

Supplier's Perspective on CMMI-ACQ

Reflections from Supplier's perspective

“Adapting CMMI for Acquisition Organizations: A Preliminary Report”

Kathryn Dodson, EDS (kathryn.dodson@eds.com)
Gowri S Ramani, Borland (gowri.ramani@borland.com)

Agenda

- Challenges in outsourcing/acquisition management
- CMMI-ACQ
- Model Highlights
- CMMI-ACQ and CMMI-DEV
 - Interfaces
 - Maturity in tandem

Outsourcing World

One off

Multi-year

Single suppliers

Multiple suppliers

Transaction based

services

maintenance

Relationship based

development

Extensions

Sourcing Strategy?

■ Giga survey (2003)

- No documented strategy for acquiring IT goods and services - >40%
- IT specific strategy - >10%
- Limited IT services and products - >20%
- Strategy as part of corporate sourcing strategy – 16%

Outcome of Outsourcing

- Satisfaction with Current Outsourcing
 - Very satisfied – 22%
 - Somewhat satisfied – 57%
 - Somewhat dissatisfied – 19%
 - Very dissatisfied – 2%

Base: 184 IT Decision-Makers at North American Enterprises that are currently outsourcing.

Source: Business Technographics[®] November 2005 North American and European Enterprise Software and Services Survey

Challenges

- Scope definition
- Monitoring and Management
- Technical feasibility
- Multiple suppliers
- Shared and independent risk management
- Impact on supplier and acquirer's processes
- Requirement for new metrics and measures
- Acquirer maturity vs. supplier maturity
- Relationship management

Attempts at Acquirer Maturity Path

- 'Fix' existing implementation of SW CMM or CMMI to manage suppliers
- Acquirer closely monitoring supplier work
- Supplier required to adhere to two process standards
- Undefined or constantly shifting lines of control and management between acquirer and supplier

CMMI for Acquisition - Intent

- Develop an acquirer specific framework
- Help focus on and improve areas critical to acquirer and supplier management
- Enable better management through targeted interfaces for outsourced activities
- Leverage existing maturity framework and industry acceptance of CMMI
- Leverage existing SCAMPI appraisal framework
- Promote in-tandem maturity and value for acquirer and supplier communities

Development Approach

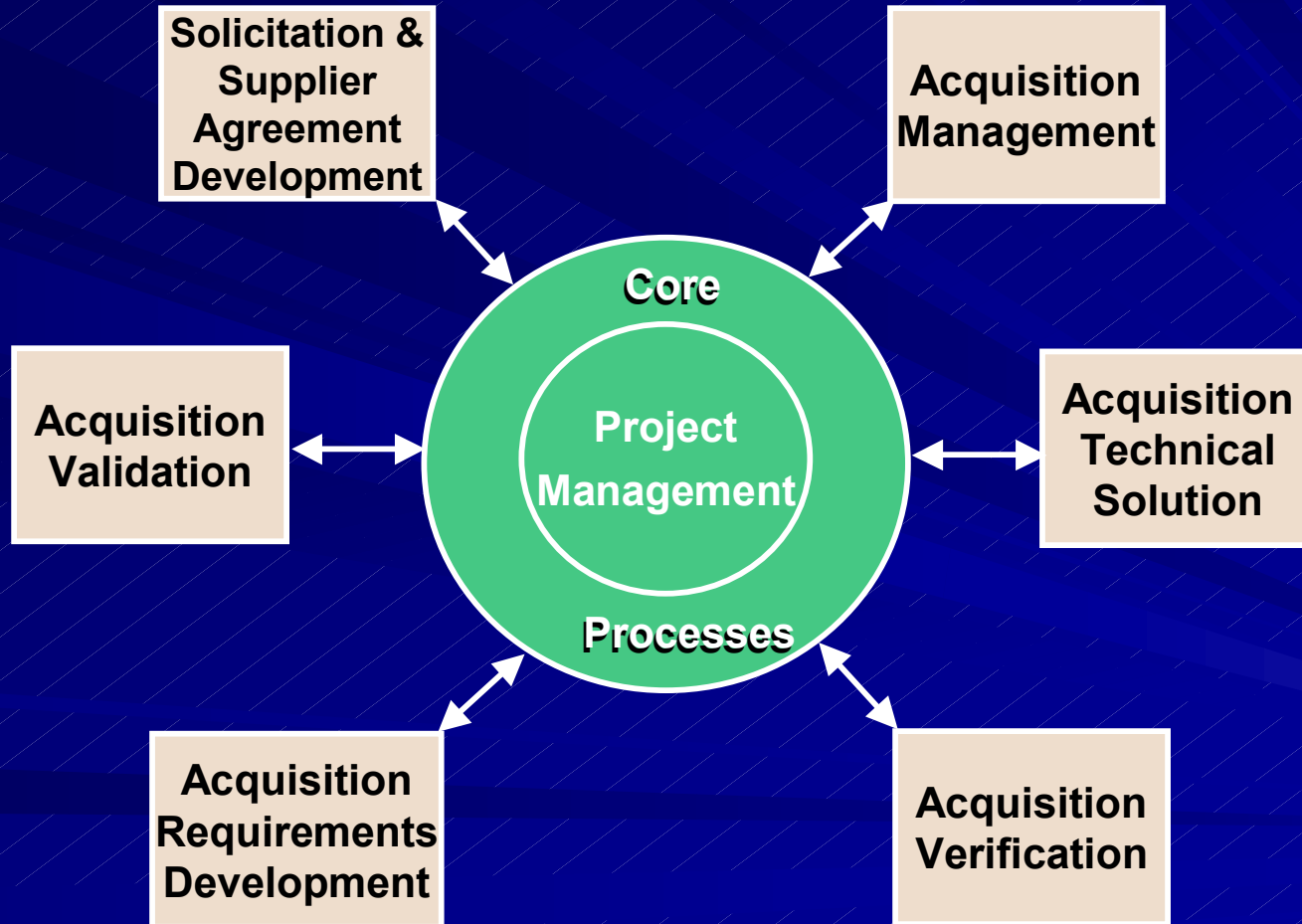
- Sponsored by GM, in collaboration with SEI
- Industry wide participation in development and reviews
 - Participants from SEI, DOD, other industries (e.g., banking, entertainment)
 - GM and GM suppliers (EDS, HP)
 - SEI
 - DOD, NASA and industry representatives
 - NASSCOM Quality Forum nominees from India
- Based on other models and best practices
 - Aligned with CMMI v1.2
 - CMMI-AM, SA-CMM, CMMI SE/SW v1.1

Initial CMMI for Acquisition: Project Execution

| Life Cycle / Roles | Acquisition & Project Planning | Analyze & Design Solution | Supplier Evaluation & Selection | Project Oversight / Supplier Mgmt | System Acceptance | Transition |
|----------------------------|--|---|---------------------------------|---|-------------------|------------|
| Supplier Management | Project Planning | Solicitation & Supplier Agreement Development | | Acquisition Management | | |
| Project Management | | Project Monitoring & Control | | | | |
| | | Integrated Project Management | | | | |
| | | Risk Management | | | | |
| | | Quantitative Project Management | | | | |
| Standards and Architecture | Acquisition Technical Solution & Organizational Process Definition | | | | | |
| Engineering Management | Requirements Management | | | | | |
| | Acquisition Requirements Development | | | Acquisition Verification & Acquisition Validation | | |

Level 2
 Level 3
 Level 4

Initial CMMI for Acquisition: A Lean Model



Acquisition Requirements Development (ARD)

Clarifies Acquirer's Responsibility for:

- Gathering, analyzing and validating requirements
 - *Focus on business needs and requirements*
 - *Not detailed requirements that pre-determine a specific solution*
- Development of contractual requirements

Acquisition Technical Solution (ATS)

Clarifies Acquirer's Responsibility for:

- Identification of design constraints
 - *Establishment of acquirer's technical standards and architecture*

- Analysis and verification of supplier's detailed technical solution
 - *Design conforms to acquirer's technical standards, product interfaces complete*

Solicitation and Supplier Agreement Development (SSAD)

Clarifies Acquirer's Responsibility for:

- Acquisition and sourcing strategy
 - *Capabilities sought, business considerations*
 - *Type of agreement, potential suppliers*
- Establishment of sound supplier agreements
 - *Detailed responsibilities, performance measures, dispute resolution*

Acquisition Management (AM) vs. Project Monitoring and Control

- Management Based on Contract and Agreement

- Part of contract management

- Focus on measurable Service Levels

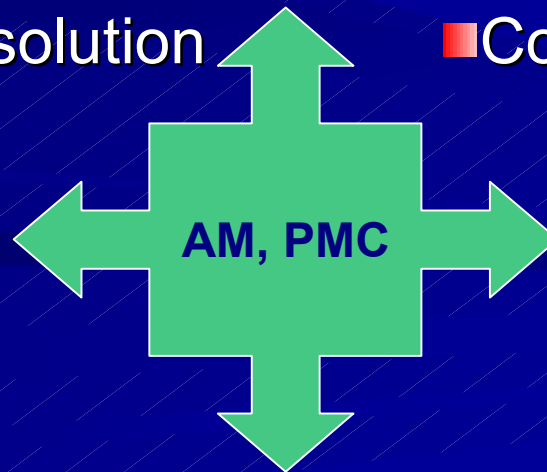
- Dispute and issue resolution

- Management Based on Integrated Project Plan

- Part of ongoing project management

- Focus on schedule, status, deliverables etc.

- Corrective actions



Acquisition Verification (AVER)

Clarifies Acquirer's Responsibility for:

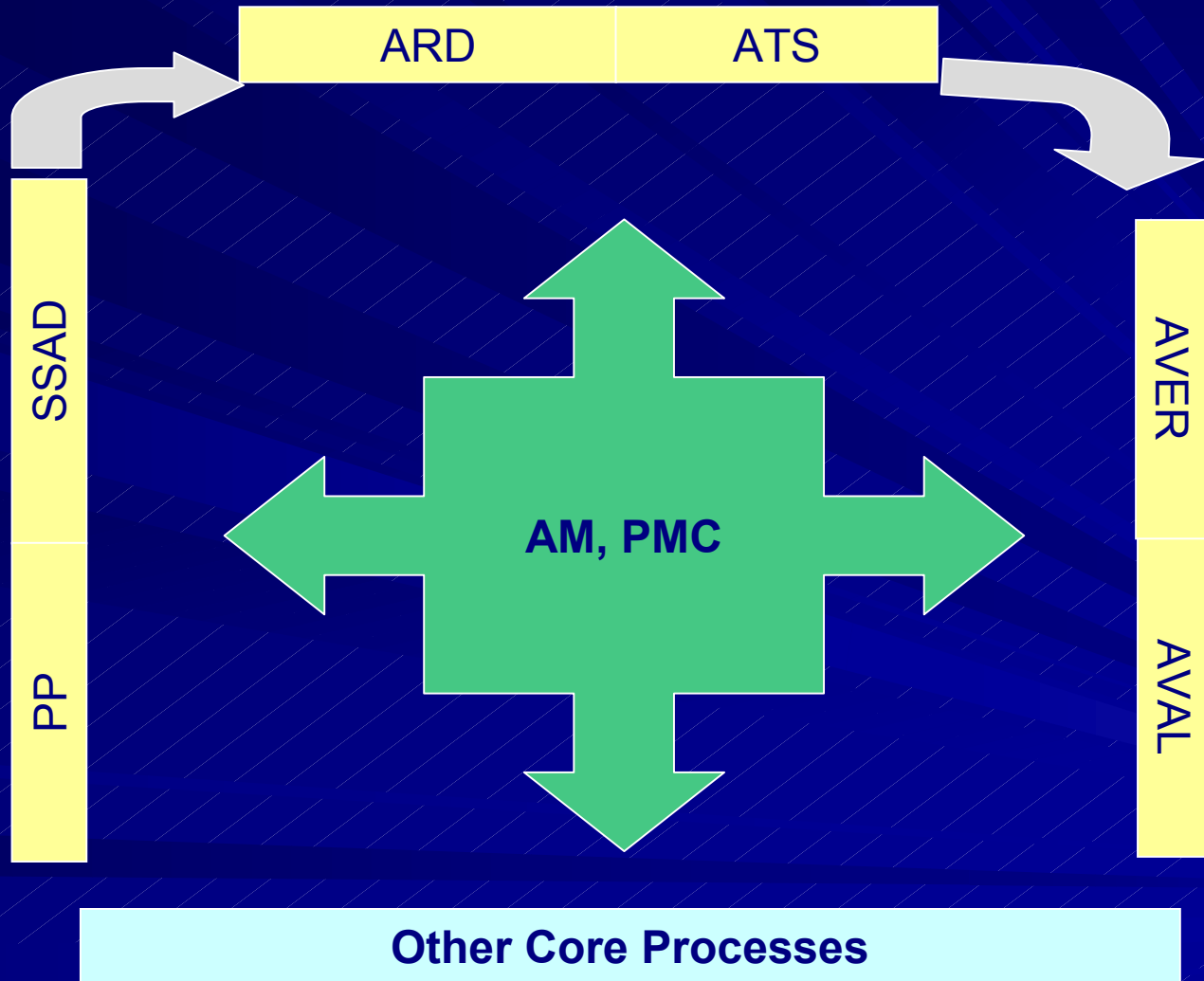
- Acquirer's own work products
 - *Examples: Requirements, solicitation packages, integrated project plans*
- Supplier work products
 - *Methods, standards, criteria established in supplier agreement*
 - *Verification results of supplier*

Acquisition Validation (AVAL)

Clarifies Acquirer's Responsibility for:

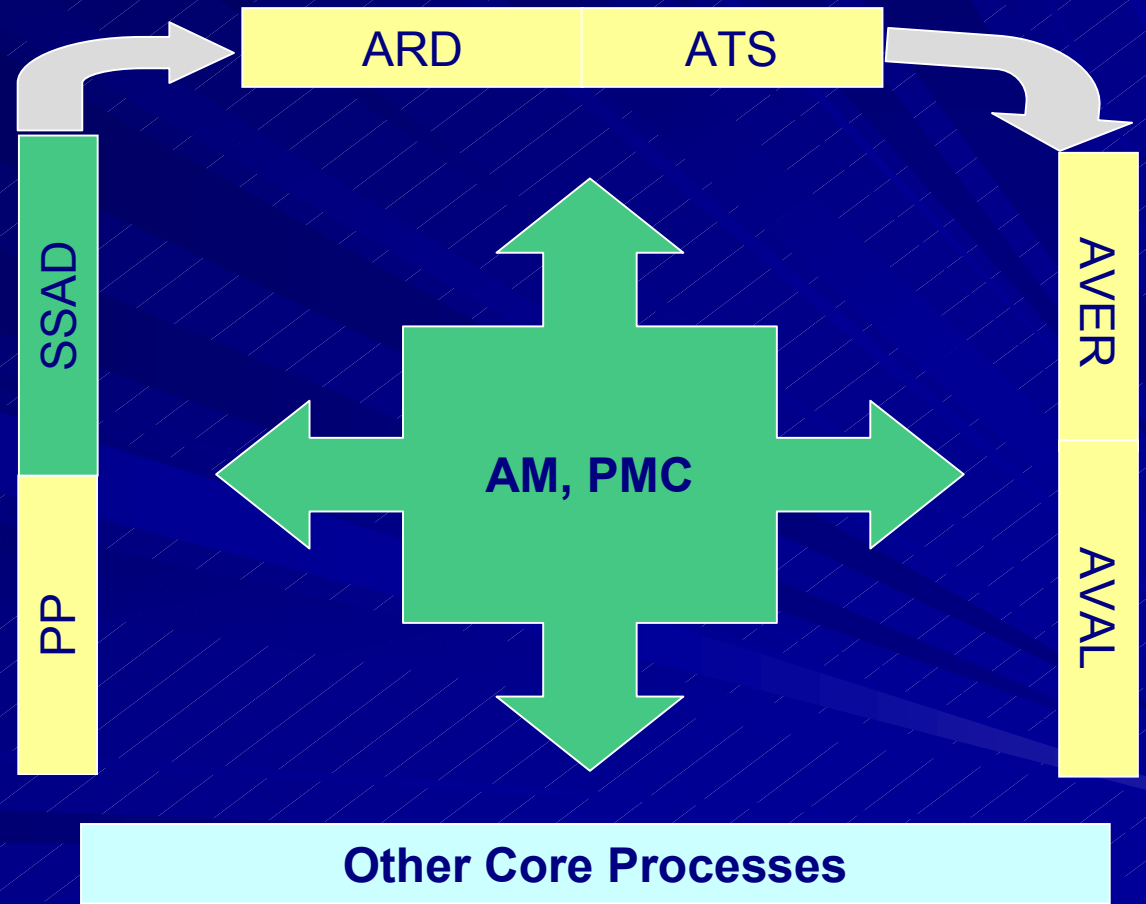
- Acquirer's own work products
 - *Example: Requirements*
- Supplier Deliverables
 - *Example: Prototypes, Training Materials, Software*
- Establishment of validation procedures, criteria, environment

Key Project Interfaces



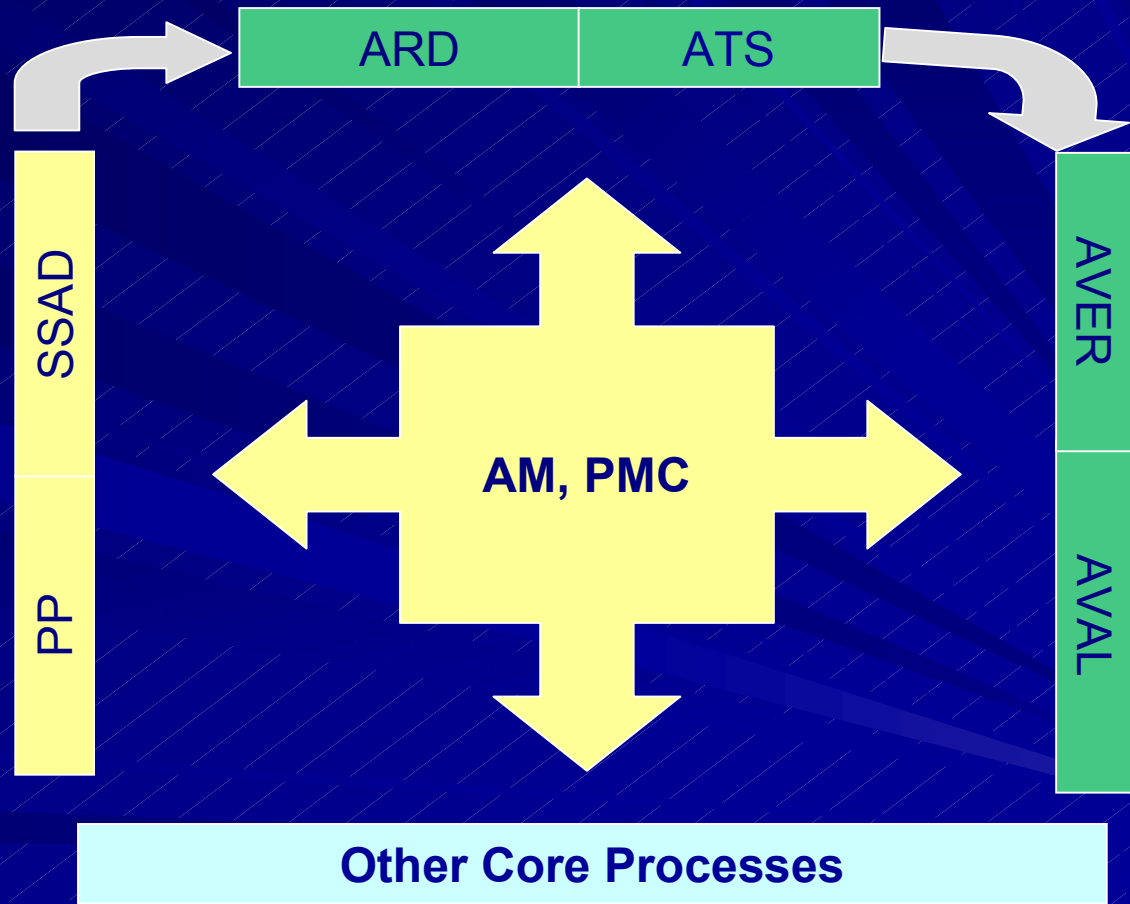
Supplier Considerations: Agreement Development and Management

- Impact on supplier's methodology
- Specific interaction points
- Multi-supplier interactions
- Acceptance Criteria
- Level, frequency of reporting
- Service Levels, penalties



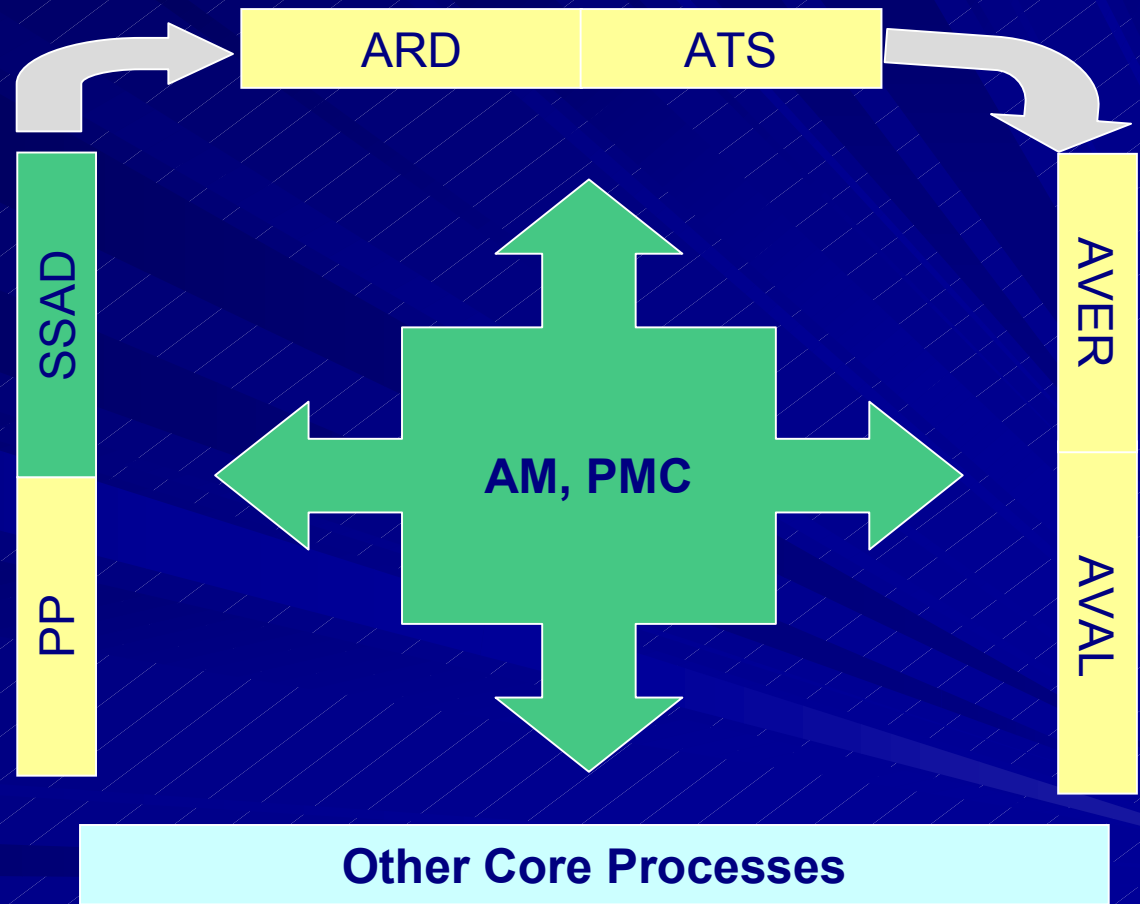
Supplier Considerations: Product Development and Delivery

- Development from non-technical and functional requirements
- Architecture and Technology standards
- Requirements for validation and verifications
- Monitoring through metrics



Supplier Considerations - Transition

- Transition of software
- Integration into acquirer production environment
- Warranty considerations
- Closing of agreements
- Transition to new agreements



Acquirer Maturity Ladder

5

- continuous improvement
- improvement involving supplier processes
- incremental and innovative process and technological improvements
- improve quality, capability and performance of the entire supply chain

4

- Joint variation control through quantitative management
- Statistical control may also involve supplier process improvements and statistical control

3

- Organizational standard processes, including acquisition management processes
- Standard supplier agreements, supplier interfaces and metrics
- Organizational technology and architecture standards

2

- Basic project management and supplier management practices
- Stable acquisitions through local process management
- Disciplined processes for managing requirements and accepting the solutions

1

- chaotic, unpredictable acquisition outcomes

High Maturity Considerations

- Pro-active performance improvement across entire supply chain
 - Analysis of performance across acquirer-supplier (s) processes
 - Better collaboration between suppliers
 - Focus on long term relationship management
- Shared cost savings between acquirer/suppliers over long term
- Smoother interaction between acquirers and suppliers due to common architecture of CMMI-ACQ and CMMI-DEV
- With improved acquirer maturity, supplier can make faster capability improvements

Possibilities of CMMI-ACQ

Supplier

■ Improves capability to deliver better value to acquirer by

- Streamlined interactions
- Improved internal efficiencies
- Focus on engineering, development capabilities
- Well defined metrics, quantitative data
- Focus on innovations in development of solutions
- Constructive collaboration

Acquirer

■ Delivers better value to the business by focusing on

- Business and functional requirements
- Evaluation of performance based on quantitative data
- Management of architecture, technology standards
- End to end project outcome, acquirer tasks
- Collaboration and value across the supplier network

Promise of CMMI-ACQ

- Maturity framework for acquirer
- Productive relationships with suppliers
- Synergy through collaboration
- Better value technology solutions

Setting the platform to bring together the value streams of the CMMI-DEV and CMMI-ACQ models

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