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Integrated System Framework (ISF[®]) for Excellence

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Presentation to the 7th Annual CMMI[®] Technology Conference



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SD - Where We Operate





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ISD - What We Do





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Agenda

- What is the current problem state?
- What is the correlation between business needs and improvement frameworks?
- What is the Integrated System Framework (ISF) and how will it help?
- " Next steps? Questions?



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pening Thoughts – *"Frameworks hire*" – The quest for a "single model" is lost

- Process standardization and improvement efforts are expanding across the entire enterprise.
 - . Process models and frameworks are proliferating to focus on different domains/disciplines within an enterprise.
 - . The impact and implementation is global.
 - . Compliance requirements levied by customers using these frameworks is driving costs in the opposite direction of management desires.
- Domain and business area specific reference models and frameworks
 - . Directly address process needs of specific sub-communities on both the client and provider sides.
 - " Can cause sub-optimal investments in process
 - ["] Can cause counter productive implementations
 - Produce large expense side inefficiencies
 - Can be successfully integrated into an enterprise improvement effort.



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ISD - Who We Are

Integrated System Diagnostics (ISD) is a multinational company dedicated to process improvement, quality and performance management.

ISD is one of the largest *Software Engineering Institute (SEI) Partners* and has been working together with the institute in researching, developing and delivering services (consulting, training and audits) related to several best practice models (SW-CMM, CMMI, People CMM) and appraisal methods (CBA-IPI, SCE, SCAMPI).

ISD is also an *IT Services Qualification Center (ITSqc) Partner* for delivering services (consulting, training and audits) related to eSCM-SP and eSCM-CL (IT-Enabled Sourcing Capability Models).

SEI and ITSqc are entities of Carnegie Mellon University SEI – Software Engineering Institute ITSqc – IT Services Qualification Center



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Sponsor's Appraisal Nightmare

Scenario – Organization X

- ISO9001 certified
- ISO20000 certified
- CMMI Level 3
- CobiT oriented

This organization will go through:

- 5 to 7 appraisals / audits a year
- 10 to 14 appraisals / audits in 2 years
- 25 to 35 appraisals / audits in 5 years

["] Imagine a company with 5 organizations like this one!



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izational, Strategic, and Operational hallenges Magnify the Problem

- How is the organization defined
 - . How to identify/communicate with stakeholders
- Multi-national and Multi-geographic
 - . Norms, culture, and values
 - . Languages, time zones, locations
- Operational/Time Constraints
 - . Business pressure
 - . Management pressure
 - . Stockholder pressure

- Many affected groups
 - . Large scope and risk adds complexity, which leads to longer deployment.
 - . Outsourcing impacts more groups, adding more points of potential %ailure.+
 - . Different targeted groups
 - " adds to cultural and legacy complexity.
 - " exhibit varying levels of process maturity.

Some slide content adapted from Paul ByrnesqINCOSE 2000 presentation 8



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PDF Complete. ovement Program Risks Magnify the Problem

Risk	Factors
Insufficient senior management commitment	Caused by turnover or mergers Based on disillusionment with results Resulting from shifting investment priorities Due to inadequate resource allocation
Middle	Overriding pressure for project performance; Incentives on delivery,
management	not quality
resistance	Doubt about seriousness of senior leadership
Inappropriate	Level 5 in 1 year
improvement goals	75 business units to be assessed by year end
Unrealistic expectations	The great productivity gap related to managing change The technology adoption curve and change management awareness Lack of motivation for or continuous focus on process improvement
Crash	No plans or long-term perspective, and lack of following through on improvement efforts
implementations	Termination of activities before they are institutionalized

Slide from Paul Byrnesq2nd ISD Customer Conference presentation



hon Goals – Current Issues

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Common Goal	Sub-Goal	Current State, Issues
Ensure results	Contribute directly to business improvement	Benchmark events less so than interim events
	Comparable across companies/organizations	More so when externally driven needs and teams (benchmarks)
Optimize value to sponsors	Support business objectives	Multiple requirements must be satisfied
	Optimize cost and minimize disruption	Can be more costly without changes in approach
Ensure appraisal reliability	Create repeatable processes . standardize	Too many improvement frameworks??
	Make results predictable and differences explainable	Benchmarks (if any) not standard
	Results independent of team composition	Objectivity an issue for both outsourcer and service provider

Slide adapted and updated from presentations by Mr. Byrnes while managing the appraisal project at the SEI.



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Purpose and Objectives

- Address a global, systemic enterprise problem of implementing, managing, maintaining, and complying with multiple process models, frameworks, and methods.
- The Integrated System Framework[®] provides one part of a technical solution to client requirements for
 - Optimizing cost to effectively demonstrate ongoing process adherence to multiple standard models.
 - Leveraging process investments across the enterprise to increase effectiveness of process improvement efforts.
 - Increasing synergy across business areas to improve process implementation efficiency
- Contribute to the professional model based process improvement community and positively influence its future.

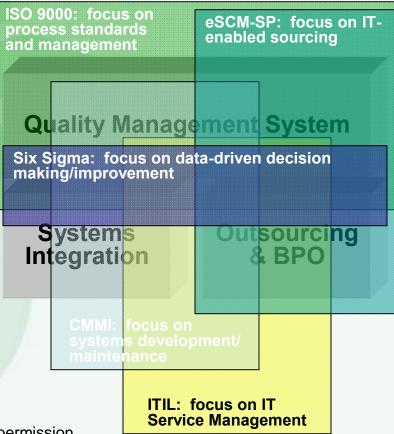


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Overlap of Key Models

- Most standards/models have content overlap
 - . Often based on Total Quality Management (TQM) and Deming plan-do-check-act principles
 - Some core topics show up in most models
- Each industry standard/model has a sweet spotqor particular area of focus.
 For example:
 - CMMI is particularly focused on systems development and maintenance
 - . eSCM-SP is focused on IT-enabled sourcing
 - COPC is focused on customer care
 - . ITIL is focused on IT Service Management

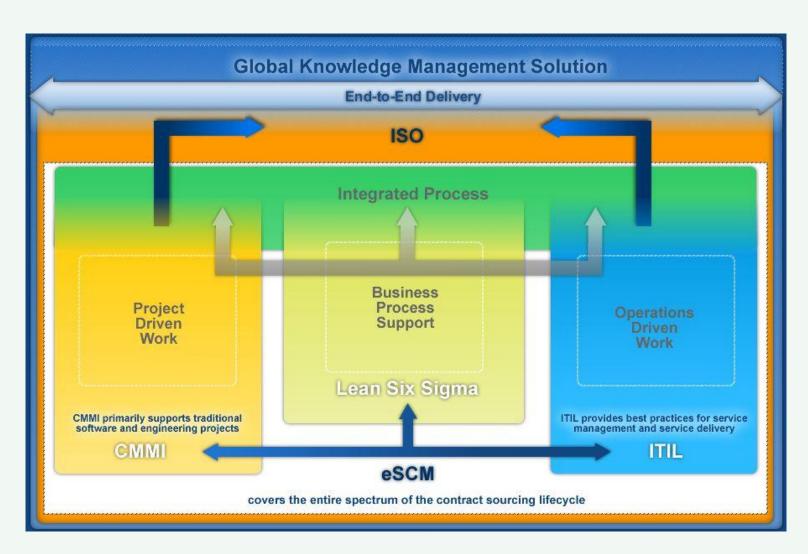


Source: Accenture. Used with permission



ss Model Integration: EDS view

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Source: EDS. Used with permission



parative Model Coverage (Example)

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	eSCM-SP	CobiT	ISO 9001	BS 15000	СММІ	COPC
Knowledge Management		O				
People Management				\bullet		
Performance Management		•	•	•		
Relationship Management		•	•	C	\bullet	
Technology Management		•	0	•		
Threat Management		•	0	•		
Contracting		O	0	0	\bullet	
Service Design & Deployment		D	•	C	•	
Service Delivery		0	•	•		
Service Transfer		0	0	0	0	0

Slide courtesy of ITSqc at Carnegie Mellon University



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IT Governance Areas

IT strategic alignment and execution . know your business and align with it

IT Performance Management . manage your performance qualitative and quantitatively





<u>Innovation Strategic Projects</u> . select and manage the right projects and add value to the organization

<u>Risks and Operations</u> . manage your risks and operations and take preventive and corrective actions in incidents





<u>Structured and Facts-Based Decision</u>. take decisions appropriately (time and discipline)

Suppliers and Sourcing . use the best balance between insourcing and outsourcing, and manage your external and internal suppliers





<u>Resource Management</u> . minimize costs and make the best use of all resources

<u>Management Process and Systemic View</u>. continuously improve your value chain and grow!



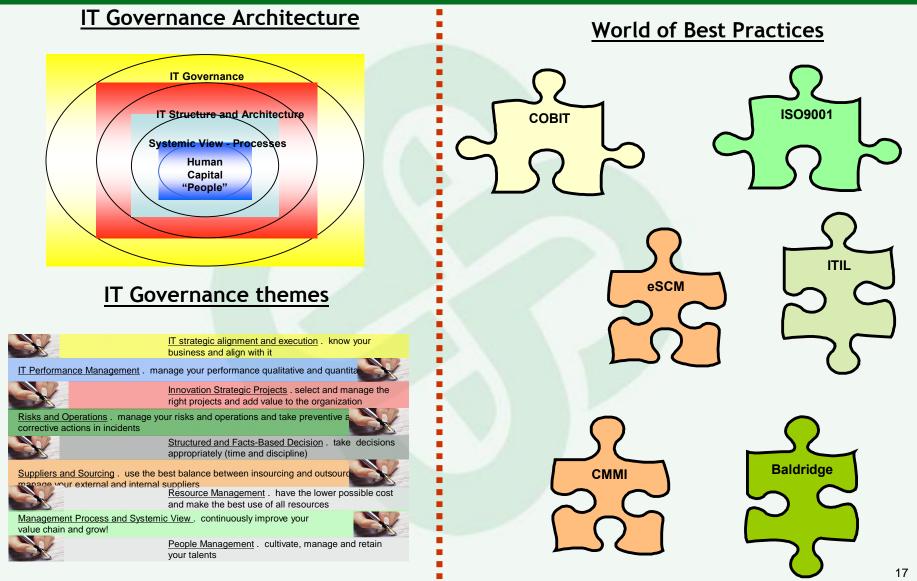


People Management . cultivate, manage and retain your talents



o not Reinvent the Wheel!

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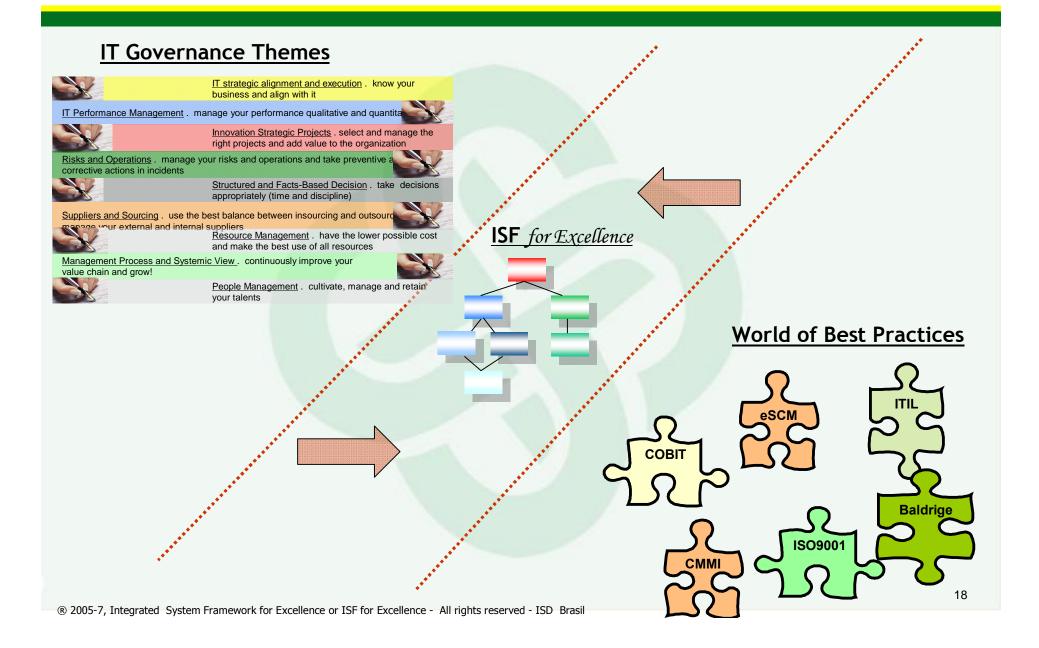




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br Excellence – Bringing It Together

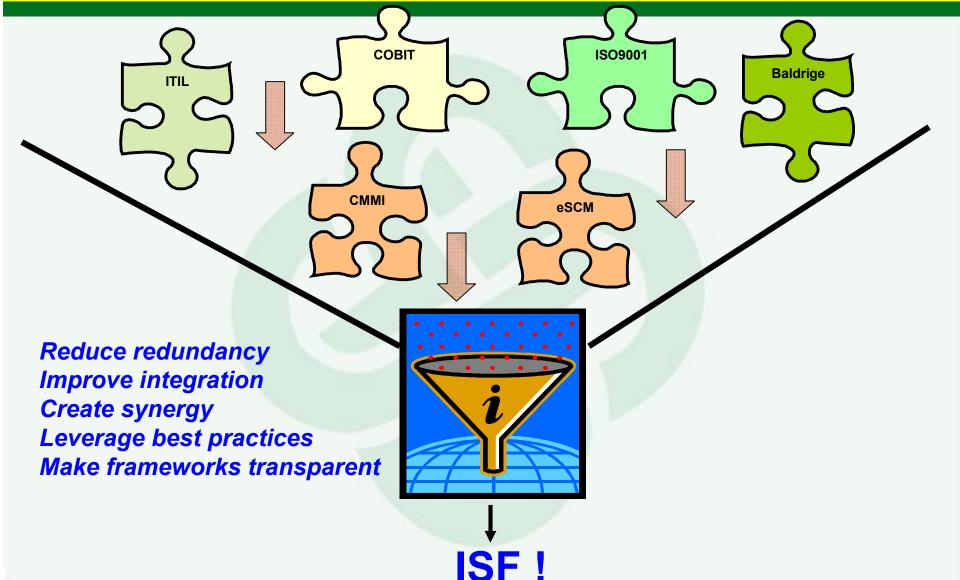




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Need to Put the Pieces Together !!





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allenge - How Do We Integrate All the Models?

Most of the models, frameworks, and best practices share a common set of principles, process areas, and practices

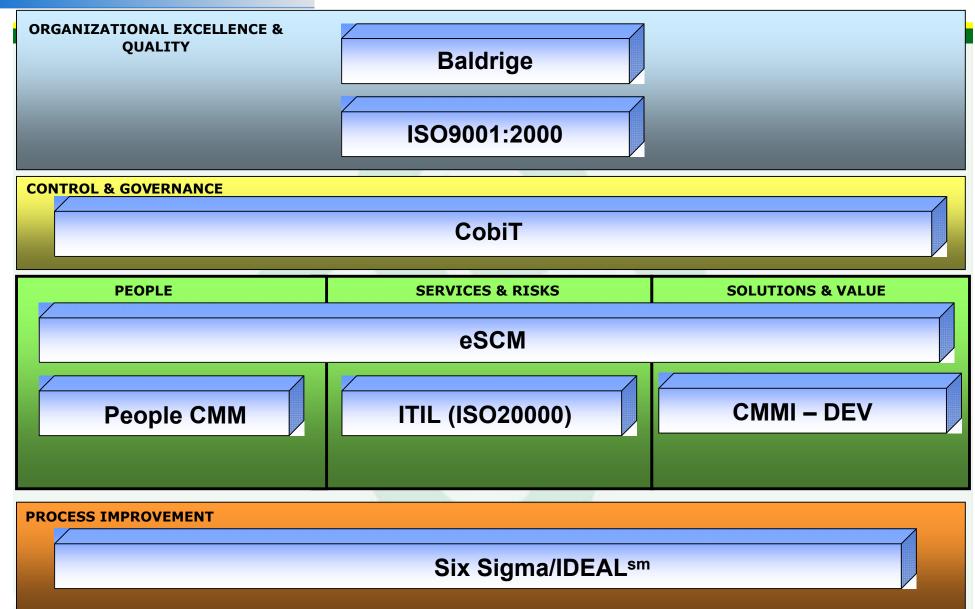
- "Senior Management Commitment
- " Leadership
- " Costumer Focus
- " People Focus
- " Systemic View Focus
- " Management by Process
- " Decisions Based on Facts
- ″ Learning
- " "Win-Win" Partnership





for Excellence – Relationship View

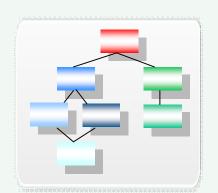
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SF for Excellence **Architecture**

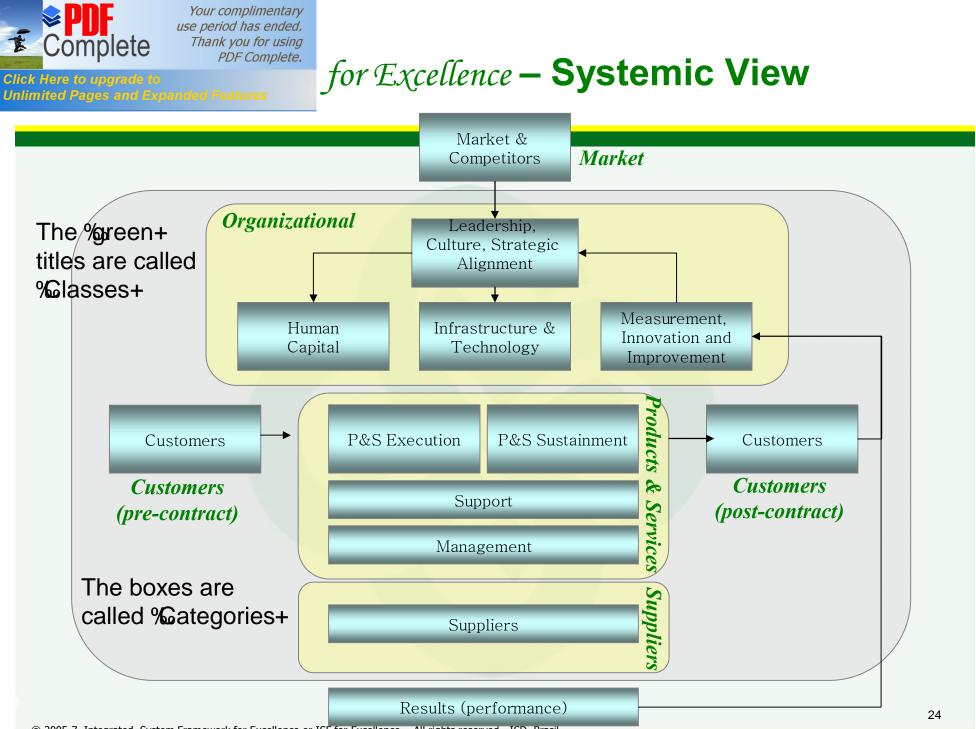


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Process Category Critical Process Objectives

Process Class

For each process "class" and "category" there will be an unique set of "CPP" (critical process for the performance) that will address (map) all the models and best practices minimizing or eliminating redundancy and respecting the overlaps.



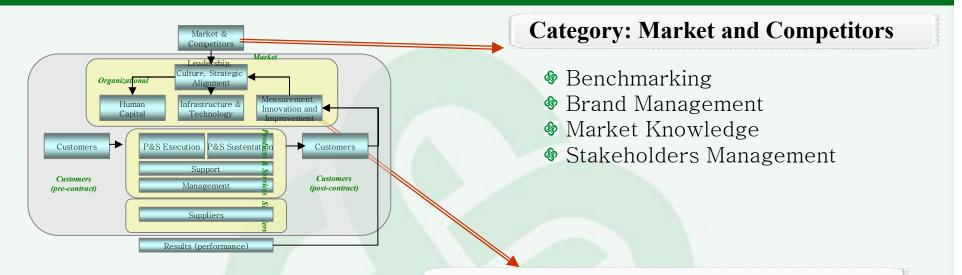
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SF for Excellence – CPP Examples



Critical Process Performance (% PPs+) streams are similar to the concept of % process areas.+

Category: Measurement, Analysis and Improvemen

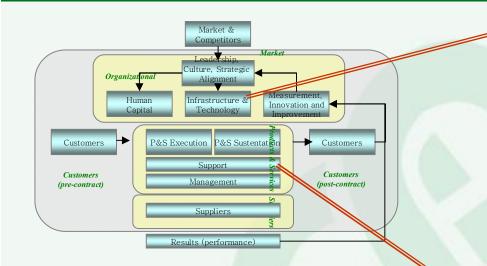
- Measurement and Analysis
- Performance Management
- Continuous Improvement Management
- Process Assets Management
- Innovation and Performance Management
- Causal Analysis and Resolution
- School Knowledge Management



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SF for Excellence – CPP Examples



Critical Process Performance (% PPs+) streams are similar to the concept of % process areas.+

Infrastructure and

Technology

- Capacity Management
- Continuity Management
- Availability Management
- Security Management
- Portfolio Management
- Infrastructure Management
- Financial and Cost Management

Support

- Incident Management
- Problem Management
- Configuration Management
- Release Management
- Change Management
- Quality Assurance Management



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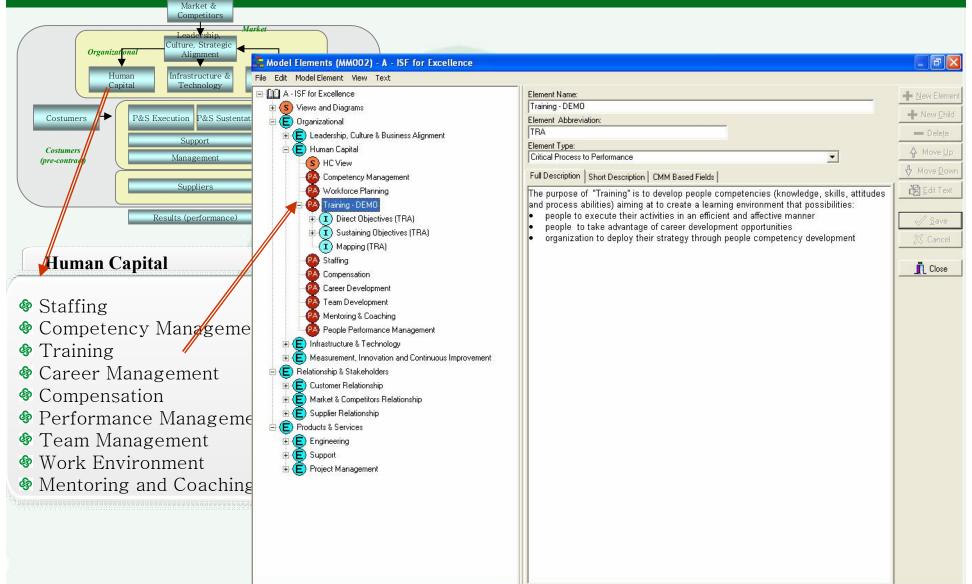
HOW TO EVALUATE YOUR PERFORMANCE AGAINST THE ISF?



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for Excellence – Automated Tooling (Model Wizard ™)

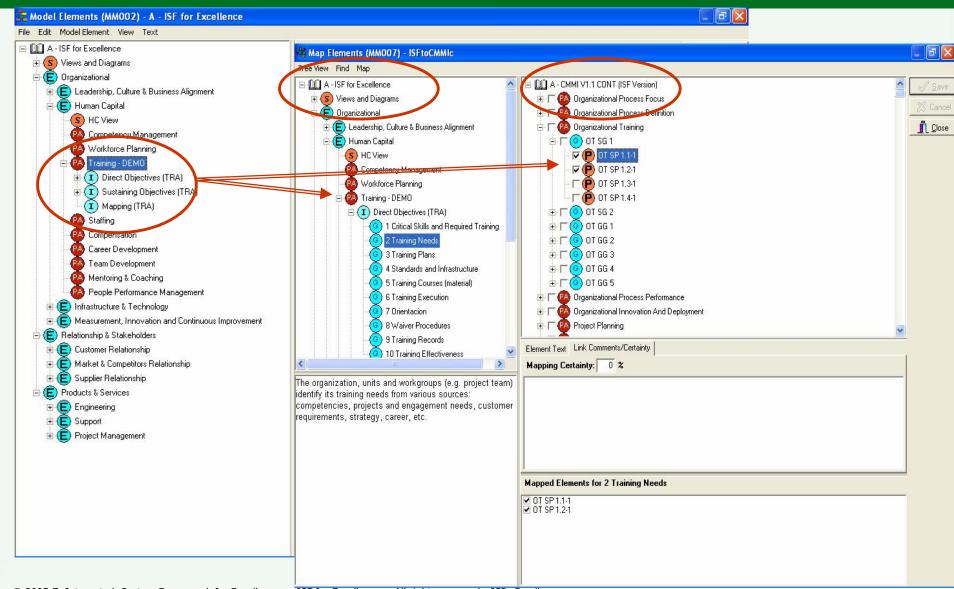




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^{The you for using} PDF Complete. Features for Excellence – Automated Tooling (Model Mapper[™])





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Model: ISF		Rating Lo		Close		
PCMM ISO 9001-200			ords Element Documents Element Mapping			
CobiT tional	Gulture & Business Alignm	+ Hew Re		·	ncel Changes	
Vorkford Training Training Training Training O Training O T O	ency Management ce Planning - DEMO t Objectives (TRA) Critical Skills and Required Training Needs Training Plans Standards and Infrastructure Training Courses (material) Training Execution Orientacion Waiver Procedures Training Records	Record Ty Findings	ls / Projects Elements / Data Sources / Team	from various so and engageme requirements, s	Status ion identifies its training needs urces: competencies, projects nt needs, customer trategy, career, etc.	
) Training Effectiveness aining Objectives (TRA)	Elements Atta	ached	Team Members	Data Sources	
	>	Model ISF	Element 2 Training Needs			
The organization, units an		PCMM	TD G1			
team) identify its training r competencies, projects ar	needs from various sources:	PCMM	TD P 02	=		
customer requirements, st		CobiT	PO7 Manage IT human resources			
		CobiT	PO7.2 Personnel Competencies			
		CobiT eSCM	P07.4 Personnel Training ppl07_b1			
		ITIL	3.3 Competence, Awareness and T			
		PNQ	1 Identification of training and deve			



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Agenda

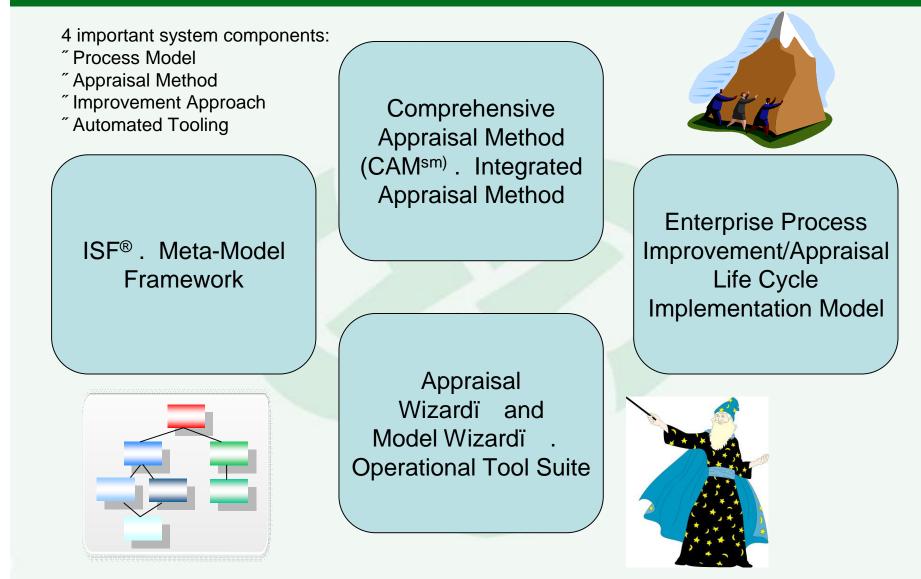
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ur "System Approach"





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m Component Positioning

System Component	Positioning
The Integrated System Framework [®]	 Is a conceptual vehicle to relate an organizations process architecture to multiple standard models; and Helps to maintain and measure process compliance across multiple models simultaneously.
The Comprehensive Appraisal Method (CAM SM)	 Provides a integrated, tailorable, rigorous, extensible, model-‰eutral+appraisal method for use across models Is suitable for conducting Process Assurance, Project Progress Tracking, Enterprise Process Oversight, and Formal Benchmark compliance determinations/audits.
Appraisal Wizard TM /Model Wizard TM V7	 Provides robust support for operationalizing the conceptual framework, and Enables conducting Process Assurance monitoring and Formal Benchmarking compliance activities in an effective, efficient, automated manner.
Enterprise Process Improvement/Appraisal Life Cycle Implementation Model	Provides a framework for integrating often disparate internal process management activities [e.g., quality audits, project process status reporting, gap analyses, interim appraisals, benchmark assessments]

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Near Term Plans

- ISF has been in joint development between ISD Brasil and PUC (a Brazilian University) since mid-2006.
- ISF V0.5 full scale pilot(s) with several base models and maps Q2/3 2007 (partial to full AW tool and CAM method support)
- ISF V1.0 initial release with more base models and % pproved+maps Q4 2007/Q1 2008 (full AW tool and CAM method support)





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, Directions, and Opportunities



Issues	 Distribution and/or importation/integration support for models (IP questions, permissions; not a technical issue) Definition, coordination, acceptance, and maintenance of the model maps (more a political than technical issue) 	Status: ISD had obtained rights to distribute CMMI models, eSCM, and ISO in Appraisal Wizard Status: ISF itself, although ISD registered, is expected to be in the public domain.
Directions	 Continue technical development and piloting with current interested parties (e.g. CMU ITSqc; global clients with current CMMI and ISO requirements; SSCI) Continue to investigate and develop solutions to legal and political ‰sues+in collaboration with specific large influential clients, industry groups, and ‰tewards+ 	Status: Engaged 3 global clients already regarding pilot appraisals and development tasks (adding client specific models of concern to ISF). Status: Discussing collaboration in an SEI SPRC (Europe) initiative.
Opportunities	 Direct sponsorship and collaboration Collaboration invitations from Consortium Industry Association / Government working groups Participation in independent AW user group with subcommittees Creation and/or participation in a new cross community consortium 	Status: Joined the new Enterprise SPICE initiative as part of Steering Group and Development team. Status: SSCI sponsored AW User Group meeting scheduled for November 2007. Follow on ISD sponsored AW User Group meeting scheduled immediately afterwards.



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Closing Thoughts

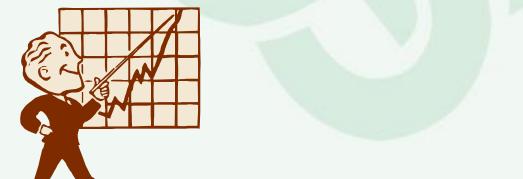
Process standardization, modeling, and improvement efforts are expanding.	 Process models and frameworks proliferation will continue. Independent model/framework bodies/owners are not really interested in giving up their %pace.+ The enterprise cost impacts are significant Increased customer drivers for compliance is driving costs higher when lower is desired.
Domain and business area specific reference models and frameworksõ	 Directly address process needs of specific sub-communities. Do have positive impacts within their constituencies and niche areas. Butõ Can cause sub-optimal investments in process, cause counter productive implementations, and produce large expense side inefficiencies
Mechanisms being developed and implemented by ISD accept and address reference model realities and synergies	◆ ISF [®] , appraisal life cycle model, Appraisal Wizardï and Model Wizardï V7, and CAM SM .
The models <i>can</i> be successfully integrated to improve enterprise performance.	Improve both the quality and efficiency of enterprise process improvement (standardization, implementation, management oversight, appraisals)



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for Excellence Benefits

Operationalize an Enterprise Improvement Strategy	Provides an enterprise strategy to implement best practices from multiple models.
Reduce compliance costs	Leverages the commonalities among models to reduce overall costs of compliance.
Increase efficiency	Appraisals can be conducted using multiple models simultaneously.
Provide a unified implementation approach	Provides management a common, unified %oadmap+to achieve high maturity, high performance goals.







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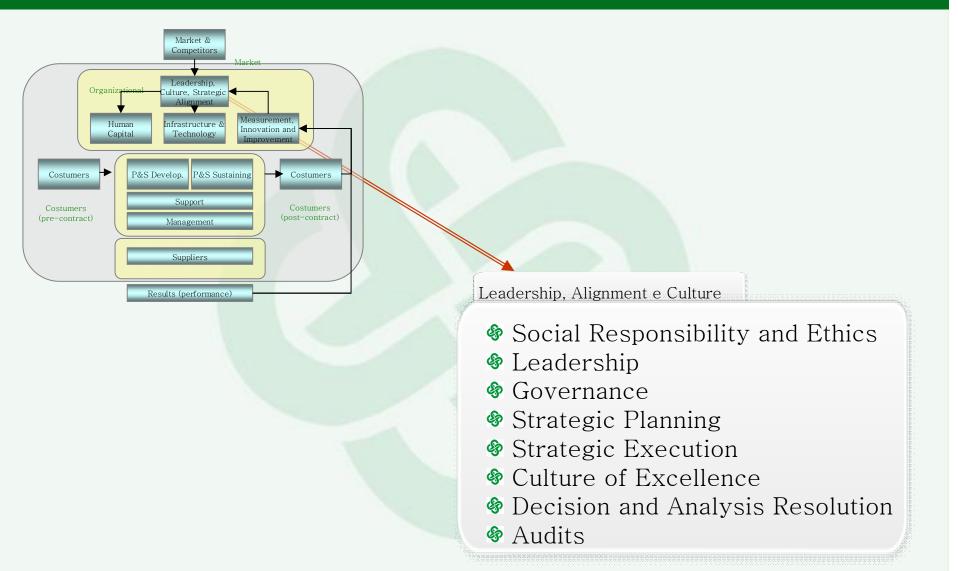
- For Enterprise SPICE, see the following web site, under % aitiatives/Enterprise SPICE
 - www.spiceusergroup.org
- For Sarah Sheardos current contact info:
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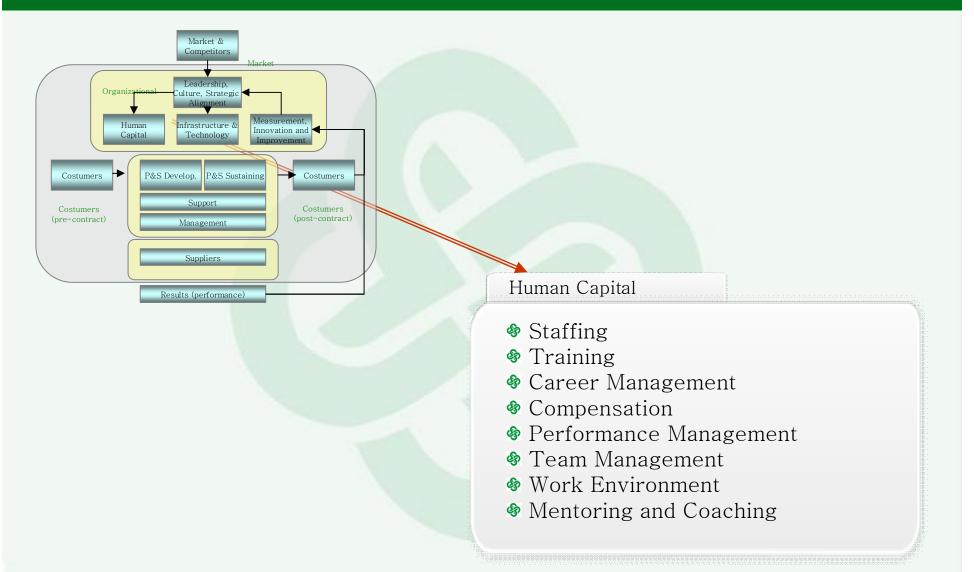




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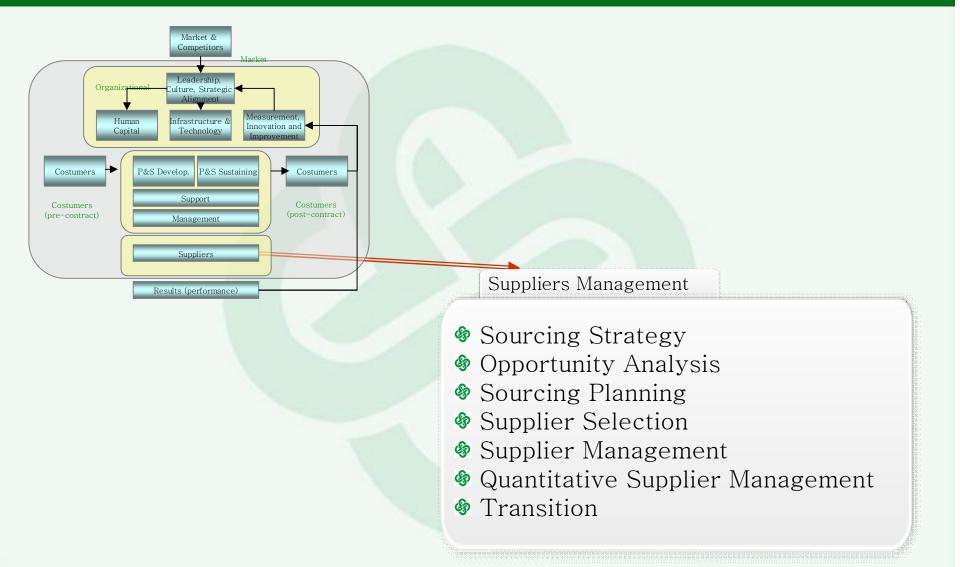




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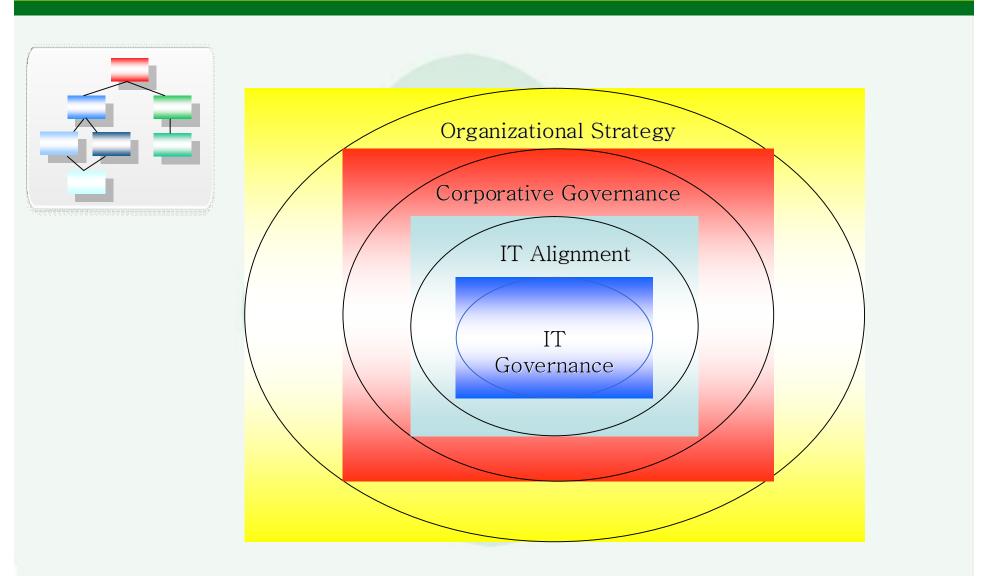
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Organizational Architecture

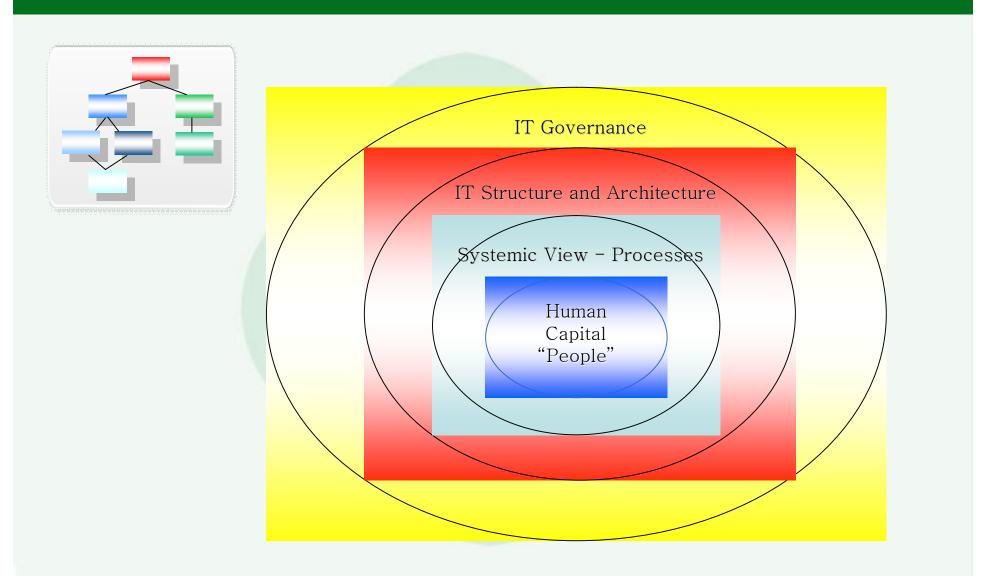




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IT Governance Architecture





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Some important definitions Unlimited Pages and Expanded Features

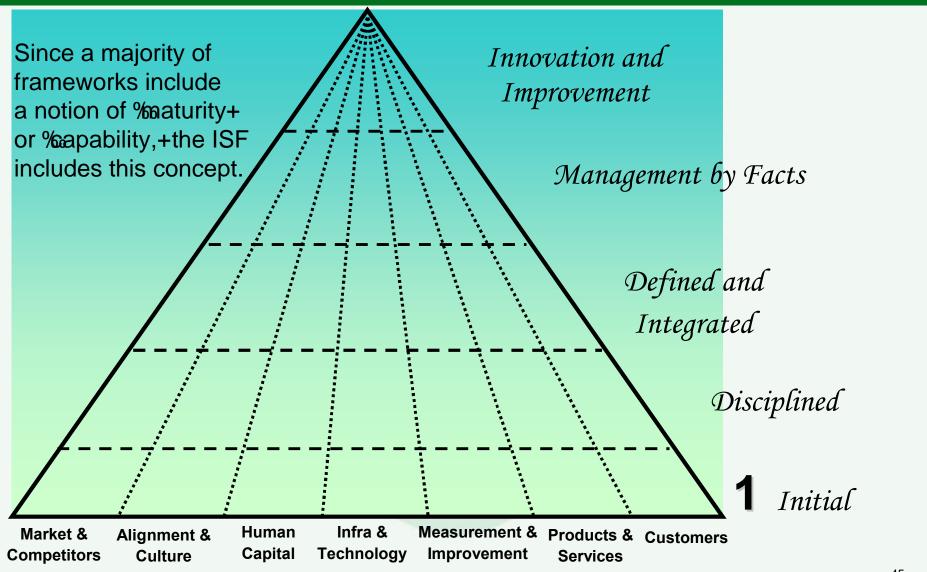




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Excellence – Maturity/Capability Levels

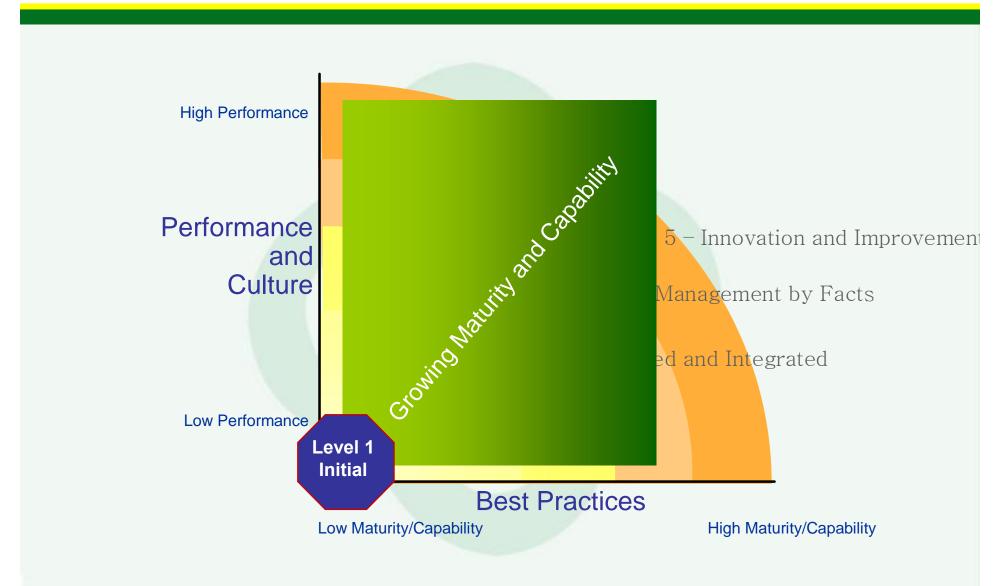




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Excellence – Maturity and Performance



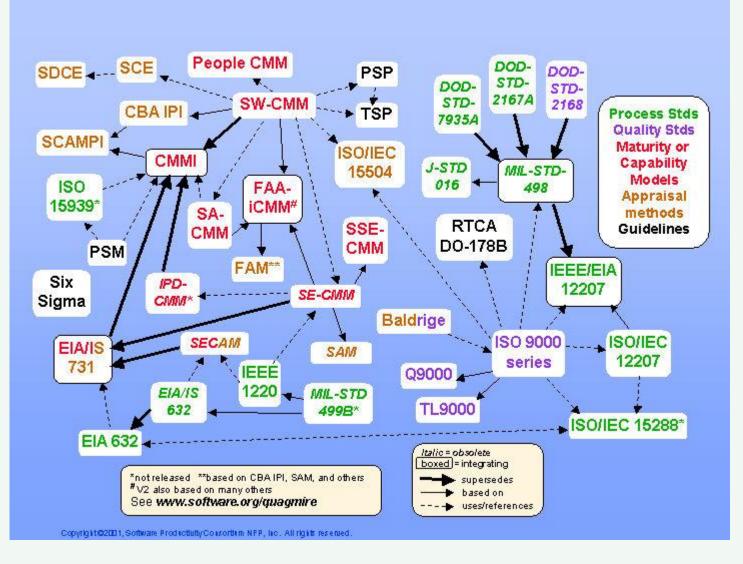


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'Frameworks Quagmire" Revisited

From: *The Frameworks Quagmire, A Brief Look,* by Sarah Sheard of SPC, now SSCI

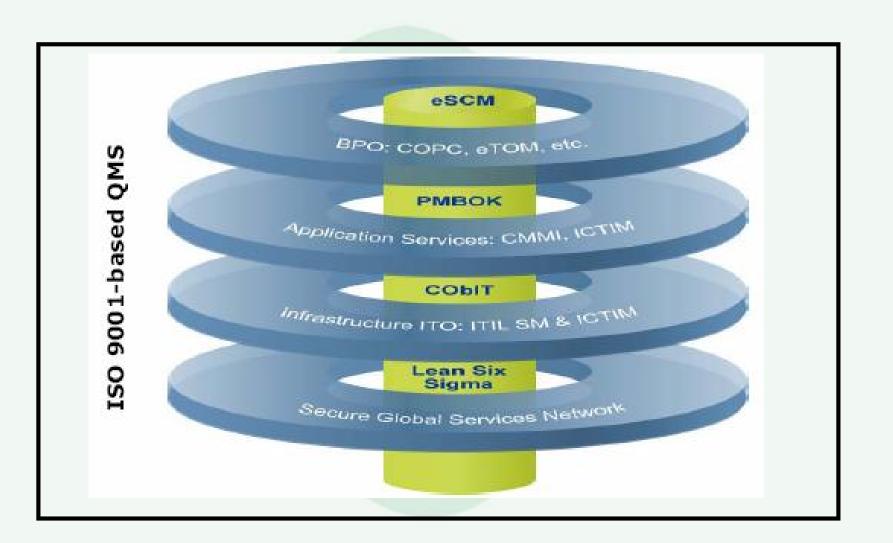




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ss Model Integration: EDS View





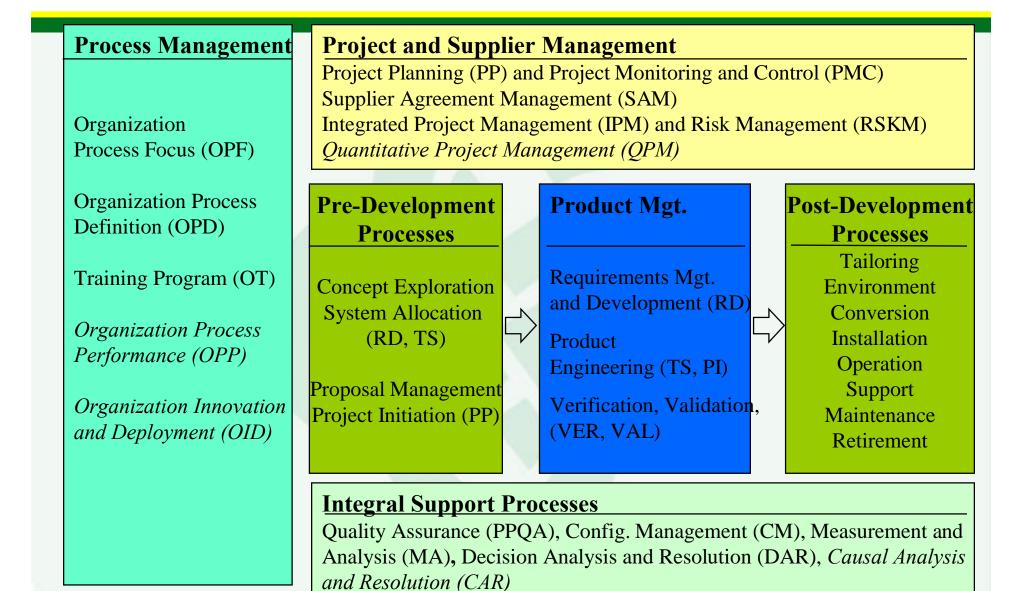
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MI[®]-Based "System Architecture"



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