

Administrative Excellence

Enterprise IT Decision-Making – Future State



WISCONSIN
UNIVERSITY OF WISCONSIN-MADISON

Project Team Members

Name	Organization
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John Krogman	Division of Information Technology (DoIT)
Bruce Maas	Office of the CIO
Greg Moses	College of Engineering
Dave Parter	College of Letters & Science (L&S)
Mike Pitterle	School of Pharmacy
Adam Fennel, Chris Slatter	Huron Consulting Group

Benchmark Institution Selection Process

Benchmark institutions were selected for interviews based on a variety of institutional characteristics, including membership in collaborative IT organizations and/or a reputation as an IT decision-making thought leader.

<u>Institution</u>	<u>RUCC</u>	<u>CIC</u>	<u>CSG</u>	<u>Common Sense</u>
Indiana University	x	x		x
Johns Hopkins University	x			
Massachusetts Institute of Technology	x		x	
Arizona State University				x
Northwestern University	x	x		
University of California - Berkeley	x		x	x
University of Illinois		x	x	
University of Michigan		x	x	x
University of Minnesota		x	x	
University of Texas - Austin	x			x
University of Washington	x		x	

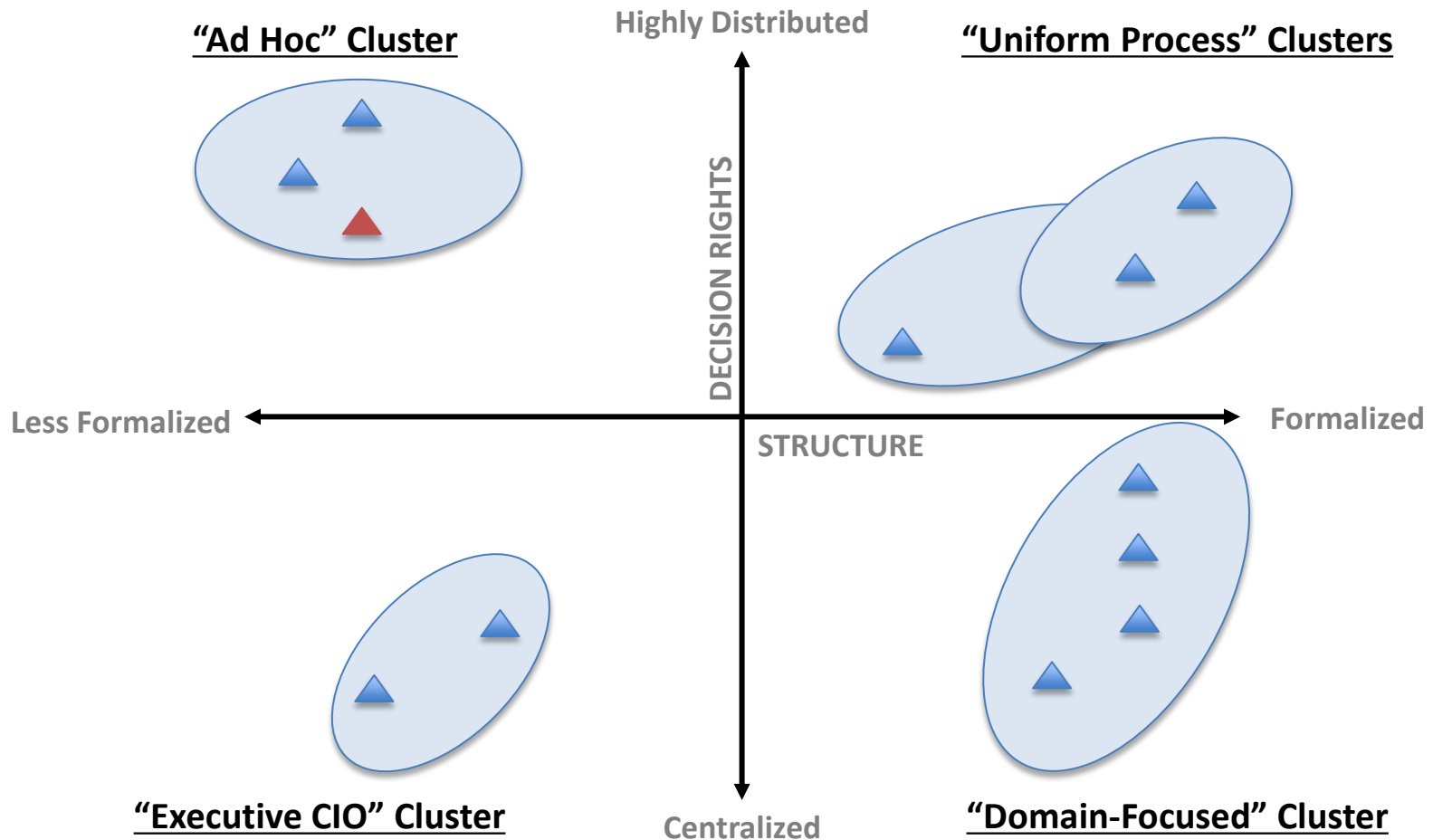
KEY:

RUCC: Research University CIO Conclave

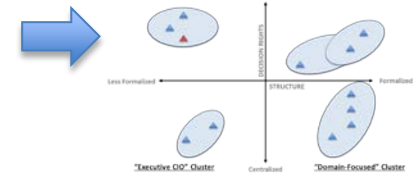
CSG: Common Solutions Group

"Common Sense": Opinion of UW IT Policy office & AE team members

IT Decision-Making Models



Ad-Hoc



Summary

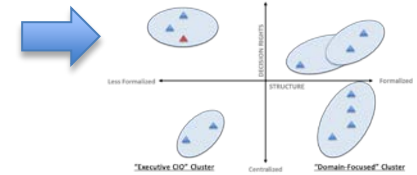
- Decisions are routed on single or multiple paths based on issue/type and stakeholders involved (e.g. routed via CIO, ITC, school/college level)
- Alongside the CIO, a second entity (e.g. ITC) serves as a major decision-making body for the academic and research communities
- Major decisions route up to Executive Leadership
- The CIO and ITC convene groups within the IT community to provide analysis and support the decision-making process

Versions of This Model Seen at:

- Johns Hopkins University, Harvard University

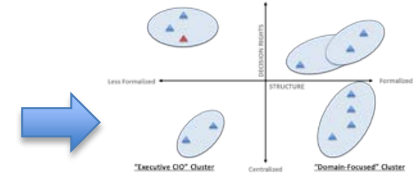


Ad-Hoc



Pros	Cons
<ul style="list-style-type: none">• More inclusive than Executive CIO model – more local decision-making, and representative decision-making at higher levels• Closest model to current decision-making environment• May present least resistance, both culturally and politically• More flexible at divisional level and departmental level• May encourage local innovation• Project funding may be dependent on the local availability of funds	<ul style="list-style-type: none">• Model may blur lines on decision-making lines of authority• Less accountability• More ambiguity• Efficiency may be compromised• May limit integration with strategic planning• Local innovation may be difficult to scale• Highest risk, with a greater potential for duplication

Executive CIO

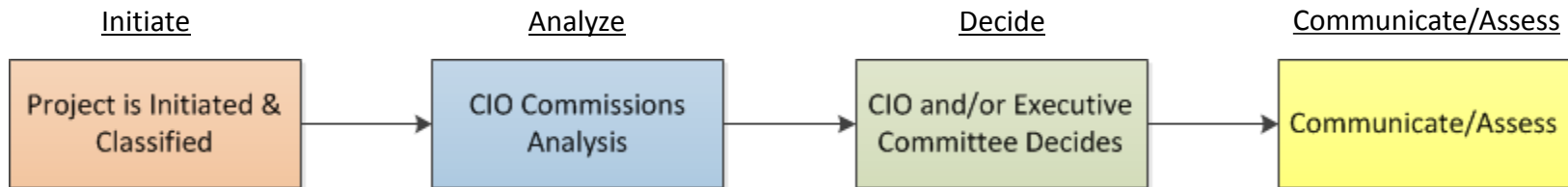


Summary

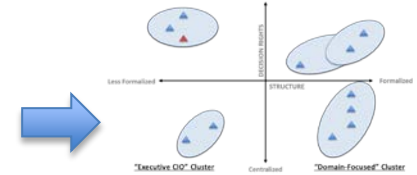
- Centralized decision-making model – a significant portion of IT decisions (as defined) flow through the CIO's office
- Major decisions route up to Executive Leadership
- The CIO convenes groups within the IT community to provide analysis and support the decision-making process

Versions of This Model Seen at:

- Arizona State University, Indiana University

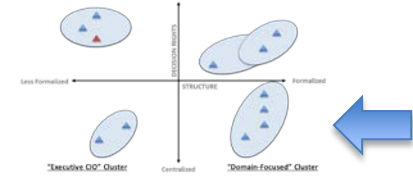


Executive CIO



Pros	Cons
<ul style="list-style-type: none">• Nimble, simple, clear• Decisive role for CIO• All significant campus IT decisions would route through the CIO (informed role)• Aligns decision-making process with the organizational chart• Potential for a clear, defined, centralized funding structure• Facilitates link between strategy, decisions, delivery, and economics	<ul style="list-style-type: none">• May be contrary to culture of campus engagement• May stifle innovation• Highly dependent on CIO's office for many aspects of the process<ul style="list-style-type: none">• Personality dependent to CIO• Potential for bottleneck in CIO's office• May encourage large, centrally funded projects• May not be a stable model

Domain-Focused

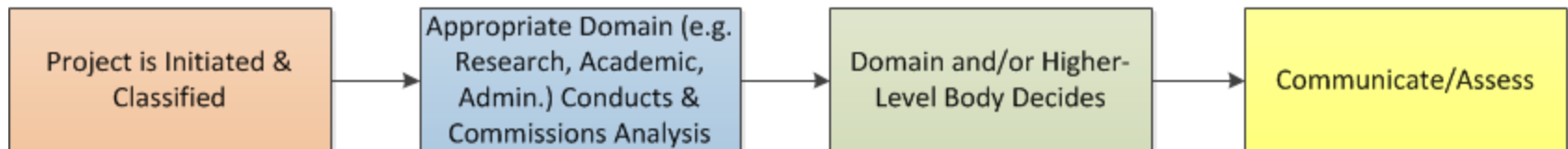


Summary

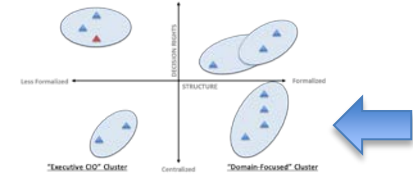
- Three or more IT domains (e.g. Research, Academic, Administrative) serve as decision-making entities, in addition to a higher-level body (e.g. ITC)
- An IT Infrastructure/Architecture Committee links the domains and supports decision-making analysis in terms of IT cohesiveness and efficiency
- Major decisions are vetted by Executive Leadership

Versions of This Model Seen at:

- University of Michigan, University of Texas at Austin, University of Illinois, Northwestern University



Domain-Focused



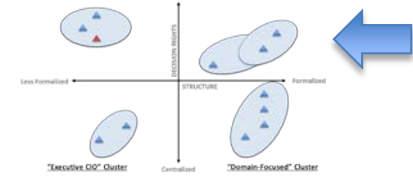
Pros

- Optimizes decisions within functional IT domains
- Builds communities of focus with unique needs
- Proxies for domains already exist on campus
- Academic domain may be natural home for decision-making around educational innovation initiatives
- Scalable model – expertise exists in abundance within domains

Cons

- Siloed approach
- May artificially separate faculty into missions
- May limit the leveraging of investments across domains
- Domains may be competing for funding/a limited set of resources
- May require the “buying out” of faculty time to appropriately support the process

Uniform Process

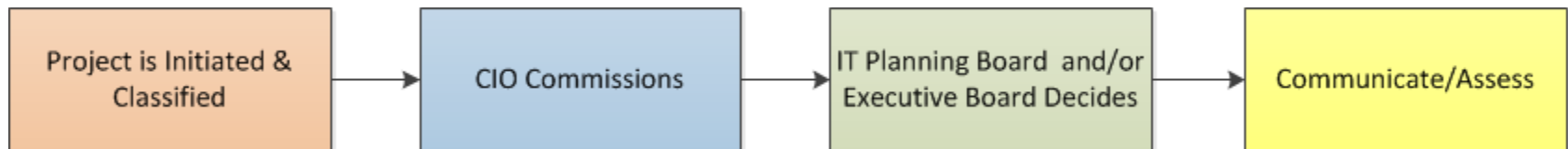


Summary

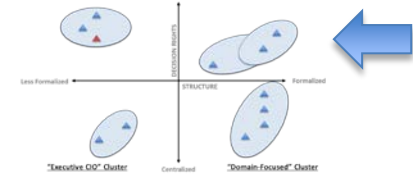
- A significant portion of IT decisions (as defined) flow through an IT Planning Board – an entity comprised of high-level faculty/staff (e.g. Deans, Department Chairs, and the CIO)
- The Planning Board may have access to funds for projects, and oversight of the central IT budget
- Major decisions route up to an Executive Board
- A Service Management Board reviews all central services at a detailed level
- The Planning Board convenes groups within the IT community to provide analysis and support the decision-making process

Versions of This Model Seen at:

- University of Washington, MIT, University of Minnesota



Uniform Process



Pros

- Simple, representative model better suited for both efficiency and transparency
- Flexible and adaptable – IT Planning Board can be staffed, configured as needed
- Potential for smarter/blended decisions with an institutional and strategic perspective
- Scalable service model focused on coordination and alignment
- Potential for an increased focus on accountability
- Elevates divisional CIOs to a more active and prominent role in institution-wide IT prioritization
- May facilitate institution-wide financial control across both local and central IT

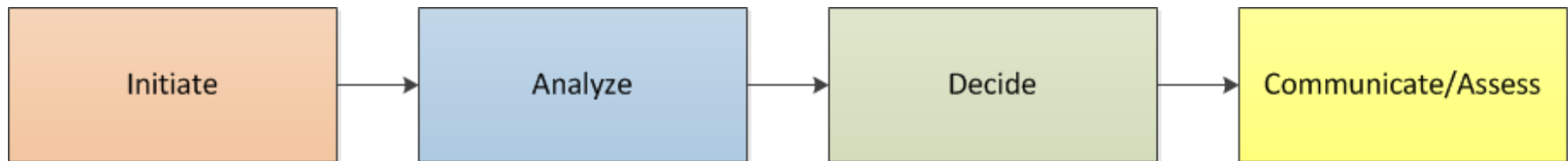
Cons

- Prominent role for IT Planning Board would be dependent on adequate staffing, oversight, and accountability
- Potential for a decision bottleneck
- Balancing institutional priorities is complex, and covers a mix ranging from large to small, and from administrative to research needs
- Potential for difficulty in constructing a planning board that would be truly representative

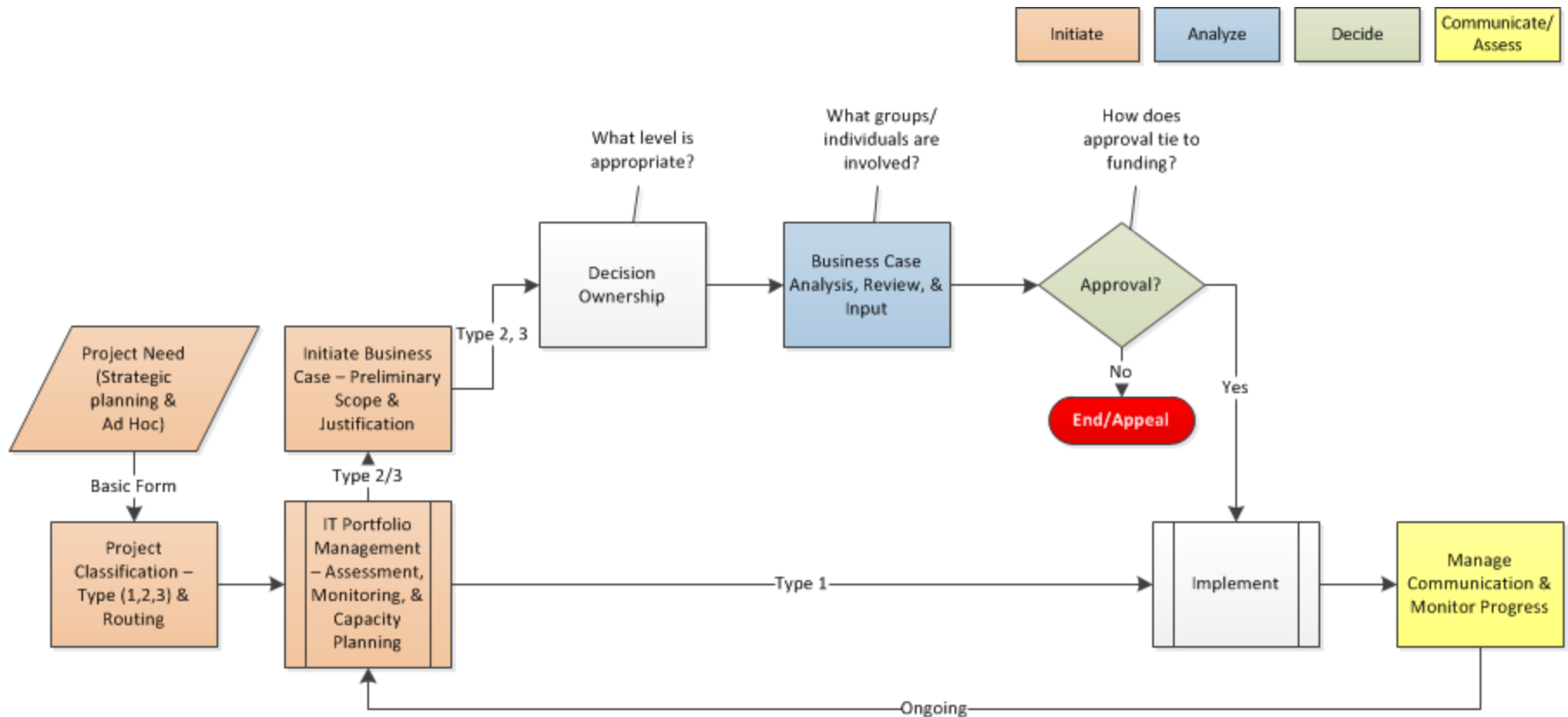
Key Components of a Future State Model

An effective IT decision-making model should be supported by :

- A triage and intake process
- Clearly delineated decision-rights/ownership
- A process for business case analysis, review, and input
- Clearly defined decision point(s)
- Effective outreach and communication
- An after-action review process



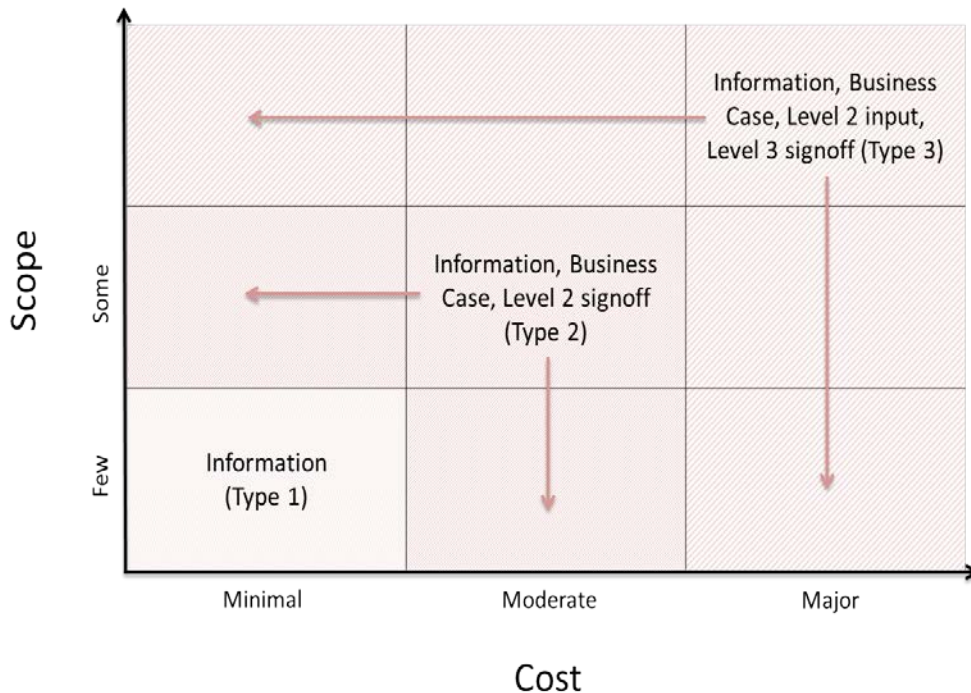
Future State Model – High Level Process



This diagram represents key steps of potential models within any quadrant, and identifies core components that will facilitate an effective decision-making process. A similar core process could be replicated at unit-level.

Future State Model – Project Classification

Sample Project Classification Approach



Sample Project Classification Matrix

UW Madison Project Classification - Impact Assessment				
Risk Factor	Low (0)	Medium (1)	High (2)	Score
Project Management Complexity				
1. Team size	-	-	-	-
2. # of Units Involved	-	-	-	-
3. Duration	-	-	-	-
IT Solution Complexity				
4. Technology/Technique/Process	-	-	-	-
5. Product maturity (if purchased)	-	-	-	-
6. Solution complexity	-	-	-	-
7. System/Interface profile	-	-	-	-
8. IT architectural impact	-	-	-	-
9. Maintenance required	-	-	-	-
Deployment Complexity				
10. Process impact	-	-	-	-
11. End user scope of impact	-	-	-	-
12. Project profile	-	-	-	-
13. Project motivation	-	-	-	-
Estimated project budget:	\$		Overall	-
Project type I	0-5	Project		
Project type II	6-15			
Project type III	16-26			

The triage function would be responsible for classifying projects/issues and routing appropriately through the decision-making process. A classification approach incorporating a variety of factors could be used.

Sample Project Classification Matrix

UW Madison Project Classification - Impact Assessment				
Risk Factor	Low (0)	Medium (1)	High (2)	Score
Project Management Complexity				
1. Team size	< than 3	3 to 8	> than 8	
2. # of Units Involved	1	2 to 3	> than 3	
3. Duration	< 6 months	> 6 months - 18 months	> 18 months	
IT Solution Complexity				
4. Technology/Technique/Process	UW Expertise	Familiar	New to UW	
5. Product maturity (if purchased)	Product implemented & working in >1 university of UW's size	Product implemented & working in 1 university of UW's size and/or smaller universities	Product not implemented in any university	
6. Solution complexity	Solution is well defined and no problems are expected	There is more than one approach to achieving the project goal and/or some problems are expected	The solution is not known or is only vaguely defined	
7. System/Interface profile	No other system interfaces	1 to 2 interfaces	3 or more interfaces	
8. IT architectural impact	Follows UW approved design patterns, principles, practice	Not in use at UW but follows established standards	Evolving 'industry' standard and/or leading edge technology	
9. Maintenance required	Maintenance requires user-level skills	Maintenance requires readily available and ubiquitous IT programming skills	Maintenance requires high level and difficult to obtain IT skills	
Deployment Complexity				
10. Process impact	Department	Division	Campus-wide	
11. End user scope of impact	Department staff/faculty only	Divisional	Large campus-wide faculty, staff, or student cohort or greater	
12. Project profile	Fully accepted by target constituency	Accepted but particularly high visibility	Controversial for target constituency	
13. Project motivation	No Federal/State or UW System mandate	Project responds to impending (>1 yr) mandate	Project responds to impending (<1 yr mandate)	
Estimated project budget:	\$		Overall Score	
Project type I	0-5	Project Classification		
Project type II	6-15			
Project type III	16-26			

Desired Future State Characteristics

Process

- *Clear:* Establish clear process and entry points into the model
- *Transparent:* Document and communicate decisions and rationale
- *Consistent:* Principles, policies, and procedures are consistently applied
- *Agile:* Provide flexibility for quick response
- *Data-driven:* Focus on developing and leveraging high-quality data to support decision-making

Structure

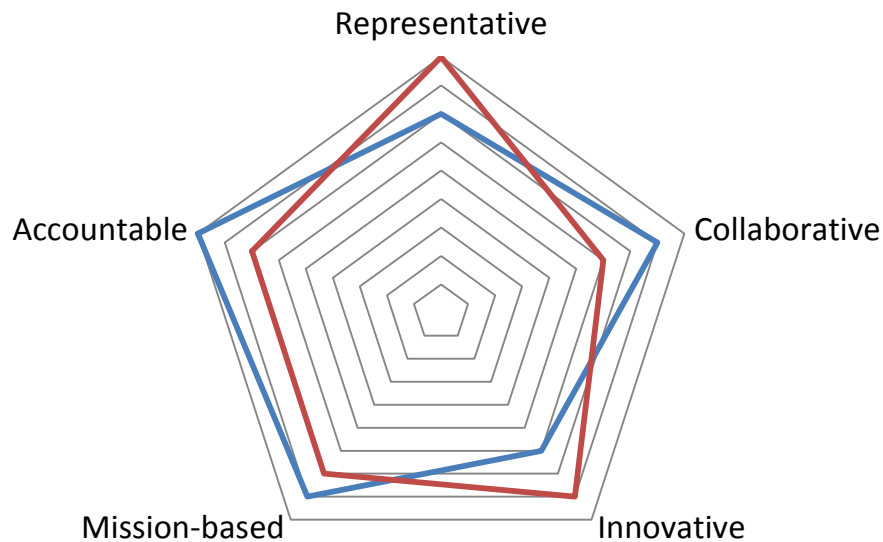
- *Representative:* Provide for appropriate representation of various constituency groups across campus
- *Collaborative:* Enable “cross talk” across (and within) areas and stakeholders
- *Innovative:* Stimulate innovation as a common goal
- *Supported:* Invest in staff and resources to enable informed decision-making
- *Mission-based:* Align with the University’s strategic and mission-related goals
- *Accountable:* Each “organization” has goals and is measured against them on a periodic basis

The team identified key characteristics seen as crucial to the success of any future state decision-making model.

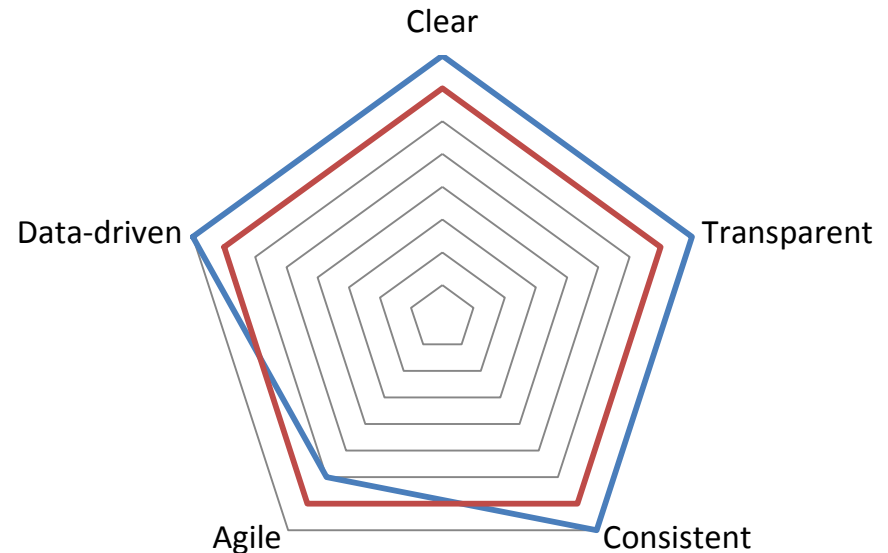
Assessment – IT Decision-Making Models

The team evaluated potential models against a selection of the key characteristics seen on the previous slide.

Illustrative Assessment - Structure



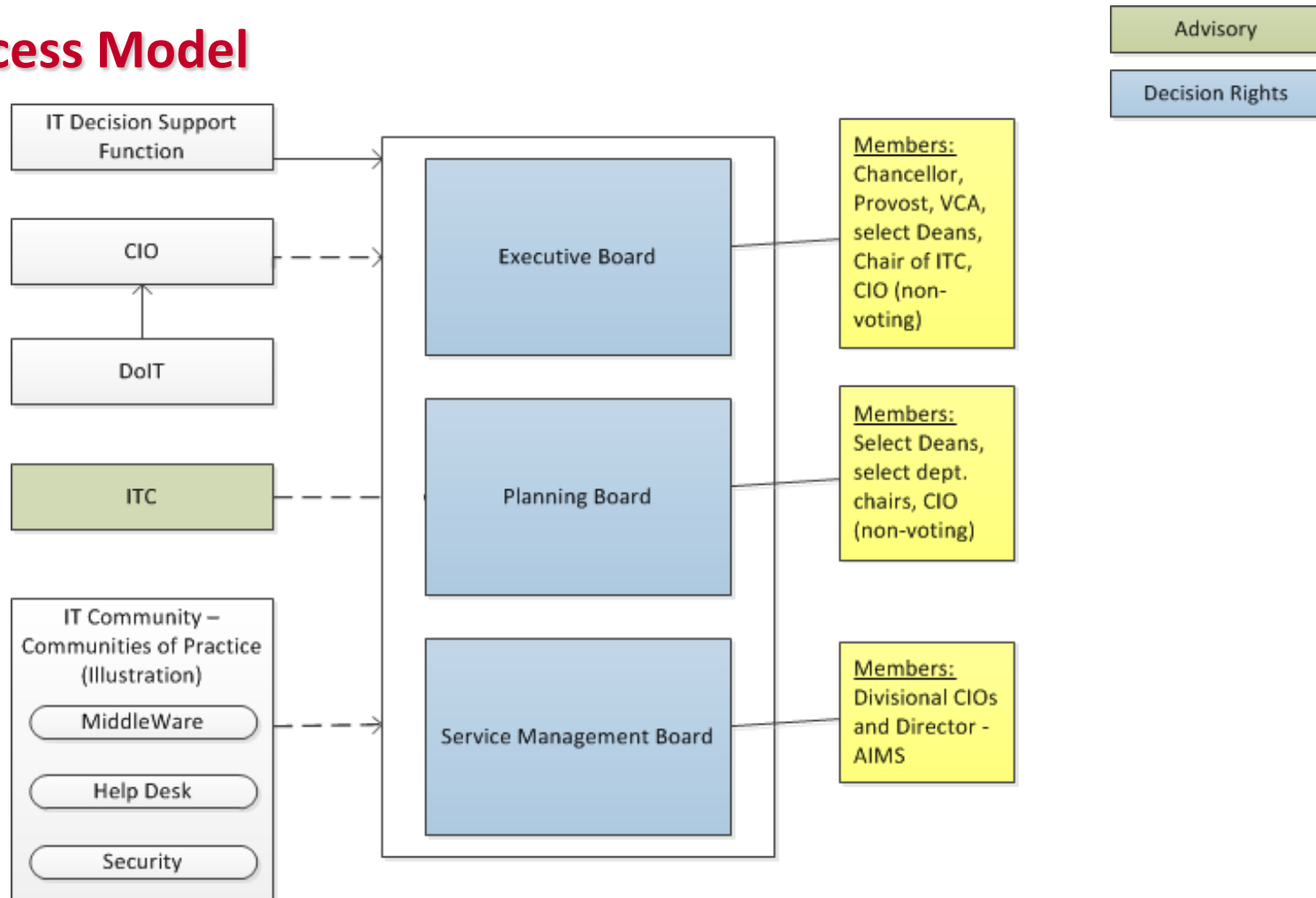
Illustrative Assessment - Process



— Uniform Process
— Domain-Focused

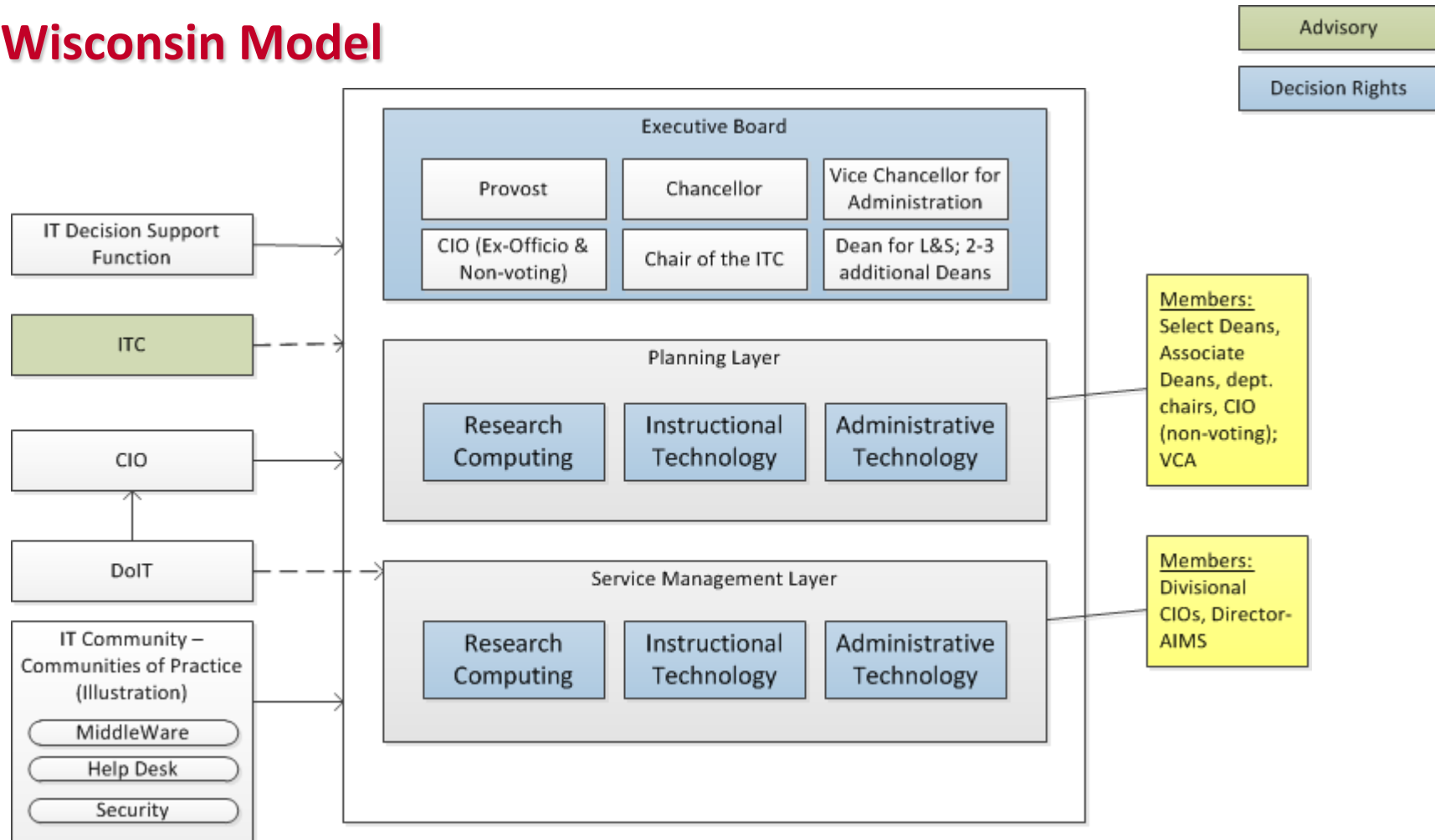
The “Uniform Process” and “Domain-Focused” models were evaluated as best fit to the desired characteristics. Points of differentiation are illustrated above.

Uniform Process Model



This model most closely resembles the decision-making approaches within the “Uniform Process” cluster and is structured to manage IT services as an enterprise-wide portfolio.

Wisconsin Model



This model is an expanded version of those found in the “Uniform Process” cluster and is structured to manage IT services as an enterprise-wide portfolio while providing for decision-making in functional areas.

AE – EITDM Future State

