

Using Effectively the CMMI Models for Performance Improvement

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Consequences

- Processes exist every where
- A process model supports improving processes' performance
- Using a complementary set of models enables efficient performance improvement

Content

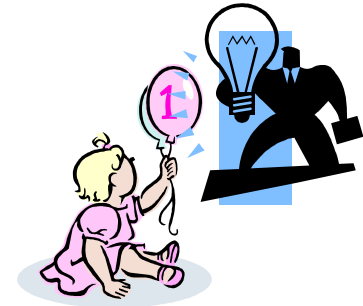
- The CMMI
- The Models
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- Summary

What is the CMMI



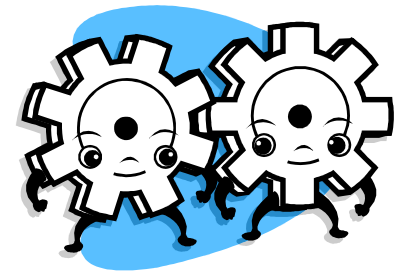
Capability – Ability, competence

Maturity – Level of Professionalism



Model – A set of guidelines

Integration – A number of disciplines together



The CMMI - What is it?

- A **comprehensive** set of Models with **best practices, appraisal method and Training**
- Used for processes improvement and evaluations of organizational capabilities
- Developed by SEI in Carnegie-Mellon University
- Used by thousands of companies around the world currently for SW and System development and for acquisition Organizations
- Used by **large and small** companies in various domains



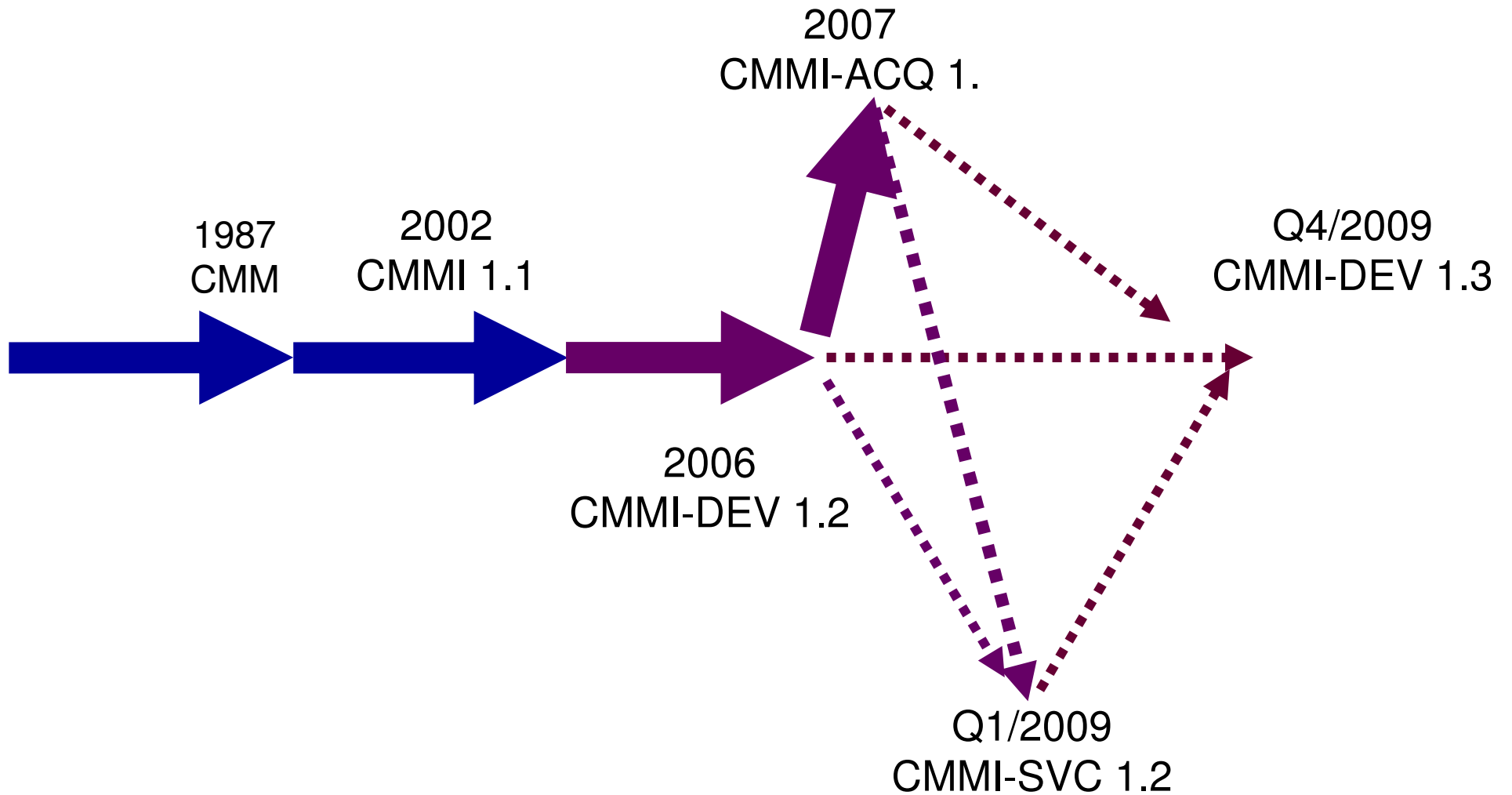
CMMI Appraisal Statistics

[Process Maturity Profile 09/08]

	Formal Appraisals	Maturity Level 4	Maturity Level 5
Around the world	3553	90	337
Israel	16	-	2
Egypt	31	2	2
USA	1136	21	118
China	581	22	39
India	362	22	158
Spain	85	1	3
France	125	1	2

Optimizing for Results

CMMI Evolution



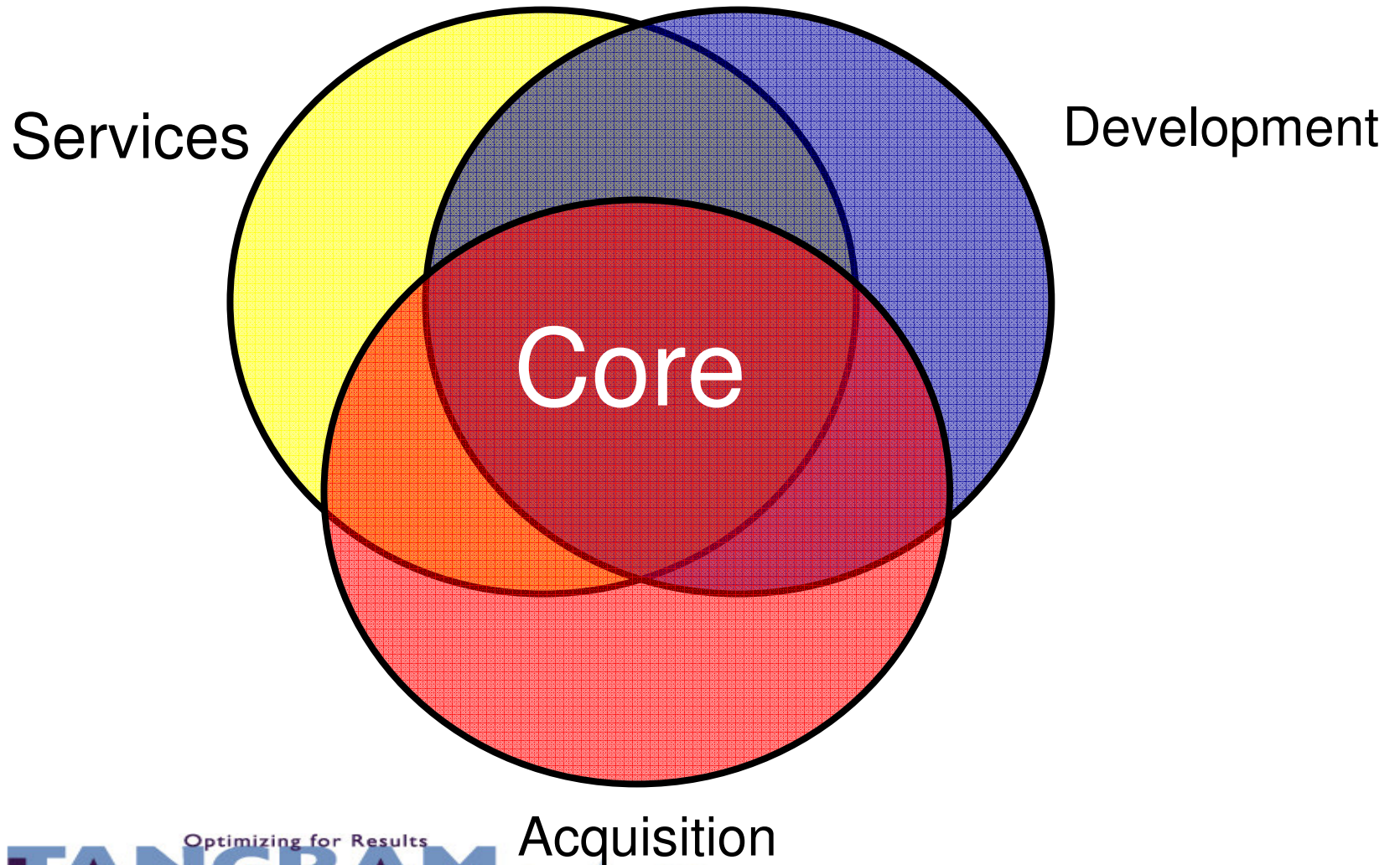
The CMMI Model Organization

- Best practices are grouped in **process areas**
- Every process areas includes **specific practices** e.g. practices for configuration management
- All process areas includes **generic practices** that increase the professionalism e.g. training for every practitioner
- Enables Incremental Performance Improvement

Project Definition - According to the CMMI

- A managed set of interrelated resources that delivers one or more products or services to a customer or end user.
- A project has a definite beginning (i.e., project startup) and typically operates according to a plan.
- A project can be a product development effort, a service provided to a customer or an acquisition effort

The CMMI Models

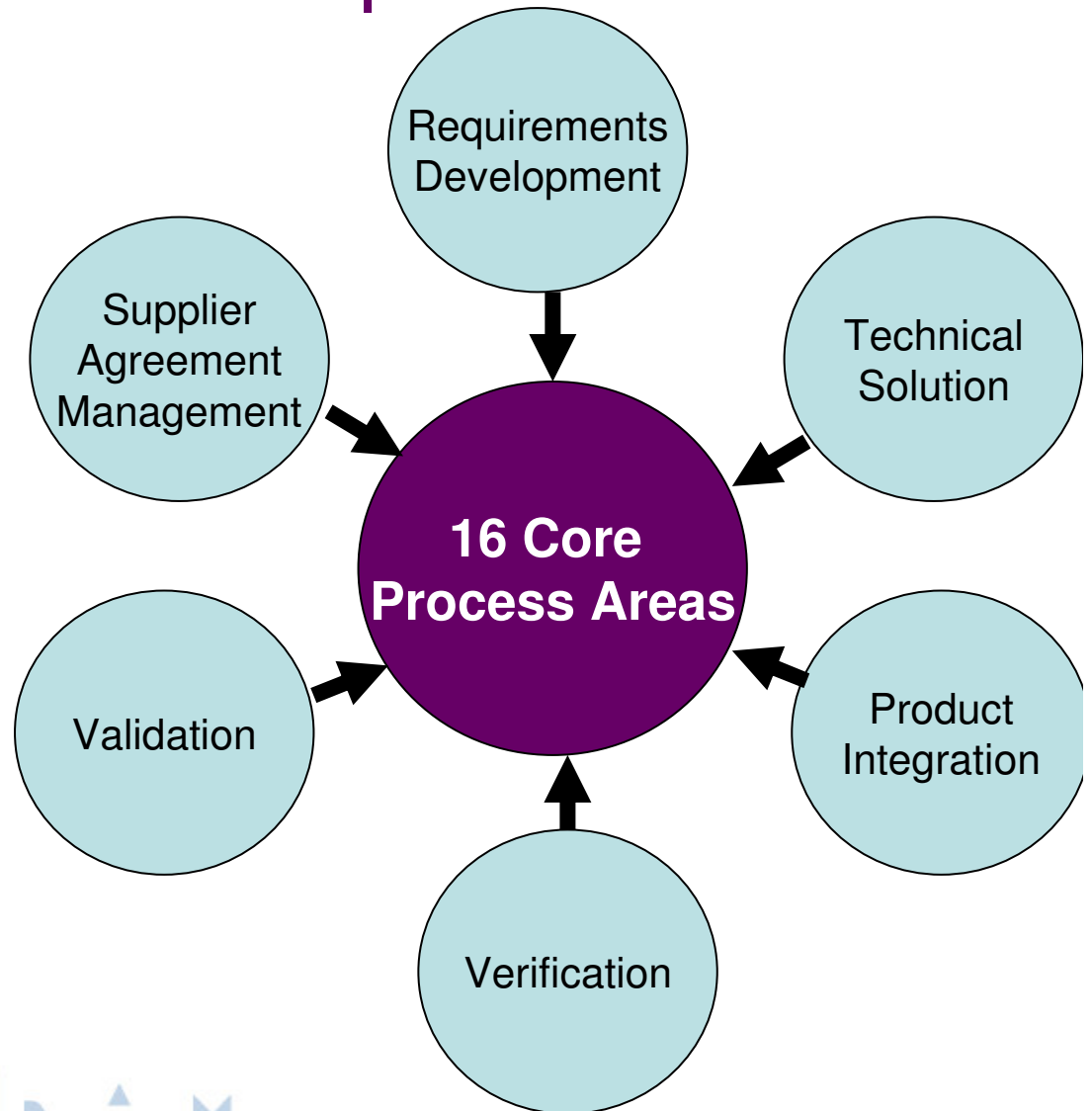


CMMI's Core Process Areas

ML	Project management	Support	Process Management
2	<ul style="list-style-type: none"> • Project Planning (PP) • Project Monitoring and Control (PMC) • Requirements Management (REQM) 	<ul style="list-style-type: none"> • Process and Product Quality Assurance (PPQA) • Configuration Management (CM) • Measurement and Analysis (MA) 	
3	<ul style="list-style-type: none"> • Integrated Project Management (IPM) • Risk Management (RSKM) 	<ul style="list-style-type: none"> • Decision Analysis and Resolution (DAR) 	<ul style="list-style-type: none"> • Organizational Process Focus (OPF) • Organizational Process Definition (OPD) • Organizational Training (OT)
4	<ul style="list-style-type: none"> • Quantitative Project Management (QPM) 		<ul style="list-style-type: none"> • Organizational Process Performance (OPP)
5		<ul style="list-style-type: none"> • Causal Analysis and Resolution (CAR) 	<ul style="list-style-type: none"> • Organizational Innovation and Deployment (OID)

CMMI for Development

- A model relevant for organizations that develop and maintain systems and software
- Examples:
 - Automobile Industry,
 - IT Systems
- Specific PAs:
best practices for the definition, design, implementation and testing of a product



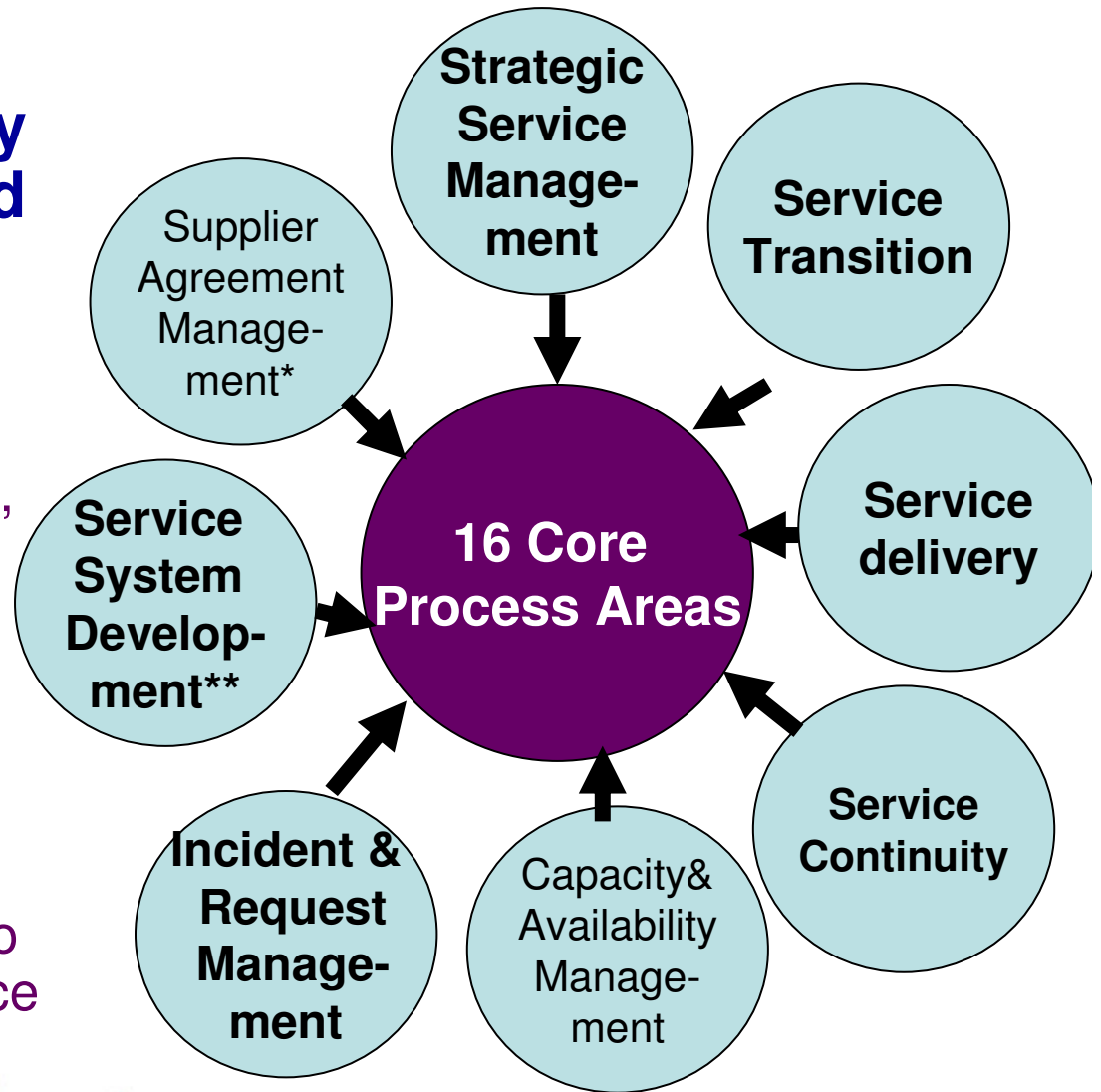
A Service According to the CMMI

- A service is a product that is intangible and non-storable.
- Services are delivered through the use of service systems that have been designed to satisfy service requirements.
- Many service providers deliver combinations of services and goods. A single service system can deliver both types of products. For example, a training organization may deliver training materials along with its training services.
- Services may be delivered through combinations of manual and automated processes.



CMMI for Services

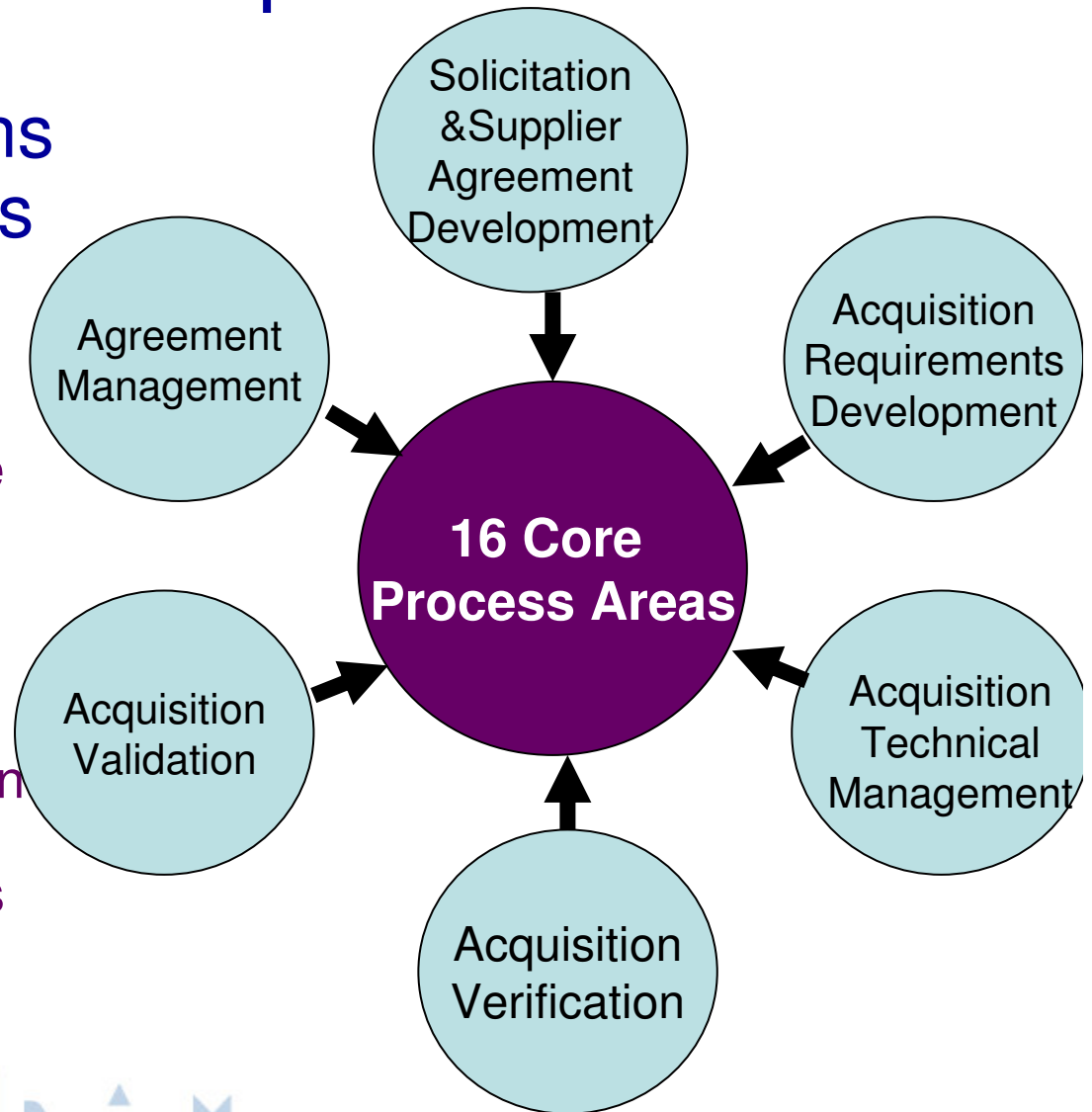
- **A model relevant to any organization concerned with the delivery of services**
- **Examples:**
 - Internet provider, Hospital, Banking, Consulting service, Testing, Training, Site developers
- **Specific Process Areas:**
- **Best practices for the establishment of service system and service delivery to customers according to service agreements**



* Shared, ** Addition

CMMI for Acquisition

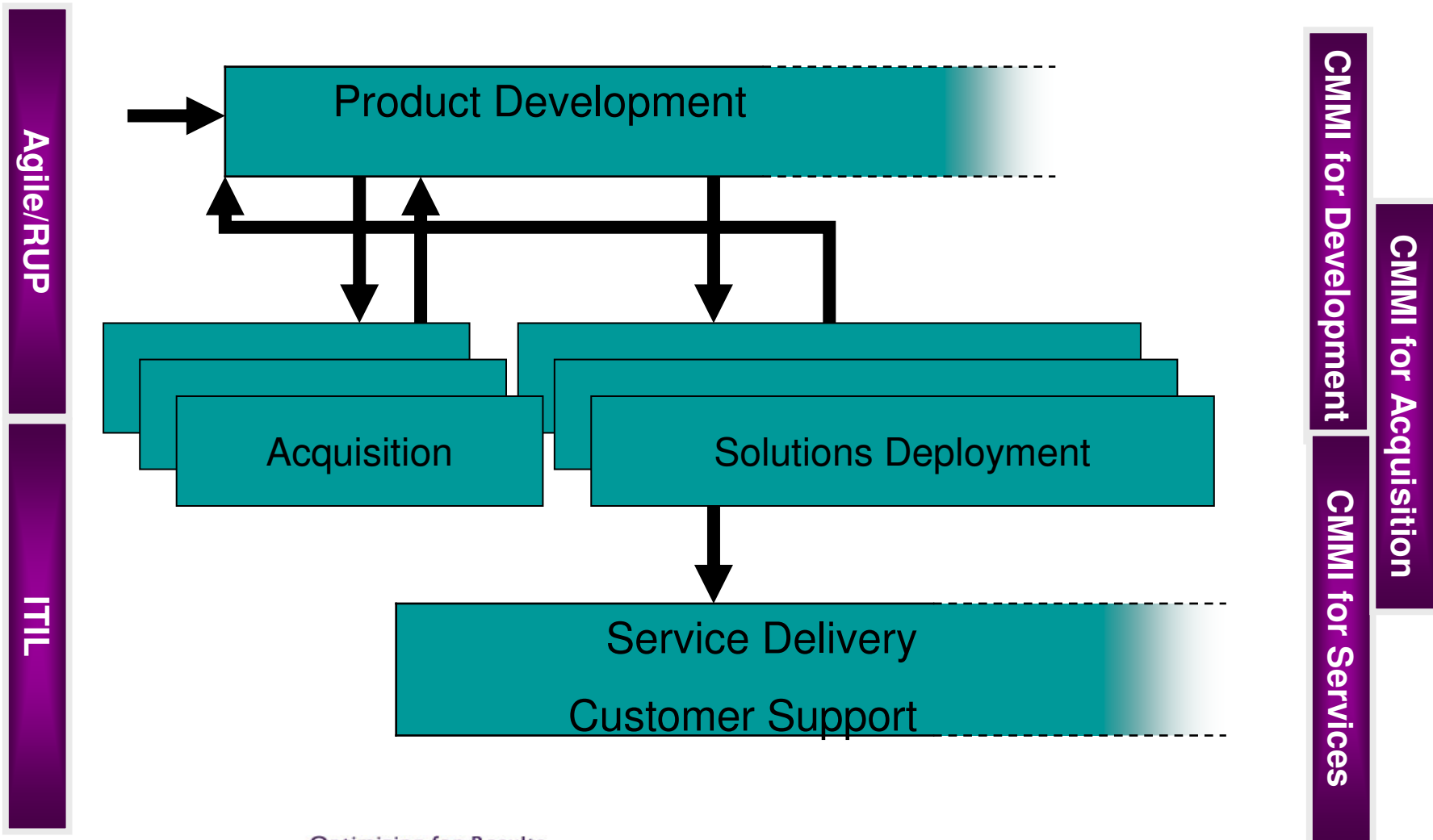
- Targets organizations that acquire products from suppliers
- Can be used to enhance the outsourcing processes in development and services organizations
- Specific Process Areas:
- best practices for preparation of a solicitation package (RFP), selection of suppliers and supplier monitoring



Candidates for Multi-Model Process Improvement

- An organization that develops large systems, uses outsourcing to shorten time to market or reduce costs and provides services to its customers
- Examples
 - Aircraft Industry – develops aircrafts by integration of subsystems from different vendors and provides support services for the airplanes
 - Billing – develops a generic system, customizes the system for every customer and provides operation services to the customers

Multi-Model Implementation – An Example



Reasons for Using the CMMI Models

- Incremental
 - Staged, continuous
- Modular
 - Process areas, generic practices
- Encompasses best practices
 - Based on known models, incorporate lessons learned
- Common Language
 - Same terminology and core process areas
- Comprehensive
 - Development, acquisition, services, ...

Summary

	Development	Acquisition	Services
Focus	Engineering	Acquisition	Service Establishment & Deployment
Audience	Developers	Acquirer (development or services)	Service Providers
Type of organizations	Hi-Tech organizations	Integrators, Army, Agencies	Consulting, Healthcare, Internet, etc.
Number of Process Areas	22	22	24
Additions	IPPD in OPD and IPM		Service Development

Summary

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- Thanks
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