Enterprise Architecture Value Chain

midwest
architecture community
collaboration

MACC 2015

Armstrong Process Group, Inc.
www.aprocessgroup.com

APG

About APG

- APG's mission is to

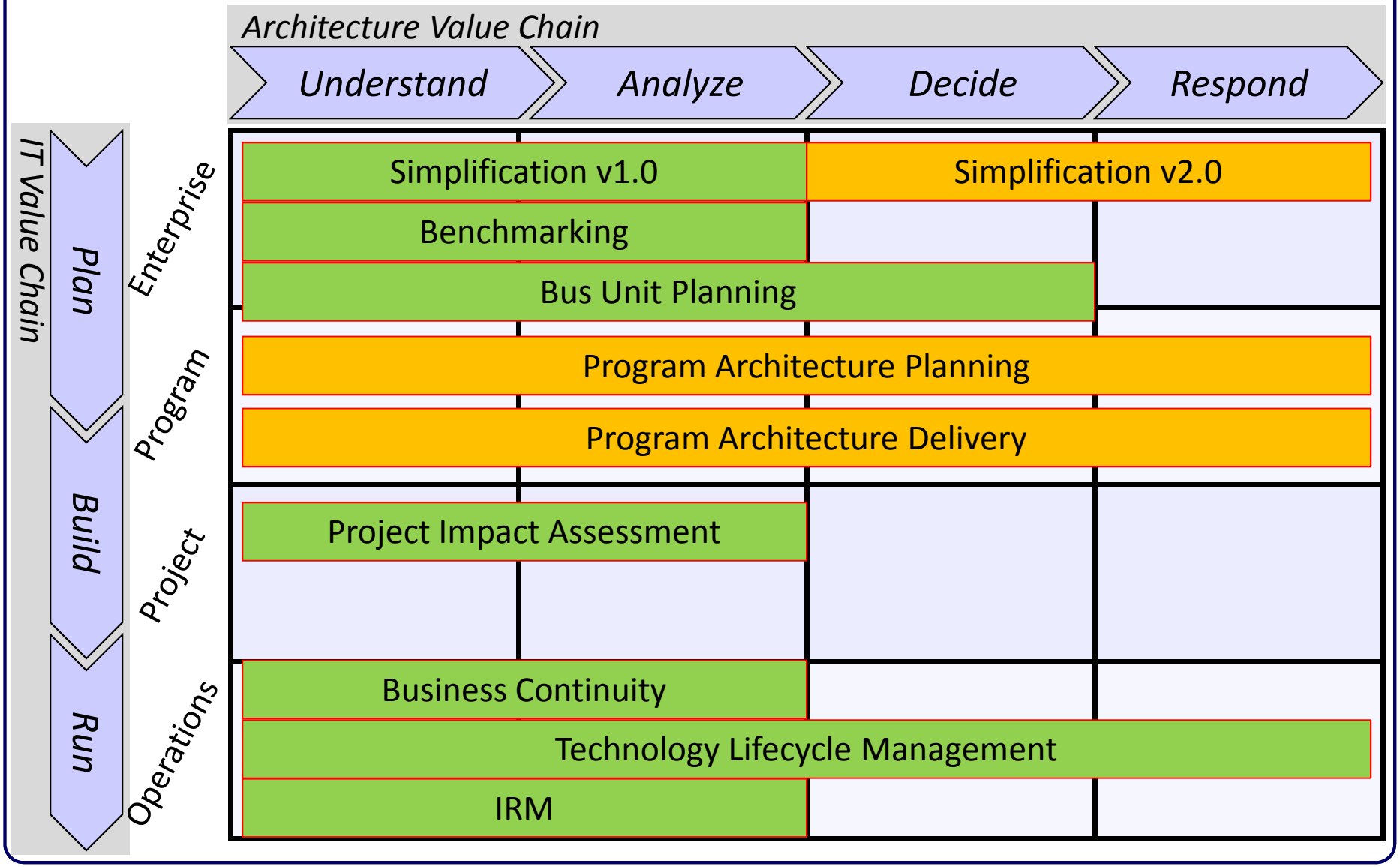
  "Align information technology and systems engineering capabilities with business strategy using proven, practical processes delivering world-class results."

- Industry thought leader in enterprise architecture, business modeling, process improvement, systems and software engineering, requirements management, and agile methods
- Member and contributor to
  - UML, SysML, SPEM, UPDM at the Object Management Group (OMG)
  - TOGAF, ArchiMate, IT4IT at The Open Group
  - Eclipse Process Framework (EPF) at the Eclipse Foundation
- Business partners with Sparx, HP, and IBM

Context

- EA leadership needs to distill EA value proposition to enterprise
  - Most stakeholders care about EA outcomes, not EA implementation
  - However, EA leadership needs model for understanding what needs to be implemented in order to deliver value
- Needs to support/integrate other business/IT value chains
  - Such as Shop-Buy-Service-Claim and Plan-Build-Run
- EA capability improvement is challenging when there is no "call to action"
  - Requires cross-organization executive support
  - Nobody cares until they understand "what's in it for me?"

EA-Enabled Business/IT Initiatives



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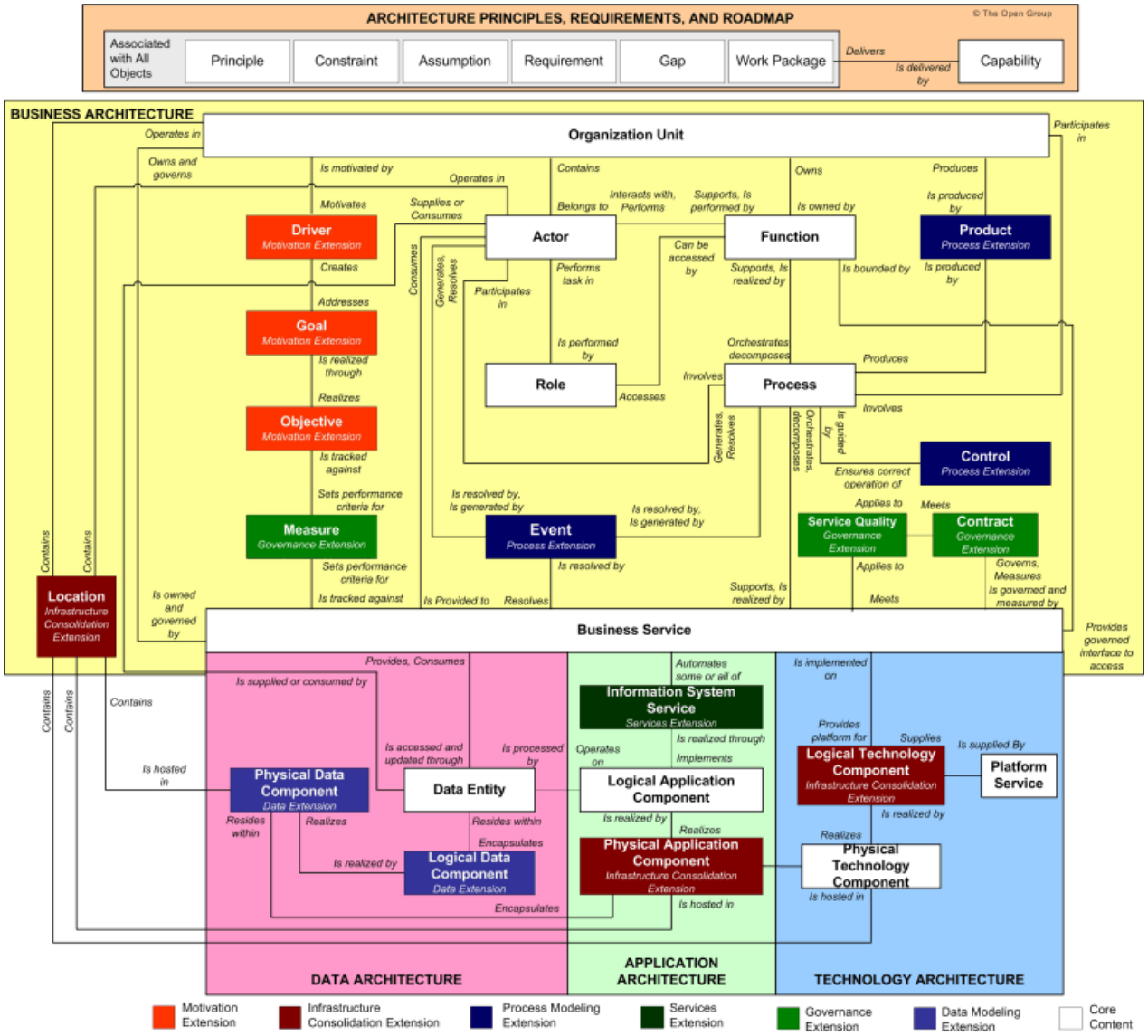
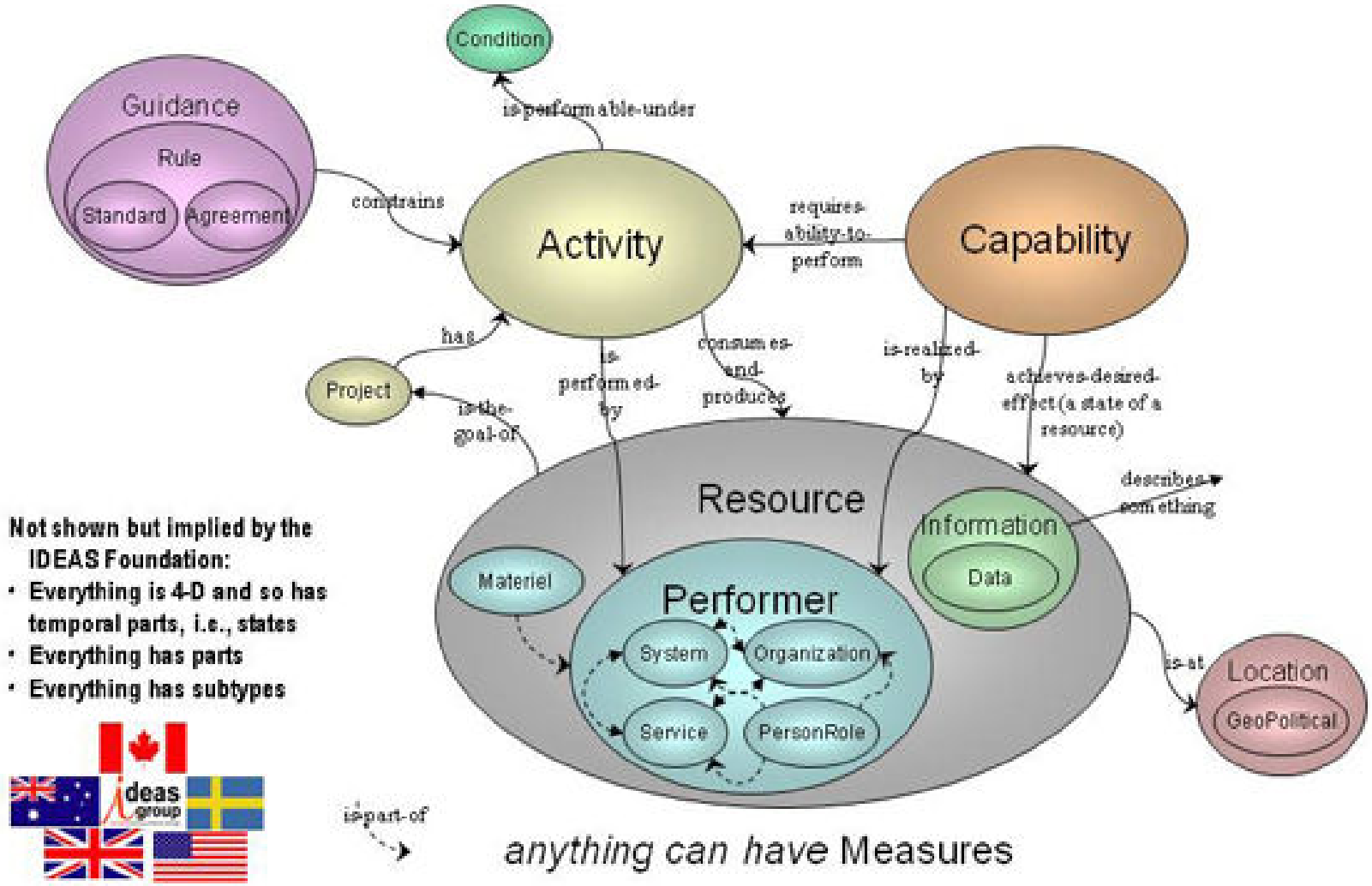
Capability Definition

- TOGAF
  - *"A business-focused outcome that is delivered by the completion of one or more work packages."*
- DoDAF
  - *"The ability to achieve a Desired Effect under specified (performance) standards and conditions through combinations of ways and means (activities and resources) to perform a set of activities."*
- BIZBOK
  - *"A particular ability or capacity that a business may possess or exchange to achieve a specific purpose or outcome."*
- Open Group CBP Project
  - *"A measurable capacity to employ resources to achieve desired outcomes or goals within a specified context (or under specified conditions)."*

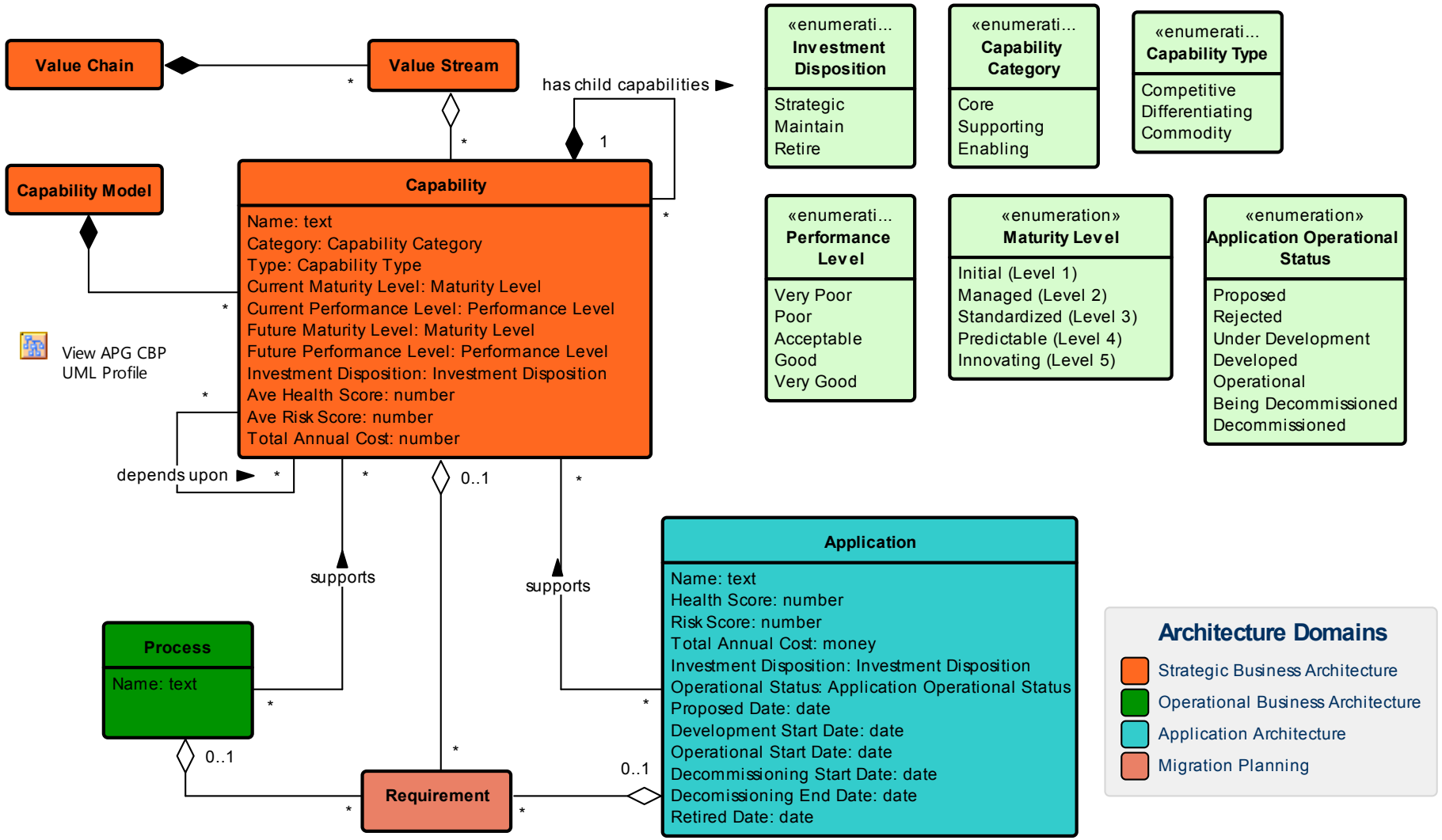
TOGAF 9 Architecture Content Metamodel



DoDAF 2 Capability Context



Fit-for-Purpose CBP Metamodel



Tailored Capability Definition

- An ability that an organization, person, or system possesses.
- Capabilities are typically expressed in general and high-level terms and typically require a combination of organization, people, processes, and technology to achieve.
- A capability is WHAT a company needs to be able to do to execute its business strategy
  - *Capabilities are represented as a catalog of things an enterprise can do (ability) regardless of the governance or how they are operationalized.*

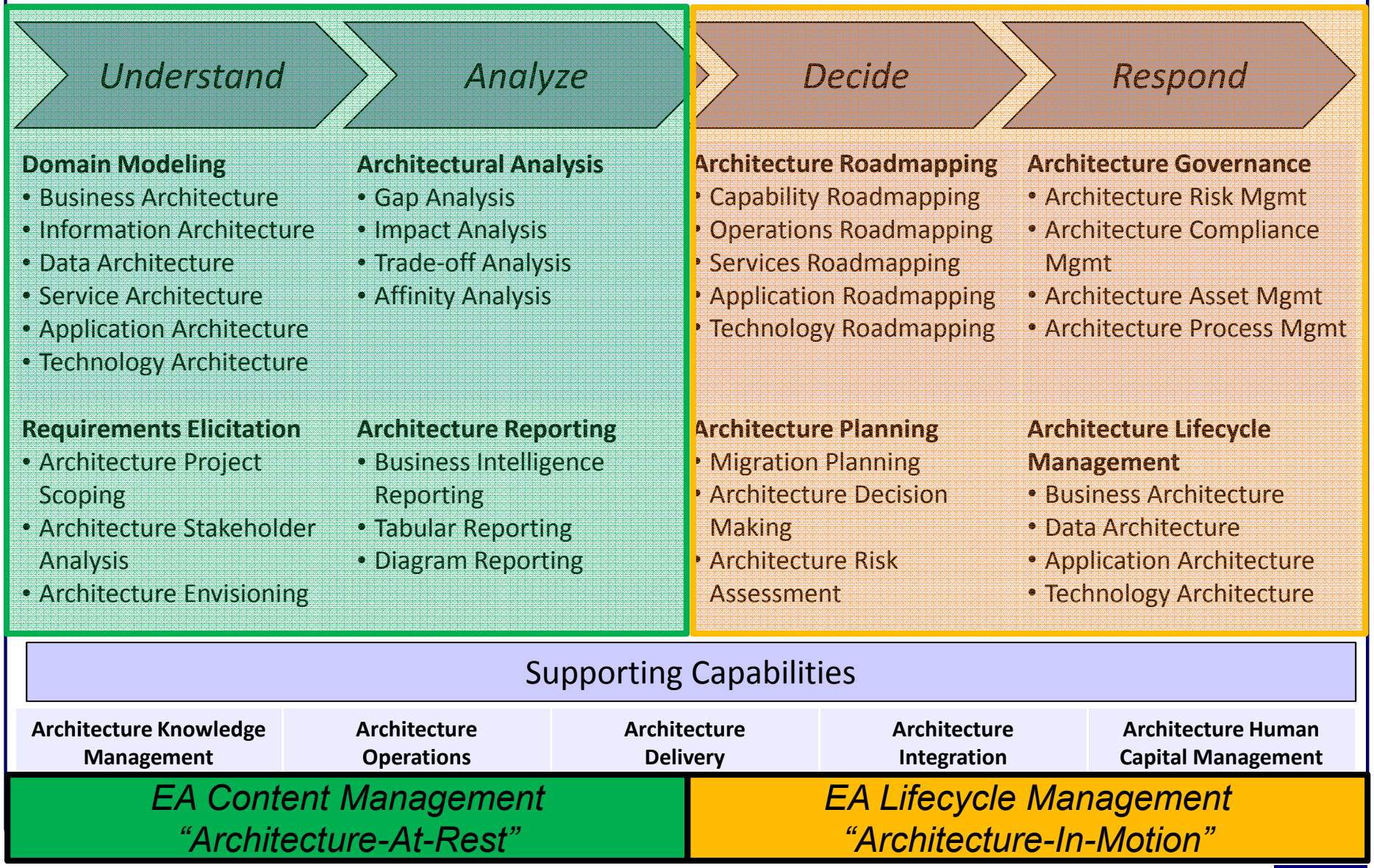
Capability Models

- Capability model is fundamentally a reference model
  - EA capability model should represent things that architecture practices and practitioners should/could do in real-world
- Capabilities are “things” – i.e. they have noun-like names
- Services are “behaviors” – i.e. they have active verb/noun-like names
  - Fine-grained services can be composed/configured into higher-level services
- Common practice is to contextualize the top-level of capability model with a value chain

Capability Model Use Cases

- Analyze EA capability performance
  - Understand what EA capabilities need uplifting to support new strategic initiatives and operational activities
- Create roadmaps for evolving EA practice
  - Associate conformance requirements for each capability as related to multiple levels in a maturity model for assessing/improving maturity
- Create EA service portfolio
  - Map EA services implemented by end-user organization to lowest level capabilities
- Use as reference model for mapping to standards and tools
  - TOGAF 9.1 content for coverage and gap analysis
  - Open CA conformance requirements
  - ISO/IEC 15704/15288/42010
  - Required tool capabilities and specific vendors' implementations

EA Value Chain and Capability Map



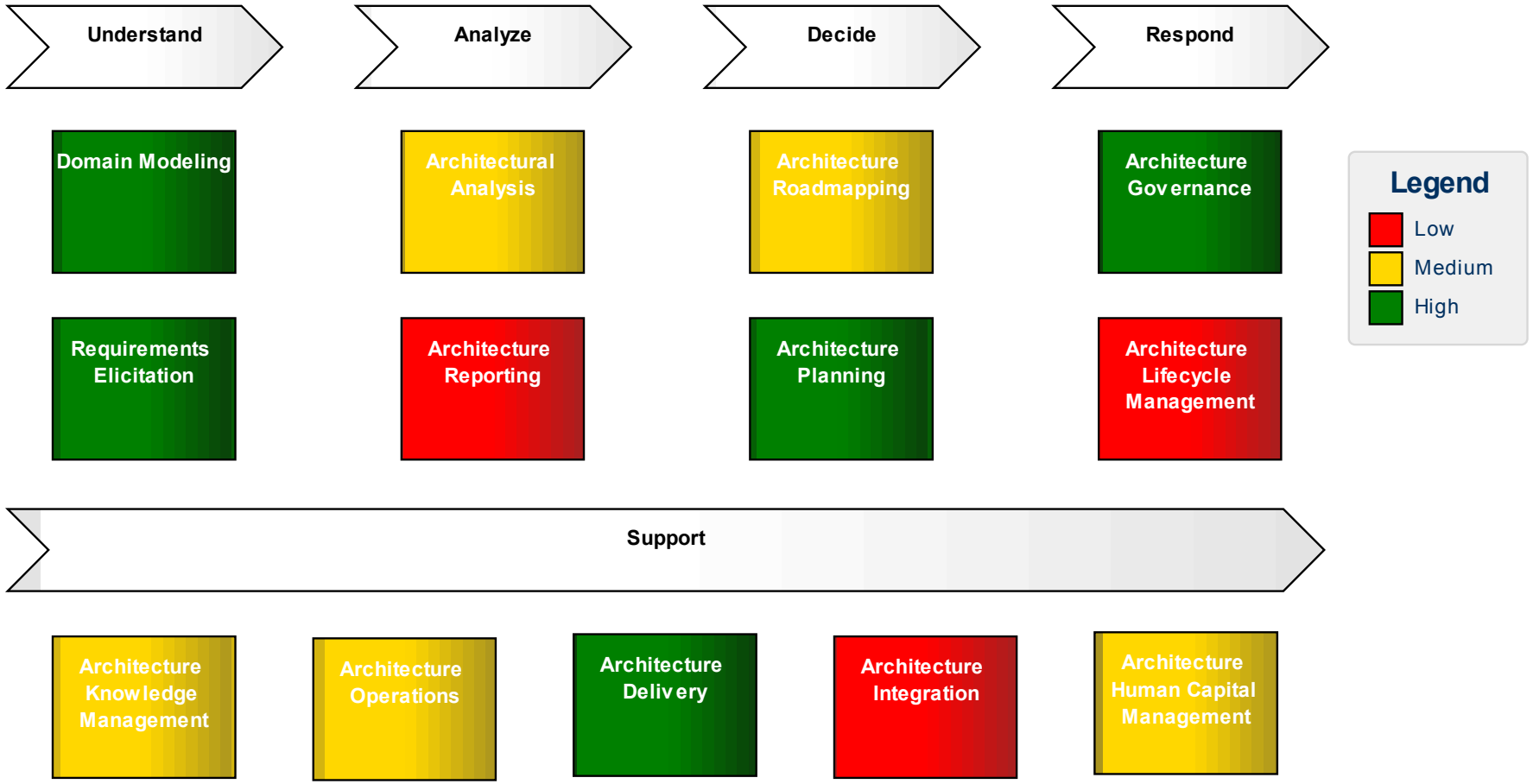
EA Supporting Capabilities

Architecture Knowledge Management	**Architecture Modeling** • Current State Modeling • Future State Modeling • Architecture Metamodel Mgmt • Architecture Viewpoints Mgmt	**Architecture Reference Models** • Performance Reference Model • Capability Reference Model • Data Reference Model • Service Reference Model • Technology Reference Model	**Architecture Requirements Management** • Architecture Requirements Definition • Architecture Requirements Monitoring	**Reference Architectures** • Platform Reference Architecture • SOA Reference Architecture • Cloud Reference Architecture • Integration Reference Architecture
Architecture Operations	**Architecture Governance** • Architecture Principles • Compliance Checklists • Governance Processes • Governance Structures • Repository Governance	**Architecture Change Management** • Business Environment Monitoring • Technology Environment Monitoring • Repository Monitoring • Governance Monitoring • Performance Monitoring	**Architecture Leadership** • Architecture Performance Measurement • Architecture Team Management	**Architecture Tool Mgmt** • Architecture Modeling Tools • Architecture Reporting Tools • Architecture Repository Tools • Integration Tools
Architecture Delivery	**Architecture Professional Services** • Architecture Tool Support • Architecture Skills Training • Architecture Tools Training • Architecture Advisory Services	**Architecture Project Support** • Architecture Project Initiation • Architecture Project Monitoring • Architecture Project Close-Out	**Architecture Method** • Architecture Development Method • Standard Architecture Deliverables	**Architecture Best Practices** • Architecture Patterns • Architecture Techniques
Architecture Integration	**Architecture Process Integration** • IT Service Management Integration • Solution Delivery Integration • Application Management Integration • Portfolio Management Integration • Project Management Integration • Procurement Integration	**Architecture Data Integration** • Technology Portfolio Integration • Application Portfolio Integration • Infrastructure Portfolio Integration • Financial Reporting Integration • Human Capital Integration	**Organization Change Management** • Architecture Liaison Services • Architecture Communications	
Architecture Human Capital Mgmt	**Architect Onboarding** • Architecture Tool Provisioning • Architecture Training Provisioning • Architect Orientation	**Architecture Skills Development** • Architecture Modeling Skills • Architecture Decision Making Skills • Architecture Thinking Skills • Architecture Leadership Skills • Architecture Mentoring Skills	**Architecture Profession** • Architecture Profession Management • Architect Certification • Architect Professional Development	

Capability Specification

Capability	Business Architecture Modeling		
Parent Capability	Architecture Modeling	**Value Chain Step**	Understand
Services	• Create Business Capability Model • Create Organization Structure Model • Create Business Process Model • Create Business Function Model • Establish Architecture Traceability		
Processes	• Business Architecture Modeling Process v1.2		
People	Responsible	Business Architect	
	Approve	Capability Manager, Process Owner	
	Consult	Subject Matter Experts	
	Inform	Business Unit Vice President	
Tools	• Sparx Systems Enterprise Architect		
KPIs	# of Models Created, # of Models Used for Impact Analysis		
Related Capabilities	Current State Modeling, Metamodel Mgmt, Viewpoint Mgmt, Modeling Tool Mgmt, Reporting, Modeling Skills, Tool Training		

Capability Heat Map – TOGAF 9 Coverage



Business Process Maturity

Level 1: Initial Fire-fighting Management	• Success in these organizations depends on competence and heroics of people • Not on use of proven processes
Level 2: Managed Work Unit Management	• Create a management foundation within each work unit or project
Level 3: Standardized Process Management	• Establish and use common organizational process infrastructure and associated process assets • Achieve consistency in how organization performs work to provide products and services
Level 4: Predictable Capability Management	• Manage and exploit the capability of the organizational process infrastructure and associated process assets • Achieve predictable results with controlled variation
Level 5: Innovating Change Management	• Continuously improve processes and resulting products and services • Defect and problem prevention, continuous capability management, and planned innovative improvements

Object Management Group
Business Process Maturity Model

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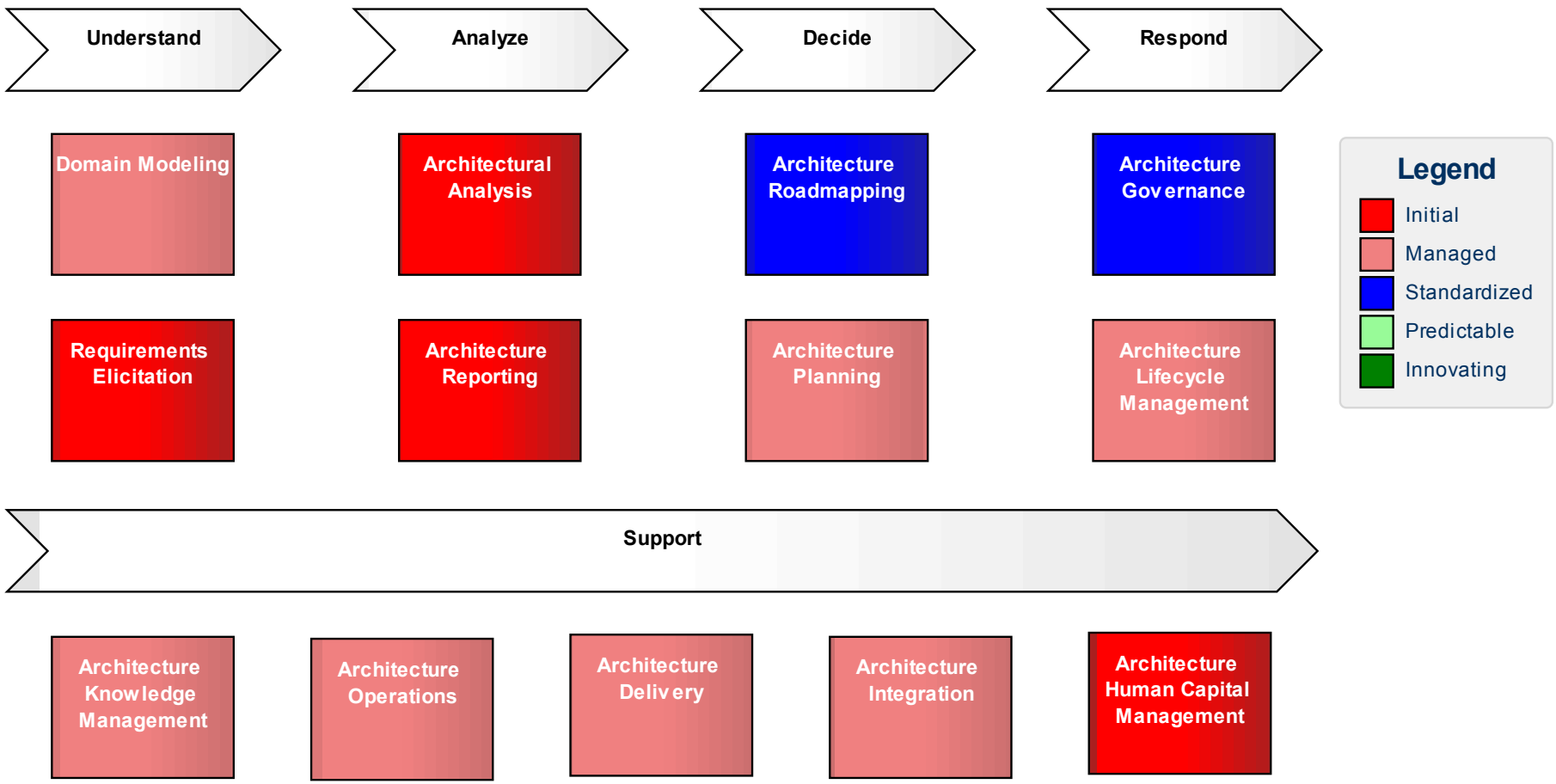
Architecture Maturity Level Requirements

Capability	Architecture Decision Making			
Parent Capability	Architecture Planning	**Value Chain Step**	Strategize	
Driver	Simplification, Technology Lifecycle Management			
Level 1 Initial	Level 2 Managed	Level 3 Standardized	Level 4 Predictable	Level 5 Innovating
• Architecture decisions are implicitly made by project team • Architecture decisions are not documented • No criteria exist to determine what decisions are architecturally-significant • No project roles are specified to be responsible for architecture decisions	• Architecture decision making is assigned as a responsibility to project architect • Architecture decisions are explicitly made by project architect • Architecture decisions are informally documented in project deliverables	• Criteria for determining architecturally-significant are documented • Architecture decisions are formally documented in project deliverables in a standard form • Architecture decisions are recorded with at least two different alternatives • Architecture decisions are supported by documented rationale	• Architecture decisions are managed in enterprise repository • Architecture decisions are traced to architecture principles • Architecture decisions are traced to the architecture elements for which the decisions are being made • Architecture decisions implicitly tied to business outcomes	• Architecture decisions explicitly tied to business outcomes • Efficacy of architecture decisions are monitored over time
Current Maturity	Level 2 (Managed)	**Future**	Level 3 (Standardized)	
Related Capabilities	Architecture Analysis, Architecture Skills Development, Architecture Method, Architecture Onboarding, Architecture Governance			

Capability Heat Map – Current Maturity Level



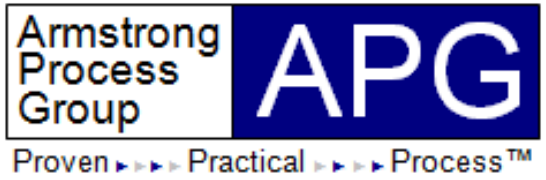
EA Service Catalog

Service Group	Service Description	Service Scope			Readiness Level			EA Capability		
	Service Name	Plan	Build	Run	Service Blueprint	Toolkit	Repository	Level 1	Level 2	Level 3
Enterprise Architecture Professional Development	Provide EA Modeling Coaching	X	X	X	100	100	100	Support	Human Capital Mgmt	Arch Skills Development
	Provide EA Skills/Tools Training	X	X	X	100	100	100	Support	Human Capital Mgmt	Arch Skills Development
	Provide TOGAF Certification Training	X	X	X	100	100	100	Support	Human Capital Mgmt	Arch Profession Mgmt
	Maintain EA Knowledge base (EA-BOK)	X	X	X	100	100	100	Support	Arch Knowledge Mgmt	
EA Repository Support and Governance	Govern EA Content (measure/report on completeness, correctness, currency)	X	X	X	100	100	100	Support	Arch Operations	Arch Governance
	Define and Maintain Meta-Model	X	X	X	100	100	100	Support	Arch Knowledge Mgmt	Arch Modeling
	Configure tools (RSA, COGNOS, Tableau)	X	X	X	100	100	100	Support	Arch Operations	Arch Tool Mgmt
	Customize and Extend EA Tools (macros, add-ins)	X	X	X	100	100	100	Support	Arch Operations	Arch Tool Mgmt
	Manage EA Content (data upload, data quality, data cleansing)	X	X	X	100	100	100	Support	Arch Operations	Arch Governance
	Manage EA Repository Users	X	X	X	100	100	100	Support	Human Capital Mgmt	Arch Onboarding
EA Analysis Services	Analyze Dependencies	X	X	X	100	100	100	Analyze	Arch Analysis	Dependency Analysis
	Analyze Data Flow	X	X	X	100	100	100	Analyze	Arch Analysis	Data Flow Analysis
	Analyze Impact	X		X	100	100	100	Analyze	Arch Analysis	Impact Analysis
	Analyze Gap	X		X	100	100	100	Analyze	Arch Analysis	Gap Analysis
	Analyze Duplications/Redundancy	X		X	100	100	100	Analyze	Arch Analysis	Redundancy Analysis
	Analyze Operational Risk	X		X	100	100	100	Analyze	Arch Analysis	Risk Analysis
	Provide Application Portfolio Insights	X		X	100	100	100	Analyze	Arch Analysis	Portfolio Analysis
	Provide Capability View of App Portfolio	X		X	100	100	100	Analyze	Arch Analysis	Capability Analysis
EA Practice / Capability Management	Market & Brand EA Practice	X	X	X	100	100	100	Support	Arch Integration	Org Change Mgmt
	Manage EA Adoption Roadmap	X	X	X	100	100	100	Support	Arch Integration	Org Change Mgmt
	Manage EA Toolkit & Services portfolio	X	X	X	100	100	100	Support	Arch Operations	Arch Leadership

Conclusions

- Value chains and capability models are emerging as industry standard best practices for planning, improving, and monitoring enterprise investments
- As these are things that are good for the business, we should internalize them when thinking about how we improve and uplift our architecture practice
- As the architecture profession advances and matures, understanding common activities all architects perform becomes more important

Q&A



http://www.aprocessgroup.com

chris.armstrong@aprocessgroup.com

Thanks for your attention and participation!