

Headquarters U.S. Air Force

Integrity - Service - Excellence

A Vision For Development and Delivery of IT Capability for the War-Fighter



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Mr. Kent Werner (SAF/USM-2)
24 May 11



AGENDA

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- **Why we're here**
- **An Enterprise Challenge**
- **Infrastructure**
- **Applications**
- **Service Development & Delivery Process (SDDP)**
- **Actions Required to Achieve Success**



WHY WE'RE HERE

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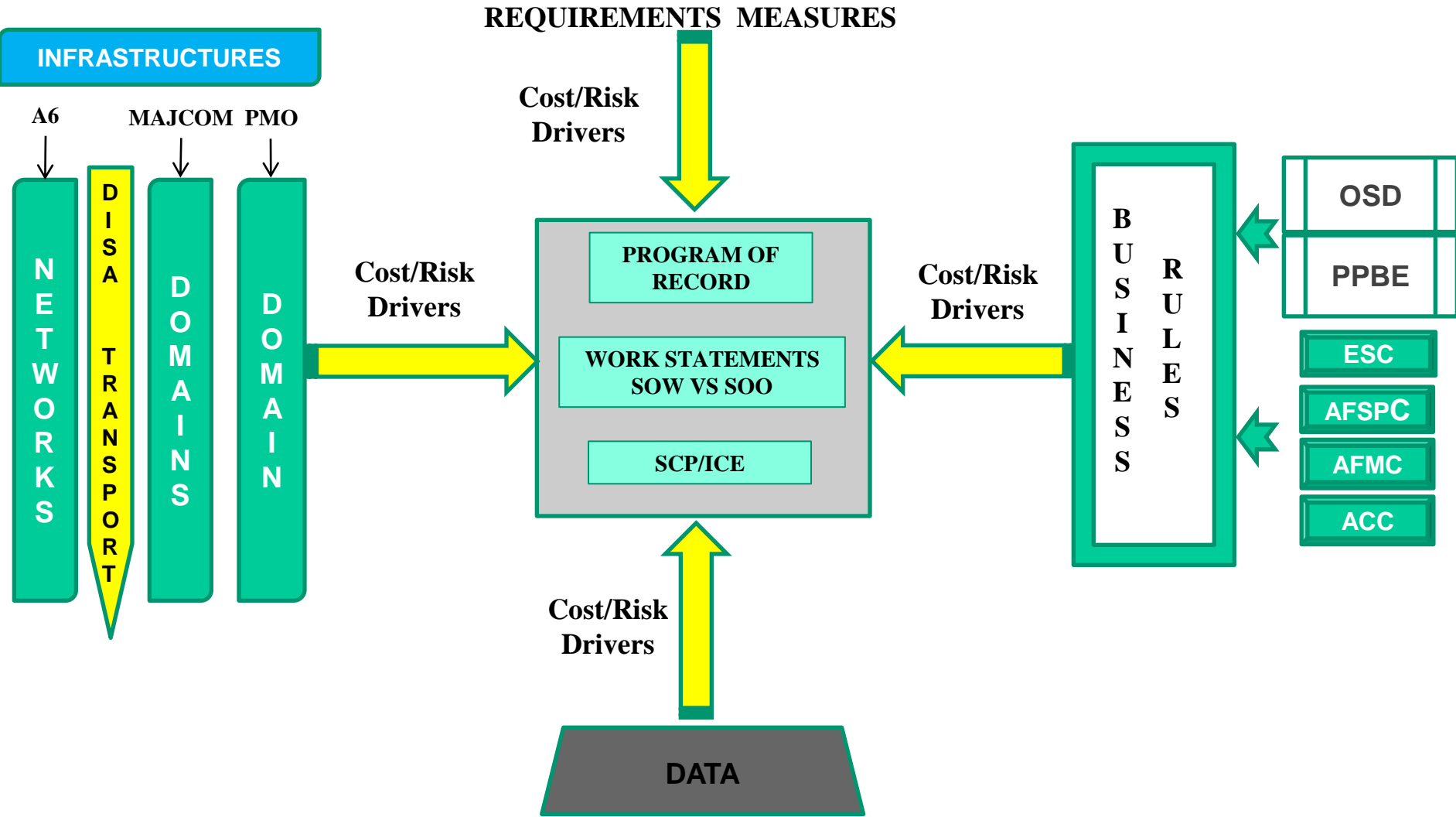
- **Include Industry Partners in IT Way-ahead Activities**
- **Work in Progress: We are Identifying functions to be Performed and Requisite Skill-sets**
- **Changes in Technology, Legislation/Policy and Commercial Business Practices**
- **To be successful we need to address:**
 - **Infrastructure**
 - **Applications**
 - **Development and Delivery Process**

The cost of IT is the **RESULT of our business practices – not the root cause!**



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AN ENTERPRISE CHALLENGE (NOT JUST ACQUISITION)





INFRASTRUCTURE

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- **Focus on both legacy and future states simultaneously**
 - **Legacy: Live and operate in legacy state continuously**
 - **Future: What will today's technology allow in near-term future?**
 - ✓ **New Security Model: E2E 2-way authentication & authorization**
 - ✓ **Rapid delivery**
 - ✓ **Deliver small reusable applications**
- **Condition the institution at all levels**
 - **Address inherent disconnect between network and system developers**
 - **Manage both legacy and future states simultaneously to exploit the rapid change of technology to our advantage**

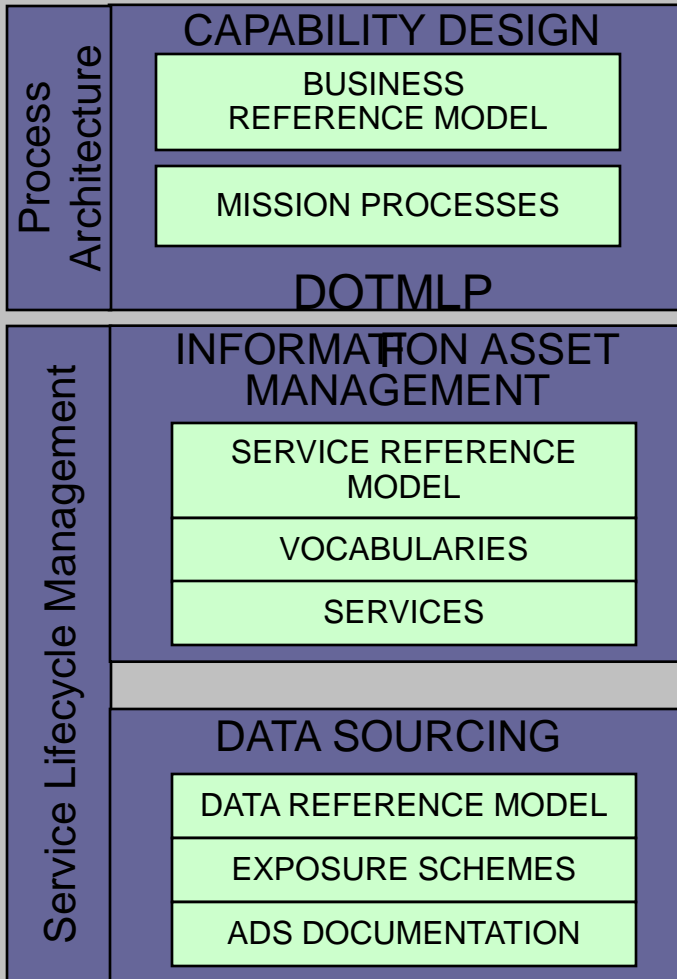
**Out-of-the-box : Manage future & legacy states together
NOT one vs the other!**



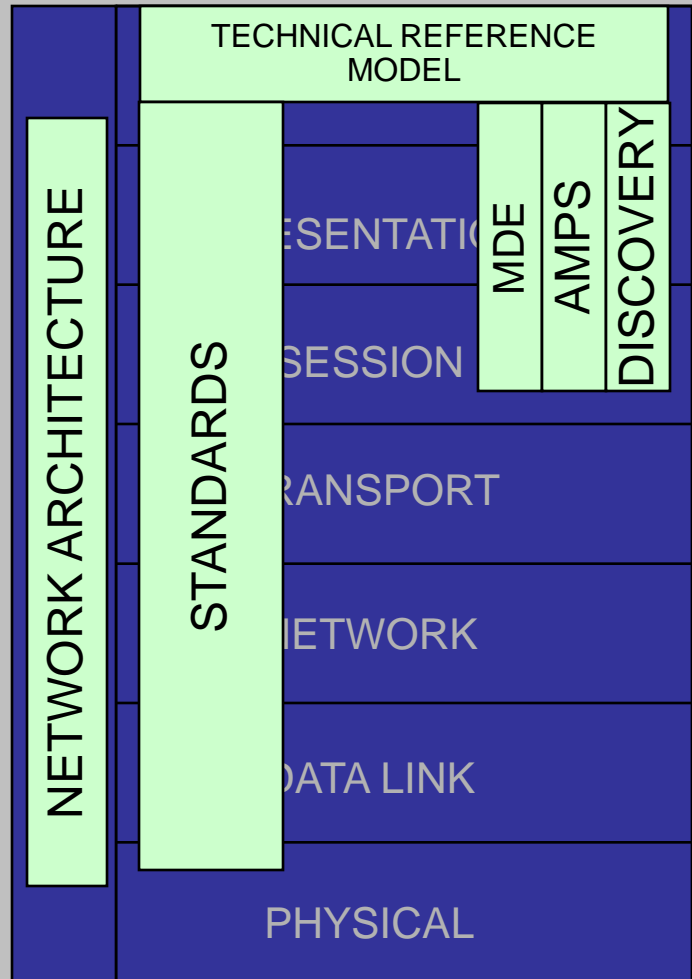
The Dual Pathway Applications over Infrastructure

CONTENT GENERATION

CONTENT DELIVERY



IA/COOP/MA ARCHITECTURE (CCS)

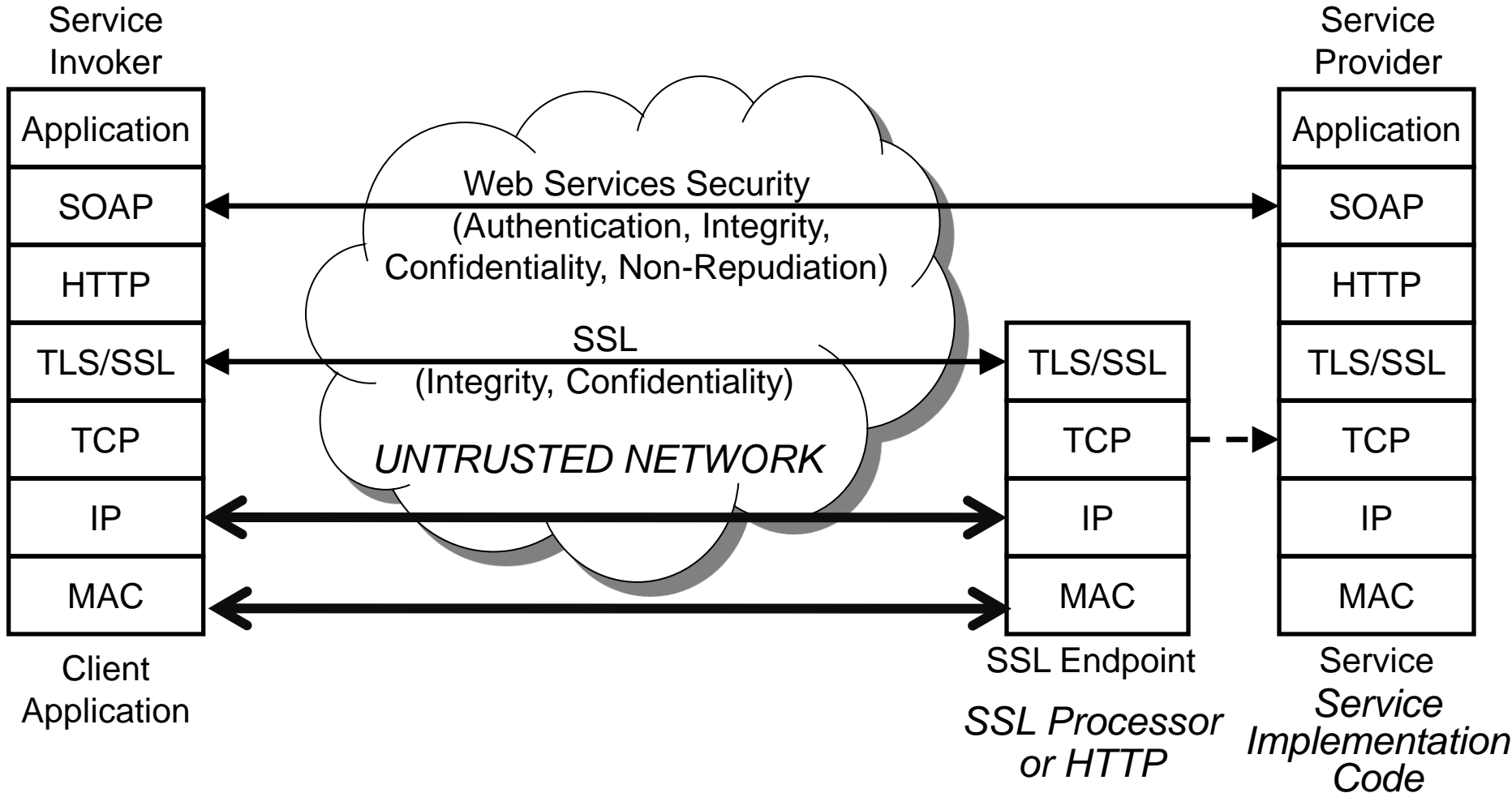




End to End Security in the OSI Stack

Single Security Level

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Baseline Definitions

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Baseline	Description	Governance
<p>Target</p> <p>CIO/CTO Phase</p> <p>The “To Be”</p>	<p>The Target Baseline specifies the standards, protocols and implementation constraints for the future state of the AF IT infrastructure. It is used to inform the development of the implementation baseline. The Target Baseline is not instantiated in any environment, but it is thoroughly documented. It is continually updated based upon emerging industry standards and the evolving AF enterprise architecture.</p>	<p>The AF CEITB CCB will be the controlling body for all changes to AF CEITB documentation. This CCB reviews and approves/disapproves configuration item instantiations and change requests to existing configuration items. Approved items are submitted to the AF CIO Council by the CTO for validation.</p>
<p>Implementation</p> <p>ACQUISITION Phase</p>	<p>The Implementation Baseline is the associated baseline of acquisition selected products and their target baseline informed/allowed configurations that implement the architecture, standards and protocols specified in the Target Baseline. The Implementation Baseline informs the Operational Baseline of the acquisition selected products and how they are to be configured to support deployment of user applications across the infrastructure topology. The Implementation Baseline governs the implementation of the Development and Integration/Test environments.</p>	<p>The Implementation Baseline is governed by the ITLC or Enterprise System Engineering function and validated by the CTO.</p>
<p>Operational</p> <p>RUN TIME Phase</p> <p>The “As Is”</p>	<p>The Operational Baseline is the set of components of the Implementation Baseline appropriately configured and deployed across the topology of the AF IT infrastructure to provide the required warfighter capabilities and performance. It specifies the exact laydown and configurations of HW and SW within all facilities in the AF infrastructure topology.</p>	<p>The Operational Baseline is managed by the 24th AF validated by the Information Technology Lifecycle Center (ITLC) or Enterprise System Engineering function.</p>



APPLICATIONS

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Condition the enterprise to develop applications

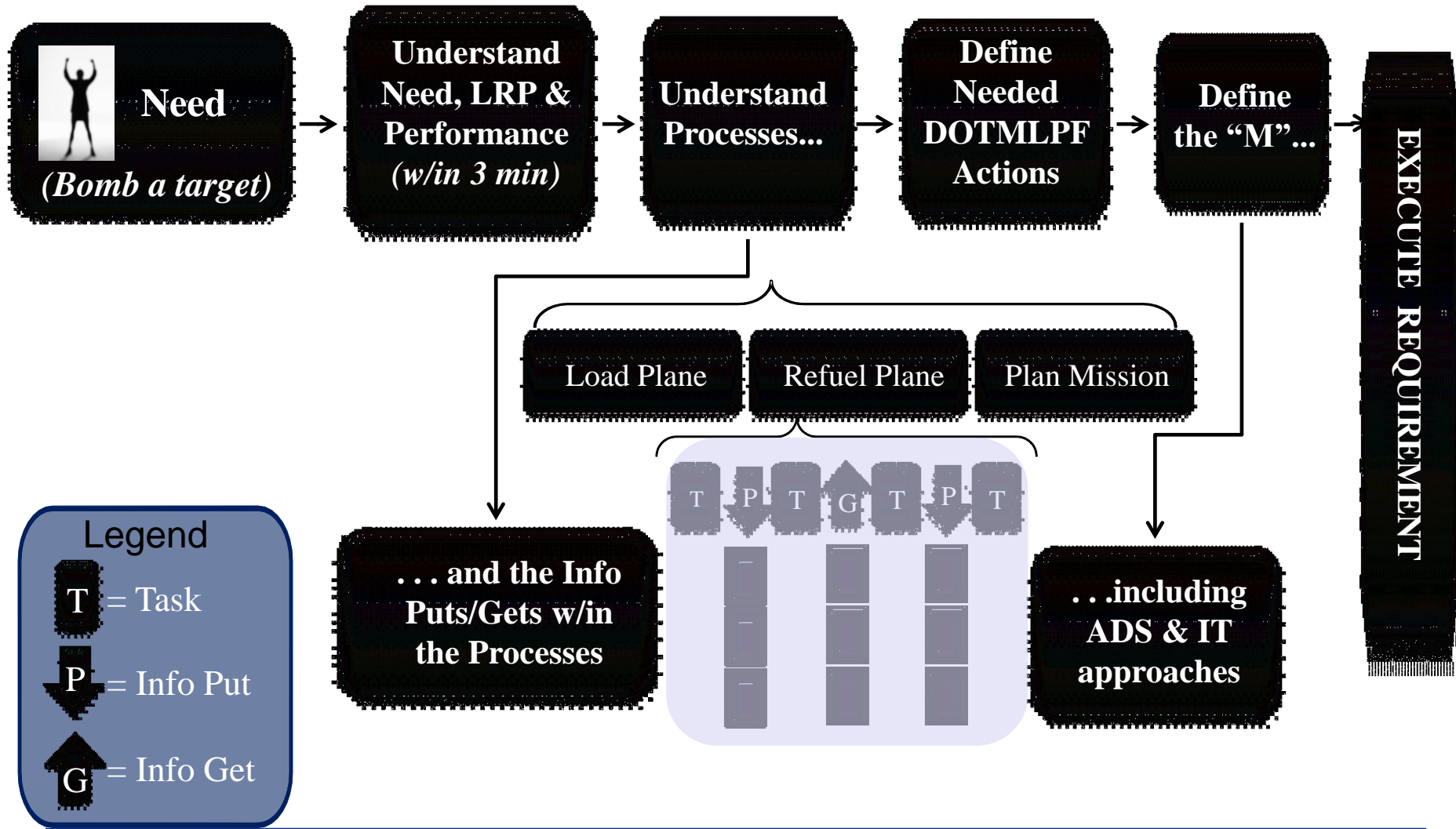
- For commoditized infrastructure
 - ✓ **Standards and protocols defined & tightly configuration controlled**
- Independent of data
- Manage data at enterprise level
 - ✓ **For both C2 and business processes (e.g. readiness)**
 - ✓ **Be able to attribute the user authorizations and access to the data**
- For IT – move from macro-level to more detailed requirements
 - ✓ **Align requirements to mission practices**
 - ✓ **Inherently governmental function**

**Aligns to Commercial Delivery Model
(e.g. Smart Phone Apps)**



SDDP Contextual Model

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SERVICE DEVELOPMENT AND DELIVERY PROCESS (SDDP)

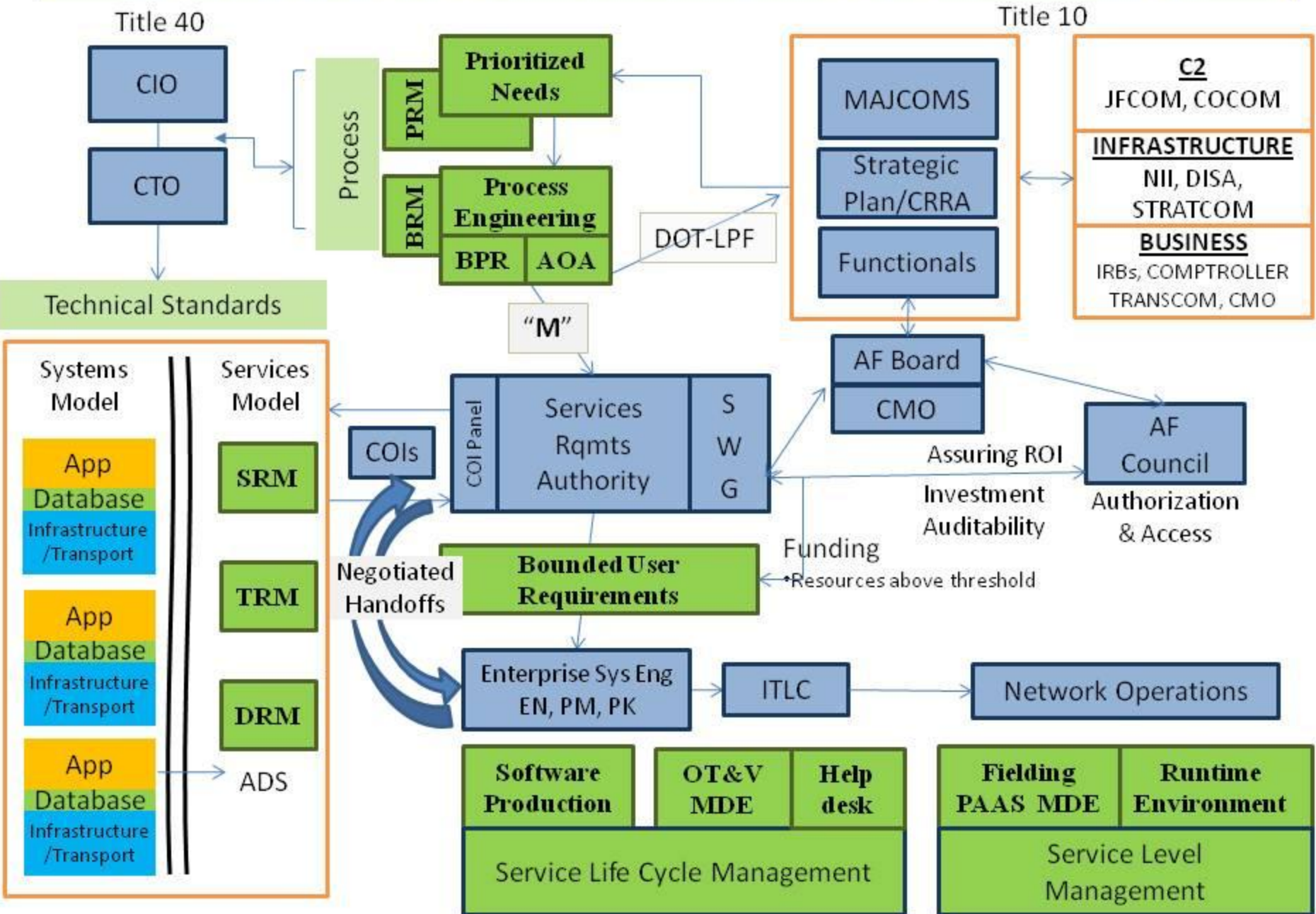
- Focus on user/war-fighter trying to solve a problem
 - ✓ Acquisition, engineering, testing, architecture, portfolio management platform engineering & network ops are supporting functions

- Solution derives directly from DOTMLPF
 - ✓ Place IT requirements in user's context
 - ✓ Supported by architectural sandbox

- SDDP defines the function/work-to-be-done vs ownership
 - ✓ Translates user needs into deployed capability

Pay it forward & Inherit it back!

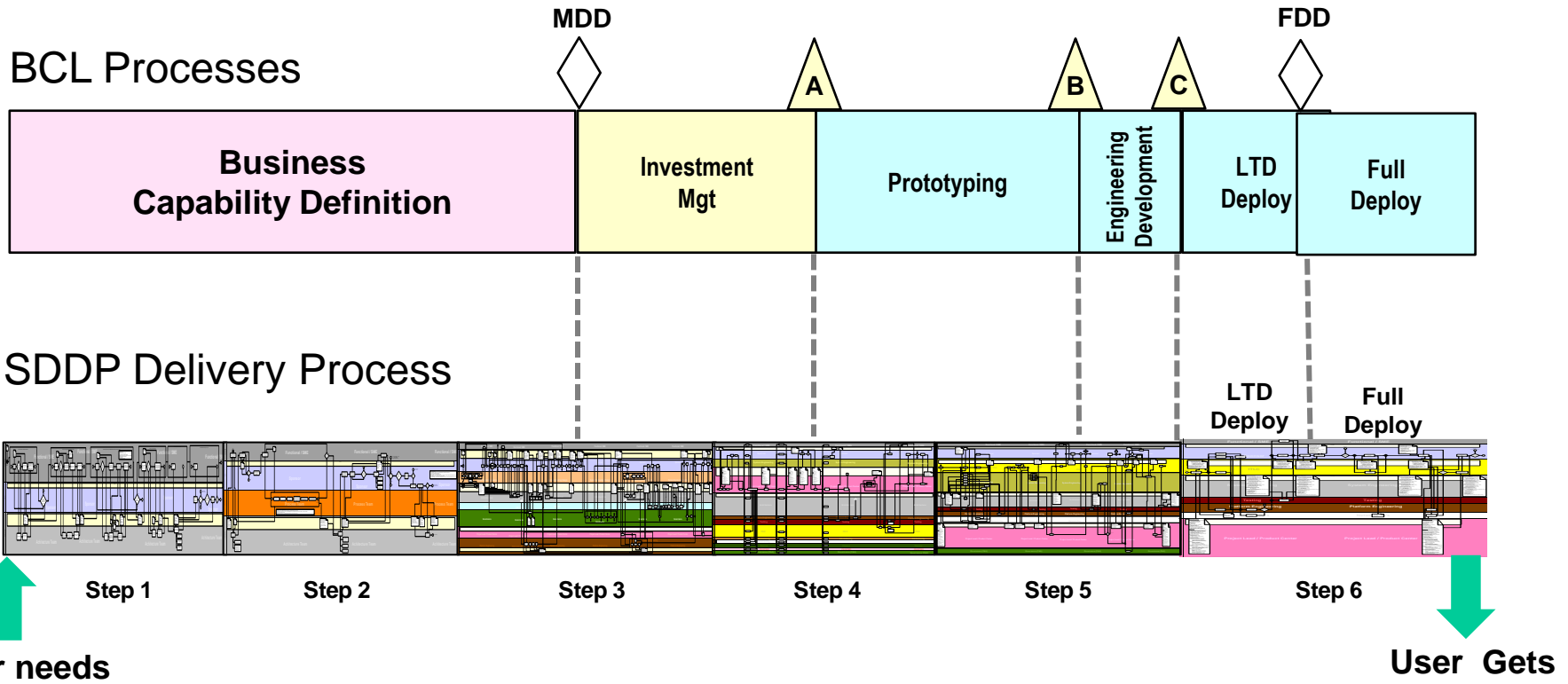
SERVICES DEVELOPMENT AND DELIVERY PROCESS





SDDP: Example Alignment

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Infrastructure Processes

Platform as a Service (PaaS)
(A configuration-managed and delivered infrastructure)

We keep attacking the problem *too late* - i.e. SDDP Steps 4 & 5



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SDDP (1) Identify DOTMLPF Capability Requirements

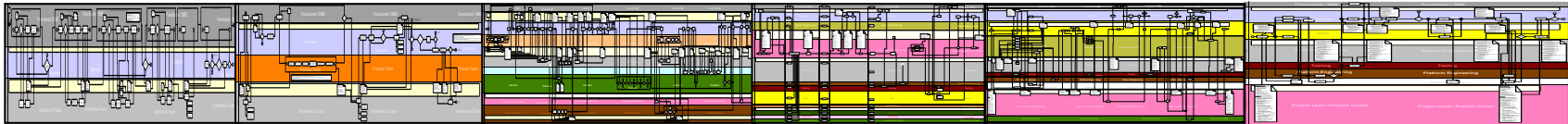
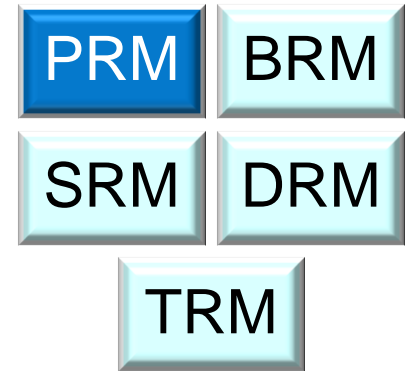
STEP OUTCOMES

- Alignment of user with a problem to a Sponsor to support solving that problem
- Commitment from Air Force corporate structure to support possible solution to the user's problem

PRODUCT OUTCOMES

- Clear, concise statement of the user's problem and/or needs
- Delineation of a proposed set of capabilities that will solve the user's problem or meet the user's needs
- Documentation of relevant Legislation, Regulation and Policy
- A set of performance measures that indicate how the capabilities, once implemented, actually solve the user's problem or meet the user's need

CAPTURED IN AND INFORMED BY ENTERPRISE ARCHITECTURE



Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

Identify
DOTMLPF
Capability
Requirements

Define
DOTMLPF
executable
actions

Define Material
Solution and
Implementation
Plan

Plan / implement
developmental
components of
the Material
Solution

Sustain
Application
Lifecycle

Deploy/Operate
the Material
Solution

The Service Development and Delivery Process



SDDP (2) Define DOTMLPF executable actions

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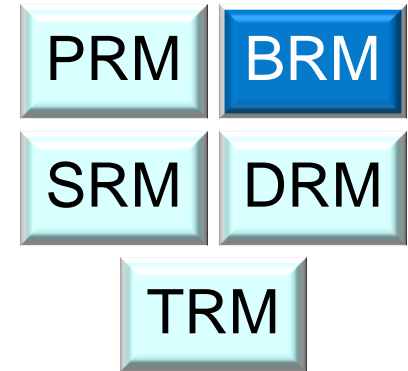
STEP OUTCOMES

- Sponsor approval to pursue the investigation of a Materiel Solution to support the improved mission processes

PRODUCT OUTCOMES

- Definition of the DOTMLPF executable actions and the implementation plan to institutionalize the improved mission processes
- Re-engineered Air Force processes that improve mission efficiency and effectiveness

CAPTURED IN AND INFORMED BY ENTERPRISE ARCHITECTURE



Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Identify DOTMLPF Capability Requirements	Define DOTMLPF executable actions	Define Material Solution and Implementation Plan	Plan / implement developmental components of the Material Solution	Sustain Application Lifecycle	Deploy/Operate the Material Solution

The Service Development and Delivery Process



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SDDP (3) Define Material Solution / Implementation Plan

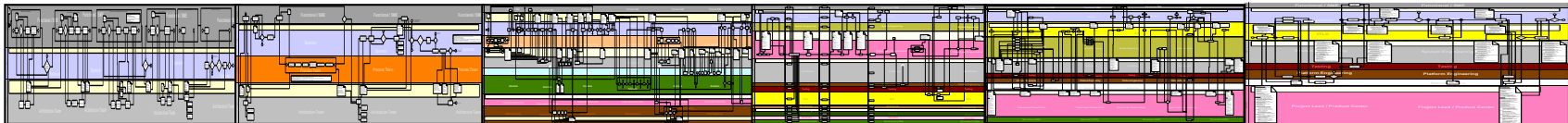
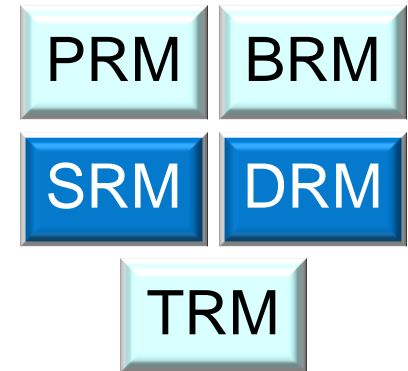
STEP OUTCOMES

- Sponsor commitment to implement selected Material Solution
- Approval by Air Force corporate structure to fund / execute the implementation of Material Solution
- Early involvement of platform engineering, network operations to align the infrastructure capabilities with the Material Solution requirements
- Ensure reusability of existing Material Solution Capabilities

PRODUCT OUTCOMES

- The bounded user requirement that includes definition of the materiel solution, information and data sources, and implementation plan

CAPTURED IN AND INFORMED BY ENTERPRISE ARCHITECTURE



Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
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The Service Development and Delivery Process



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SDDP (4) Plan/implement Dev Components of Material Solution

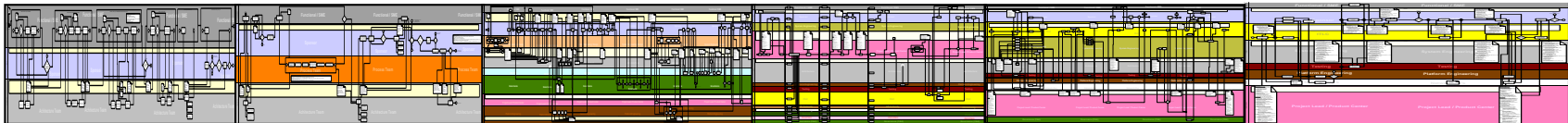
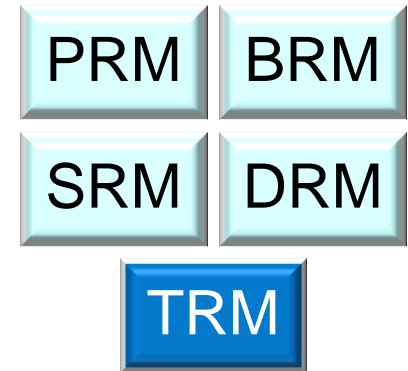
STEP OUTCOMES

- Designation of Project Lead
- Formation of a project team with a wide range of skillsets from multiple Air Force functions, including engineering, architecture, acquisition, testing, platform engineering, network operations
- Inherit engineering and project artifacts from Step 3 to streamline implementation processes, e.g. C&A inheritance
- Enterprise standards for development processes & environments

PRODUCT OUTCOMES

- Integrated master schedule to deliver the Materiel Solution
- Developed components of the Materiel Solution
- Supporting engineering content including test plans, onboarding requirements

DEVELOPED AGAINST CONFIGURATION MANAGED TECHNICAL STANDARDS



Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
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The Service Development and Delivery Process



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SDDP (5) Sustain Application Lifecycle

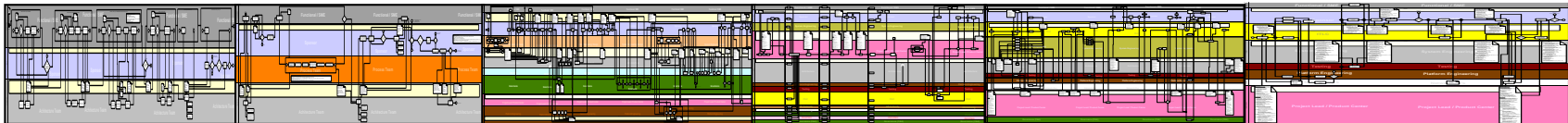
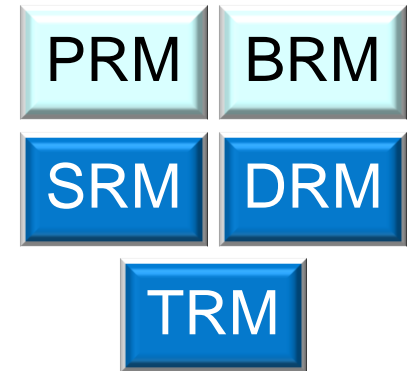
STEP OUTCOMES

- Enterprise standards for test processes and environments
- Enterprise standards for development and code sustainment
- Management and control of testing and sustainment at the Air Force enterprise level

PRODUCT OUTCOMES

- Fully Integrated Material Solution
- Deployment Package /Tech Order

TESTED / ACCREDITED TO CONFIGURATION MANAGED TECHNICAL STANDARDS



Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Identify DOTMLPF Capability Requirements	Define DOTMLPF executable actions	Define Material Solution and Implementation Plan	Plan / implement developmental components of the Material Solution	Sustain Application Lifecycle	Deploy/Operate the Material Solution

The Service Development and Delivery Process



SDDP (6) Deploy/Operate the Material Solution

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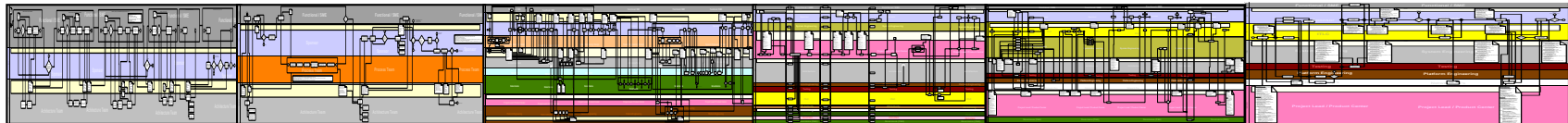
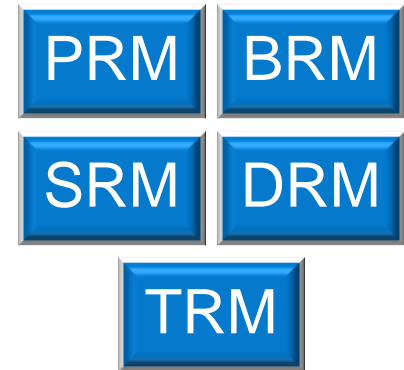
STEP OUTCOMES

- Ensure effectiveness of Material Solution in meeting users' needs prior to commitment of resources to fully deploy Material Solution and DOTLPF capabilities
- Ensure ongoing effectiveness of DOTMLPF solution, with fully deployed Material Solution, in meeting users' needs

PRODUCT OUTCOMES

- Fully operational, deployed Material Solution within the context of the larger DOTMLPF Implementation

DEPLOYED TO PLATFORM
CONFIGURED TO
TECHNICAL STANDARDS



Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
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The Service Development and Delivery Process

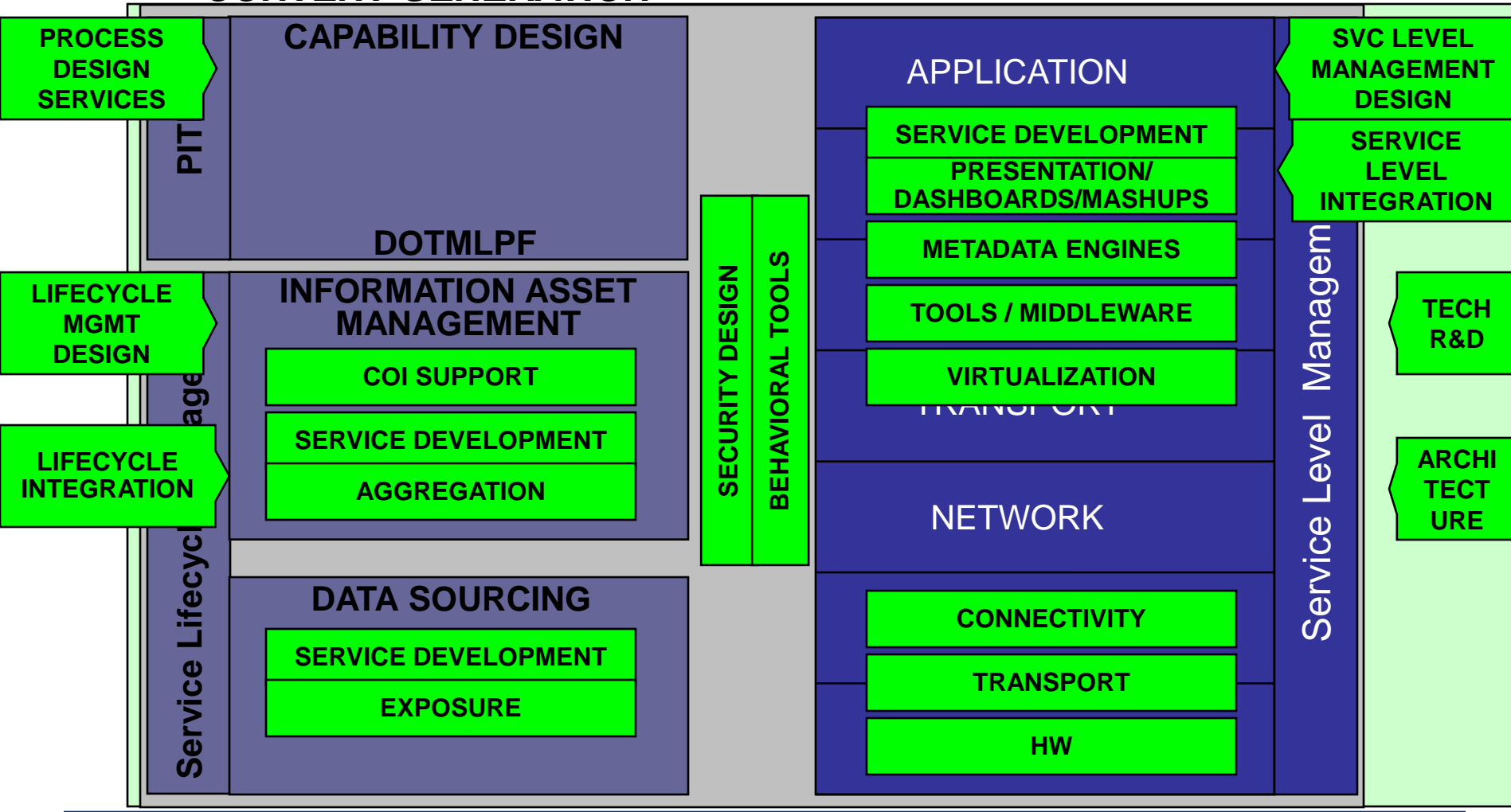


The Way Ahead Together

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CONTENT GENERATION

CONTENT DELIVERY





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QUESTIONS

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