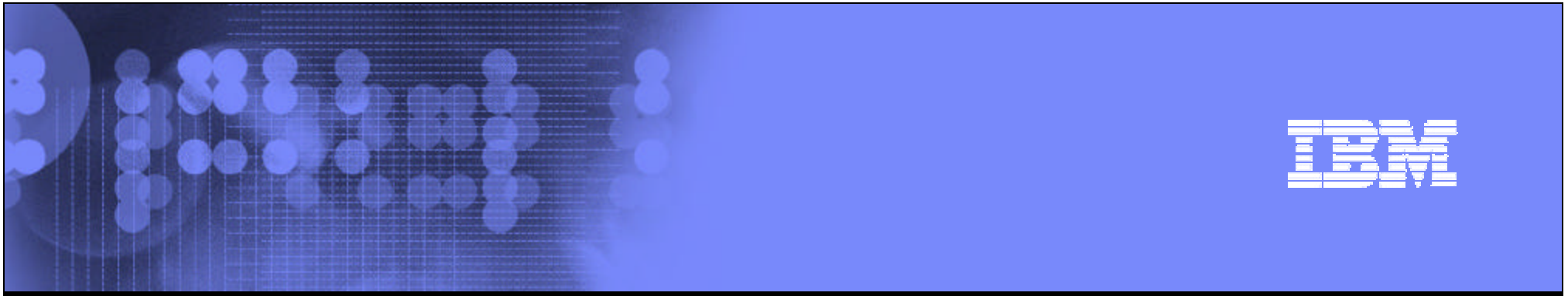


Architecting an On Demand Enterprise with the Federal Enterprise Architecture (FEA)

Andras R. Szakal
Chief Architect, IBM Federal Software, S&D

Agenda

- What is driving organizations toward an On Demand Enterprise?
- The Federal Enterprise Architecture – Driving eGovernment Transformation
- On Demand Organizational Transformation
  - Characteristics of an On Demand Enterprise
- Defining the On Demand Operating Environment
- Leveraging the FEA to drive the On Demand transformation of the federal government
- Questions

Constantly Changing Environment

technology

Open Movement

Commoditization

Autonomic Computing

Grids

Web Services

Clusters

Blades

Virtualization

Standards

Constantly Changing Environment

Requires constant improvement in business design and business process

Productivity

Governance

Security Threats

Economy

Pricing Pressures

Capital and Asset Utilization

Customer Preferences

Constantly Changing Environment

Productivity

Governance

Economy

Capital and Asset Utilization

Security Threats

Pricing Pressures

Customer Preferences

business

Delivery Options

on demand business

Financial Models

technology

Open Movement

Commoditization

Autonomic Computing

Grids

Web Services

Clusters

Blades

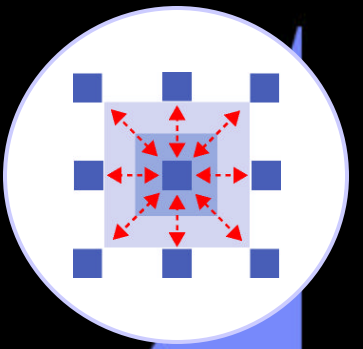
Virtualization

Standards

Business Transformation
Driving Competitive Advantage

- Improved customer services
- More agile, responsive business
- Faster return on investment
- Higher returns and multiples

On demand Business

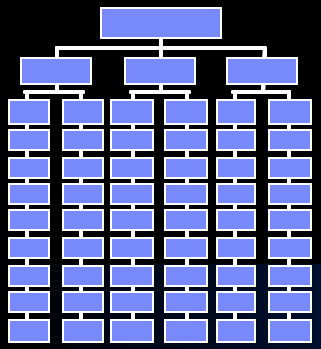


External Collaboration

Horizontal Process Integration

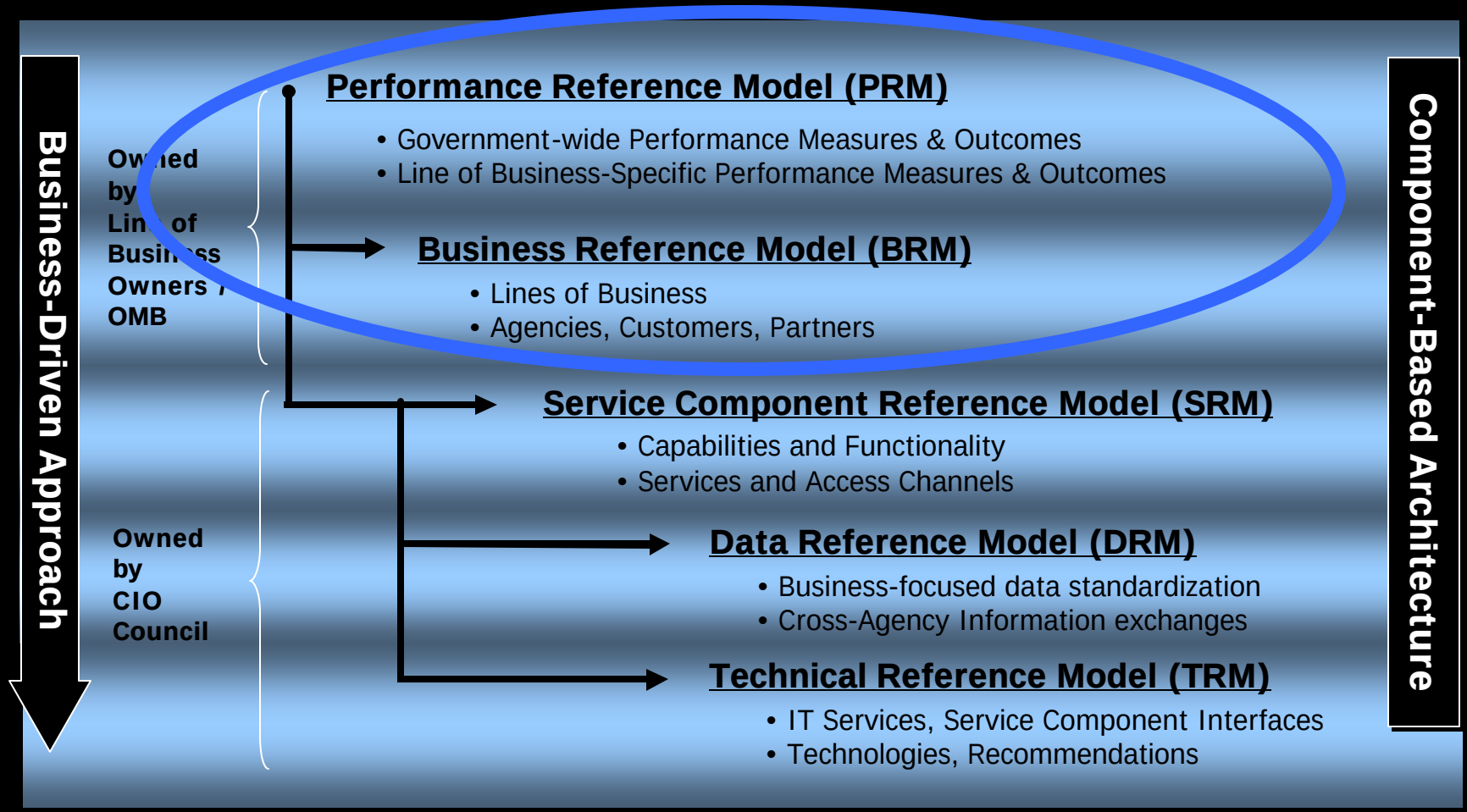
Functional optimization

Static Enterprise Model



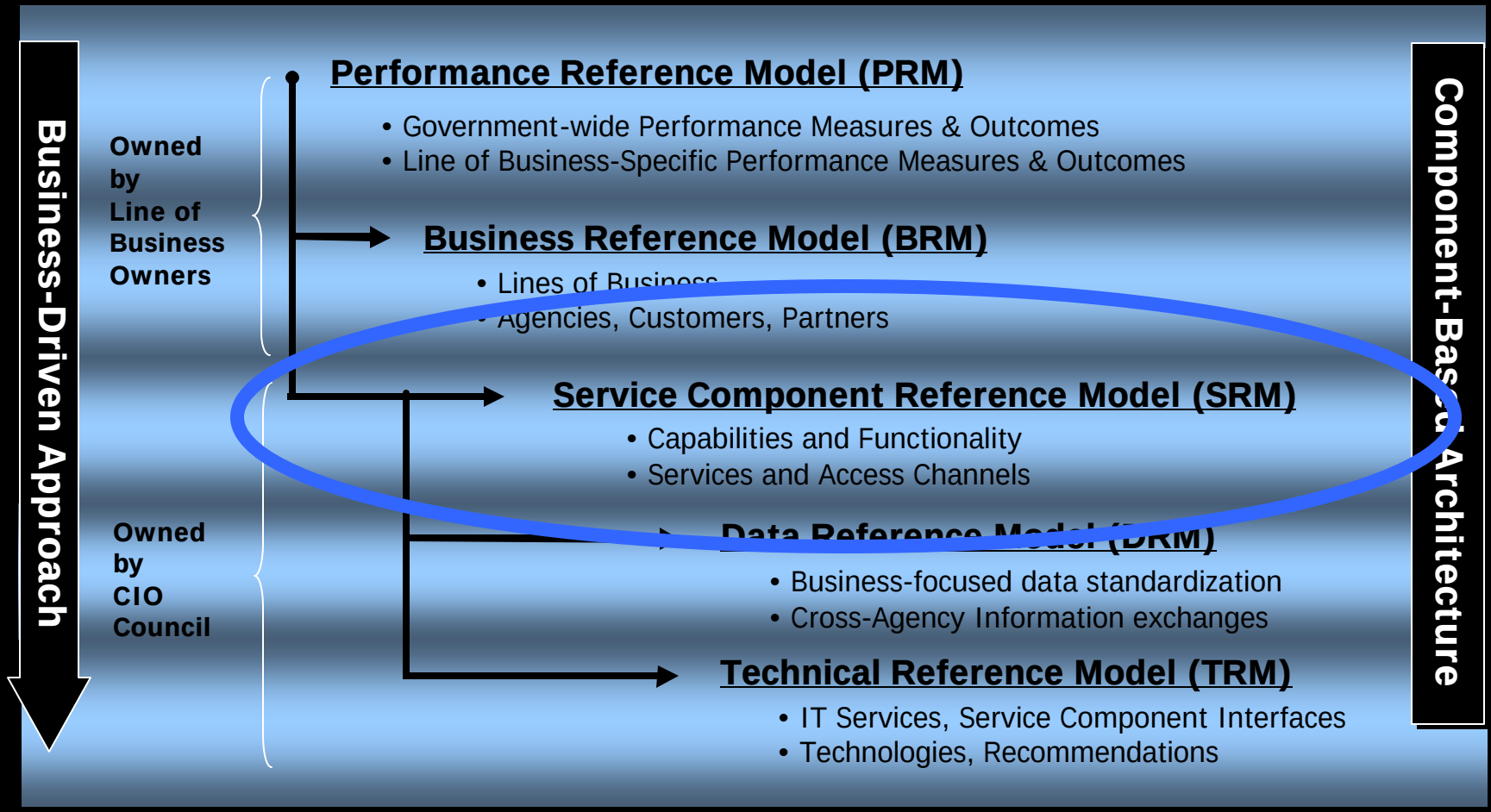
Federal Enterprise Architecture

U.S. Federal Government is using the FEA as a driver for e-government transformation



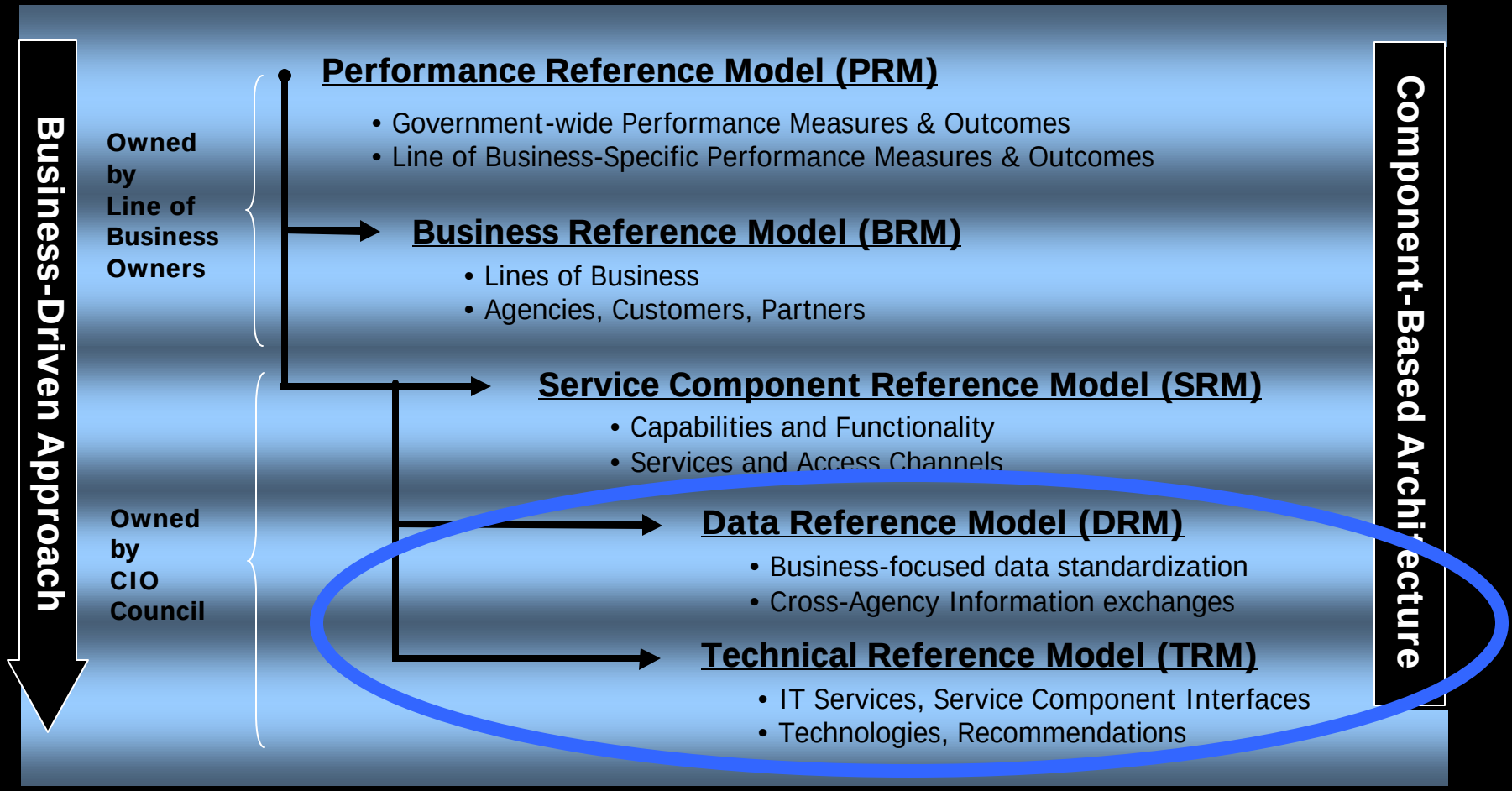
Codifies the U.S. Federal Government Agencies Structures and Missions

Service Components Link to Business Objectives



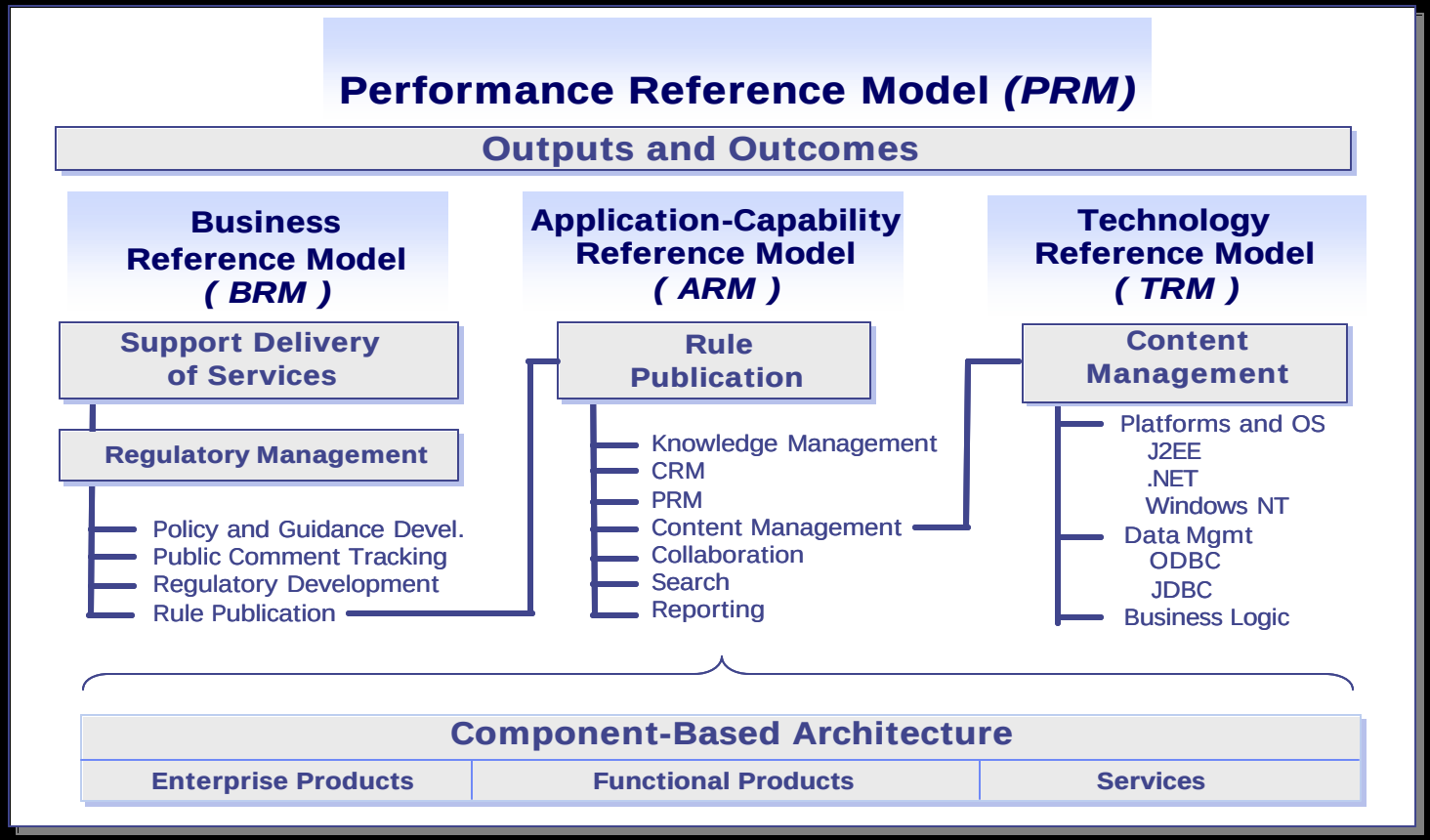
Reference Model for Services Provided Aligned to the BRM

FEA Technical Architecture Layers



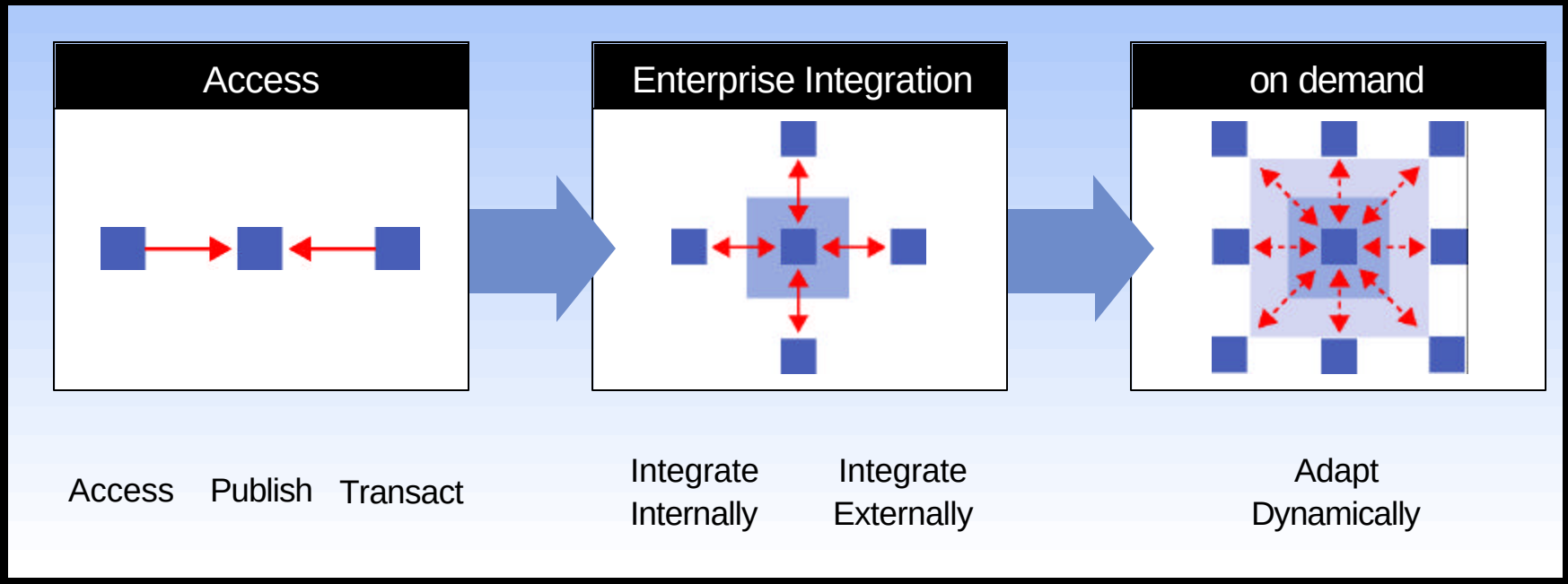
Ontology for describing Data Models and Technical Architecture

Performance Reference Model Links Measurement



A conceptual depiction of the interrelationships between the FEA Reference Models. This integrated approach will serve as the foundation of Component-Based Architecture design.

On demand is the next step in e-business adoption…



- *Basic HR newsletters / portals*
- *Publishing dynamic content internally and externally*
- *Simple (consumer focused) procurement systems*
- *E-mail added to customer service*

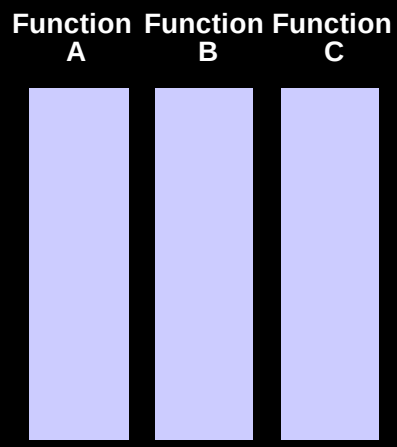
- *Employee intranets*
- *Limited integration procurement systems*
- *Custom EDI over VPN and preliminary XML linkages with customers*
- *Web-based customer service*

- *Personalized portals (employees, customers, partners, suppliers)*
- *Integrated, open-standards based supply chains*
- *Real-time decision making with full customer visibility on all customer interactions*

Organizational productivity means that business operations must shift from a vertical to horizontal focus…

Access digital information

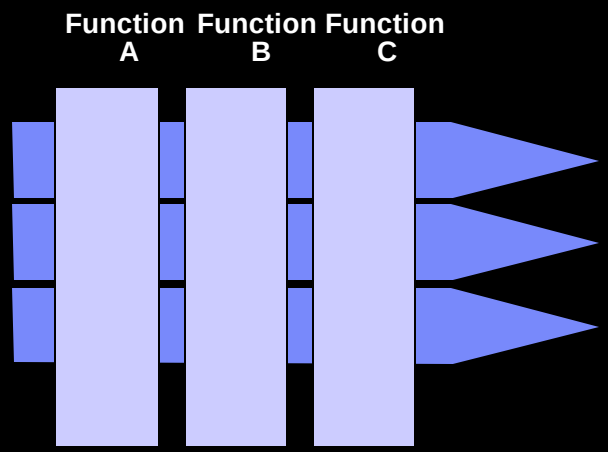
Processes are bounded by functions



- Functions lead business
- Traditional business applications – limited integration

Integration: real e-business transactions

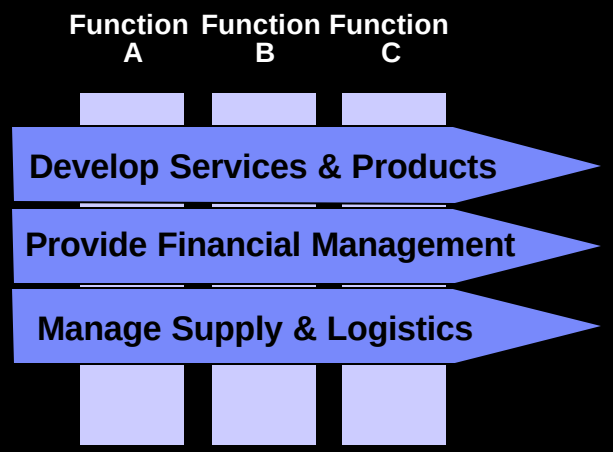
Processes led by functions, integrated across functions



- Core processes defined, functions still lead business
- Integration is “reactive”
- Enterprise applications are integrated
- Middleware exploits the internet

on demand: real-time adaptable operations

Processes led by business, extended to value nets



- Planned process integration leads the business activity
- Adaptive, integrated enterprise applications
- Processes linked with partners and suppliers

Transitioning Government to an On Demand Organization

- PRM and BRM need to be dynamic in nature.
  - Best Practice Driven
  - Feedback and Oversight Drives Changes to Cross Agency Organization
  - Cross Agency Business Functions are consolidated and coordinated
  - Business Process drives Organization
  - Cross Agency Collaboration Driven by Presidential Initiatives
    - For example, 21 eGov Initiatives

Attributes of an On Demand Enterprise

Attributes of on-demand business	Business requirements	IT environment requirements
Responsive	**Insight-driven decision making** ? Industry insight and best practice ? Increased responsiveness to customers ? Faster deployment against new opportunities	**Integrated** ? Transaction and process integration across the enterprise ? Connection to partners, suppliers and customers ? Active data mining and decision support
Variable	**Return on investment** ? Reduced or variabilized business costs ? Reduced capital investment requirements ? Improved process productivity	**Utility-like** ? Lower cost of ownership ? Usage-based pricing ? Leverage of existing technology investments
Focused	**Outsource non-core** ? Focus on key value-added processes ? Cross-functional integration ? Leverage of third party scale and efficiency	**Open standards** ? Integration with legacy systems ? Adaptability to technology environment change ? Modularity to leverage range of ISV offerings
Resilient	**Risk reduction** ? Reduced operational risk ? Robust security and privacy ? Increased business availability	**Autonomic** ? Self-diagnosis and self-healing ? Remote monitoring and management ? Embedded security and privacy capabilities

Transform or Become Marginalized/Irrelevant

Static	On Demand
Siloed operati	value nets
Hierarchica	ing
	lifecycles
Independent processes and infrastructure	Integrated processes and infrastructure
Passive operational risk management	Proactive risk management
Fixed costs	Variable costs
Proprietary systems	Open and integrated systems
Labor intensive maintenance	Self-healing, self-managing systems

Look For Cross Agency Collaboration Opportunities

Transforming to an on demand business requires substantial organizational change

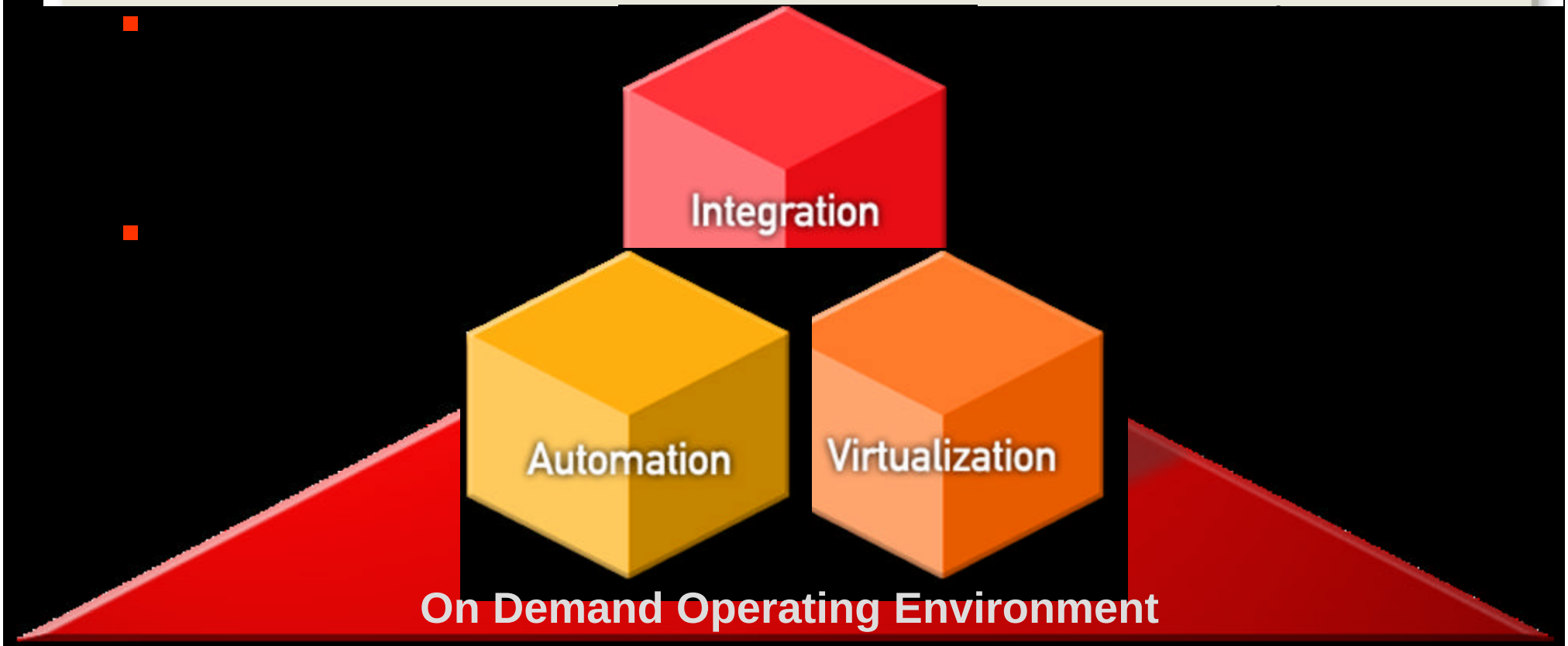
Adapt Organization

	FROM	TO
Organizational Infrastructure	? Stable, departmental reporting relationships	? Flexible, networked, integrated, virtual cross agency teams
	? Strong orientation toward department results	? Structures/incentives that support collaboration
	? Vendor, contractually-driven relationships	? Performance based partnerships
	? Competency specialization	? Broad individual competencies and capabilities
Governance	? Rigid, vertical control systems	? Adaptive governance structures and practices
	? Metrics that favor “tried and true” endeavors	? Steady state yet adaptive to continuous innovation
	? Top-down, limited authority levels	? Distributed, fast decision making
	? Stable, “done once” performance measures	? Dynamic performance management
Change Management	? Narrow groups of largely uninvolved sponsors	? Broad-based change leadership capabilities
	? Change management via consultants	? Rigorous, consistent, broad-based change management
	? Training as needed for new requirements	? Focused learning through multiple channels
	? Projects are managed discretely	? Manages global, virtual groups of projects
	? EA Inwardly focused only	? EA focused on cross Agency Collaboration

On Demand Business

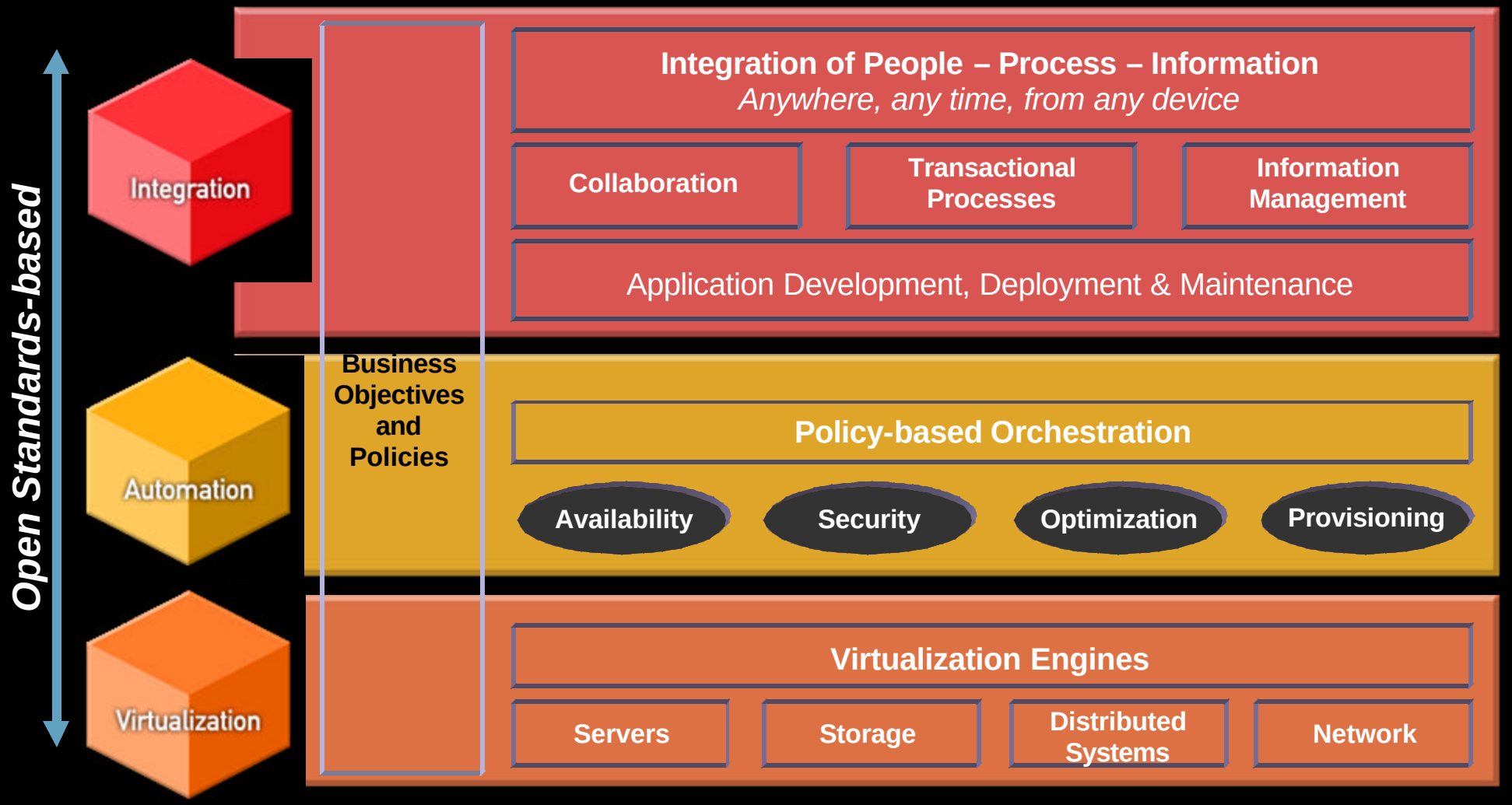
Requires an On Demand Operating Environment

Business Transformation



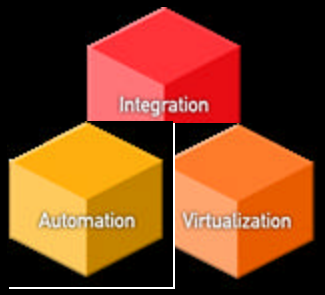
On Demand Operating Environment

On Demand Operating Environment



Creating the Operating Environment

Based on an Evolving Set of Shared Components that Simplify Development, Deployment and Maintenance



Open Standards-based

Web Services

J2EE

Grid Services

Business Process Integration

IT Resource Integration

Business Integration Services

- Model driven design
- Solution mapping
- Solution Deployment
- Process Simulation
- Activity Management
- Process Management

Common Runtime Services

- Integrated System Console
- Security and Identity
- Transaction Coordination
- Data Persistence
- Workload Management
- Workflow
- Collaboration
- Application Connectivity

Virtualization Services

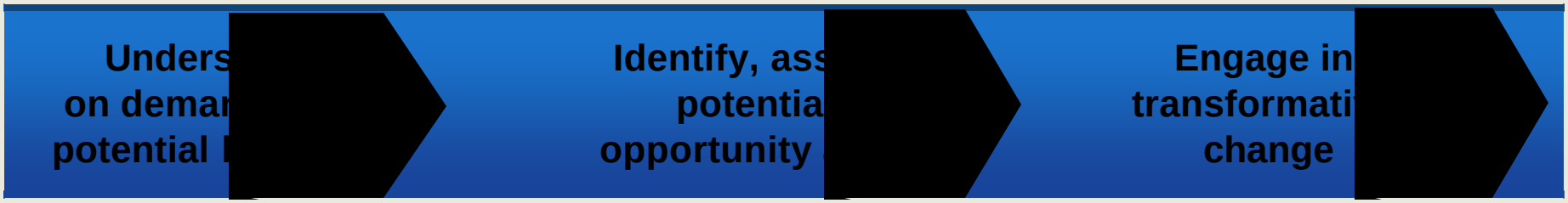
Dynamic hardware virtualization

Clusters Blades Networks Storage

Automation Services

- Policy-based orchestration
- Event correlation
- Provisioning

Phases of Delivery



- Establish Leadership
- Use FEA as model for developing Road Map to On Demand
- Leverage Industry Best Practices

- Client discussion framework; Workshop
- Assessments, roadmaps, business cases
- Application infrastructure assessments
- Transformation Outsourcing Benchmarks

- Business process transformation
- Designated Industry Solutions
- Enterprise Application Integration
- Change, Organization & Culture
- Transformation Outsourcing
- Innovation services

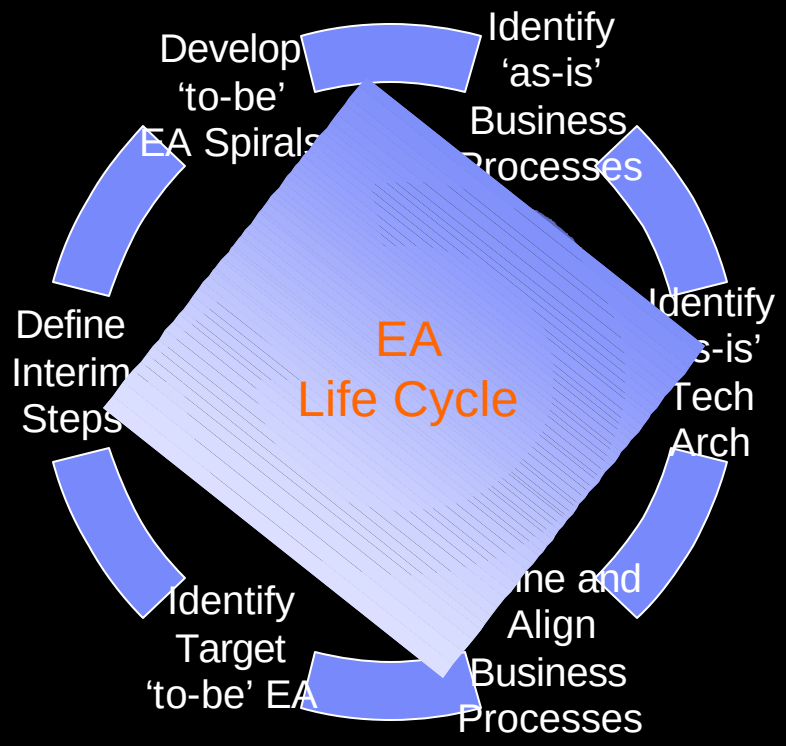
FEA PRM & Proposed Control and Oversight Process

Performance Reference Model

Must be Linked to

Cross Agency Collaboration

Using FEA to Move to an On Demand Enterprise

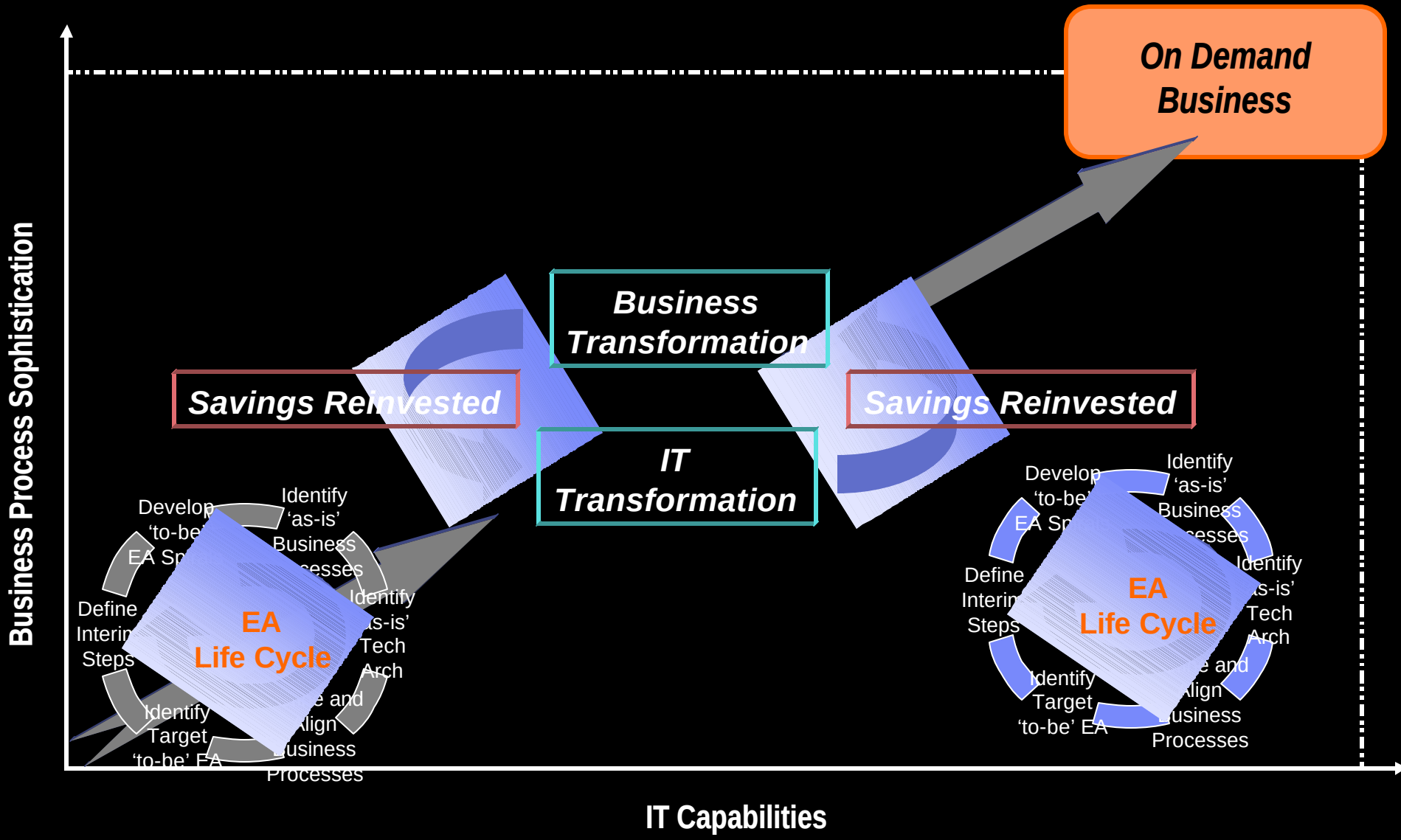


Understand on demand and the potential benefits

Identify & assess potential opportunity areas

Engage in transformative change

FEA Life Cycle Drives On Demand Reinvestment



On Demand Government Transformation using the FEA

- Use e-Gov Initiatives to drive the On Demand Transformation
- Define Cross Agency Business Processes
  - Create Virtual Organizations
  - Empower cross agency collaborators
  - Drive changes into BRM
  - Measure success using PRM
- Create On Demand Road Maps
  - Define intermediate milestones for Agency Enterprise Architectures
- Enterprise Architecture is an Iterative Process
- Integrate New On Demand Capabilities into TRM and DRM Annually
  - Fast moving technology changes
- Transform your organization or – Become Marginalized

Thank You

business on demand

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