
AWS
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WPS203

Agile governance on AWS GovCloud (US)

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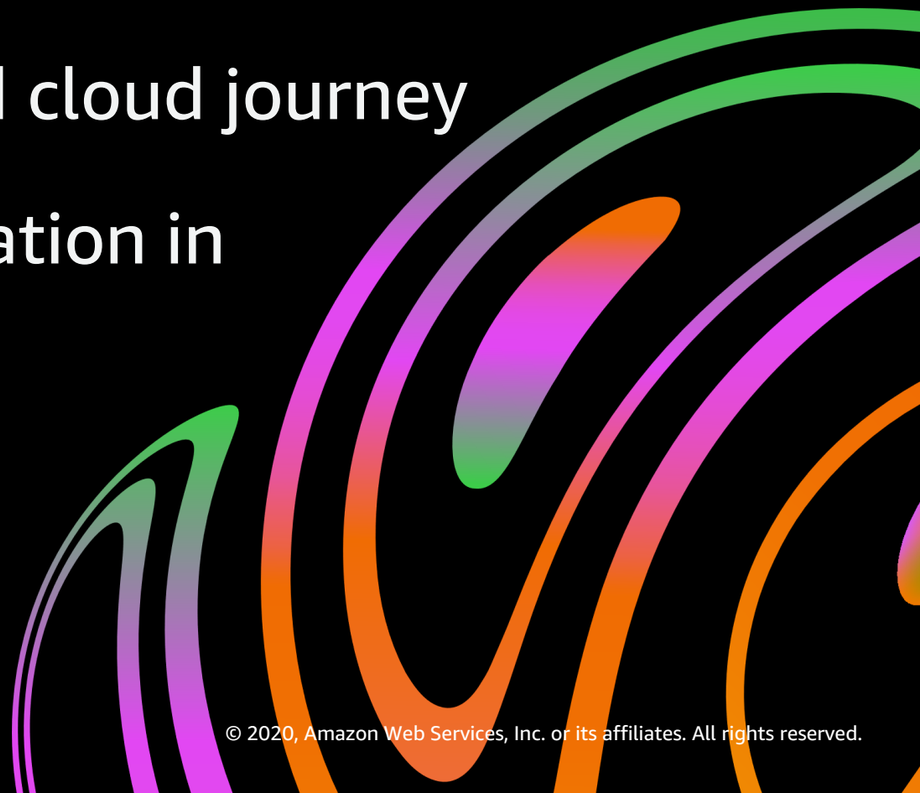
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AWS re:Invent

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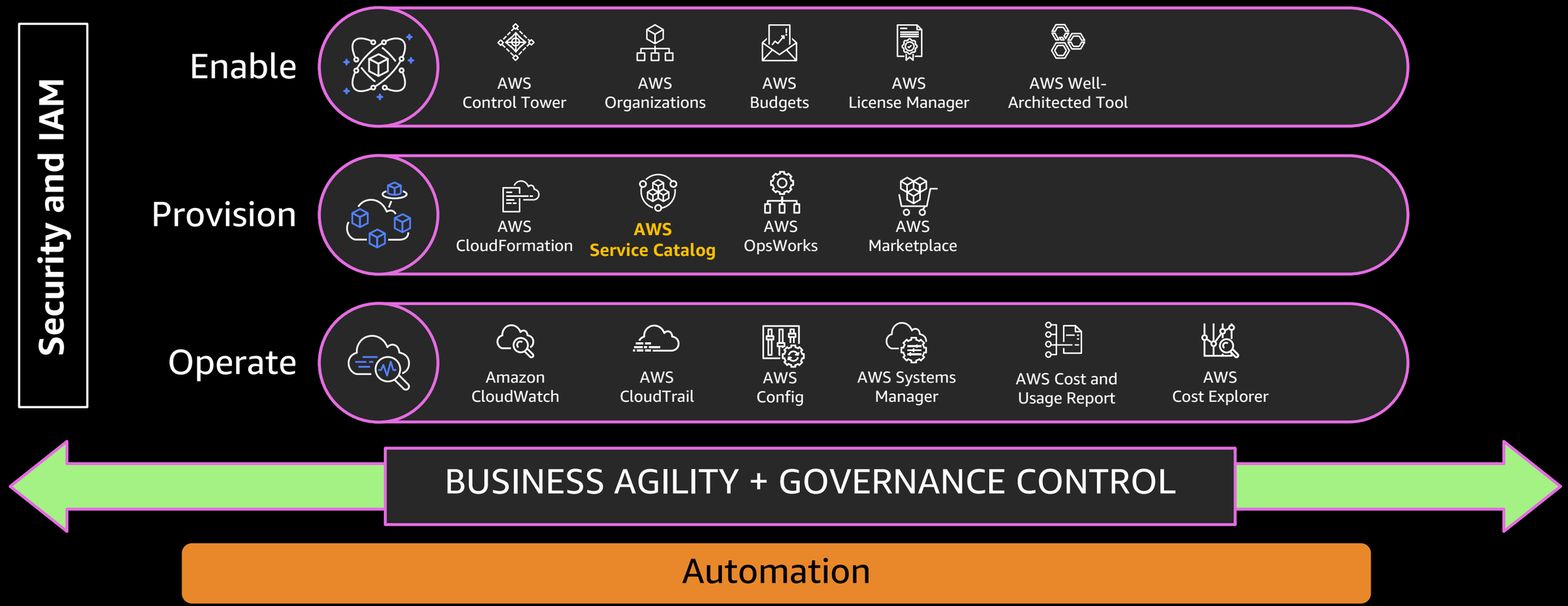
Agenda: Agile governance on AWS GovCloud (US)

- ✓ Management and governance in AWS
- ✓ AWS Service Catalog in AWS GovCloud (US) – a key enabler
- ✓ Lockheed Martin Corp. (LMCO) – overview and cloud journey
- ✓ AWS Service Catalog enabled agile transformation in AWS GovCloud (US)
- ✓ Way forward and lessons learned



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AWS management and governance services



Business agility *and* governance control

With AWS Service Catalog, you don't have to choose between agility and governance

You can have both

Governance

Security

Compliance

Operations

Spend Management



AWS Service Catalog

Agility

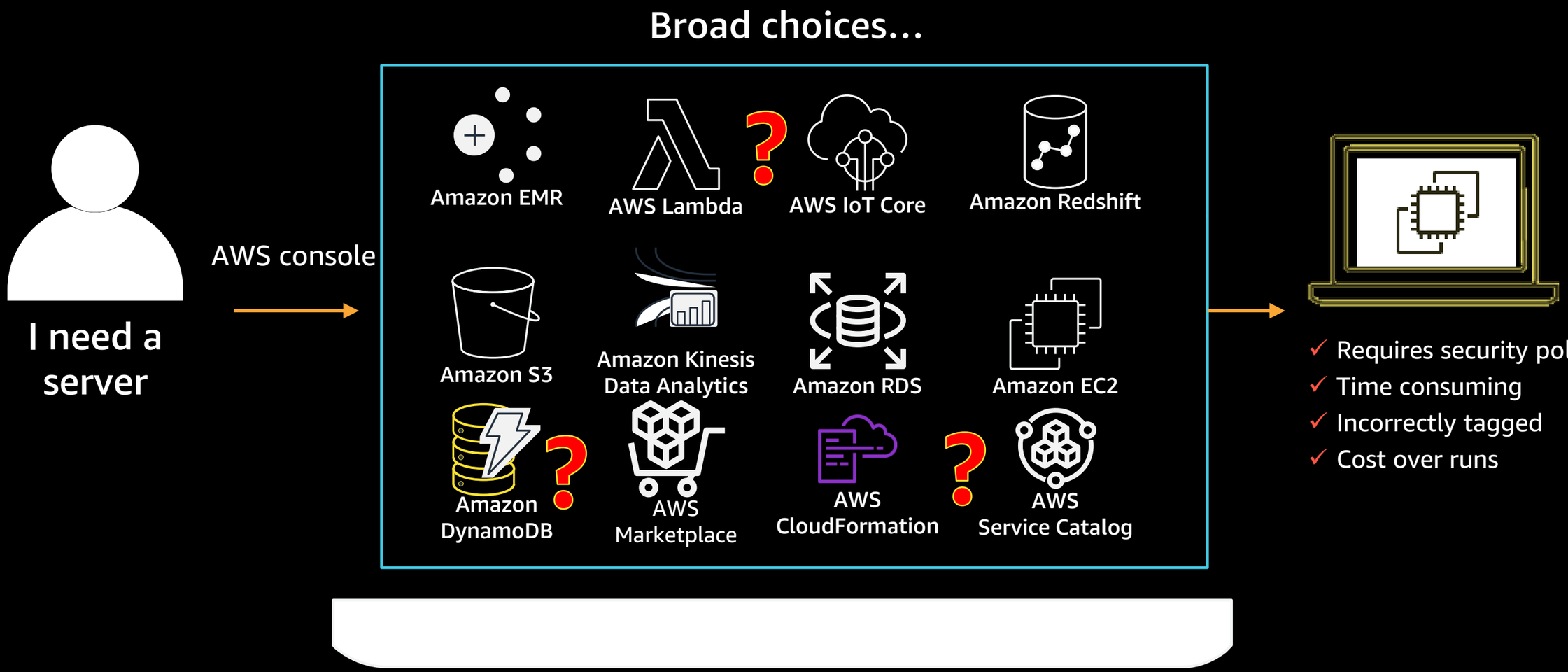
Self-service access

Experiment fast

Respond quickly to change

Organize, Govern, Share → Self-Service

Current state of self-service



Self-service products

Anything that you can put in a **CloudFormation** template



JSON / YAML / Terraform

CloudFormation Template

1 Standardized by administrator as a product

Admin (John)

supports

Product

- Service actions
- Versioning
- TagOptions

2 Add governance via Service Catalog constraints [launch, template, StackSet, notification]

Self-service via:

- Console
- API/CLI
- CloudFormation resources

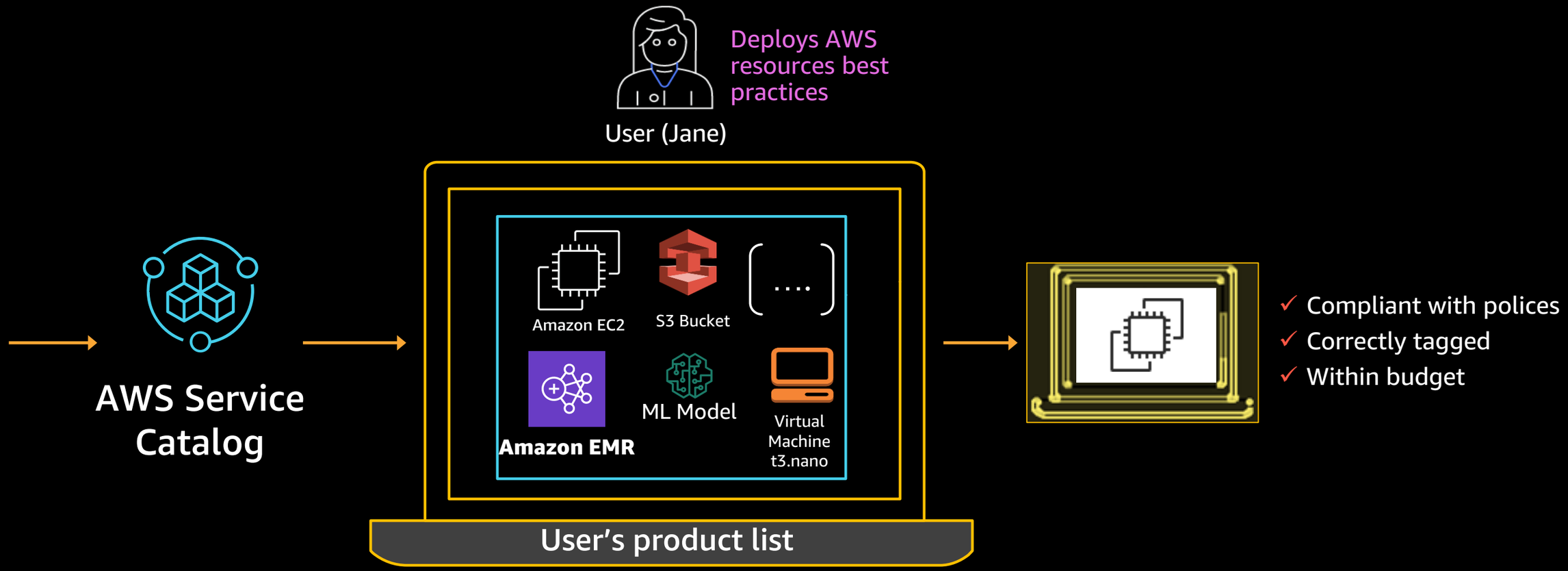
3 Self-service provisioning

User (Jane)

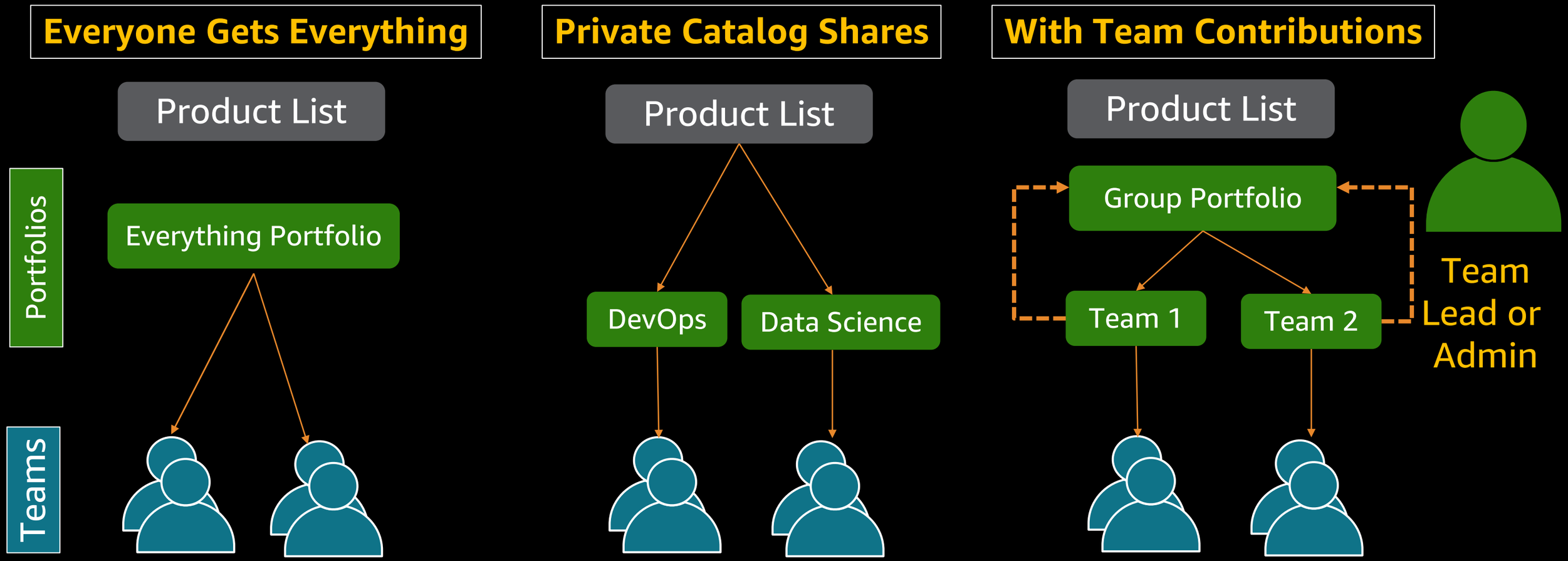
Provisioned Product

Stack

New state of self-service



Customer usage patterns for AWS Service Catalog



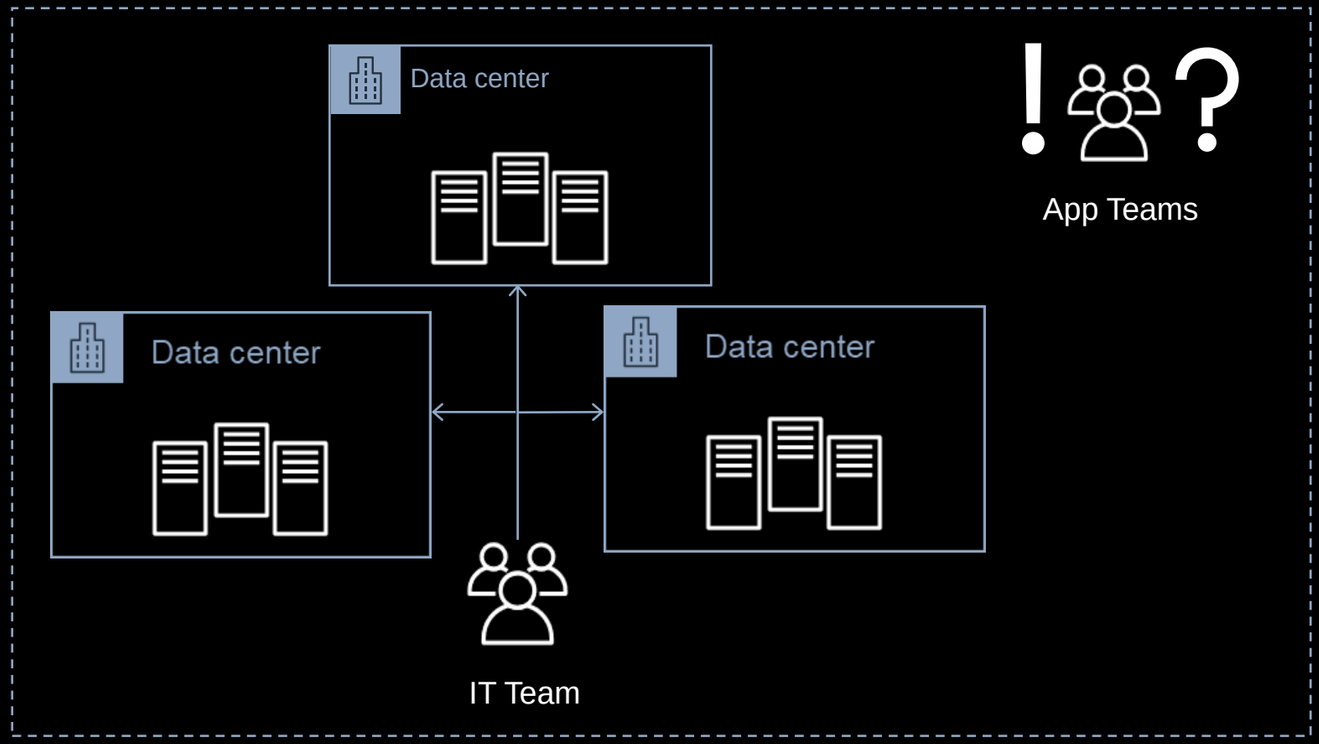
Lockheed Martin Corporation (LMCO)

Lockheed Martin is a global security and aerospace company that employs approximately ~110,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products, and services.



Life before the cloud

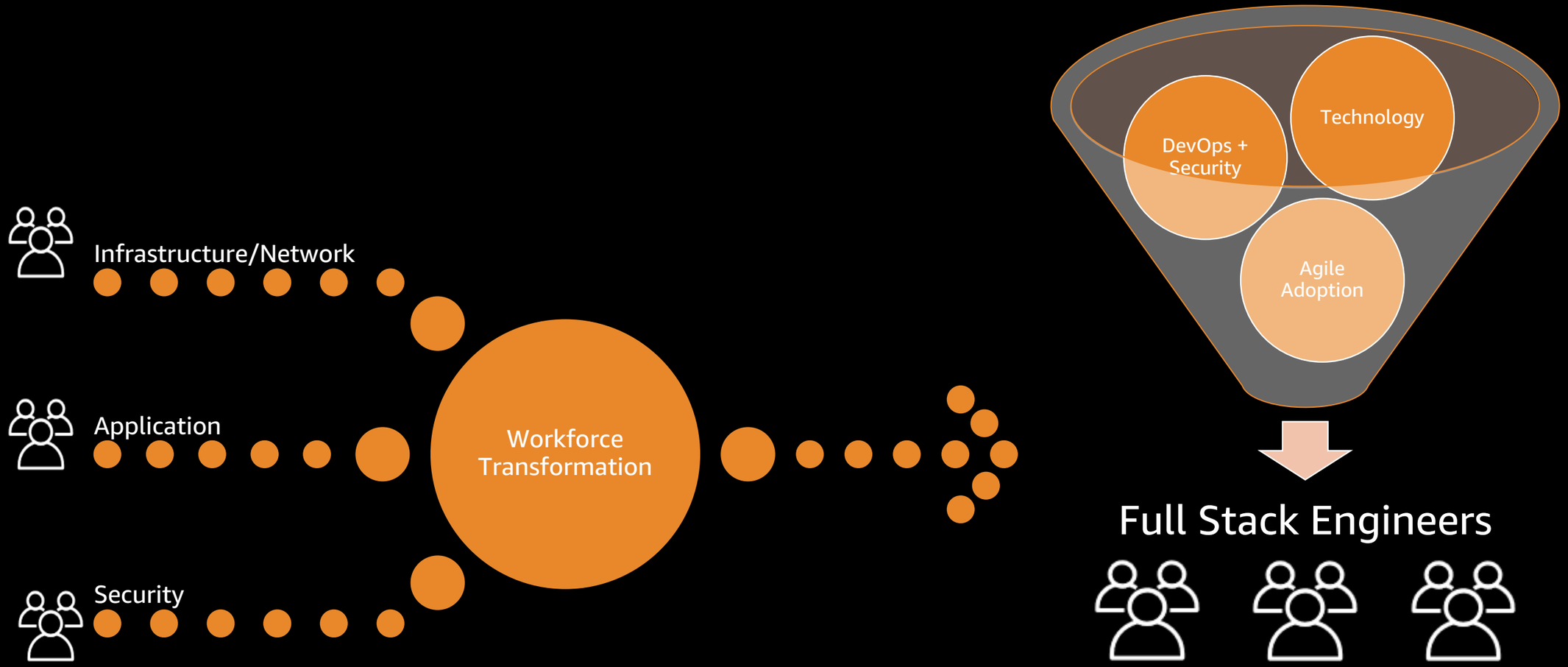
- Data Centers managed by Central IT Team
  - Lengthy server provisioning and decommissioning
  - Complex maintenance
  - Problematic coordination
  - Challenging disaster recovery
  - Limited automation



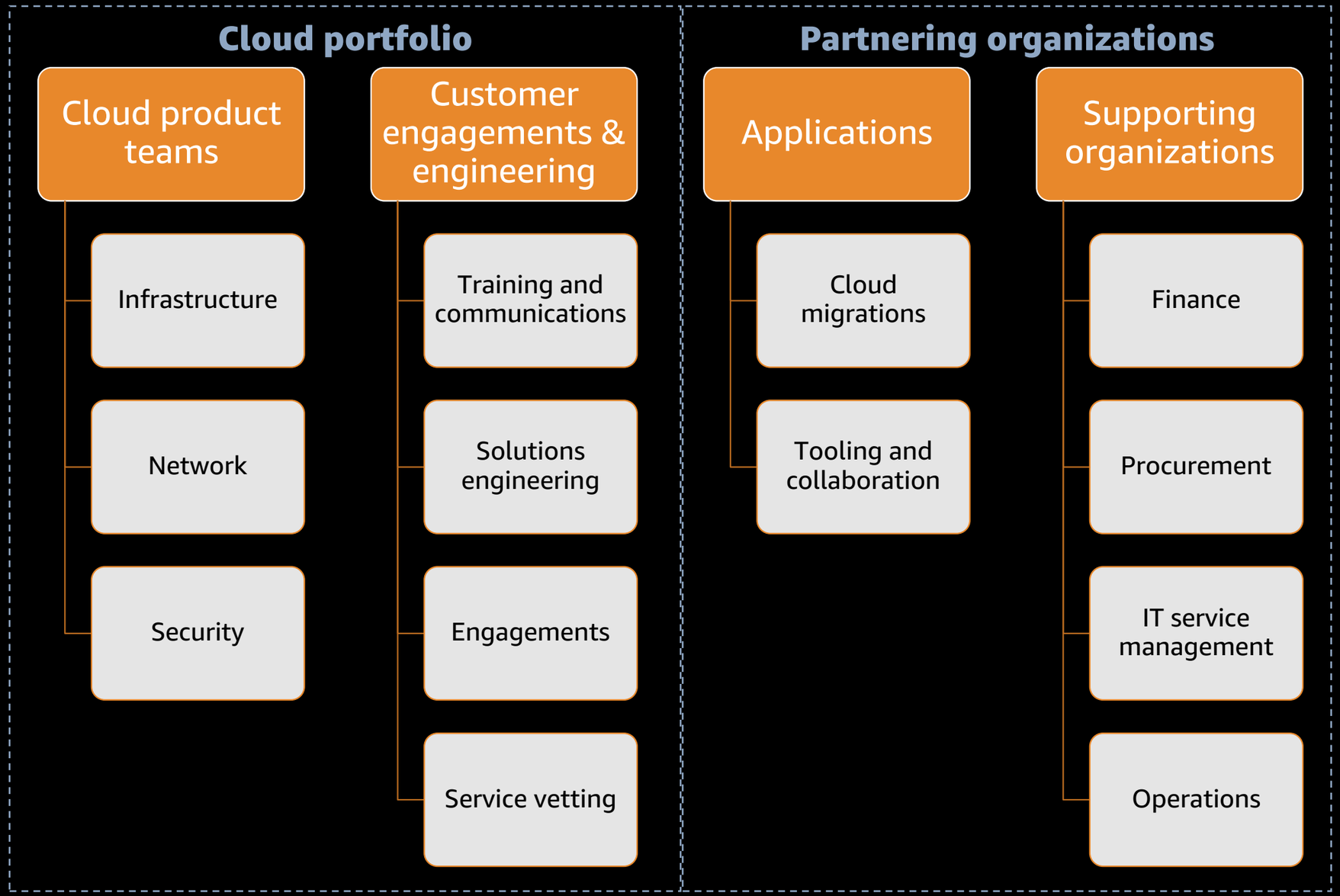
Our cloud adoption

- What led us to the Cloud:
  - Desire for agility with IT Infrastructure
  - Expressed need from customers for cloud usage
  - Potential for cost savings
  - Compliance posture
  - Service portfolio
- Our mission:
  - Develop pipelines for enterprise cloud adoption
  - Migrate 50+ programs and 100+ applications for business area programs and enterprise IT

Agile transformation

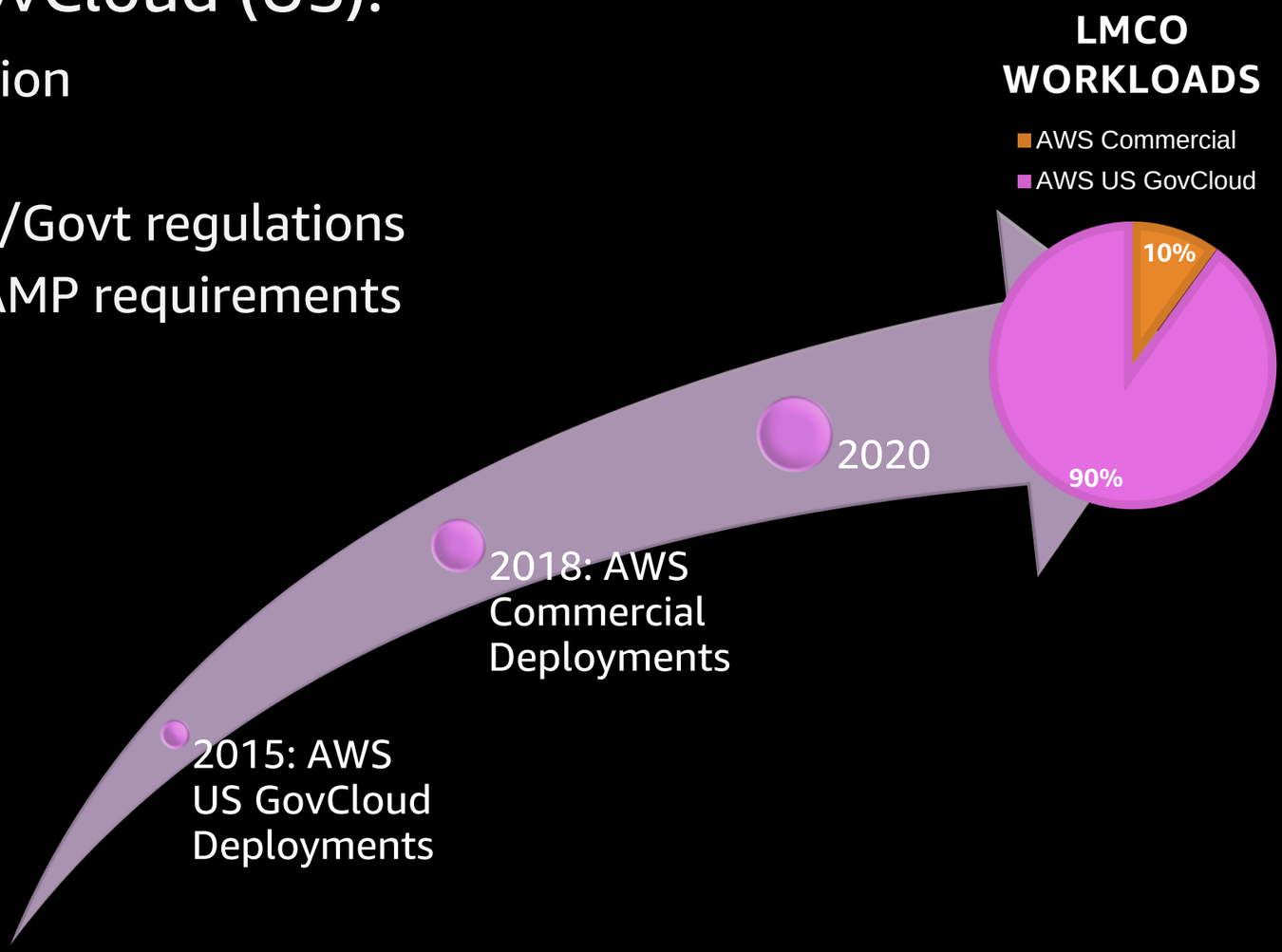


Organizational restructure and partnership



AWS GovCloud (US) at Lockheed Martin

- Importance of AWS GovCloud (US):
  - Logical and physical separation
  - Management by US persons
  - Auditing of services for DoD/Govt regulations
  - Adhering to ITAR and FedRAMP requirements

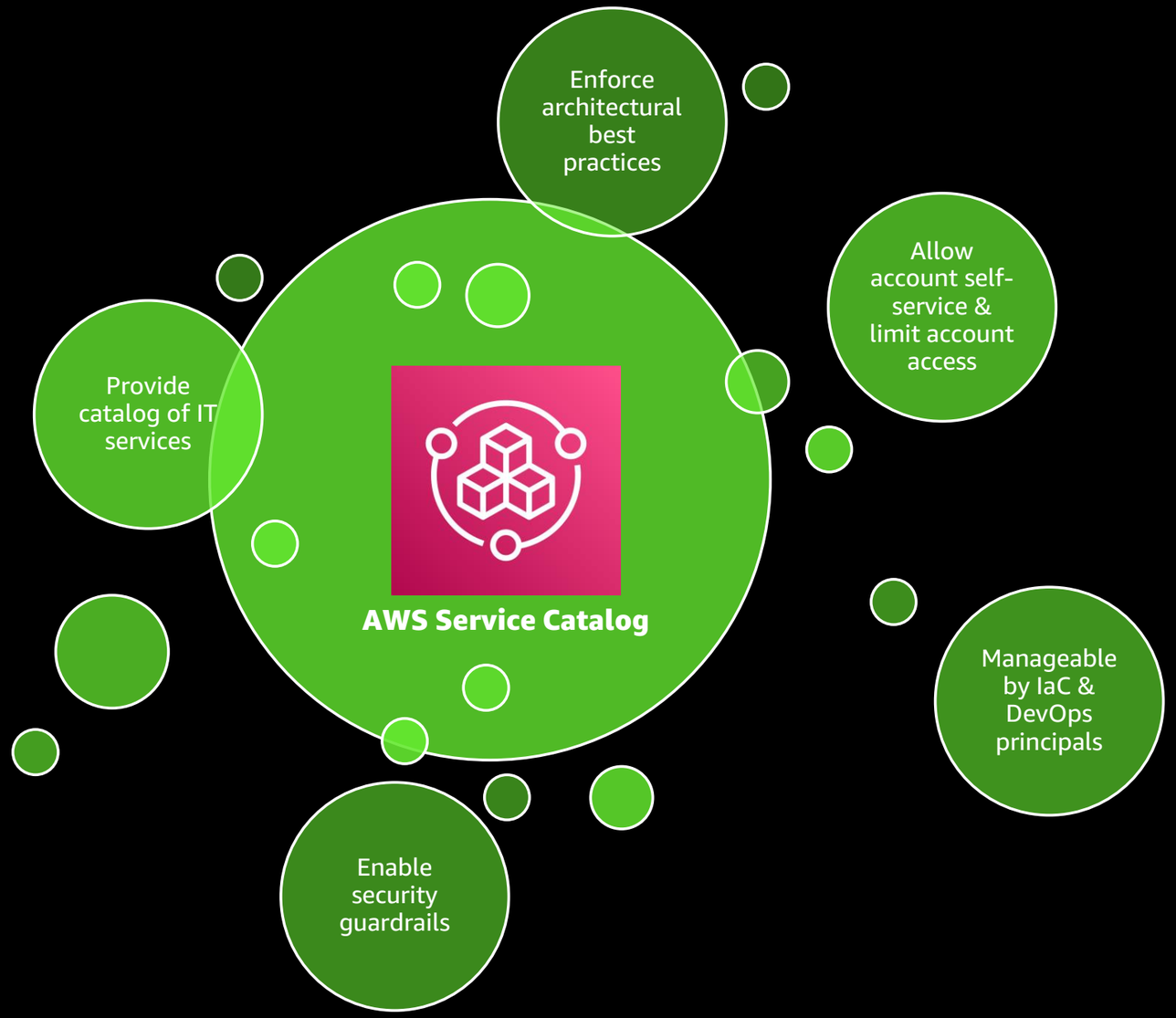


AWS GovCloud (US) vs commercial

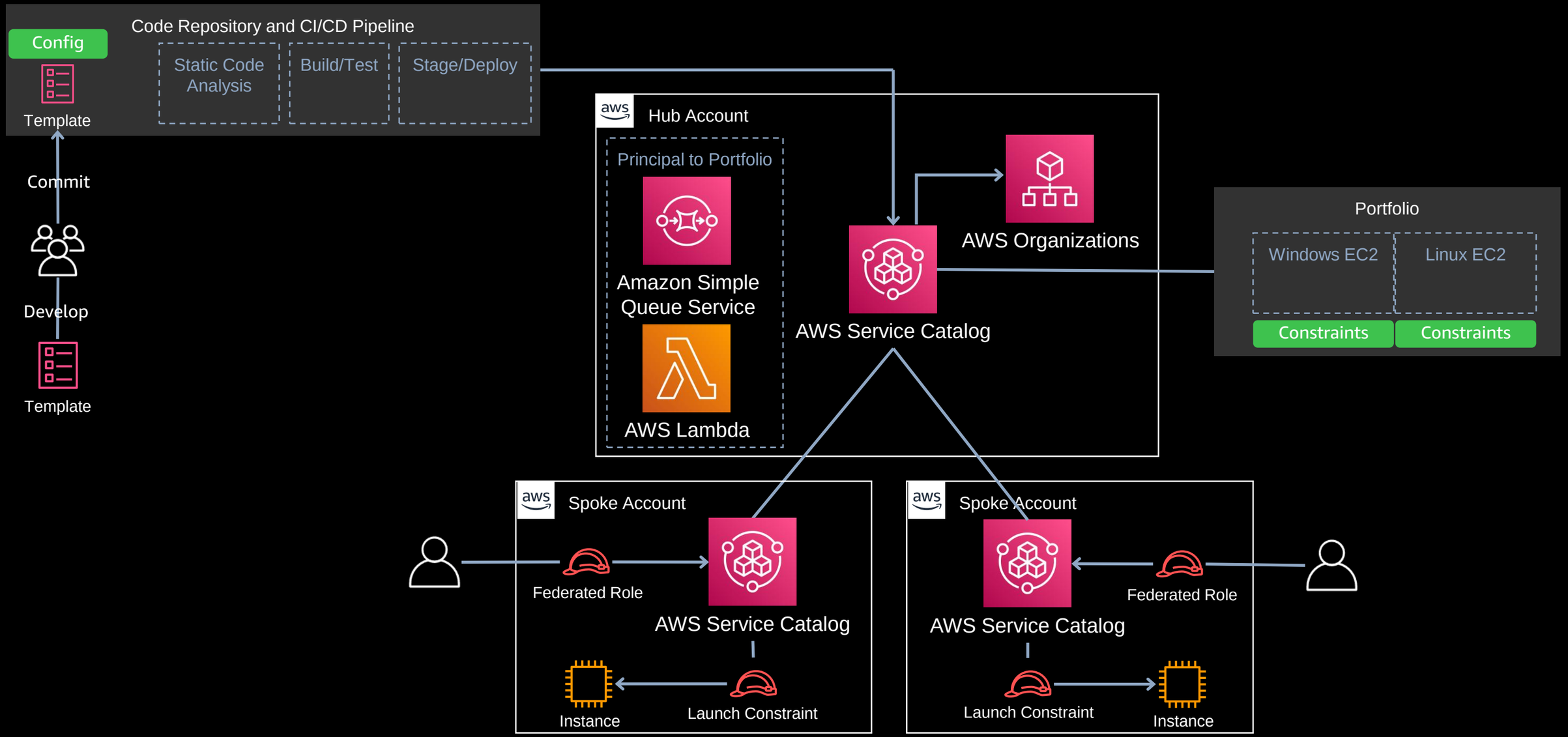
LMCO's position on handling US Government or Regulated data (2019)

US Govt or Regulated	AWS GovCloud (US)	Commercial
Dept. of Defense (DOD) [CDI] DFARS 7012	✓	X
Dept. of State (DOS) ITAR [ECI]	✓	X
For Official Use Only [FOUO]	✓	X
Dept. of Commerce (DOC) EAR [ECI]	✓	X
DOE, NRC, and other Agencies [ECI and other restrictions]	✓	X
Other regulated data [w/ no ECI]	✓	✓
Non-US Govt or Regulated	✓ w/exceptions	✓ w/exceptions
Lockheed Martin Data	✓ w/exceptions	✓ w/exceptions

AWS Service Catalog in AWS GovCloud (US)



AWS Service Catalog deployment



AWS Service Catalog deployment

- Deployment Characteristics:
  - Governance Process for Products
  - Code Repository and CI/CD Pipeline for Portfolio and Product Management
  - Portfolio Organization Share
  - Custom Code for Association of Principal to Portfolio
  - Launch Constraints, as needed
  - Template Constraints



- Engagement with ProServe:
  - Engaged with ProServe and the Service Catalog Team to ensure clarity on use case and an understanding of how LMCO would utilize Service Catalog to achieve their security guardrail and automation needs
  - Hand in hand, LMCO and ProServe built, tested, and launched initial Service Catalog solution in US East, AWS GovCloud (US) - West and AWS GovCloud (US) – East regions



Our journey began with Amazon EC2

- Provide “Golden AMIs”
  - Incorporating required agents
  - Incorporating security policies and required configurations
- Support on-going maintenance of Amazon EC2
- Simplify updates across the entire organization
- Provide flexibility for and restrict deployment options as needed

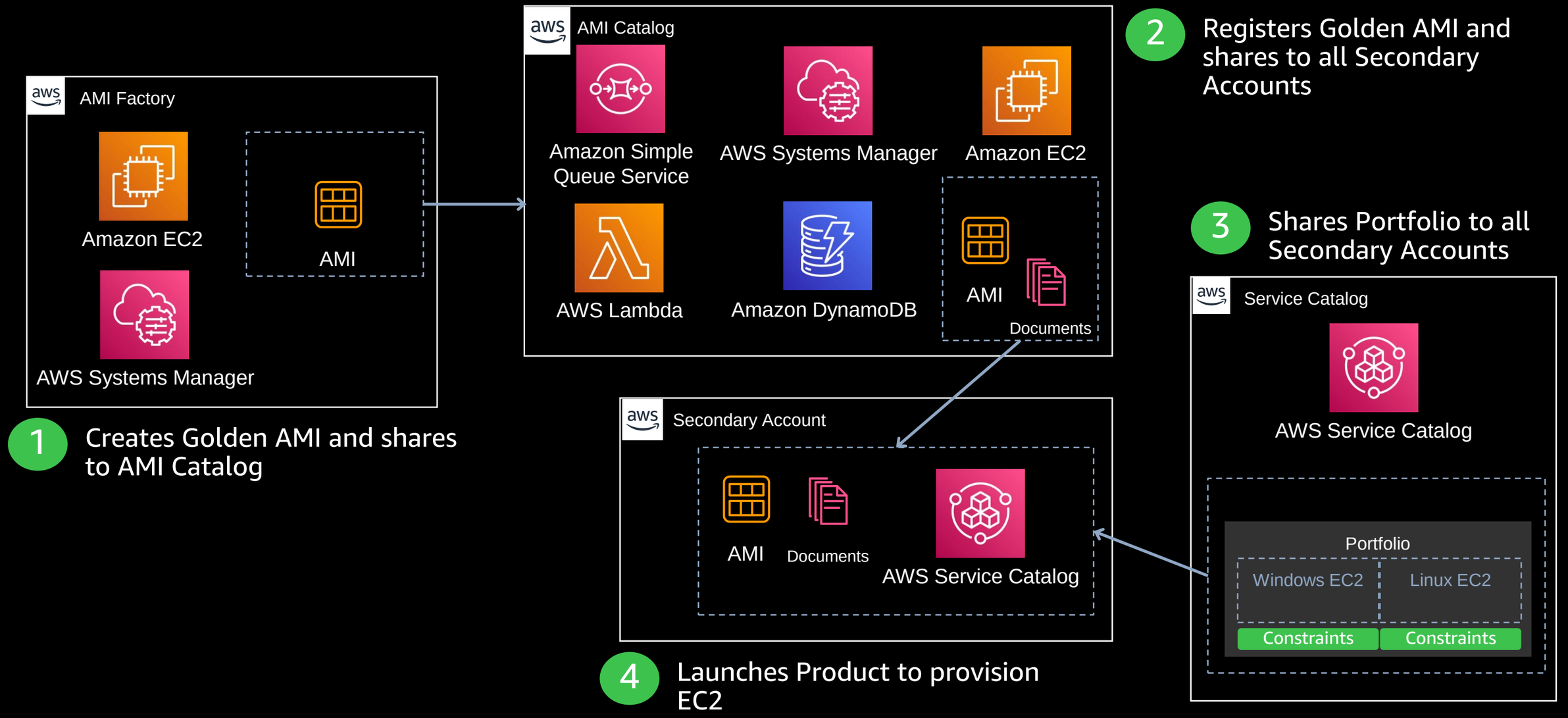


Amazon EC2



AWS Service Catalog

LMCO Amazon EC2 solution



LMCO expanded use cases

Expanded variations of Amazon EC2 Products

Amazon RDS instances

Account Network Configuration

- Dedicated VPC
- Security Groups

Automation and Integration

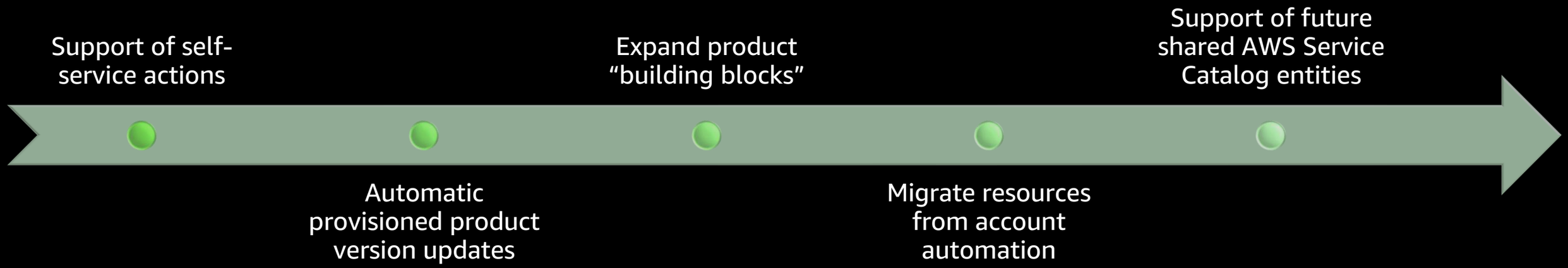
- AWS CloudWatch integration with Ticketing System
- Scheduled Removal of Aged Snapshots
- Account Integration with Monitoring Tools

Recently expanded to Commercial, with 95% provisioned products in AWS GovCloud (US)

Our AWS Service Catalog roadmap – near term

- AWS Service Management Connector
  - AWS Config with CMDB
    - CMDB is the record of authority at LMCO for tracking Configuration Items (CIs) such as services and assets, and their CI-to-CI relationships throughout their life cycle.
    - Solution fills a gap with AWS accounts, where there is little to no CIs in the CMDB for these accounts and related AWS compute resources.
  - AWS Service Catalog and AWS Systems Manager
    - Provides integration with product provisioning and running of automation documents in accounts which can be tied into catalogs and workflows
    - Reduces need for development of custom interfaces and will assist with scenarios such as new account requests and restricting direct logon onto accounts

Our AWS Service Catalog roadmap – long term



Lessons learned – key takeaways for you

1. Utilize AWS Service Catalog, an easy to use solution for creating a central repository of IT services with minimal code development due to sharing capabilities
    1. AWS Service Catalog is a service that strives to keep equal capabilities available in both AWS GovCloud (US) and Commercial
2. Create a well defined governance model around publishing of products
    1. Utilize automation, DevSecOps, IaC to support
3. Grow your catalog
    1. Ensure you have developers to support - employ a dedicated team or have commitment across company with engagement in product creation
    2. Utilize launch constraints
4. Provide feedback to AWS

What’s next

- **Learn and be curious *(useful links)***
  - *AWS Service Catalog – Getting started, case studies and blog posts*
  - *AWS Service Catalog reference architecture in GitHub*
  - *Getting Started Library – Well architected blue prints for using AWS Services*
  - *Service Management Connectors for ServiceNow and Jira Service Desk*
  - *AWS Service Catalog Partners validated for following best practices*
  - *AWS Service Catalog FAQs*
- **Provide feedback**
- **Let’s get secure and compliant workloads into production for our AWS GovCloud (US) customers!**

Thank you!



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