

Multi-Constellation/Model Tutorial

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Topics

What is Multi-Model Improvement?

What Multi-Model Improvement is NOT

The Case for Multi-Model

A Multi-Constellation Look

The Multi-Model Improvement Strategy

The Improvement Continuum



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What is Multi-Model Improvement?

A systematic approach to using different improvement models to ensure value to the organization

- Develop the process appropriate to the work being performed
- Develop the workforce appropriate to the work being performed
- Align objectives with overall strategy
- Implement and appraise

Using multiple improvement technologies

- Concurrently implemented
- At different hierarchical levels
- Across different organizational functions
- Leverage existing resources



What Multi-Model Improvement is NOT

Creating a master meta-model

Developing a:

- new single technology that encompasses all other technologies
- universal combination to suit every organization

Promoting any single combination of technologies as the best

All models implemented identically in all areas

(Necessarily) adding more technologies



The Case for “Multi-Model”

Alignment of processes and improvement activities with specific business objectives

- Business challenges are complex, often not monolithic, and require the ‘right’ combination of capability, targeted to business needs.

A Multi-Model approach is well suited to this environment.

- The different CMMI constellations (DEV, ACQ, SVC) can allow Orgs to achieve ratings appropriate to the type of work they do.
- P-CMM can support the development and retention of a world-class workforce.
- Resilience Maturity Model (RMM) can support resilience of the “systems” to security and other threats
- Multi-model improvement will create an Enterprise “profile” of qualifications to enhance offerings to customers, based on their need, and the ability of the Org to deliver real value.



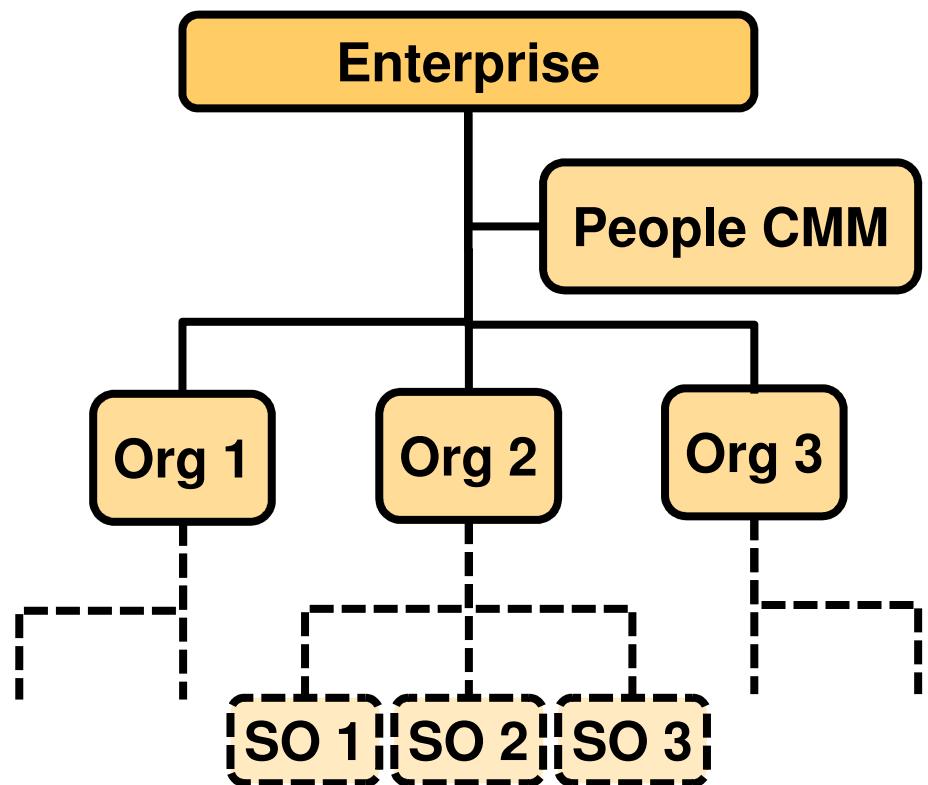
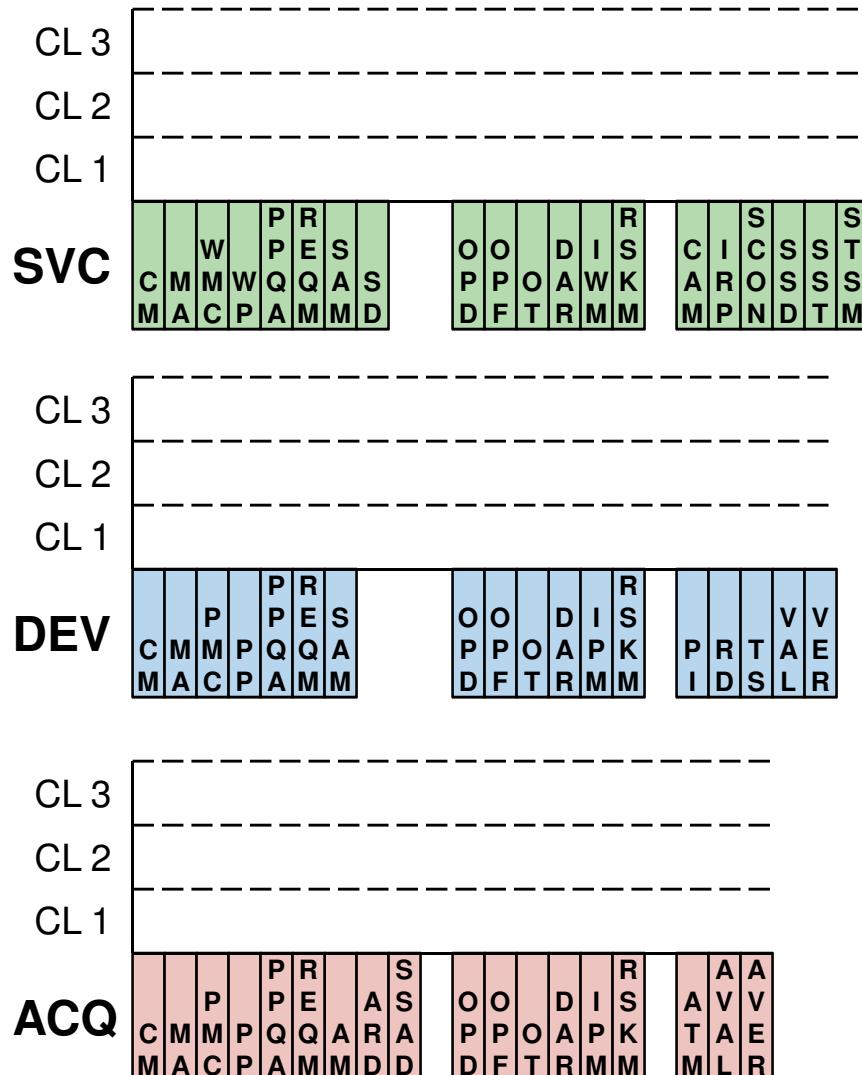
The Case for “Multi-Model”

Create an Org-specific “constellation”

- Using the Org capability profile, identify an integrated set of process areas from the different models and constellations that can be used to create a unique model for the enterprise.
- As needed, create specific models for each Org that fit their specific process needs
- Within some of the Orgs, if the process diversity is great enough, it may be beneficial to create specific models for sub-organizations of the Org.
- Using the Org capability profiles, identify an integrated set of workforce management practices that can be used to manage the workforce across the enterprise.

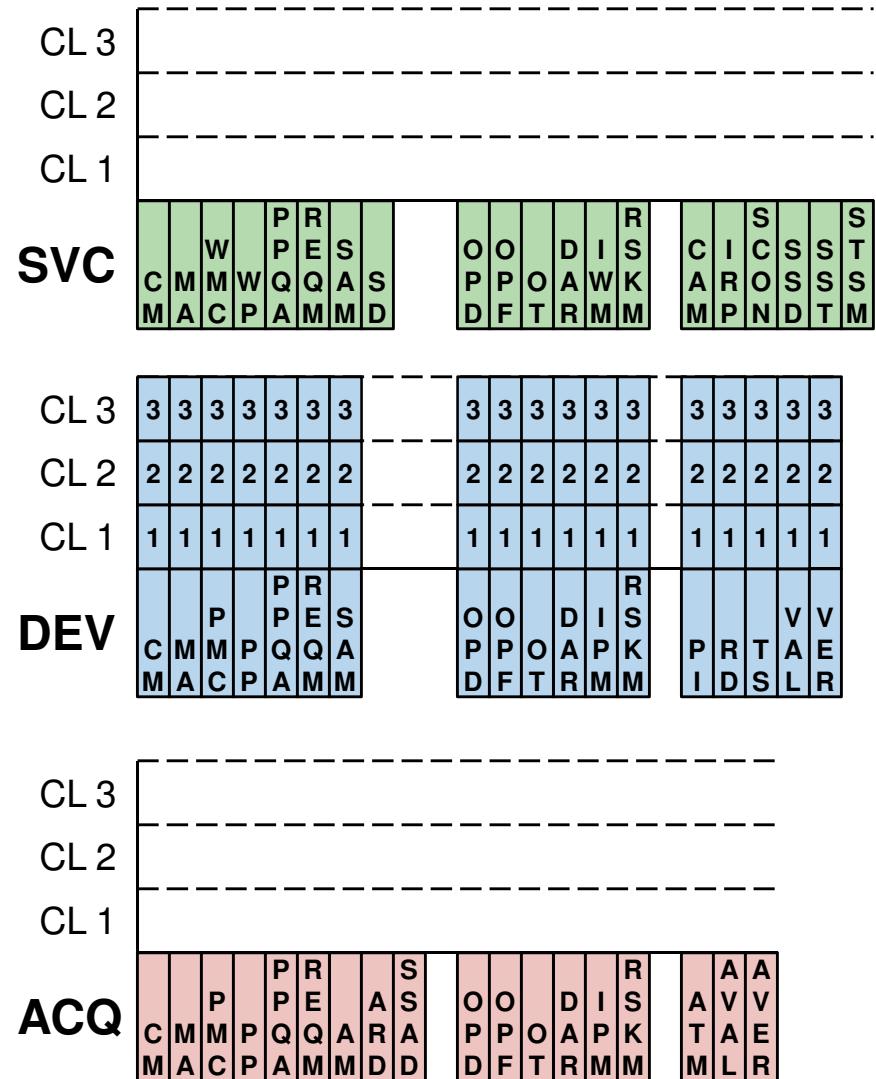


A Multi-Constellation Look



Organization 1

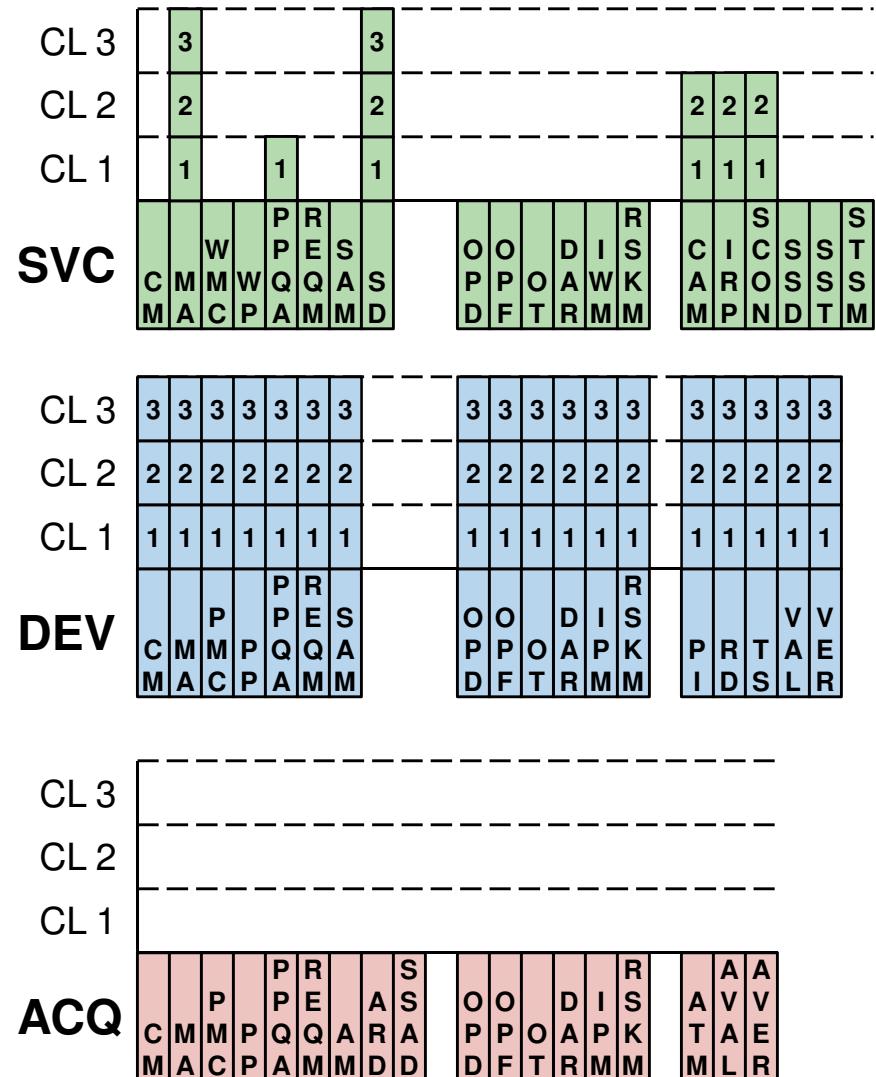
Org 1 is primarily a development organization



Organization 1

They also perform some services

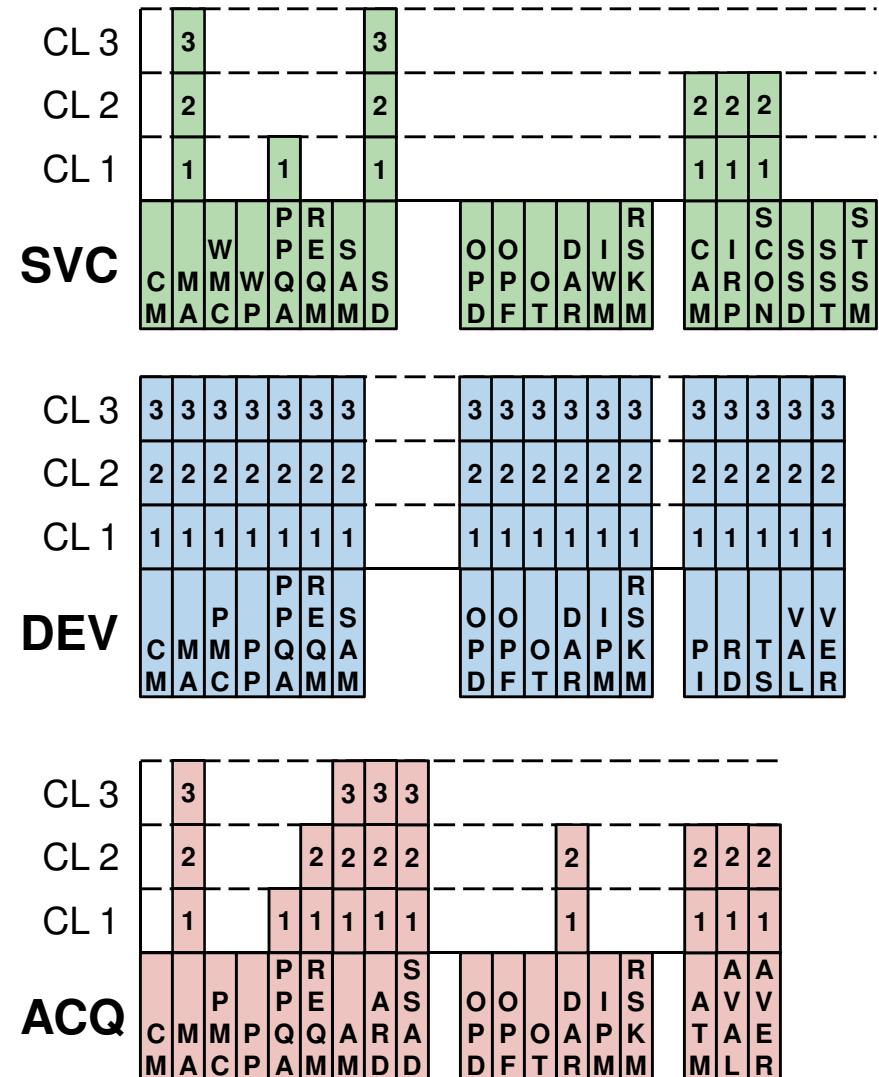
- They have a help desk which is important to them
- The need to ensure it is adequately staffed, problems are corrected, and it will not be disrupted even by disaster
- The organization recognizes the value of measurement and analysis
- They want to check that the process is being followed



Organization 1

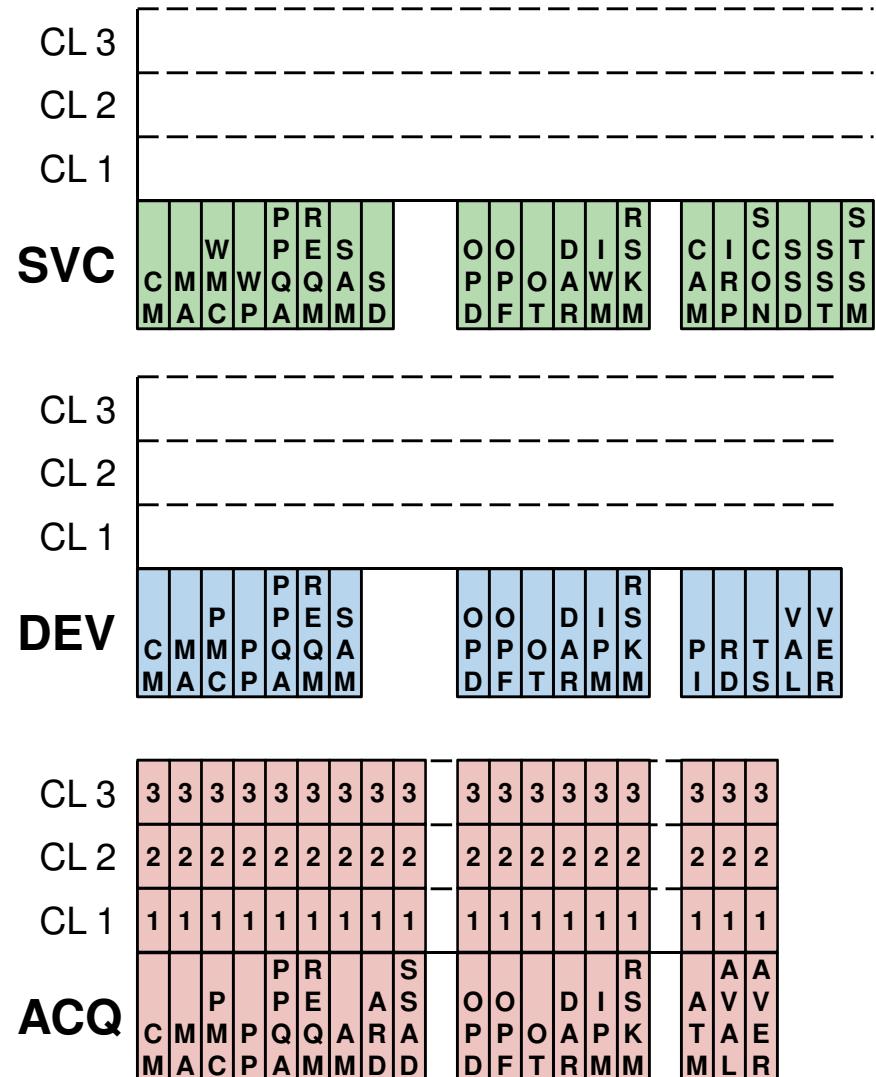
They acquire some products and services

- Develop product requirements
- Conduct a source selection
- Manage the acquisition and requirements
- Have a formal bid evaluation and decision process
- Verify, validate, and transition the product and services
- Ensure process fidelity
- Measure and analyze the process



Organization 2

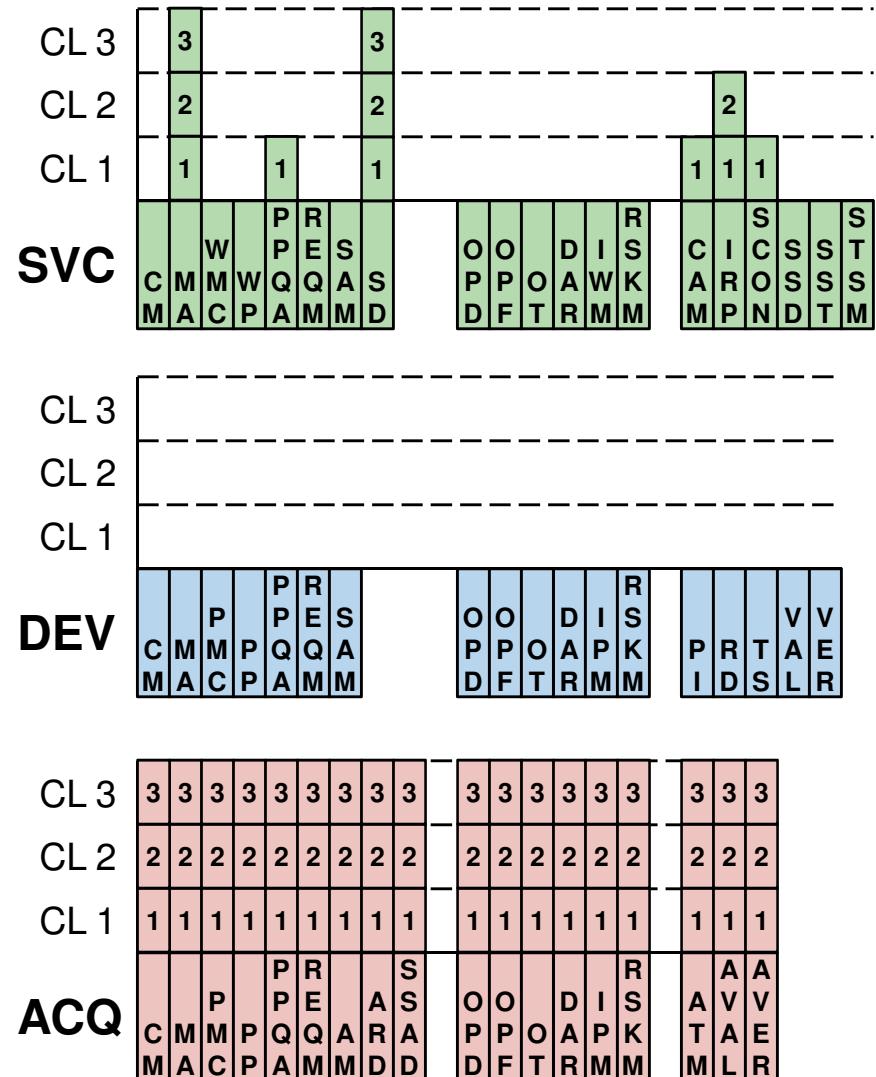
Org 2 is primarily an acquisition organization



Organization 2

They also provide acquisition help services to other organizations in the enterprise

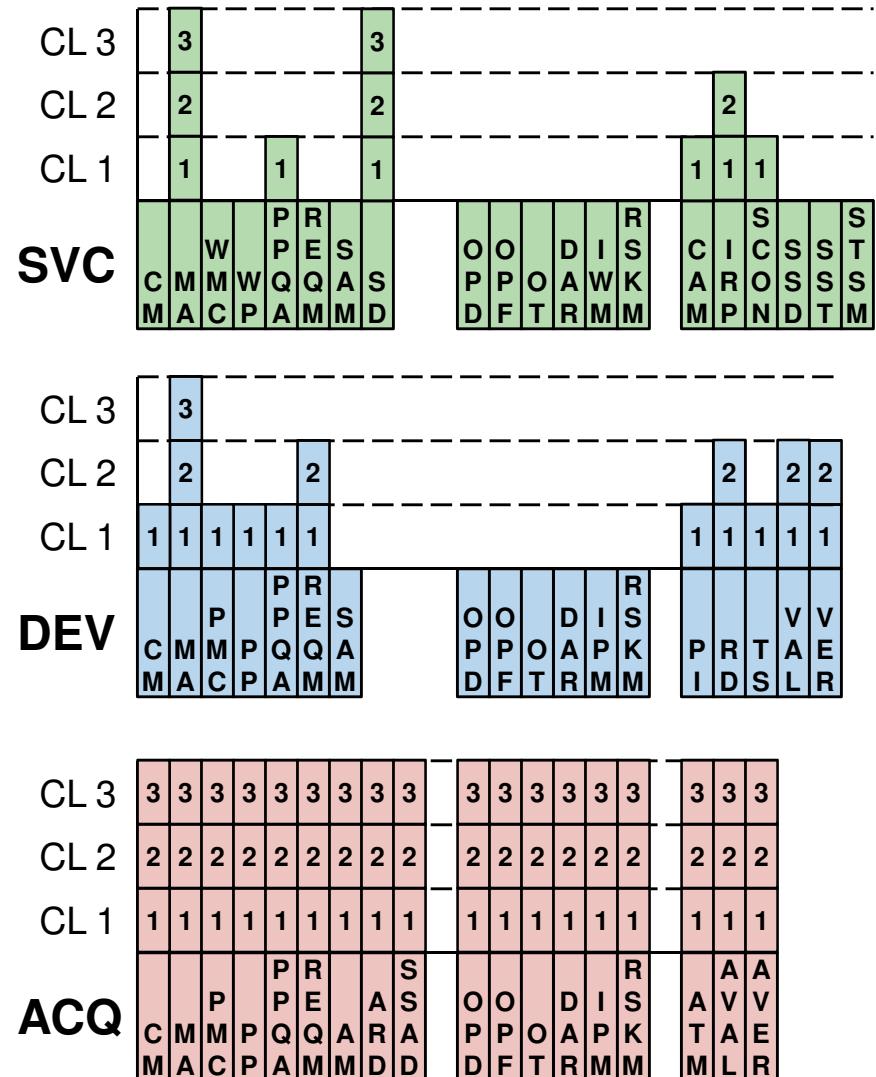
- They have a request for services function
- They recognize the need to handle service issues
- Staffing and recovery from disruption, while important are not critical
- Measurement and analysis are important
- Ensure process fidelity



Organization 2

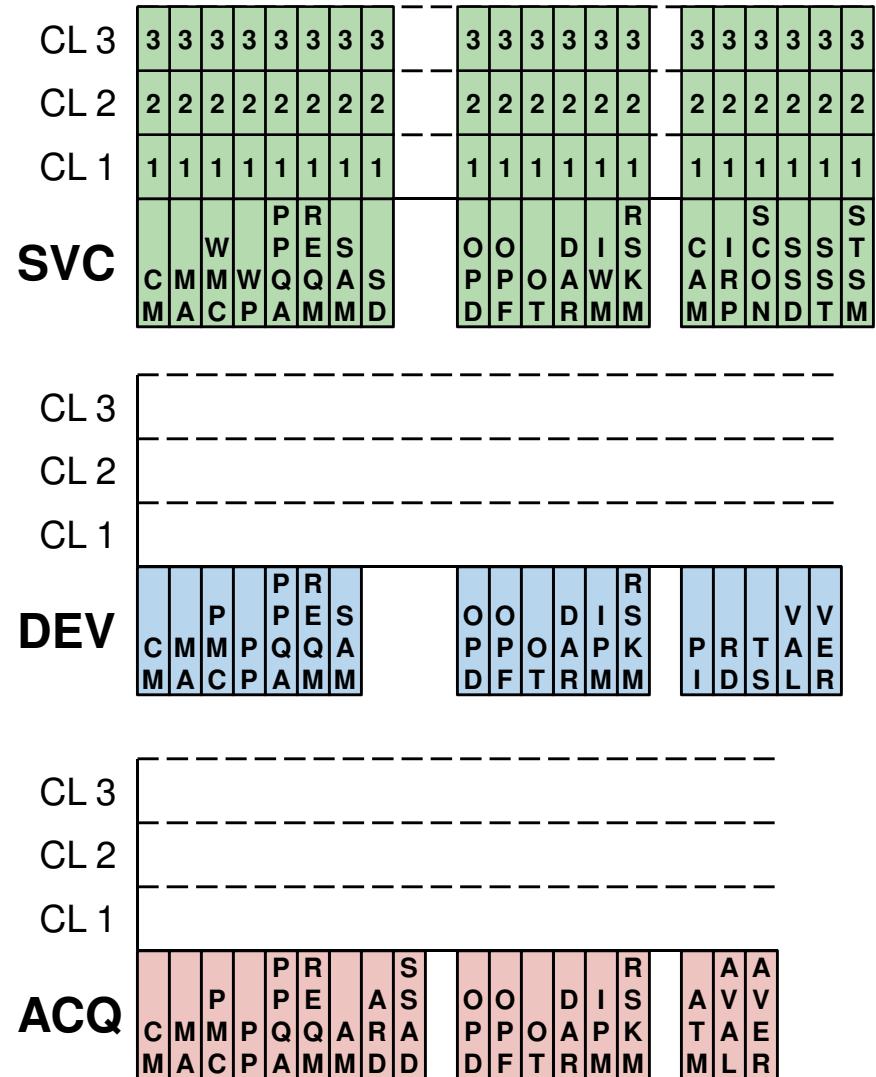
The organization develops applications to support its work

- Good requirements and controlling changes are important
- Ensuring the software works correctly is critical
- Need delivery on schedule
- Need to measure and analyze the process
- Need to ensure process fidelity



Organization 3

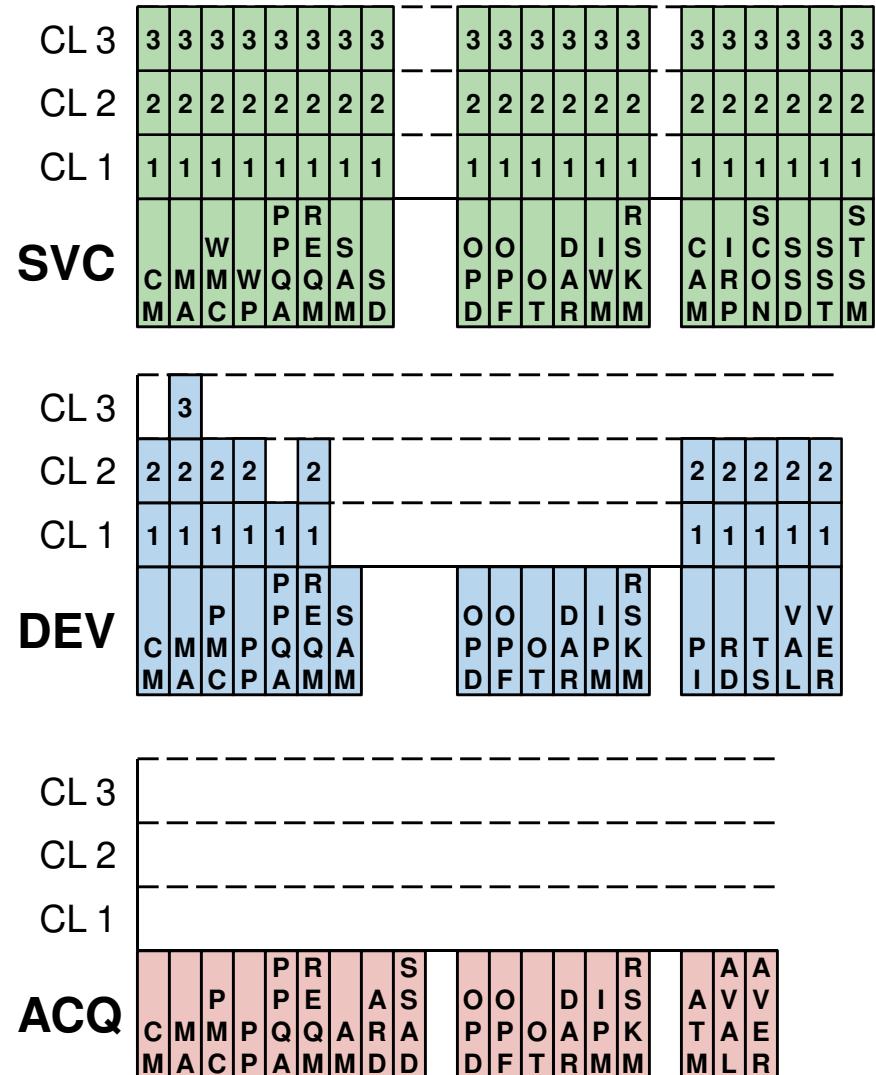
Org 3 is primarily a services organization



Organization 3

Services include some software maintenance

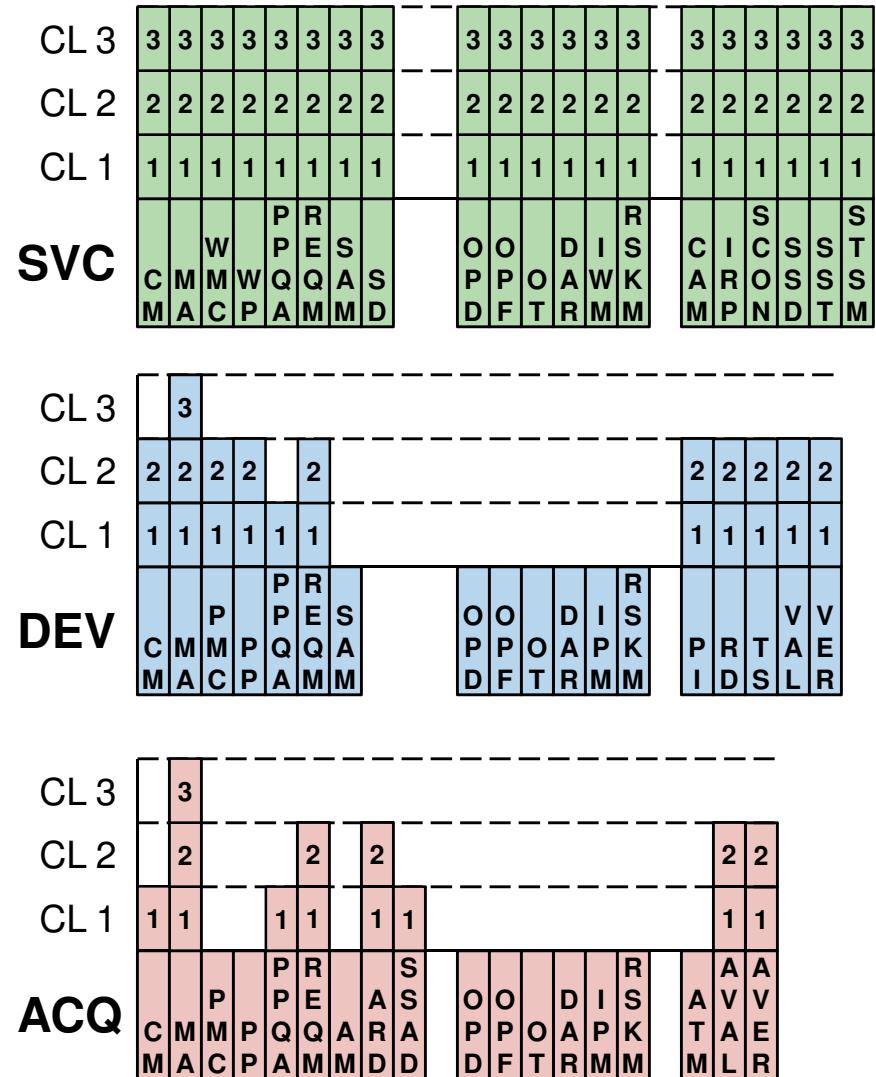
- Need to meet the maintenance SLAs
- Need to provide quality maintenance
- Need to control changes
- Measure and analyze
- Ensure process fidelity



Organization 3

Occasionally provide procurement support services under the SLA

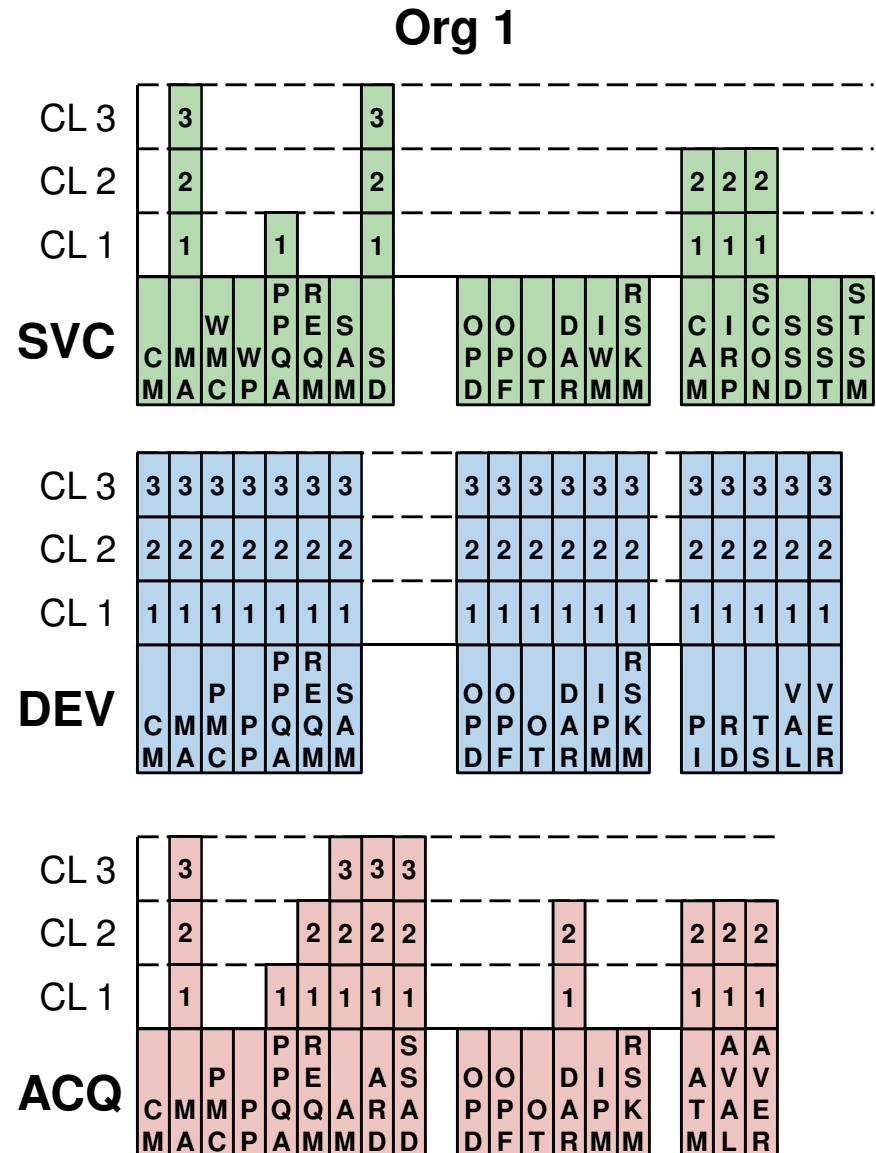
- Develop and control requirements
- Support the solicitation
- Provide verification and validation support services
- Measurement and analysis
- Ensure process fidelity



Organization 1

A profile for an organization that is assumed to be:

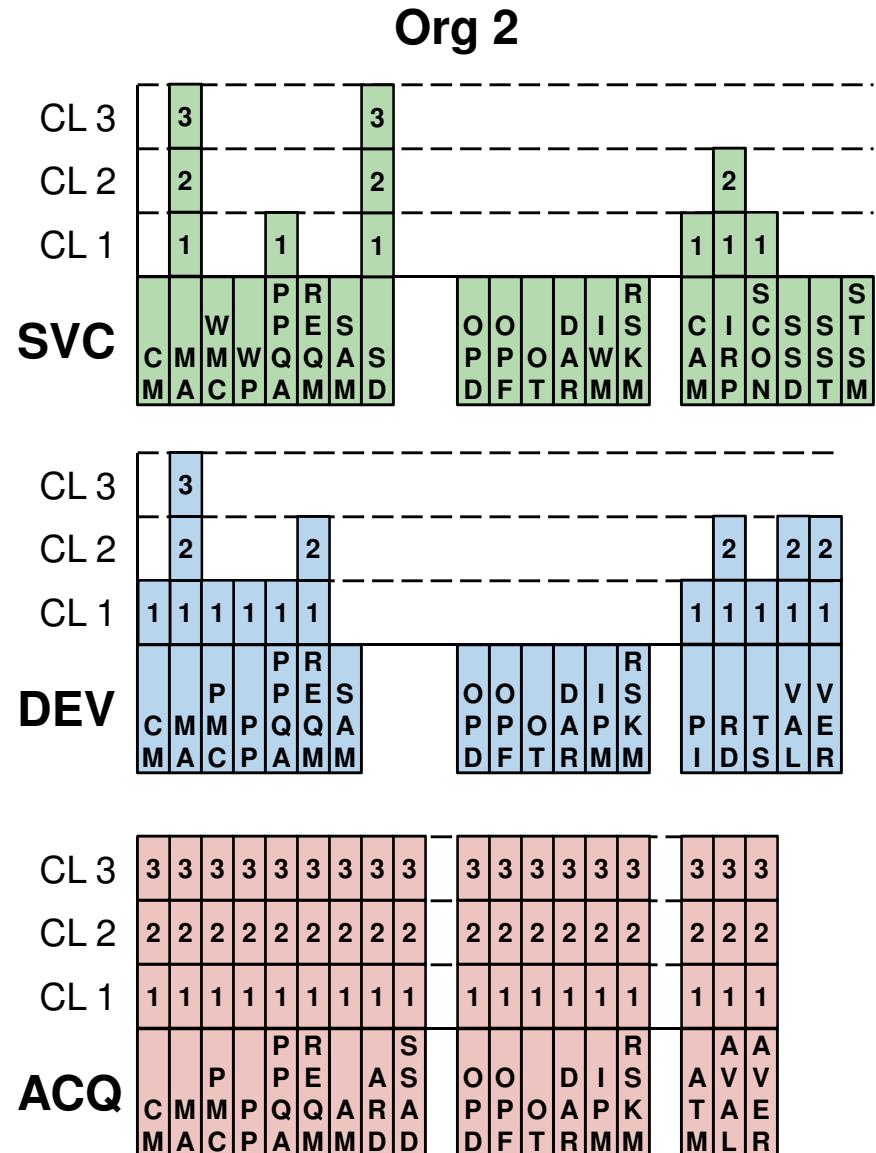
- Primarily software development
- With:
 - Helpdesk service
 - Some procurement



Organization 2

Org 2 is assumed to be:

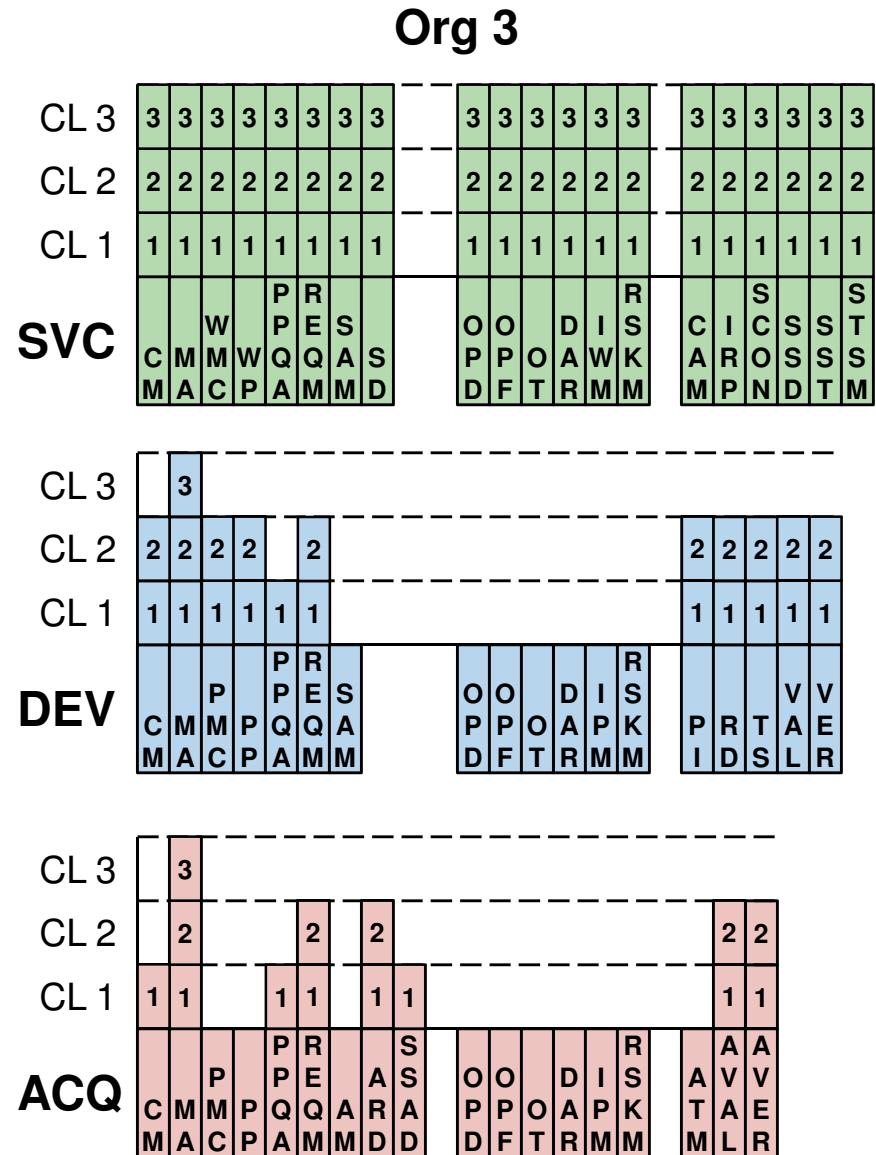
- Primarily acquisition
 - With:
 - Helpdesk service
 - Some software development



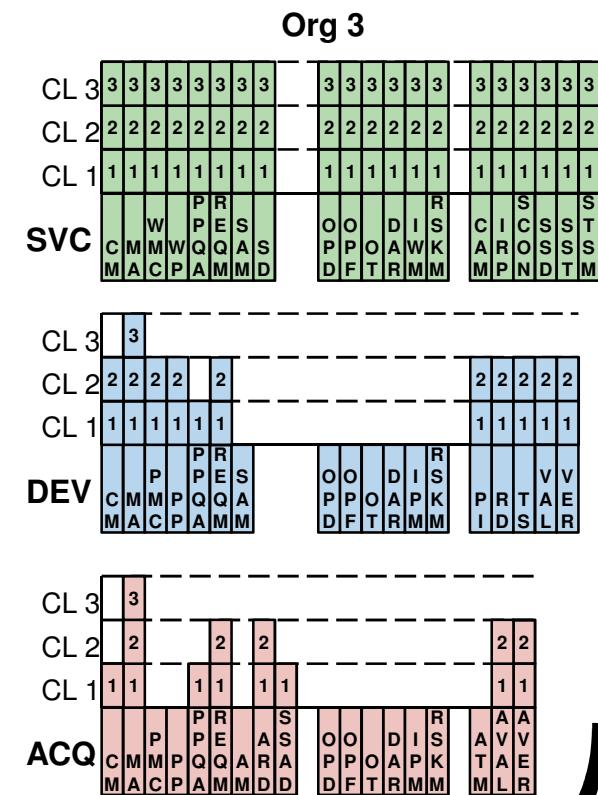
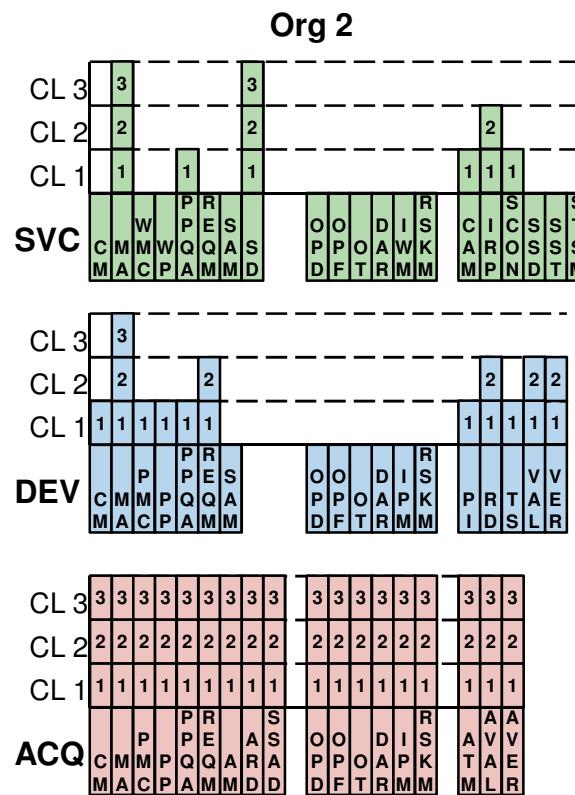
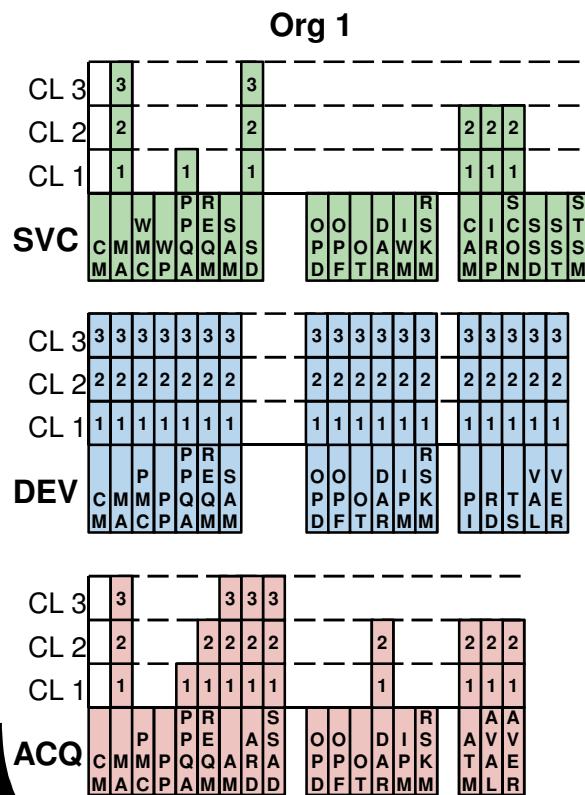
Organization 3

Org 3 is assumed to be:

- Primarily services
- With:
 - Some software development
 - Some procurement



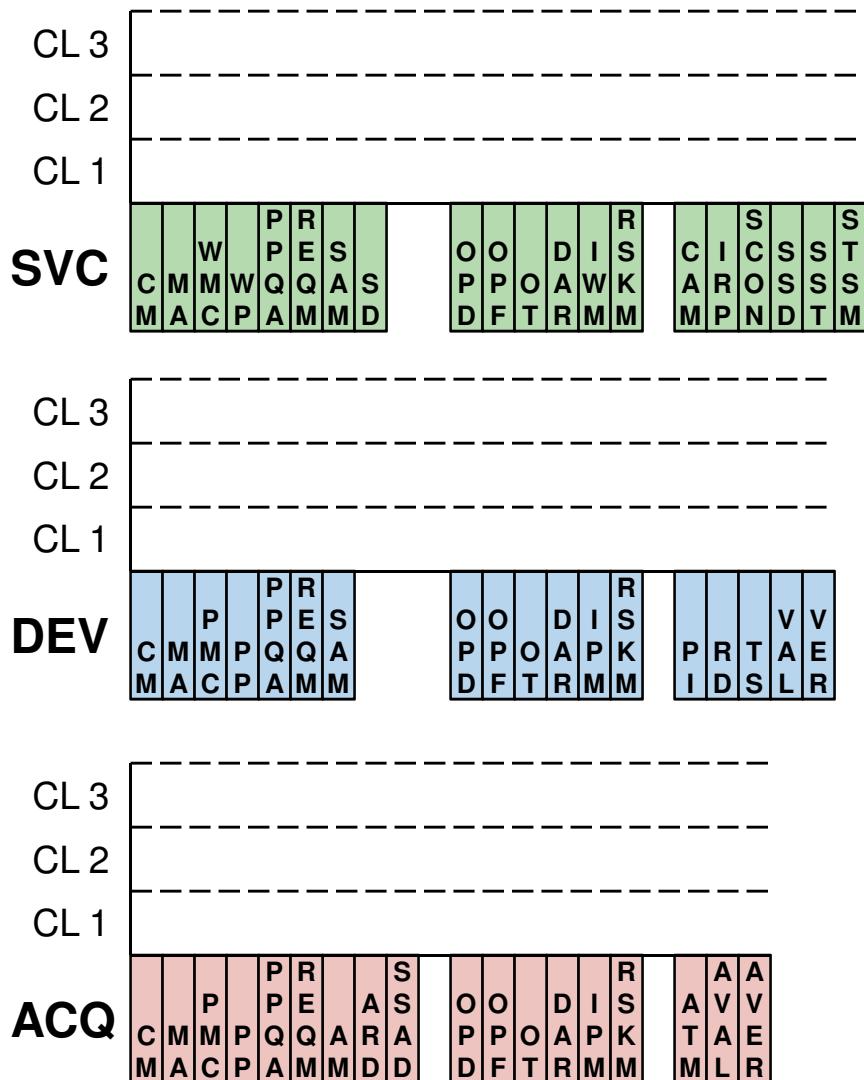
A Tale of Three Orgs



A multi-constellation approach more efficiently and effectively supports the needs of different parts of the enterprise – no round pegs in square holes



A Multi-Constellation/Model Look

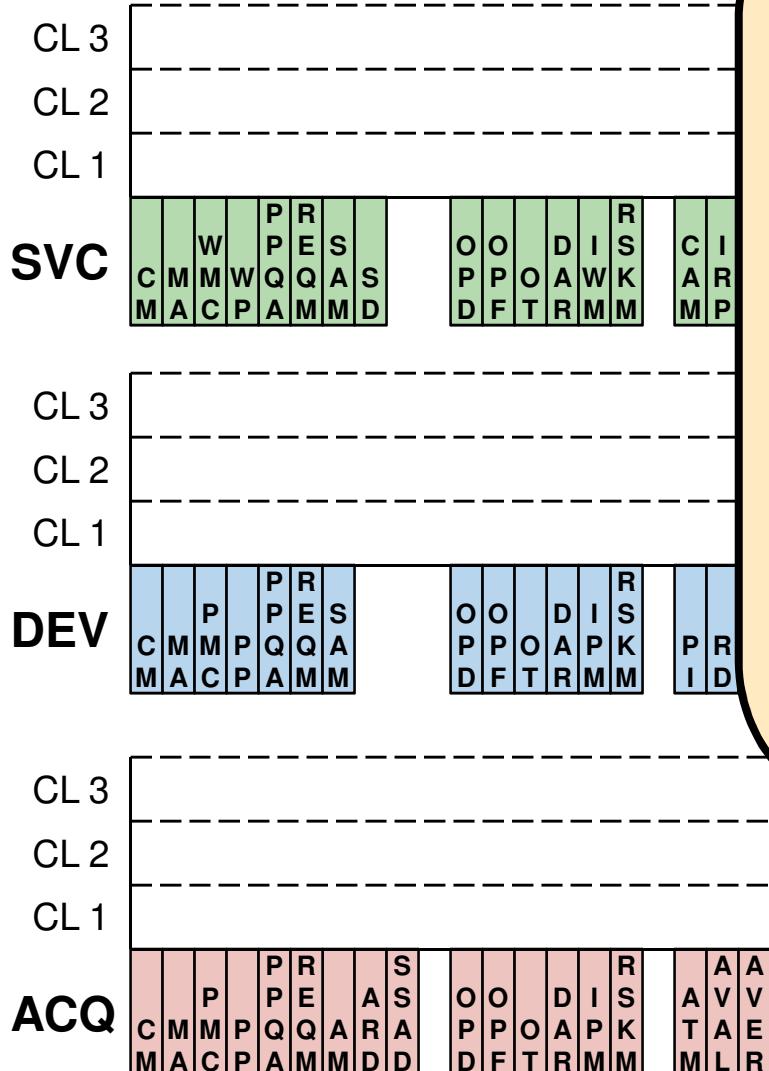


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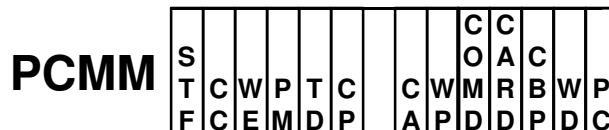
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A Multi-Model Look

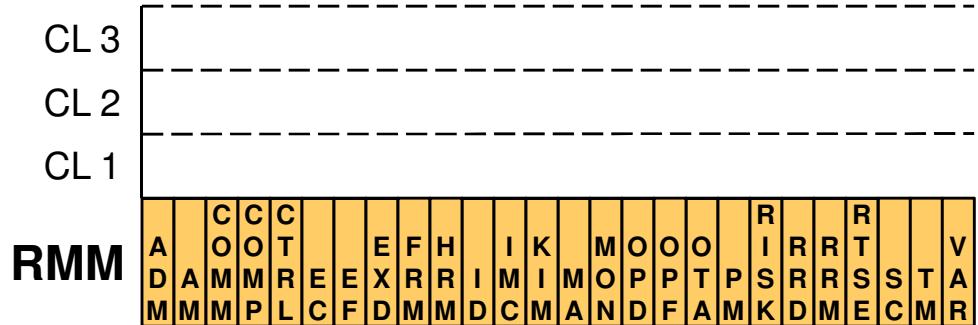


Level 2

- STF Staffing
 - CC Communication and Coordination
 - WE Work Environment
 - PM Performance Management
 - TD Training and Development
 - CP Compensation
- ## Level 3
- CA Competency Analysis
 - WP Workforce Planning
 - COMD Competency Development
 - CARD Career Development
 - CBP Competency-Based Practices
 - WD Workgroup Development
 - PC Participatory Culture

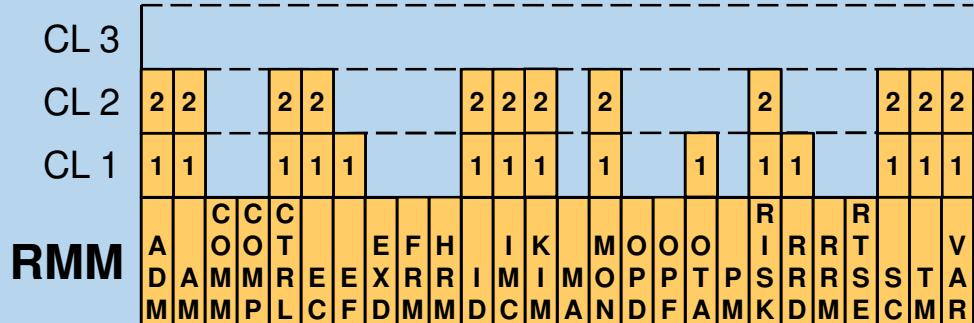


R M M	Process Area		Process Area
ADM	Asset Definition and Management	MA	Measurement and Analysis
AM	Access Management	MON	Monitoring
COMM	Communications	OPD	Organizational Progress Definition
COMP	Compliance	OPF	Organizational Process Focus
CTRL	Controls Management	OTA	Organizational Training and Awareness
EC	Environmental Control	PM	People Management
EF	Enterprise Focus	Risk	Risk Management
EXD	External Dependencies Management	RRD	Resilience Requirements Development
FRM	Financial Resource Management	RRM	Resilience Requirements Management
HRM	Human Resource Management	RTSE	Resilience Technical Solutions Engineering
ID	Identity Management	SC	Service Continuity
IMC	Incident Management and Control	TM	Technology Management
KIM	Knowledge and Information Management	VAR	Vulnerability Analysis and Resolution

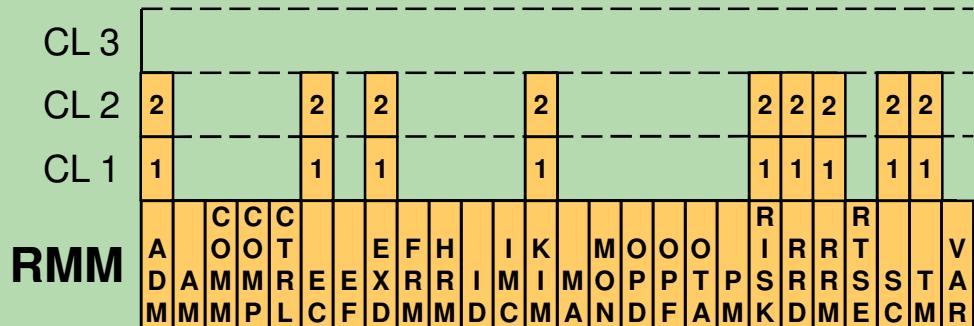


RMM Profile Examples

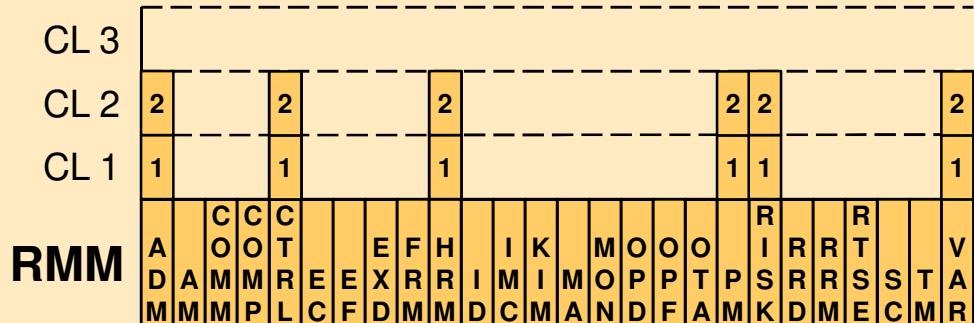
Your organization is required to be compliant with FISMA



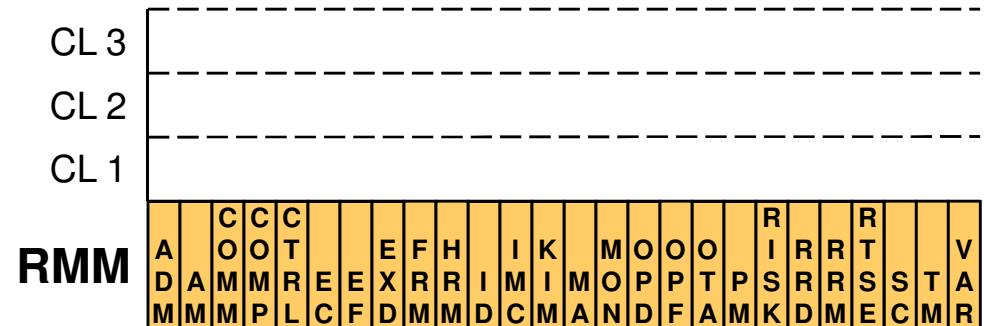
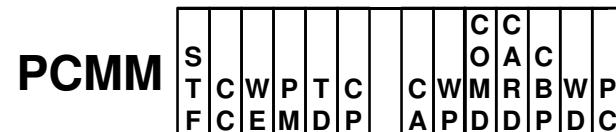
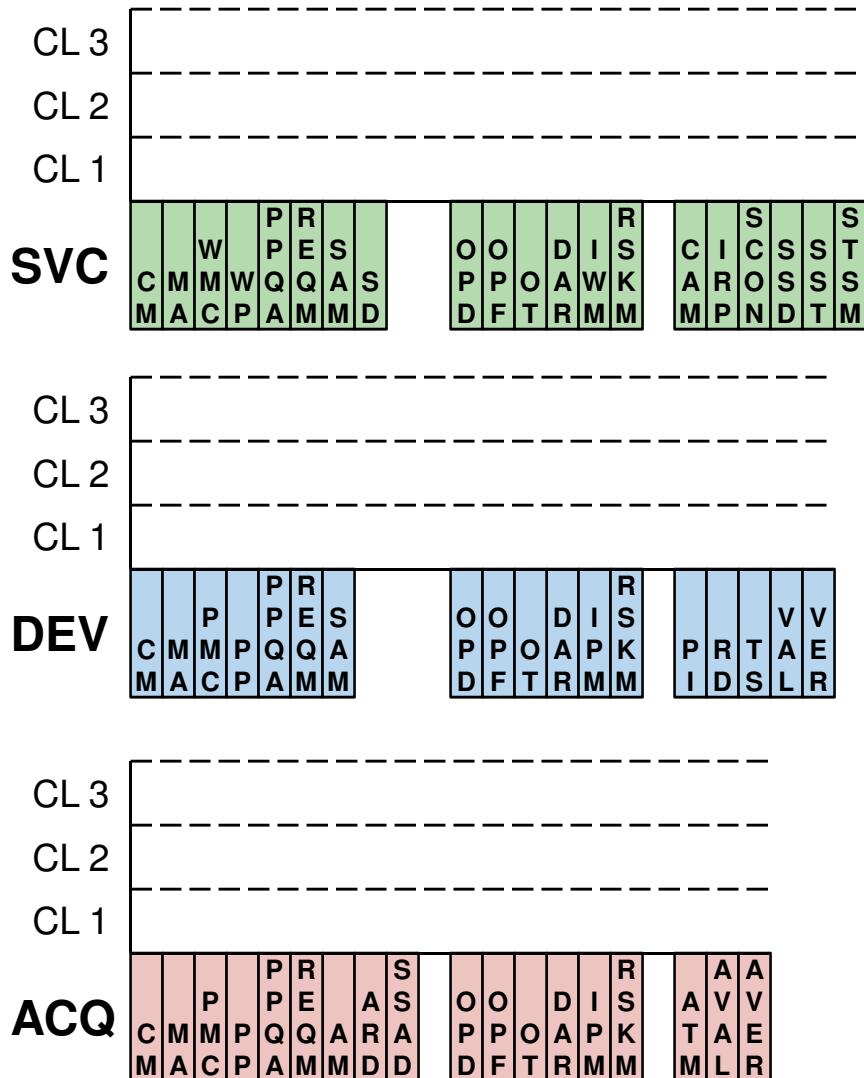
Your organization wants to manage risks with cloud computing



Your organization wants to manage insider threat risks



Multi-Constellation/Model



Information System

Provide decision support systems and services to the company. Involves:

- Development
- Management reporting
- Dashboards
- Analysis
- Assistance



Information System

Recruiting, refining, and retaining the workforce is a key factor in efficient and cost effective operations.

PCMM

S	T	C	W	P	T	C	C	C	A	C	W	P	P
T	C	W	P	T	C	C	O	M	R	B	W	P	P
F	C	E	M	D	P	C	W	M	R	B	W	P	D



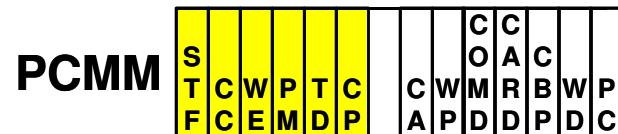
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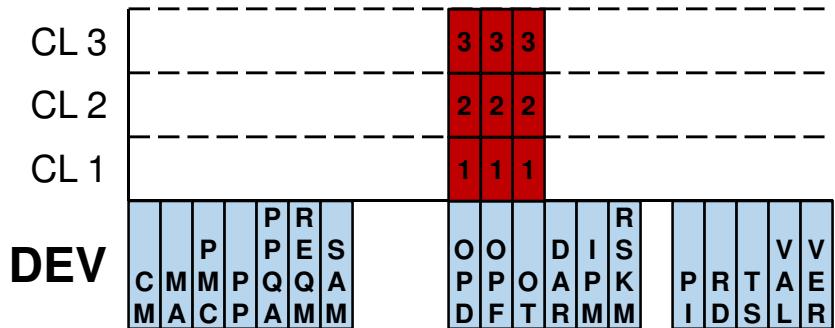
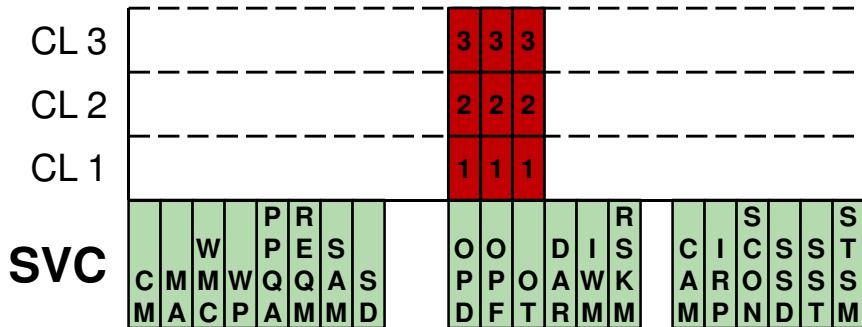
Information System

Recruiting, refining, and retaining the workforce is a key factor in efficient and cost effective operations.
Involves:

- Staffing
- Communication and Coordination
- Work Environment
- Performance Management
- Training and Development
- Compensation

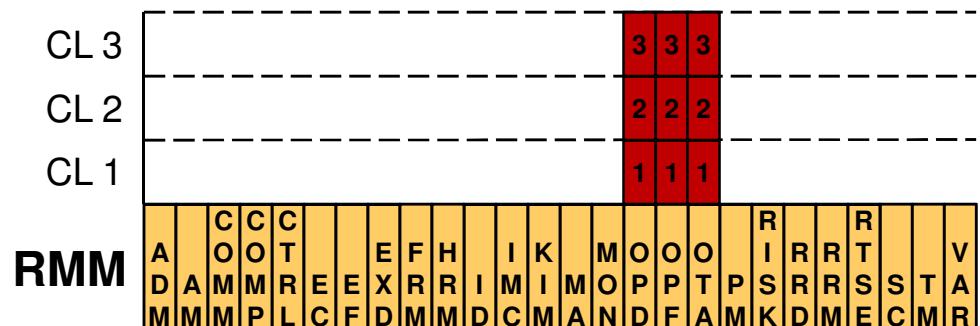
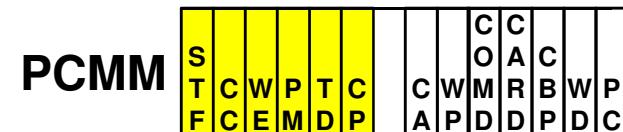


Information System

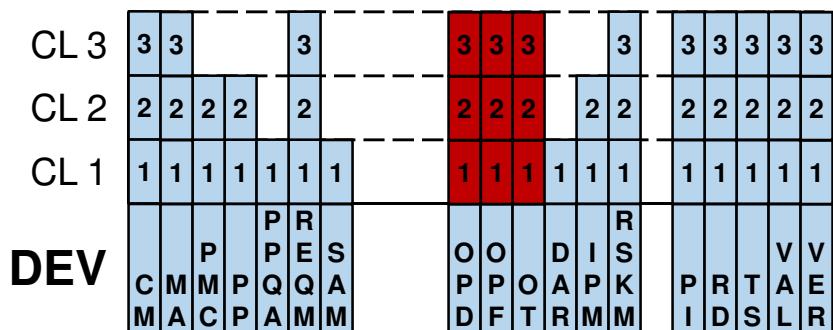
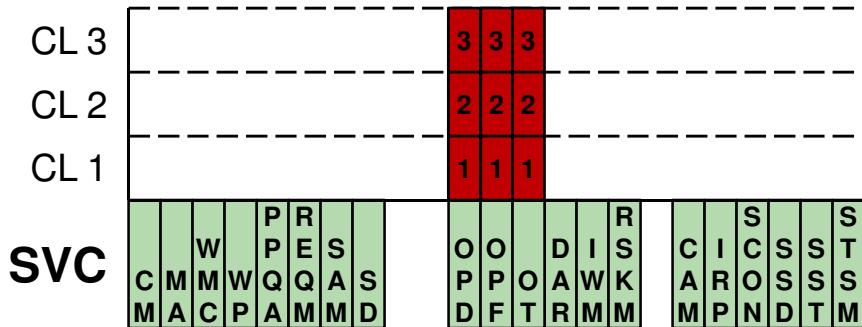


Successful process improvement requires

- Identifying what to improve
- Establishing a structure
- Planning the effort
- Training the people

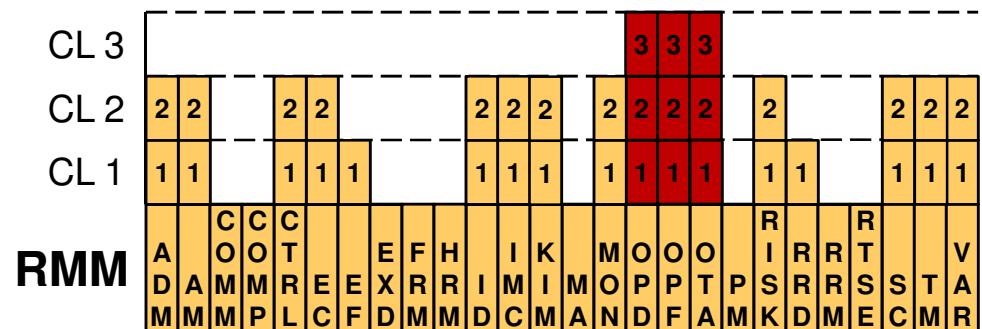
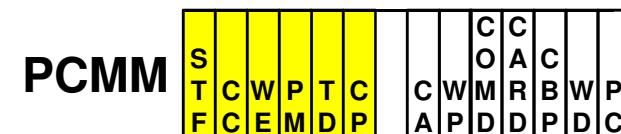


Information System



Development project drivers are

- Requirement for FISMA compliance
- Make or break decisions are being made based on the information supplied so quality systems are paramount
- Not schedule driven
- Very diverse set of project types and environments
- Risks and measures are important
- Little procurement activity



Planning for Development is not the Same as Planning for Services

Development

Tangible products

Schedule oriented to
producing products

Schedule driven

Services

Intangible services

Schedule oriented to
providing resources

Event driven



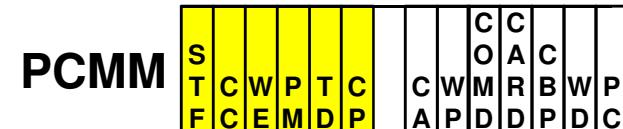
Information System

	CL 3	3	3	3	3	3	3	3	3
	CL 2	2	2	2	2	2	2	2	2
	CL 1	1	1	1	1	1	1	1	1
SVC	C M M A C P Q A M	M M C P A P Q A M	W W W P E S A S	P P O O D A W K	R R R I S R M M	O O O P P O A W K	D D I S R S S T	I I C C O S S S	S S T S S S S S

	CL 3	3	3	3	3	3	3	3	3
	CL 2	2	2	2	2	2	2	2	2
	CL 1	1	1	1	1	1	1	1	1
DEV	C M M A C P Q A M	M M C P A P Q A M	P P R E S	R P O A P K	I S R M M	O O D I S R	P P O A P K	3 3 3 3 3 3	3 3 3 3 3 3

Services Drivers are

- Make or break decisions are reliant upon the analytical services
- Measurements are important to this business
- Planning and CM are rather simple and non-critical



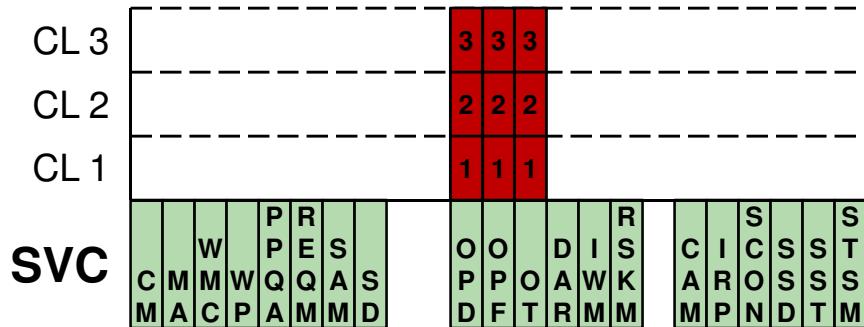
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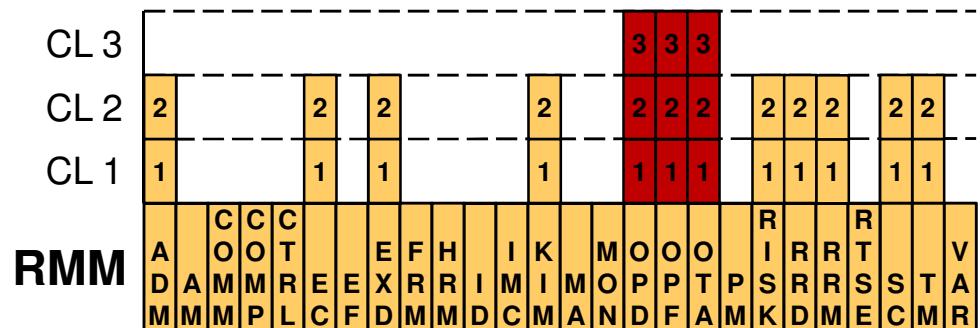
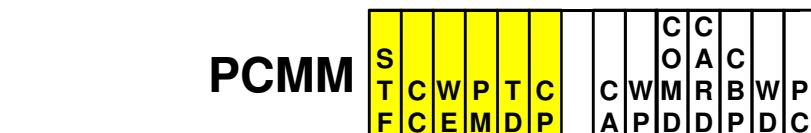
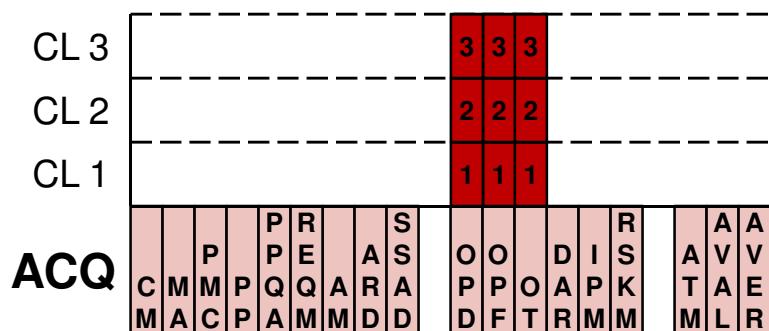
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Cloud Services

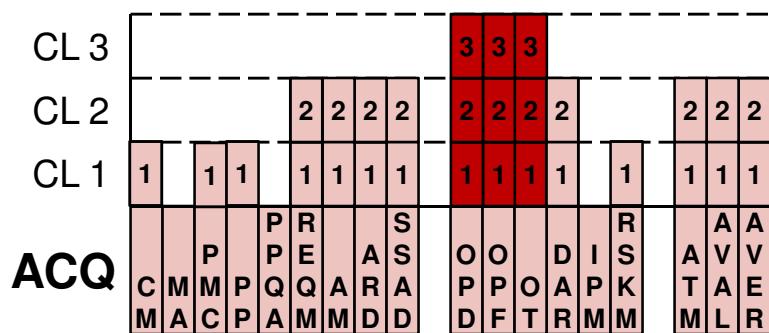
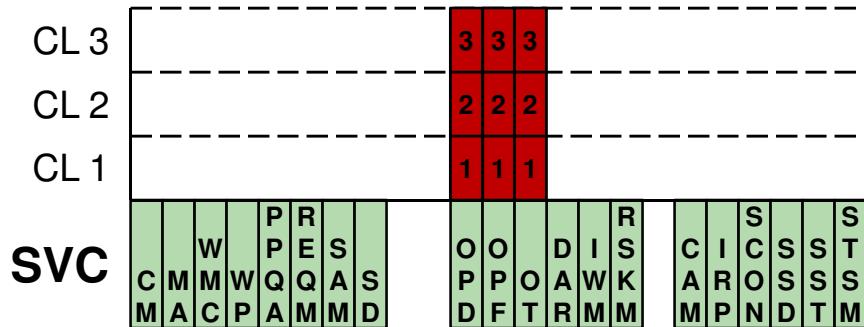


Providing Cloud Services

- People CMM for an effective workforce
- ACQ to procure the cloud services
- SVC for service delivery
- RMM for managing the security and other risks of cloud computing

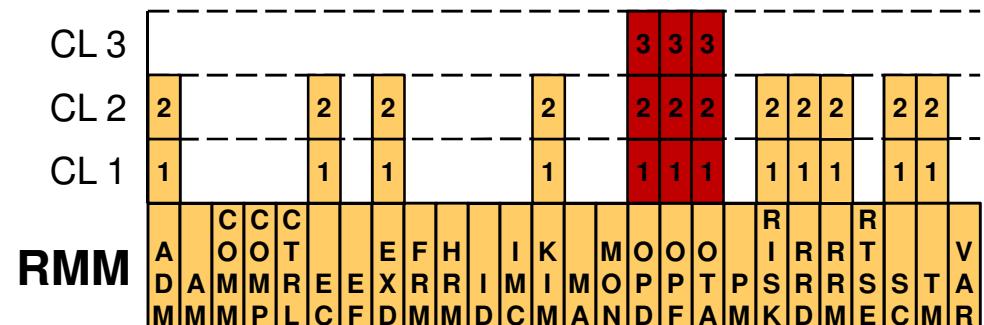
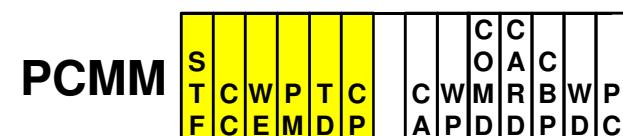


Cloud Services

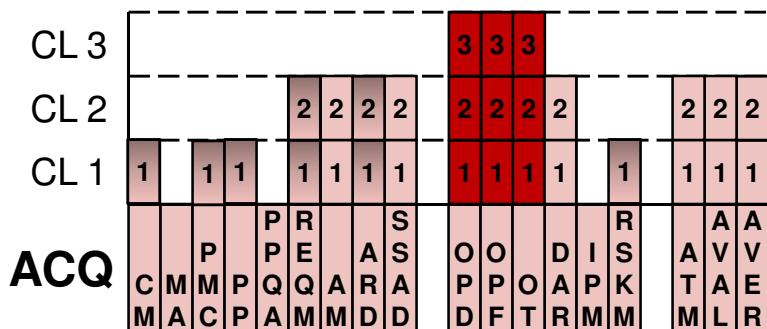
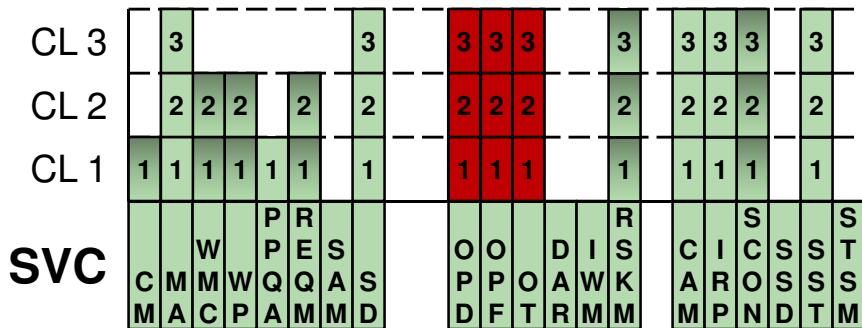


Procuring Cloud Services

- The procurement is critical to providing the right service level
- Focus on
 - Requirements
 - Selecting the right vendor
 - Verifying and validating the cloud
- Procurement is a rare activity for this organization

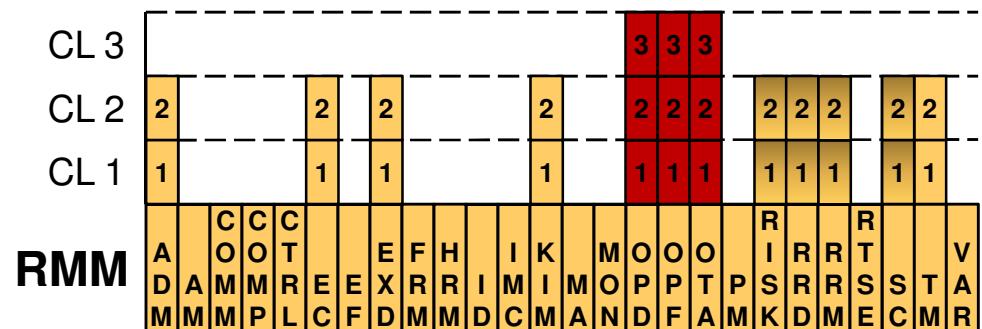
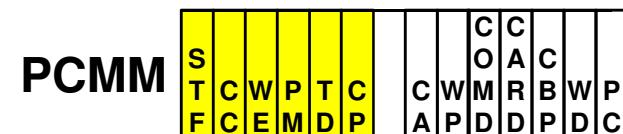


Cloud Services



Delivering Cloud Services

- Cloud services are critical to the company
 - User request for help or issues must be promptly addressed
 - Service must be 24/365 – no interruptions
- Services are not a focus of the company

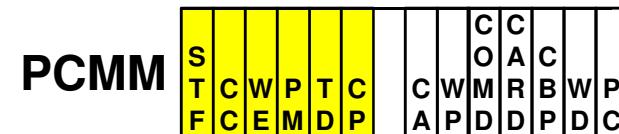


Banking System and Insider Threat

CL 3	3 3 3 3 3 3	3 3 3 3 3 3	3 3 3 3 3 3
CL 2	2 2 2 2 2 2	2 2 2 2 2 2	2 2 2 2 2 2
CL 1	1 1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1 1
DEV	C M P P E S M A C P Q A M M A C P A M M	O O D I S P P O A P K D F T R M M	P R T V V I D S L R

Banking systems must

- Operate correctly, quickly, and securely
- Be protected from developers and users who are a potential threat to security



CL 3	3 3 3	3 3 3	3 3 3
CL 2	2 2 2	2 2 2	2 2 2
CL 1	1 1 1	1 1 1	1 1 1
RMM	A D M M P L C F D M M D C M A N D F A M K D M E C M R	E X R R I M I M O P P T P S R R T R V	S T C W P T C C O A C W M R B W P C A P D D P D C



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Multi-Model Improvement Strategy

At the Enterprise Level

- Define Multi-Model Improvement
- Define overall objectives.
- What does Success Look Like?
- How do we sell to our customers?
- Benefits of Multi-Model Improvement
- Define an integrated set of workforce management practices for the Org.

At the Org Level

- Identify what models or process areas make sense for each Org
- Ensure alignment of PI objectives within each Org with overall Enterprise strategic objectives
 - Leverage other improvement initiatives wherever possible
- Identify areas of commonality and build on them
- Document the standard process architecture
- Revise and update PAL structure to minimize redundancy
 - Use existing resources to maximize value out of investment
- Use P-CMM practices to foster the organizational culture of change and improvement



Multi-Model Improvement Strategy -2

Plan the implementation and deployment

- Set achievable timeframes
- Assign responsibility and authority
- Plan appropriate training

Deploy and implement according to the plan

- Monitor progress and compliance
 - Measurements are critical here
 - Use “Voice of the Customer” to help evaluate effectiveness
 - Track progress to plan
 - Determine benchmark-readiness
- Keep stakeholders updated on the current effort, concerns and questions

Develop an appraisal approach, if applicable to performing a multi-model SCAMPIS



The Improvement Continuum



Characteristics of the continuum:

- Move from single model focus to an integrated approach that allows focus on specific improvement needs
- Emphasize the focus at the Org level
 - “What makes sense to do?”
 - “If I do primarily acquisition, does it make sense to implement SW development practices?”
 - More effective use of PI resources, minimize impact.
 - Leverage work being done in other initiatives.
 - Identify commonalities and best practices.
 - Build the Enterprise Improvement Model based on what the enterprise does.
 - Streamline processes



QUESTIONS? ONE? TWO? THREE?



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