

Massachusetts Institute of Technology

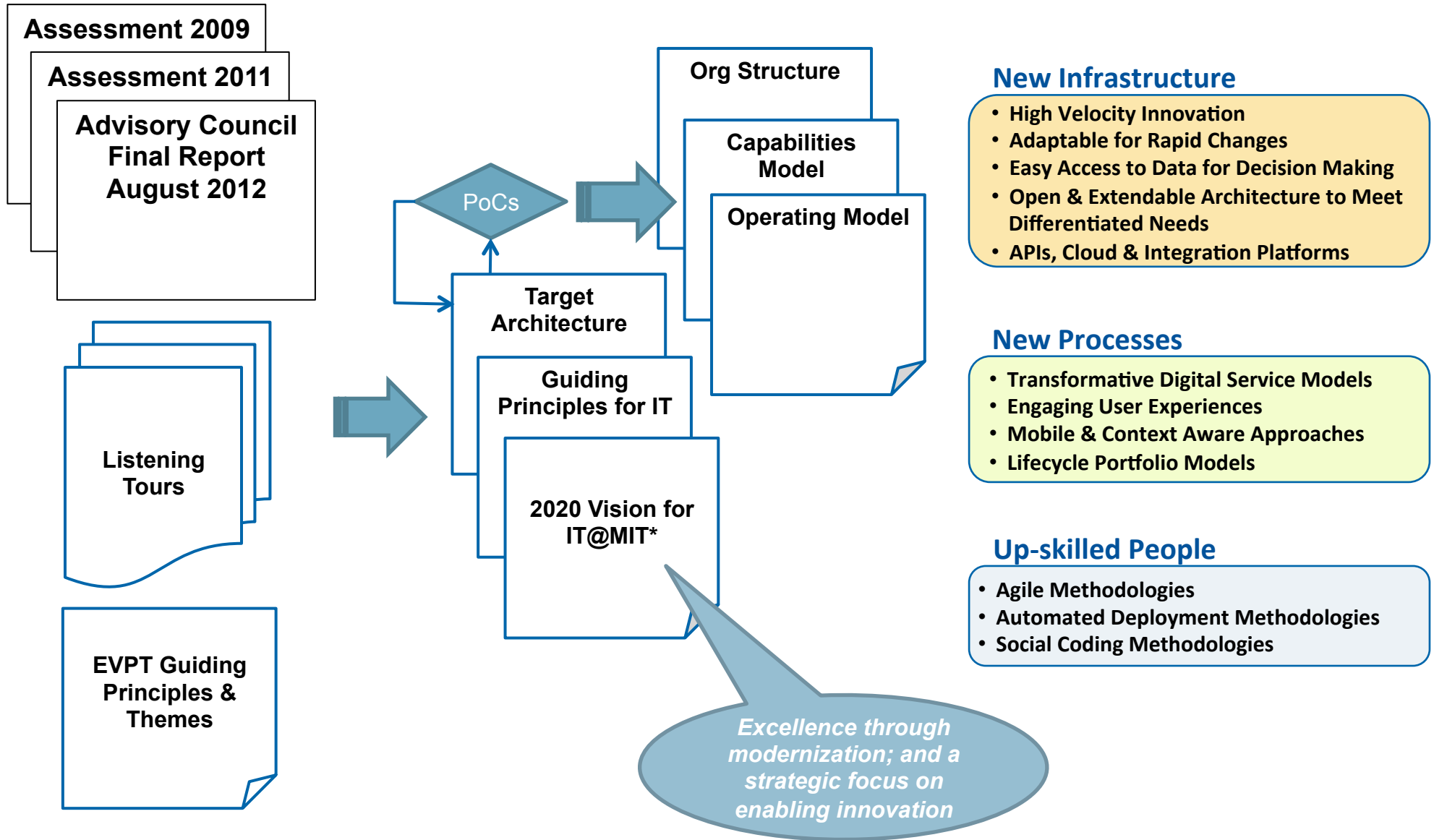
IS&T Transformation Strategy: Enabling the 2020 Vision for IT@MIT

Administrative Advisory Council II
March 18, 2015

Future
of IT
@MIT

The Strategic Planning Process

Assessment of the Institute's needs: Drove convergence on a vision, guiding principles, target architecture, new operating model, new capabilities model, & new org structure



The Target Architecture & Proof-of-Concept Projects

PoCs validated and calibrated the target architecture & new operating model

Example Proof-of-Concept Projects:

Infrastructure

- High Velocity Innovation
- Adaptable for Rapid Changes
- Easy Access to Data for Decision Making
- Open & Extendable Architecture to Meet Differentiated Needs
- APIs, Cloud & Integration Platforms

Processes

- Transformative Digital Service Models
- Engaging User Experiences (UX)
- Mobile & Context Aware Approaches
- Software Development Lifecycle Model

People

- Agile Methodologies
- Automated Deployment Methodologies
- Social Coding Methodologies

PoC	Participants	Components of New Model Tested	Assessment
Lab Admin App	RLE (Mark Mondol)	<u>DLC independent use</u> of an IS&T-provisioned model-driven software development kit (SDK) to rapidly develop an easily updateable cloud-based app	Validated target architecture, non-IS&T use of agile SDKs, & automated deployment
P-Card App	CSAIL (Karen Shirer)	<u>IS&T use</u> of a SDK to rapidly develop an easily updateable SAP-integrated app for a DLC <u>w/o customizing SAP</u>	Validated rapid dev & secure use of SAP APIs, engaging UX, & transformational digital service model
Compensation Analysis App	HR (Wayne Turner)	<u>IS&T use</u> of SDK to rapidly develop an easily updateable SAP- & Success Factors-integrated app for an Admin Unit w/o customizing SAP	Validated secure use of SDK with SaaS and SAP APIs via an integration platform architecture
Student Acct App	SFS (Mark Waters)	<u>IS&T use</u> of IS&T-provisioned APIs to rapidly add a modern cloud app (Nelnet) on top of MITSIS <u>w/o customizing MITSIS</u>	Validated rapid & secure use of API connectors into MITSIS
2.009 PM Platform	ME (Prof David Wallace)	<u>Faculty use</u> of an IS&T-provisioned API for a cloud service platform (Dropbox) to independently & rapidly extend functionality to meet differentiated needs	Validated rapid & secure non-IS&T use of API connectors to create new services
Beaver Dash App	MIT Student Team	<u>Student use</u> of IS&T-provisioned APIs to rapidly & securely create new services	Validated student use of APIs to create new services

Architecture & Operating Model Validated... Essential Capabilities Identified... Buy-in Demonstrated & Confirmed

Successfully demonstrated that the new model & architecture can unlock business value & enable innovation

BUILD Applications Better, Faster, & Cheaper

- Optimized **UX**
- Accelerate app development by **10x**
- Significantly lower cost (approximately **25%** of previous costs)

RESPOND Quickly to Changes & Opportunities

- Reduce time-to-market
- Accommodate constant updates

ENABLE the DLCs & Admin Units to Accelerate Innovation

- Reduce project bottlenecks
- Open platforms to extension by others
- Enable units to move at their own pace

New Operating Model

New Operating Model

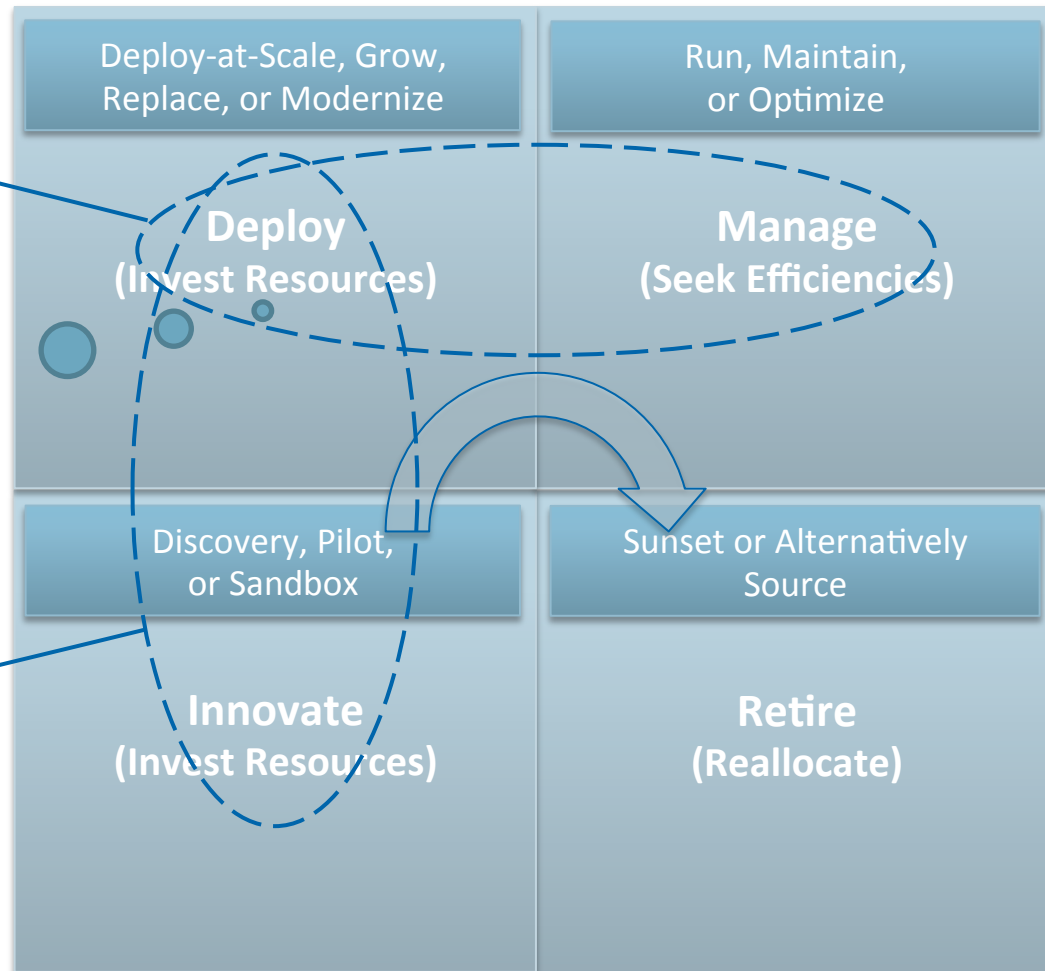
Enabling Services

- Cloud & API-centric Architectures
- Open & Extendable Platforms
- DevOps Culture
- Data & Code Repositories

Handoff to Enabling Services frees-up the Emerging Solutions team to focus on next round of innovation

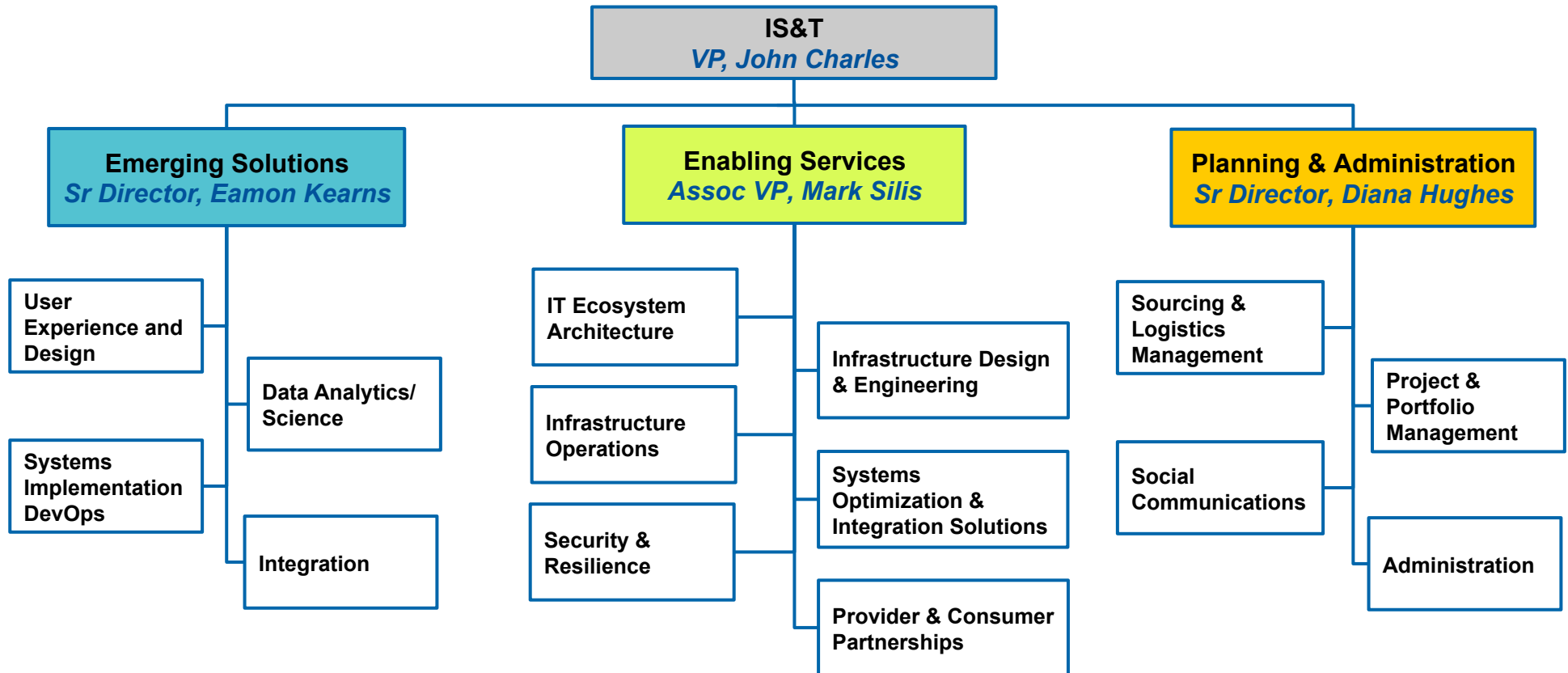
Emerging Solutions

- Work with Innovation Teams
- Fast Track Agile Methodologies
- Focus on User Experiences
- Leverage Platforms

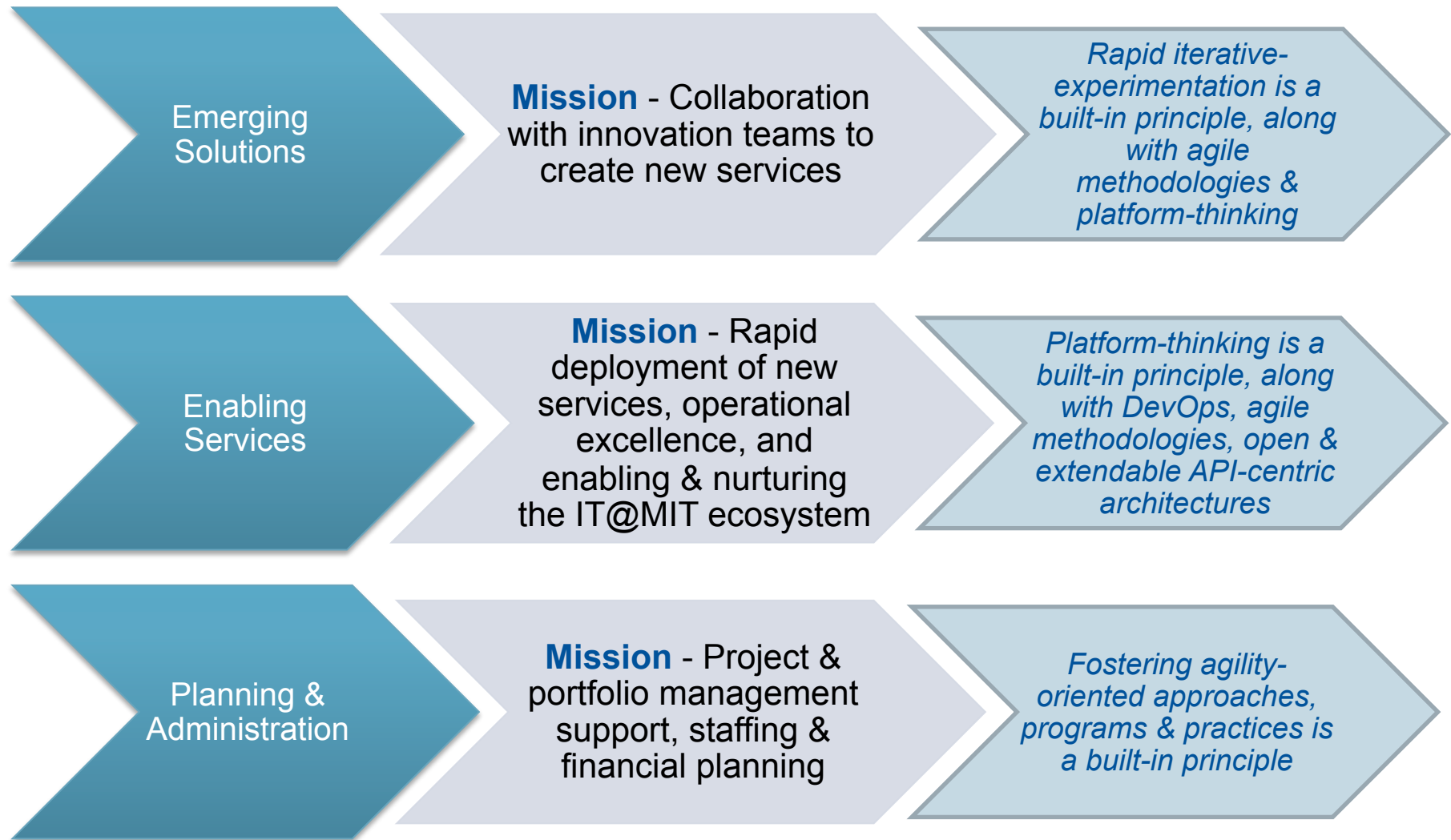


Organizational Agility

New IS&T Organization Structure: Consolidated into 3 “capability” groupings with 14 teams



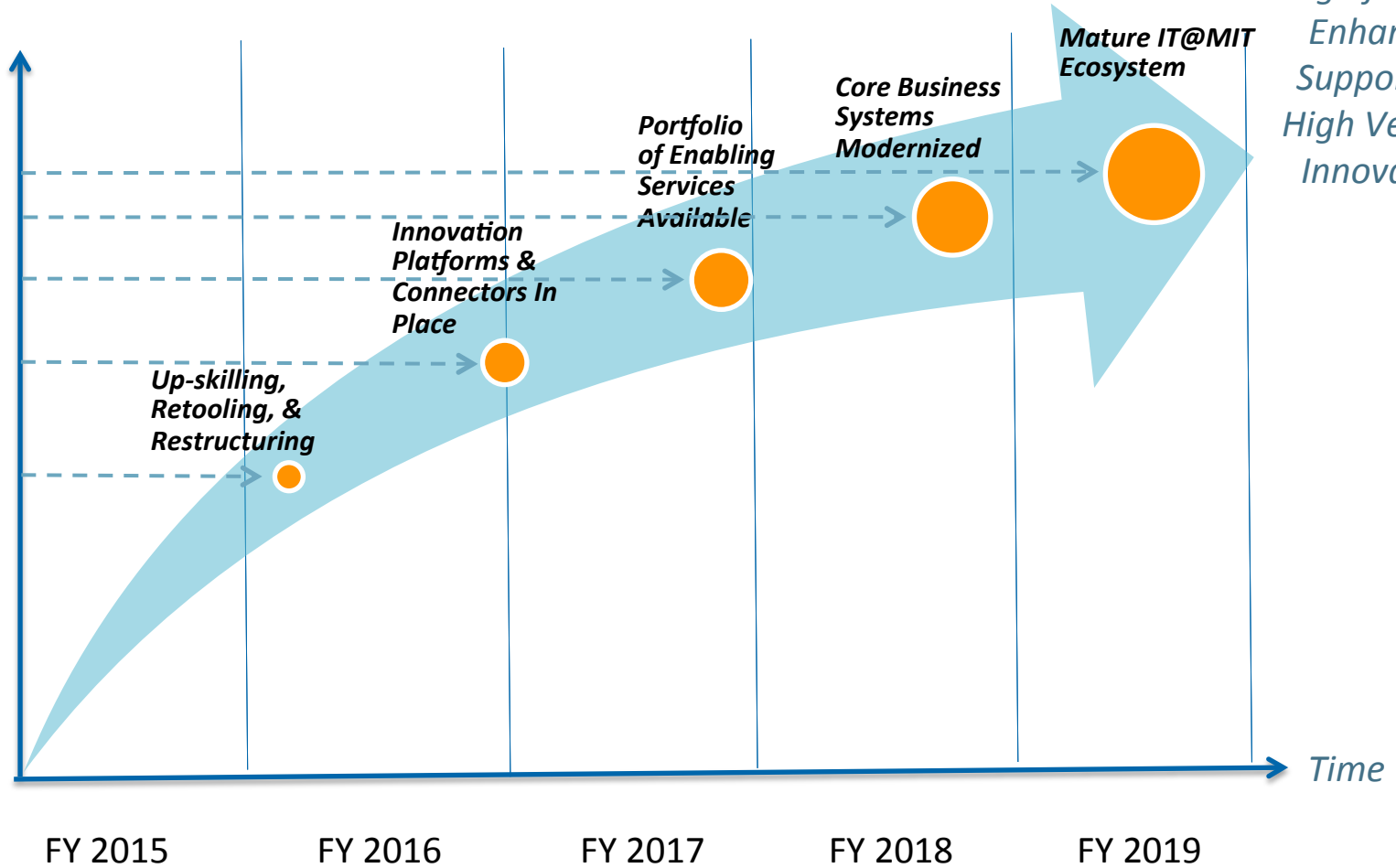
Agility-Oriented Operating Model: Designed for speed – strategic urgency



Transformation Roadmap

Transformation Milestones

*Responsiveness
of IS&T and
IT@MIT
(Success Stories)*



Consideration for DLCs & Admin Units

Some considerations for DLCs & admin units

■ When can DLC & admin unit IT service providers get involved?

- IT teams are welcome to opt-in at anytime – and welcome to take full advantage of IS&T scheduled (and funded) opportunities for training

■ Will DLCs & admin units have access to the new tools & platforms?

- IS&T is attempting to license each new tool and platform for Institute-wide use – enabling access by individual students, faculty, researchers, and staff

■ How could this new architecture and operating model create multiple wins for DLC & admin unit IT teams?

- IT teams will be able to replace some (perhaps many) of their “shadow systems” with modern mobile-ready apps sitting on top of (and connected through APIs to) Institute systems-of-record
- IT teams will be able to leverage IS&T-provided compute and storage platforms to reduce some of their existing “keeping-the-lights-on” workloads & costs – thereby enabling the shift of resources to higher-value functions
- IS&T’s transformed focus on collaborating in agile ways with innovation teams across the Institute will make it possible for DLCs & admin units to more easily tap into a wider array of resources as they strive to relieve pain-points for their constituencies

Questions?
