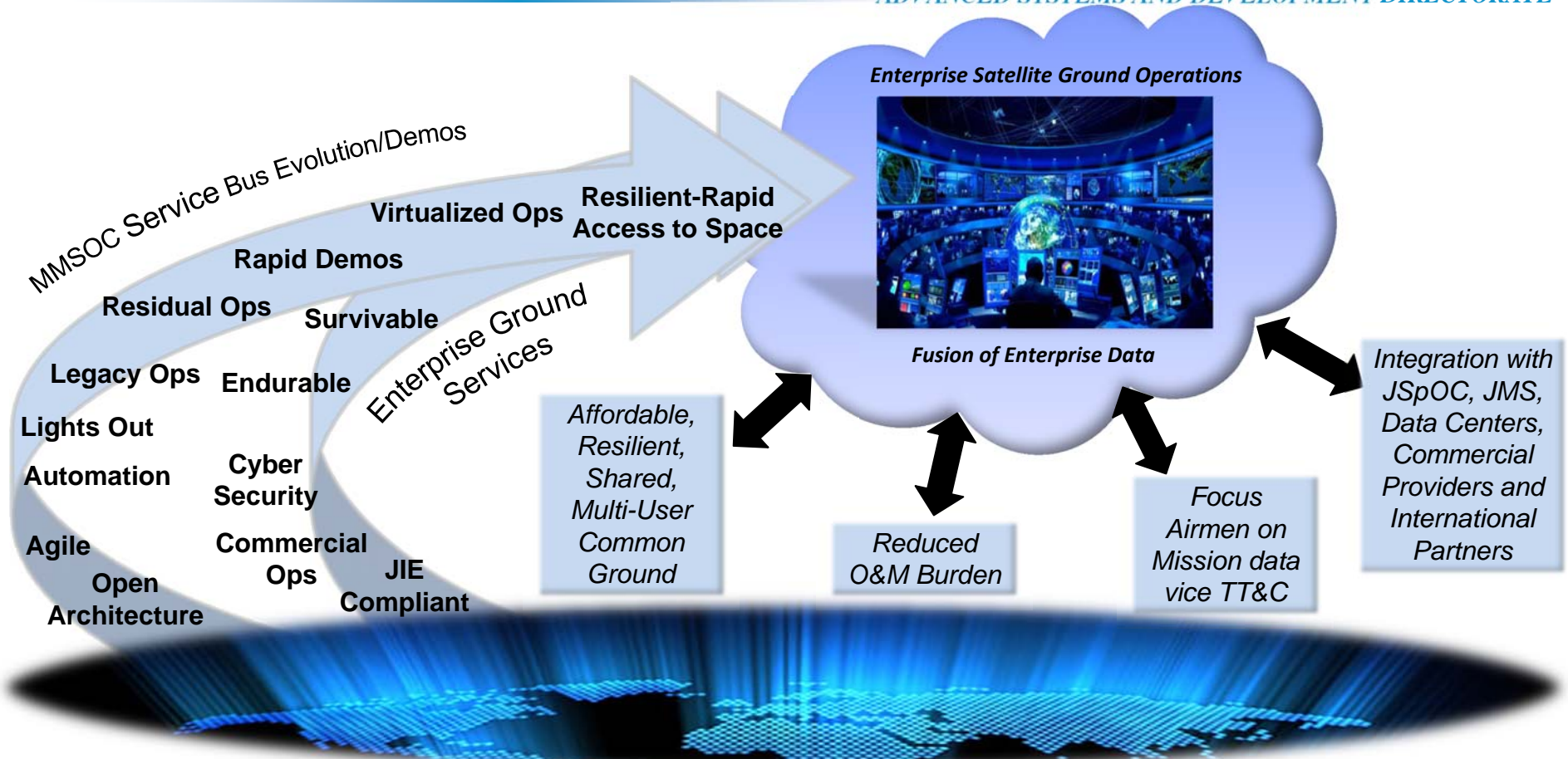
- **AFSPC Directives / Guidance**
  - 2008 AFSPC/CC
  - 2011 AFSPC/CC
  - 2013 AFSPC/CC requested ISAG on future Ground Enterprise options
  
- **Drivers for the transformation**
  - Increasing budget constraints
  - Increasing sustainment cost
  - Evolving mission requirements
  - Tech maturity & emerging threats
  - GAO criticism
  - Success by other Gov't offices
    - NRL
    - NRO
    - SMC (MMSOC)





# Characteristics of an Enterprise Ground Cloud Computing Solution

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**Leveraging MMSOC Mindset as the Test Bed for a Future AFSPC Ground Enterprise**



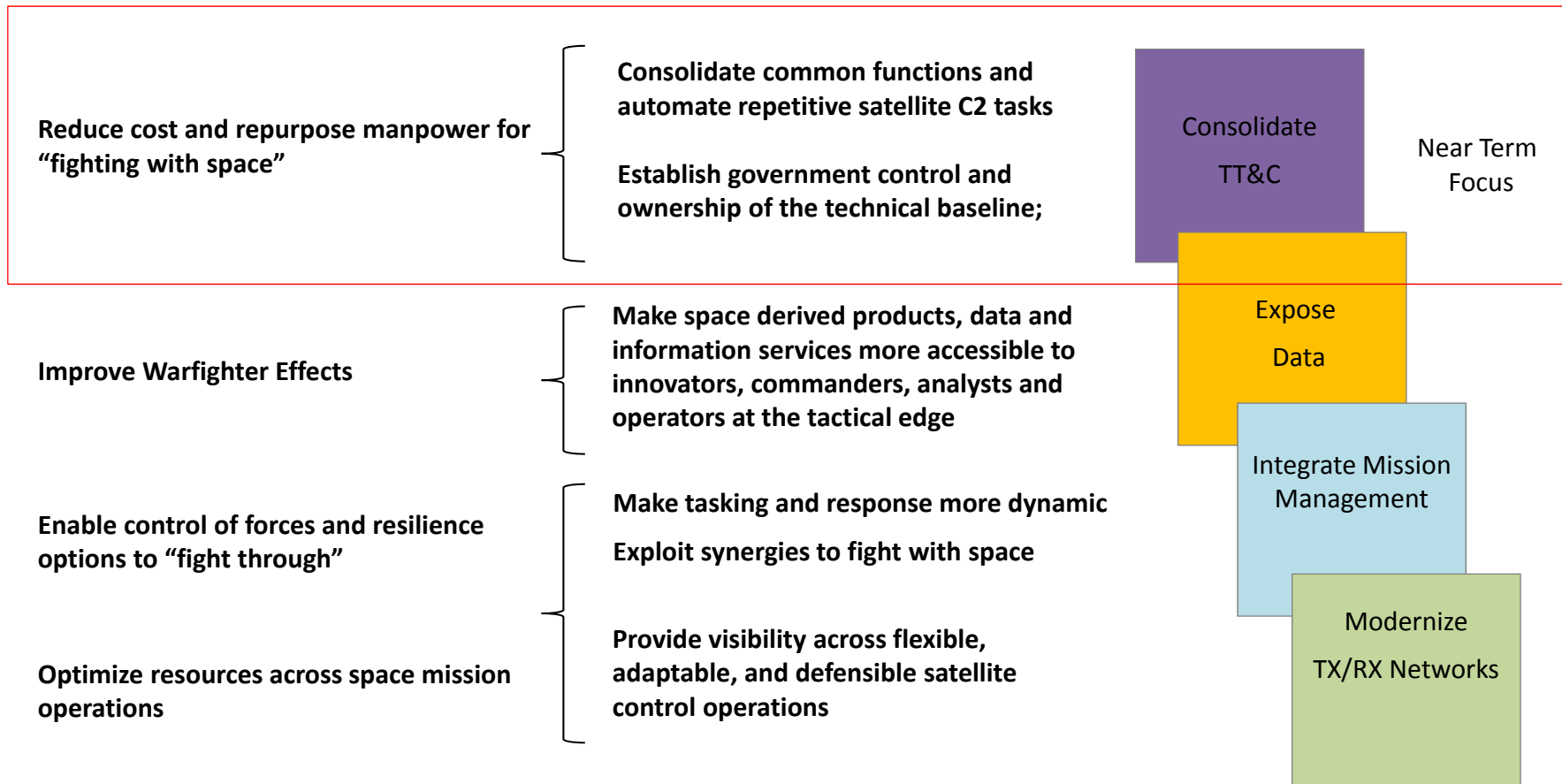
# Scope

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## Commander's Intent

## AF Outcomes

## Command Strategy





# Boundary Conditions

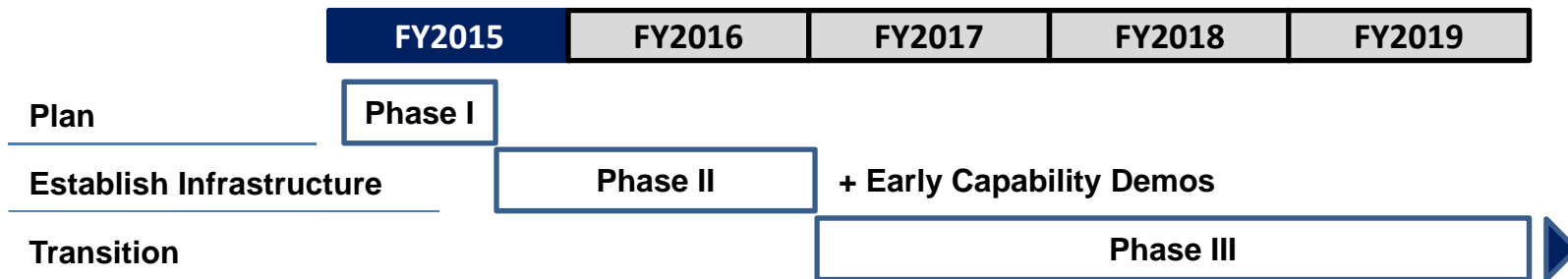
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- **Planning process will be guided by acknowledgment that no new large scale initiative is likely within current budget constraints**
- **End state architecture must be:**
  - **Scalable and expandable**
  - **Cyber secure and resilient**
  - **Compliant with future JIE objectives**
- **Transition plan must identify and minimize risks to mission area ground deployments and operations**
  - **To be developed in collaboration with SPOs**



# Schedule

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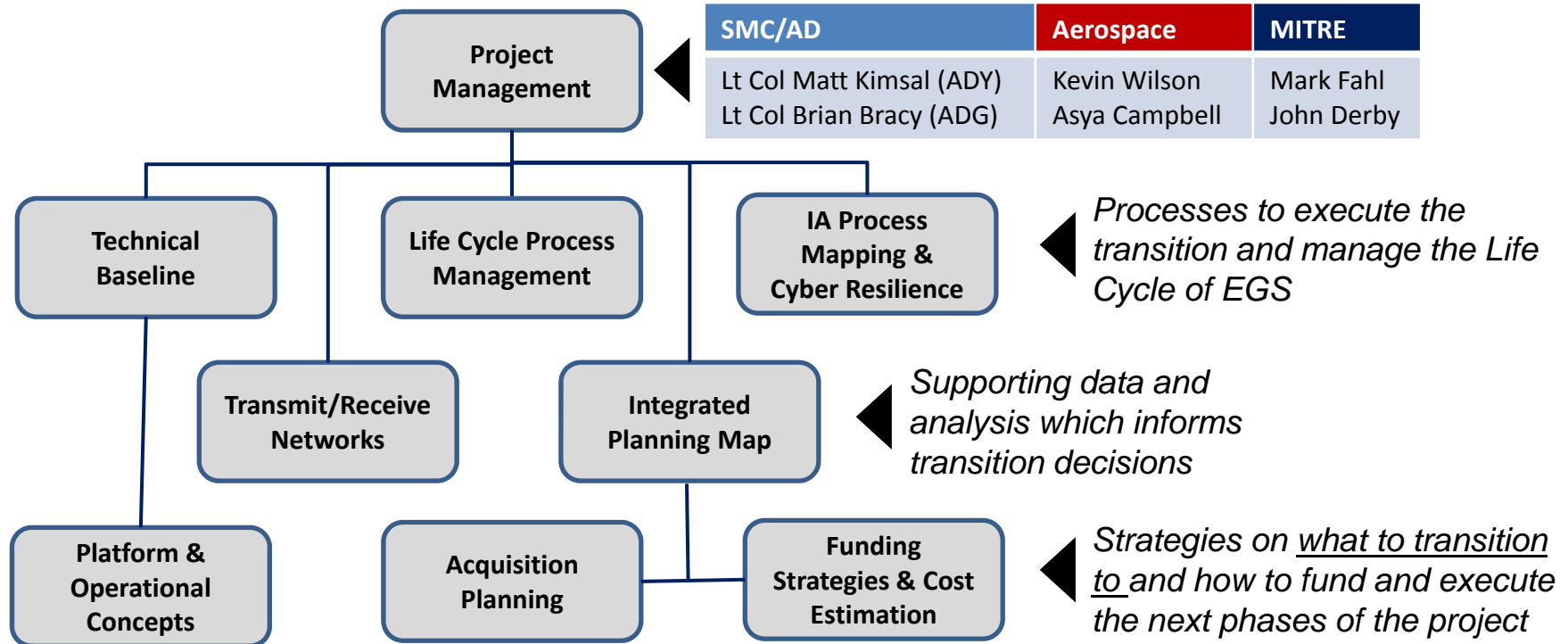
## Expanded Phase I Tasks and Schedule

ID	Task Name	Duration	Schedule																		
			Jan 1/11	1/18	1/25	2/1	2/8	2/15	2/22	3/1	3/8	3/15	3/22	3/29	4/5	4/12	4/19	4/26	5/3	5/10	
1	Pre-Kickoff Planning	5 days	█																		
2	Project Kickoff	0 days		◆ 1/19																	
3	Establish Working Groups	15 days	█	█	█	█	█														
4	East Cost OGA Trip	4 days				█	█	█													
5	Working Group Technical Activities	35 days					█	█	█	█	█	█	█	█	█	█	█				
6	1st Steering Group Review	0 days						◆ 2/11													
7	ISAG TIM	1 day						█													
8	Vector Check Briefings	7 days						█	█	█	█	█	█								
9	2nd Steering Group Review	0 days								◆ 3/2											
10	GSAW Workshop	3 days								█	█	█									
11	3rd Steering Group Review	3 days											█	█	█						
12	Preparation of Transition Plan	14 days												█	█	█	█	█	█		
13	Stakeholder Review	7 days																			
14	Target SMC Out Brief	0 days																			◆ 5/1
15	Target AFSPC Out Brief	0 days																			◆ 5/12



# Functional Organization

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- Focused tasking with cross-organization teams
  - AF + Aerospace + MITRE
- Short project timeline requires parallel activities
- Build on previous foundational studies





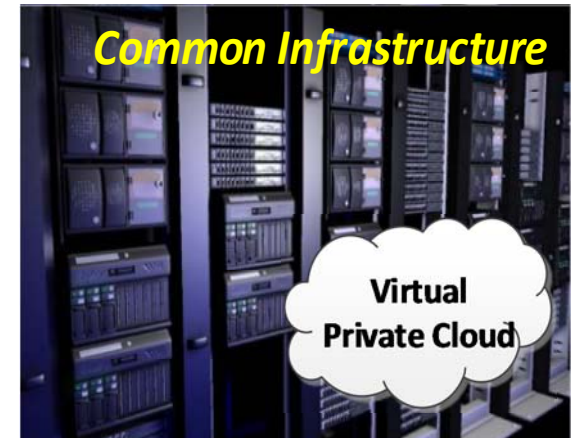
# Architectural Transition

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- **Current State**
  - No commonality in applications and services across missions
  - Contractors “own” the stack which defines the architecture
  - Each mission area has its own hardware set
  - Duplication, without commonality, of ground capability and costs

## EGS Transition Leads to

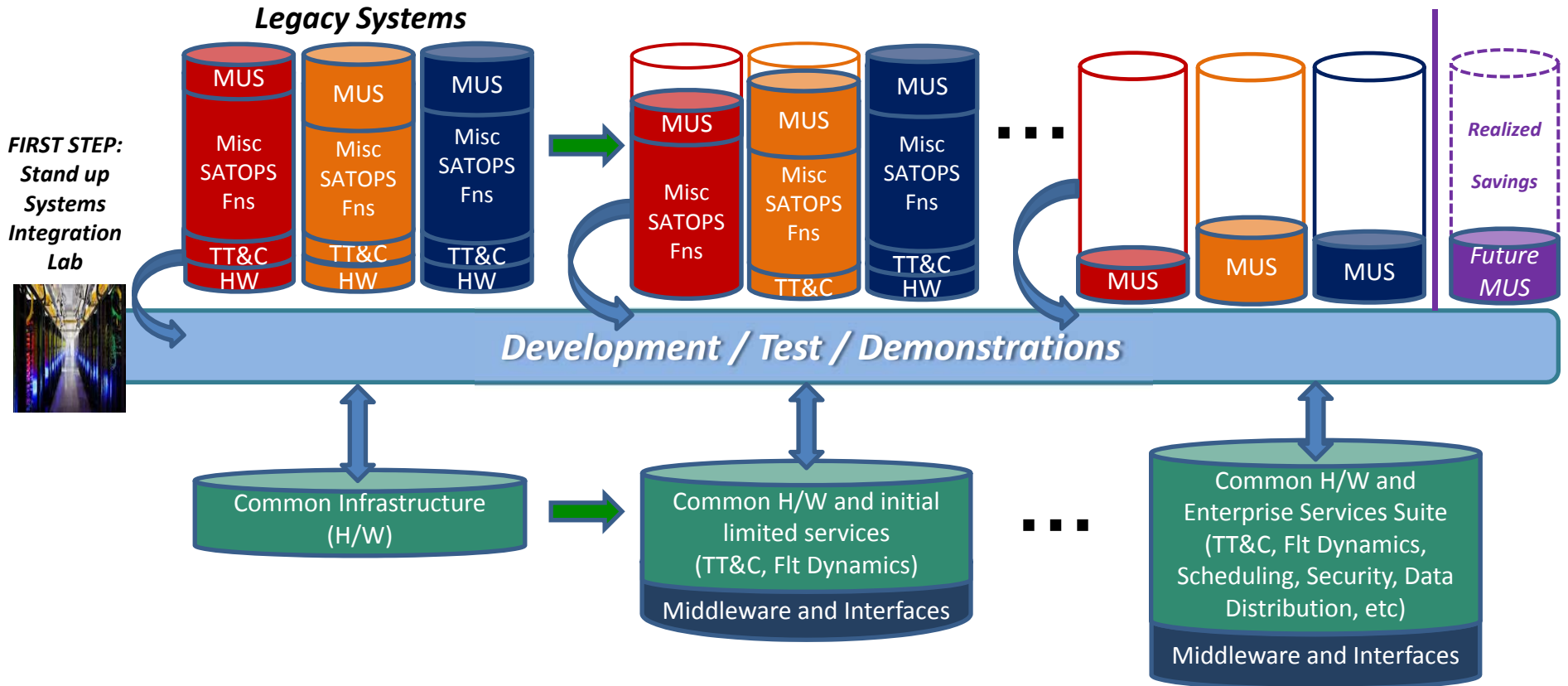
- **Common infrastructure**
  - Leverages low-cost commercial data center practices
  - OTB returns tight integration control to the government
- **Common services and applications for C2**
- **Common security practices**
- **Enterprise Ground Services**
  - Creates common practices environment for mission unique applications
  - Promotes best practices for software development
  - Enables easier transition through single Interface





# Transition Strategy

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**Benefits**

- 1) Systems run on common H/W
- 2) Decreased H/W Baseline
- 3) Proof of Concept

**Benefits**

- 1) Systems run on common H/W and M/W
- 2) Shared resources optimized b/w systems
- 3) Maintenance and sustainment efficiencies
- 4) Government increases ownership and control of technical baseline

**Benefits**

- 1) Systems run on common services
- 2) Minimizes mission unique S/W
- 3) Highest efficiencies maintenance and ops
- 4) Savings on future development
- 5) Government fully owns and controls technical baseline



# Operational Demonstrations

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- **An important component of the Transition is building confidence through relevant demonstrations**
  - Automation
  - Multiple TT&C engines on a Service Based Architecture
  - Initially on MMSOC at RSC (Kirtland AFB)
- **Demonstrations in the mid-term: experimental and residual satellites**
  - SENSE
  - DSP
  - DSCS
  - Milstar
  - GPS



# Phase I Objectives

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- **A detailed end state architectural vision for achieving mission objective**
- **A transition plan to move the current AFSPC ground systems to the defined end state vision**
- **Identification of near term pathfinder activities/projects/demonstrations which assist transition to the end state**
- **Creation of sufficiently detailed plans for submission through formal AFSPC CFSP planning processes, and associated inputs to POM Planning**
- **Development of a planning roadmap aligned to the JCIDS process, as applicable**



# Way Forward

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- **Transition Plan to be developed in collaboration with SMC SPOs**
- **Stakeholder communication is an ongoing process**
- **Continue demonstration planning**
- **Final Briefing to AFSPC/CC early May 2015**
- **Initiate Transition Plan immediately upon approval**



# How Can Industry Help?

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- **Start preparing to support the target architecture**
  - Supporting and maintaining a cloud environment
  - Developing and instituting a set of standard interfaces
- **Allow us time to define our needs**
  - Need a clearer path forward before involving industry
  - Will reach out after conclusion of 90-day study
  - Look for RFIs in the near-mid term