Cloud Maturity Model^{TM} (CLMM^{TM}) and A Road Map for Cloud Transition Planning

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Assumptions and Goals

Assumptions:

- 1. This is not the LAST word on the topic.
- 2. This is not the ONLY word on the topic.

Goals:

- 1. Offer a *framework* for facilitating *strategic* thinking about your IT Infrastructure and *how cloud* may or may not align with it.
- 2. Offer a goal based approach, grounded in evidence, applying the scientific method to developing an IT road map.

3 Takeaways for the day

- 1. ***Don't confuse,*** virtualization with "the cloud."

- 2. ***Don't dismiss,*** self provider as an option.

- 3. ***Be self aware,*** of your 2 – 3 most critical strategic IT goals.

Two common phrases stated publicly by CIOs at enterprise organizations:

- "I want to get out of the data center business."

- "I want get out of the IT business."

(Hyman, 2017)

Background

- Cloud computing technology has become the dominant conversation in IT strategic planning and implementation (Hyman, 2016).

- There is a significant and palpable sense of urgency at enterprise level organizations (and governmental agencies) that cloud:

  - 1. Is a critical technology that **must** be adopted in earnest, in organizational IT planning and implementation.

  - 2. Is a panacea capable of solving fundamental IT gaps in an organizational infrastructure.

Business Problem

- At present there is no standardized roadmap, best practice guidelines, or agreed upon guiding principles to inform and lead CIOs, CTOs, and IT managers in cloud adoption and IT infrastructure transition.

Research Question

- How can we develop a framework or methodology to guide IT decision makers through the Cloud Computing adoption process, and assist them in assessing their organizations' current status along a continuum of strategic IT infrastructure maturity?

Foundational Maturity Models to Consider

- CMM
  - Capability Maturity Model
    - Classification method for organizational process
    - Applied to SDLC (in this conversation)
- CMMI®
  - Capability Maturity Model Integration
    - Behaviors leading to improved performance
    - 1 – 5, Initial – Optimization
    - Universal organizational behaviors associated with predicting success in enhancement of performance.
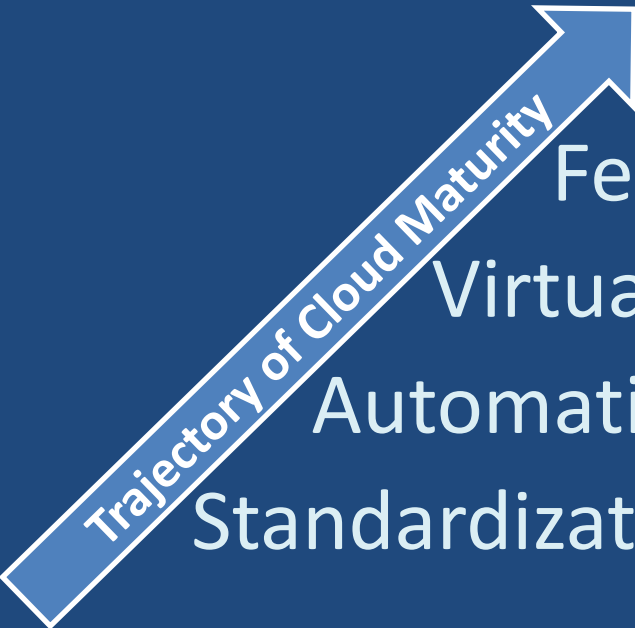
State of the Art (SOTA)

- Various thinkers on the topic of the "*evolution and trajectory of cloud computing*" have developed a consensus of an *arc of cloud adoption* in organizations.

- But at present, there is no agreed upon classification method, for identification of categories, for describing Cloud maturity or implementation at an organization.
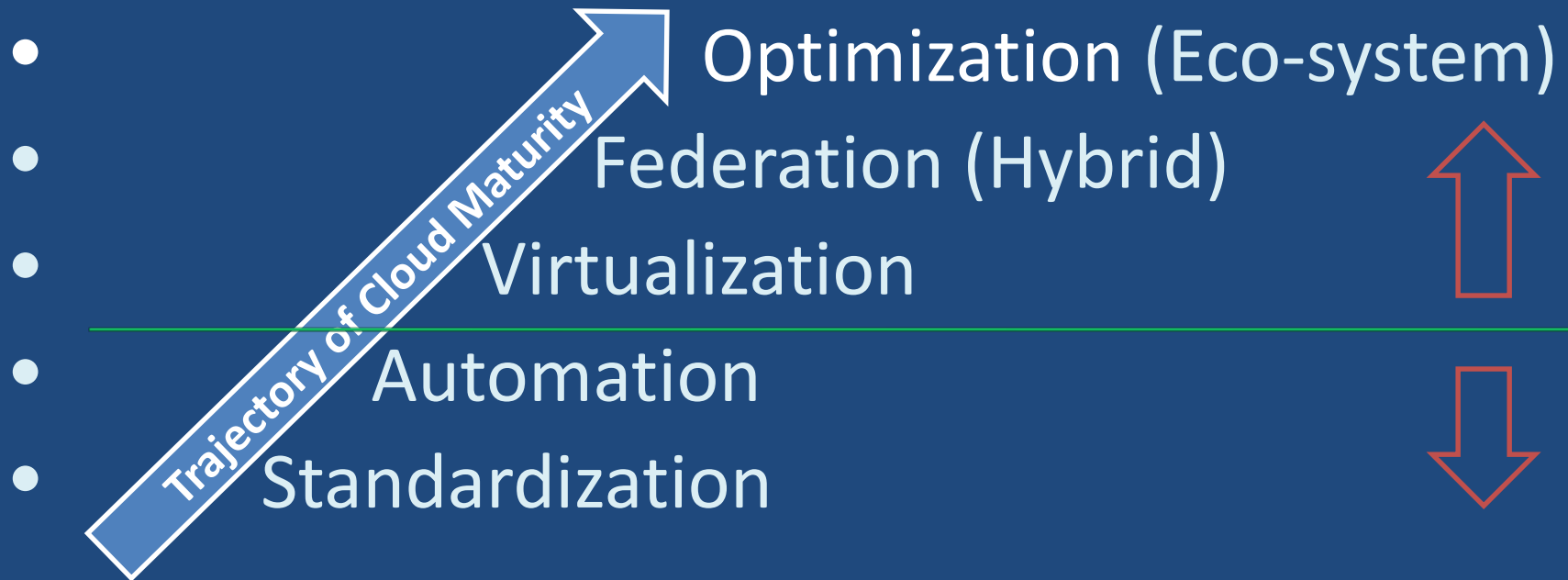
Motivation

- A classification method for categorizing levels of cloud adoption and assessing an organization's strategic IT infrastructure can assist in distinguishing among stronger and weaker positioned organizations;

- and, can provide a framework for an individual organization to develop their own IT Road Map for Cloud Adoption.

Cloud Maturity Model (CLMM)

- **Optimization (Eco-system)**
- **Federation (Hybrid)**
- **Virtualization**
- **Automation**
- **Standardization**

Trajectory of Cloud Maturity

- A classification method to measure the level of evolution of cloud adoption and IT maturity in an organization.

(Hyman, 2017)

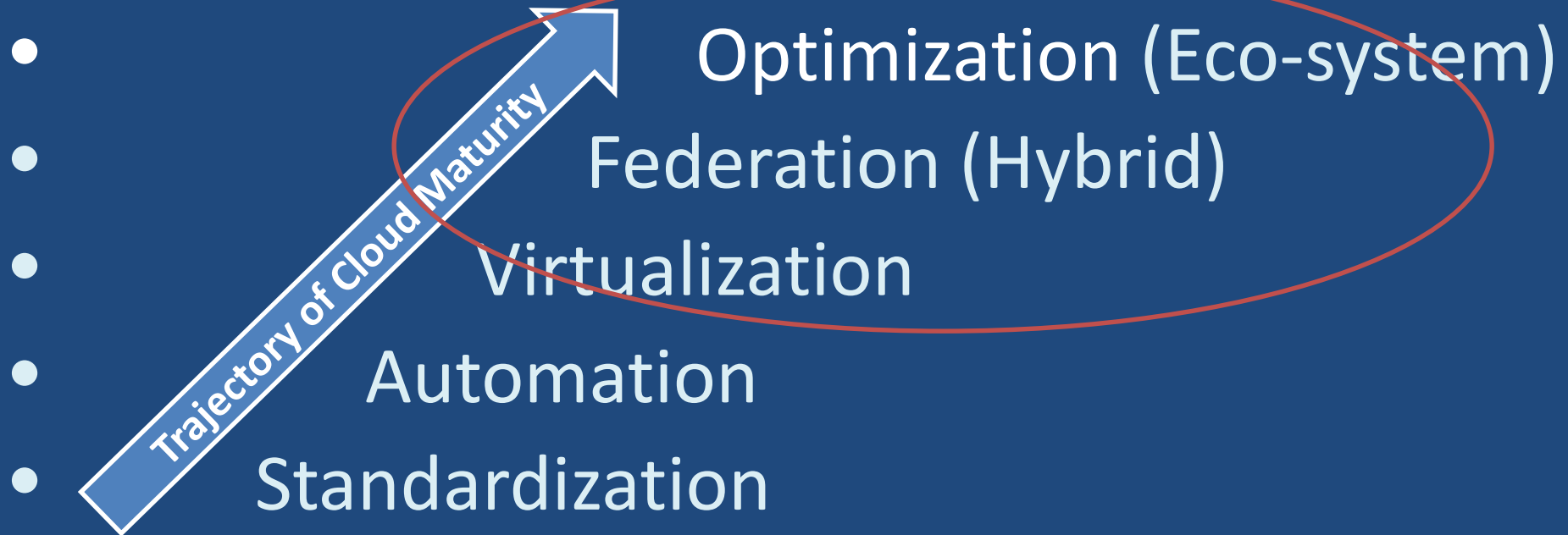# Are you above the line or below the line?

- Optimization (Eco-system)
- Federation (Hybrid)
- Virtualization
- Automation
- Standardization

Trajectory of Cloud Maturity

- If you have not achieved standardization and automation, you will encounter repeated failures at the higher levels.

(Hyman, 2017)

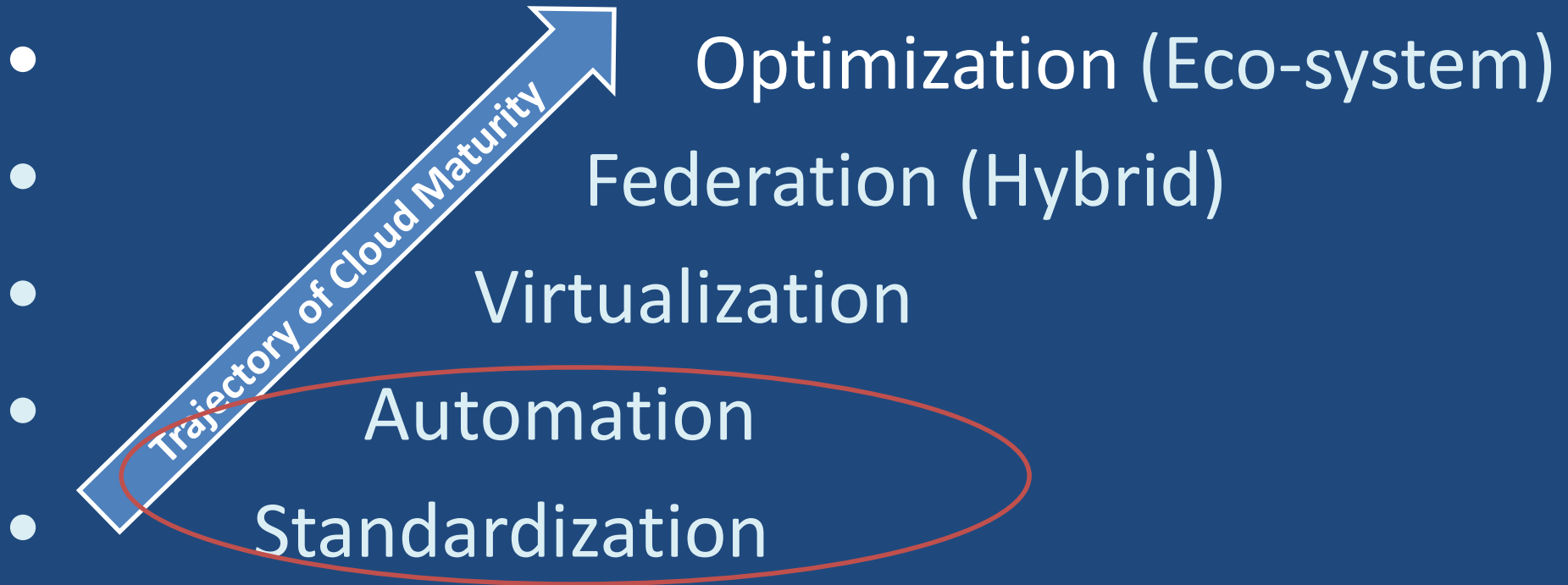# Many IT cloud efforts are focused here

- Optimization (Eco-system)
- Federation (Hybrid)
- Virtualization
- Automation
- Standardization

Trajectory of Cloud Maturity

(Hyman, 2017)

While evidence suggests their cloud maturity is here

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Trajectory of Cloud Maturity

(Hyman, 2017)

Strategic Goals for Transitioning to a Cloud Based IT Infrastructure

- Capacity
- Topology
- Platform

Road Map

- Timelines
- Trajectory
- Evolution
- Optimization Strategy

Capacity: Footprint, Topology, Expansion

- How large is <u>our current footprint</u> of Storage, Compute, and Memory?

- What is <u>our current topology</u>?

- What is our rate and size of growth/<u>expansion</u>?

Topology, Network, Security

- What is our <u>Topology</u> goal?
  - PCF/ACF, DR, HA-Federated
- What is our <u>Network</u> Model?
  - Types of Packets
  - Types of Workloads: TXs, Analytics, Scale, Peak, Bursts, response rates.
- What is our <u>Security</u> Model?
  - Legal requirements, choice of monitoring methods and tools.

Platform: Delivery, Eco-System, Deployment

Platform <u>provider</u>, virtualization <u>tool</u>, <u>deployment</u>, and <u>orchestration</u> choices for:
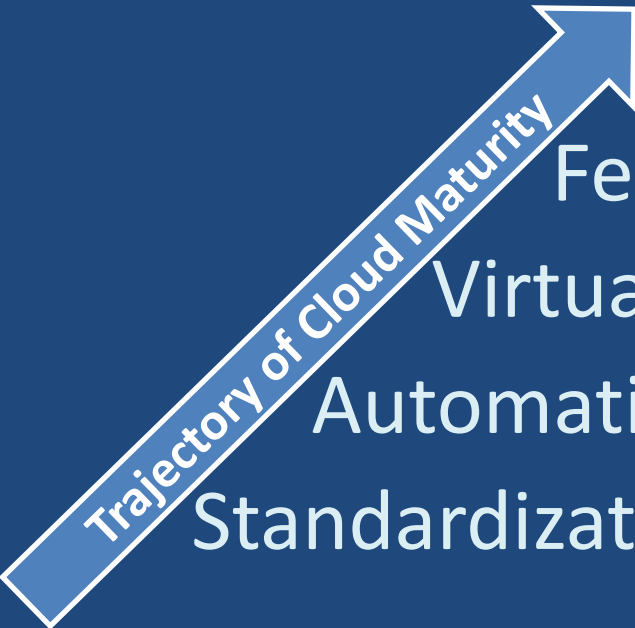
- <u>Delivery</u> Method

- <u>Eco-System</u> Infrastructure

- <u>Deployment</u>/Scaling Framework, orchestration choices

Goal: Development of Road Map

Your strategic goals determine the:
- Timelines (criticality/urgency)
- Trajectory (path toward maturity)
- Evolution (capabilities)
- Optimization Strategy (resources/efforts)

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(Hyman, 2017)