MQ-1B/9 Dynamic Allocation and ISR Enterprise Data Challenges

Mr. Lance Orr

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Overall Classification of this briefing is: UNCLASSIFIED

Overview

- **OUSD(I) Priorities** – Integration
- **ISR Ops Analysis** – Data underwrites DoD ISR assessments—but tremendous challenges persist
- **MQ-1B/9 Dynamic Allocation** – Maximizing ISR
- **Study** – Recouping lost hours through RSO shifts
- **EXORD** – Operational implementation
- **Data Challenges** – ISR enterprise management

OUSD(I) Defense Intelligence Priorities

Leadership Guidance

Secretary of Defense Three Commitments

- Provide President with best national security advice
- Ensure strength and wellness of today's fighting force
- Build the Department and joint force of the future

Director of National Intelligence National Intelligence Strategy

- Strategic Intelligence
- Current Operations
- Anticipatory Intelligence
- Integrated Mission Management
- Integrated Enterprise Management

OUSD(I) Priorities

- Integration
- Current Operations
- Future Capabilities

Priority Areas of Emphasis

- National Intelligence/Defense Intelligence
- Within Defense Intelligence Enterprise
- Within OUSDI
- With other key stakeholders (Congress, foreign partners, policy community)

- Counter ISIL
- Operationalize Asia-Pacific Rebalance
- Counter Russian Aggression
- Support Cyber Defense
- Counter WMD Proliferation (Iran/DPRK)
- Afghanistan 2016+

- Expand Global Coverage
- Operate in A2/AD Environments
- Sustain CT Ops and CP
- Develop Cyber Intel Capabilities
- Counter Insider Threat

OUSD(I) ISR Operations Analysis Team – Measuring Impact

The ISR Operations Analysis Team applies operations analysis methods using real-world data to evaluate ISR effectiveness and identify potential improvements

2014 - 2015

Dynamic Allocation

2014 **2015** **2016**

ISR Automation

ISR Data Enrichment & Aggregation

ISR Data Mart

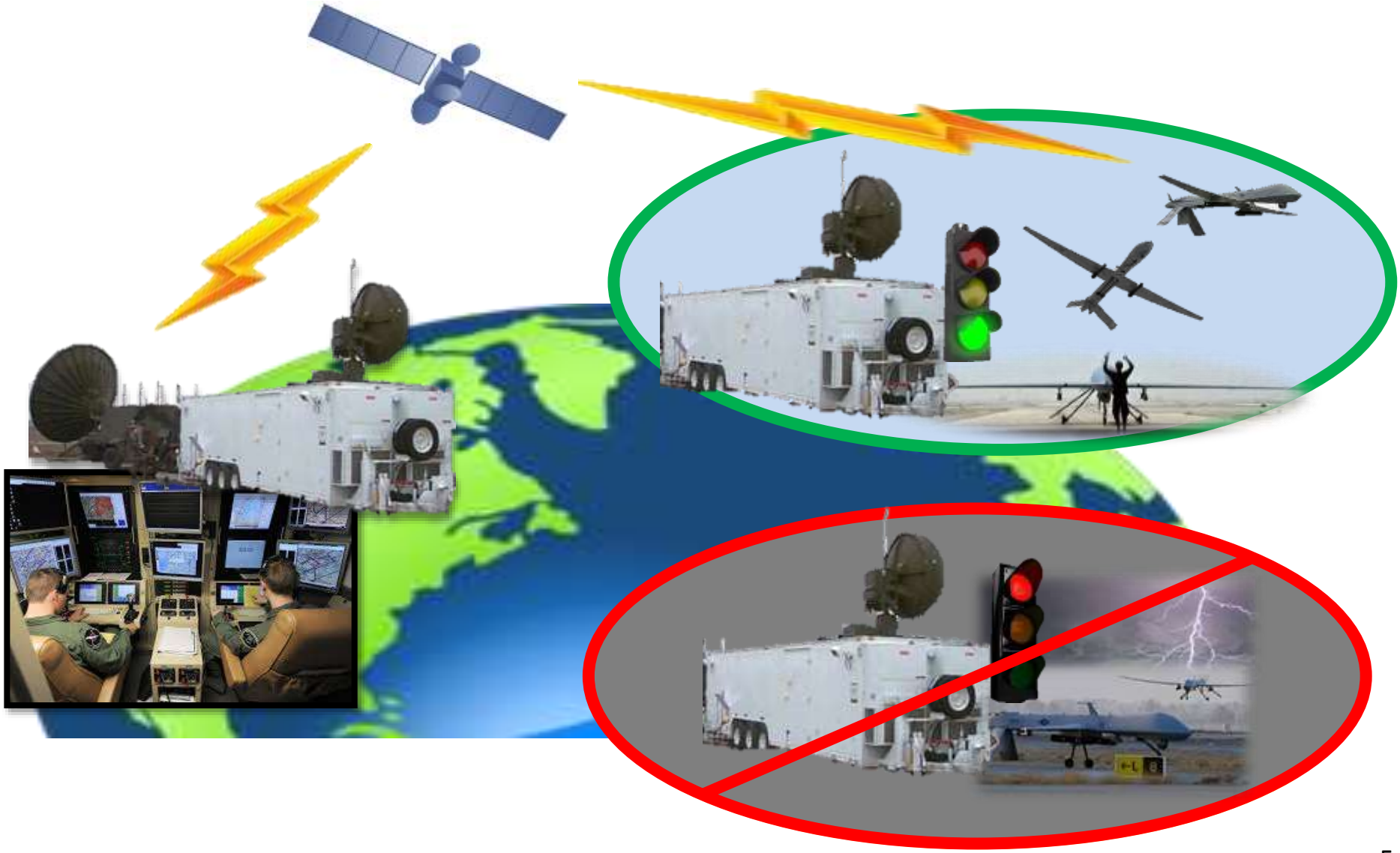
Major ISR Effectiveness Studies

2011	2012	2013	2014	2015	2016
Conv. ISR (Iraq)	SIGINT PED	Multi-INT Fusion	CT (HOA)	WAMI (Afg)	PSS Sensor	**Dynamic Allocation**	Unmanned ISR in OIR	Surrogate Ops
HVI Study (Afg)	GMTI (Iraq)	GMTI (Afg)	HSI (Afg)	Conv. Forces ISR (Afg)	MOE	NTM Spt to Ops	**ISR Auto-mation**	ISR SPR / OH	**IDEA**
PSAT	CW-IED	BSO	CM/MM	CIED	S-3B	LR/LE	HL	EFIC	LEAP
Direct Analytic Support to ISAF / CENTCOM / AFRICOM / SOUTHCOM →	TUAS	HALOE	SPYDR	C-LRA	C-ISIL	G/COCO
						ISR Data Mart

ISR TF est.

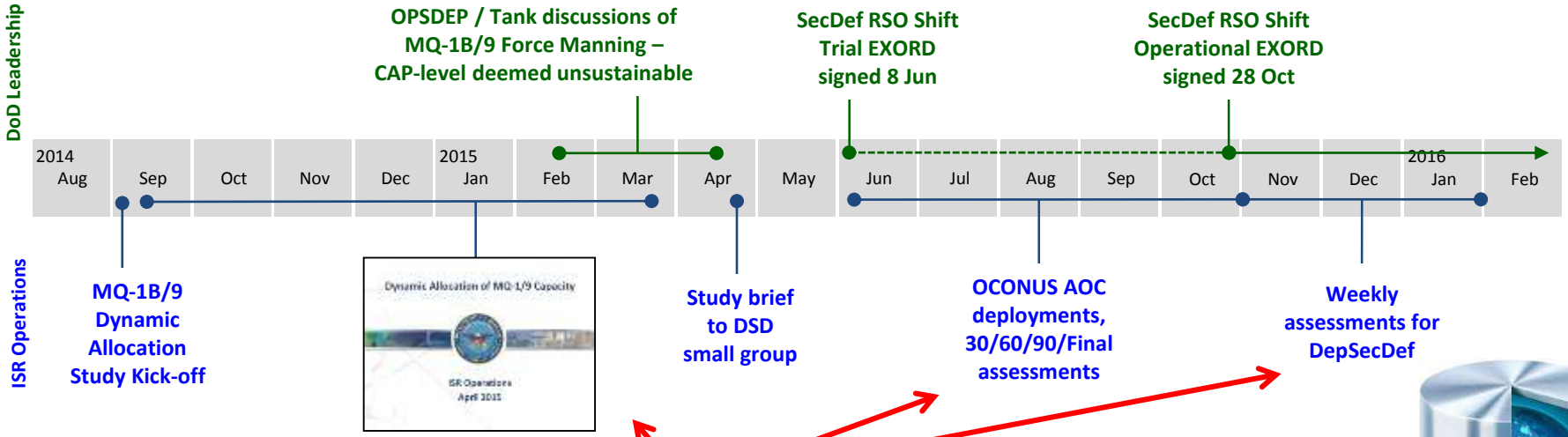
Quick Turn Assessments / Direct CCMD Support

Concept of Remote Split Operations (RSO) Shift



Summary: ISR Operations Directorate played a key role in SecDef directed RSO Shift EXORD to better leverage MQ-1B/9 capacity

- **Two early 2015 events set the conditions for a SecDef directed Remote Split Operations (RSO) Shift EXORD to increase dynamic allocation of the MQ-1B/9 enterprise**
- **SecDef directed implementation of one of three study recommendations for a trial period; ISR Ops analysts assisted in EXORD execution and assessed monthly impact**
- **Following a successful trial, SecDef approved a two-year operational RSO Shift EXORD**



Studies and assessments depend on data discovery and intensive analysis

Dynamic Allocation Study: Examined unrealized capacity within the Air Force MQ-1B/9 enterprise and identified steps to recoup lost hours

- **OUSD(I) commissioned a study to address the need for more efficient management of the USAF ISR enterprise through RSO shifts**

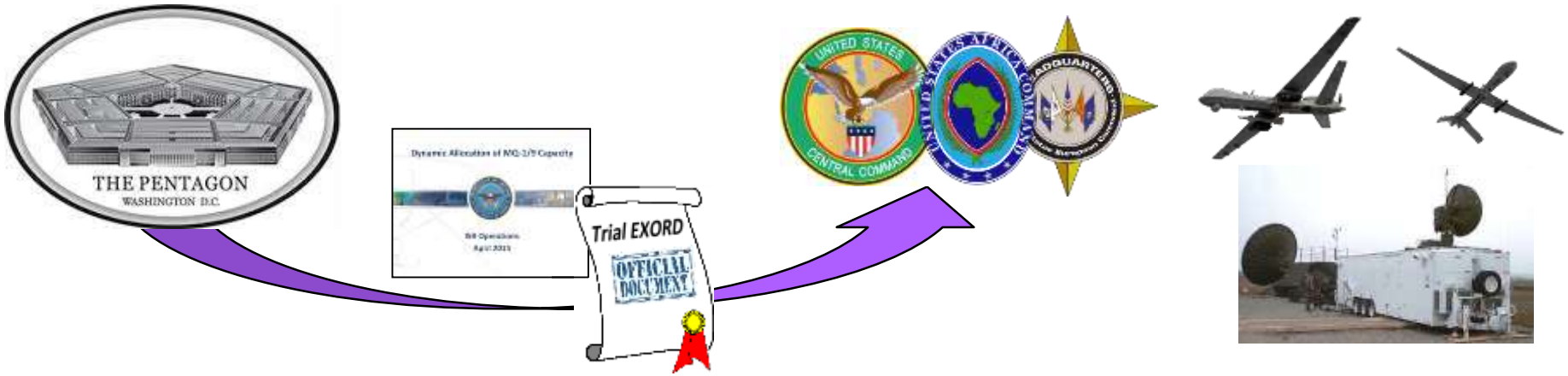
- **Data Challenge: The study depended on access to a LIMDIS database and RSO shift log**
  - **Although assumed to be comprehensive, the database and log are unique to the MQ-1B/9 enterprise and depend on operator initiative, which increases potential for errors and gaps**
  - **More universal ISR databases seek to encompass mission data for the entire ISR enterprise but are also dependent on operator initiative to make information available**

Study Recommendations and Implementation

- **The study recommended recouping flight time by addressing key RSO shift limitations**
  - **Materiel and non-materiel changes were identified to address each limitation:**

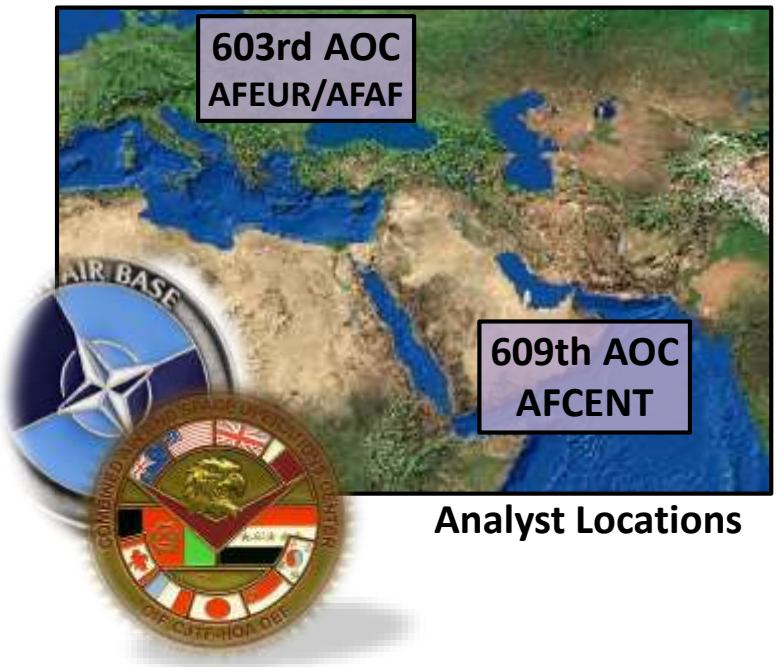
Limitations	Recommend Change
Majority cancelled within hours of planned landing	Incentivize earlier cancellation time
LREs limited in number of RSO shifts a day	Increase LRE shift capacity
ANG MCE crews have more restrictive certifications	Consider ways to expand ANG certifications

- **The study coincided with AF CAP reductions (DepSecDef interest item), culminating in DepSecDef order to Joint Staff: Trial Dynamic Allocation EXORD issued 8 Jun 2015**

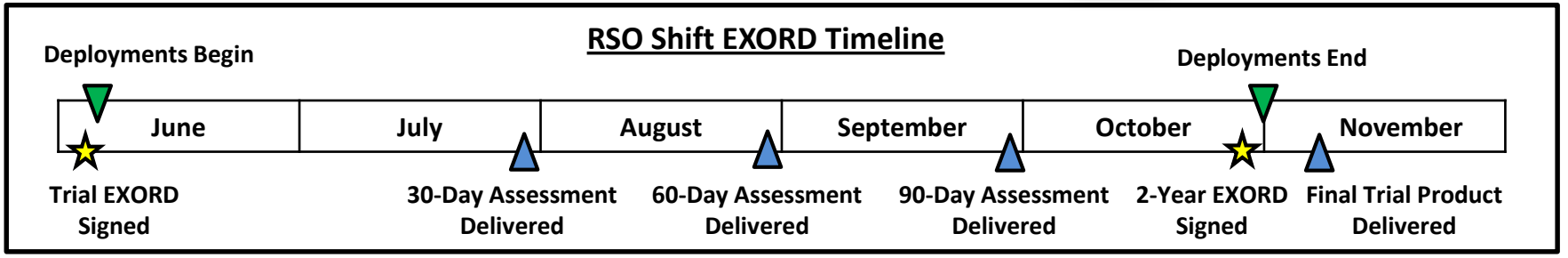


ISR Operations Analysts deployed to 603rd and 609th AOCs: Facilitated EXORD implementation and improved data collection for impact assessments

- **ISR Ops Analysis Team deployed to AOCs from Jun – Oct 2015 to operationalize EXORD implementation**
  - **21 rotations among 15 different analysts**
  - **Developed work-flow processes to assist AOC Ops personnel in decision and data characterization**
  - **Monitored all sortie activity and captured data to support detailed analysis**
- **Team generated 30, 60, and 90 day assessments for DepSecDef, as well as a final analysis product**
- **Deployments ended 31 Oct 2015; team continued to remotely monitor through the winter season**



Analyst Locations



- **Set the stage for SecDef to approve operational RSO Shift EXORD effective through 2017**

EXORD Results and Impact

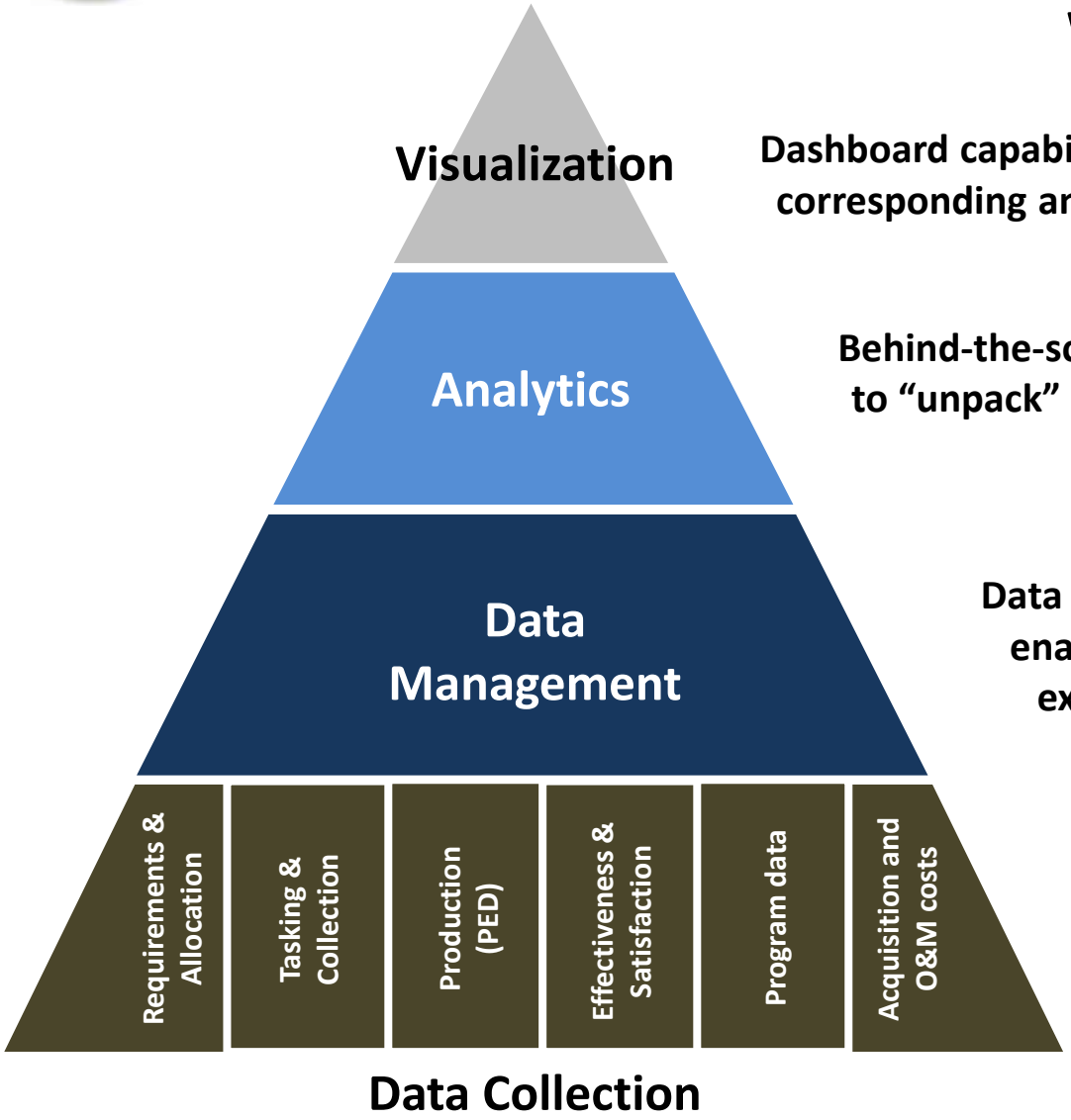
- **The combination of Dynamic Allocation Study and Trial EXORD produced doctrinal and cultural changes, *<u>increasing ISR capacity for the Warfighter</u>***
  - **Stakeholders requested OUSD(I) ISR Ops continue analysis through Jan 2016 to assess the impact of more extensive weather during winter months on cancellations and RSO shifts**
  - **Initial analysis indicates the RSO shift rate decreased to 17% as high volumes of weather cancellations overwhelmed LRE capacity, but the shift rate still exceeded historical trends**
  - **The new RSO shift business rules were codified in a subsequent EXORD effective through 2017 and is the benchmark for future ISR effectiveness efforts**

Implications and Way Forward

- **Data challenges identified during OUSD(I) ISR Ops studies prompted senior leader-directed follow-on efforts to examine ISR enterprise management**

- **Future Vision: Shape allocation and investment decisions with data-driven effectiveness assessments**

Way Forward: A robust, data-driven ISR enterprise management capability is comprised of four key layers aligned in a comprehensive framework



What is needed?

Dashboard capability to present underlying ISR data and corresponding analytics for monitoring and assessment

Behind-the-scenes analytics (preferably automated) to "unpack" the data to answer common questions and derive meaningful insights

Data management architecture and tools to enable automated / semi-automated data extraction, transformation, loading (ETL)

Identify, access and as needed create original data sets from across the ISR enterprise plus common reporting standards

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Questions?

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