CMMI for Acquisition Organizations: The Next Wave of Outsourcing

2006 SEPG, Nashville

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Chief Technology Officer and Director of the Systems Development Factory, General Motors Corporation
Our Products
1 in every 6 cars built in the world is from the GM Automotive Network

GMC
Chevrolet
Cadillac
Saturn
Vauxhall
Saab
Holden
Opel
Hummer
Pontiac
Daewoo
Buick
General Motors Corporation

- World’s largest provider of transportation products and related services
- Sells products in more than 200 countries
- Manufacturing operations facilities in 33 countries
- Sold 9.17 million cars and trucks globally in 2005
- 327,000 global employees
- 14,000 dealers help GM deliver to the market
- 2005 revenue of $193 billion
Manufacturing at GM

178 Plants located in 33 Countries

$104 billion of material and services purchased annually

14 million pounds of material received daily

Approximately 5,000 parts in each vehicle

375 million sq ft of Manufacturing space including Joint Ventures

3,200 sources provide delivery "just in time"
Why IT Means Business at General Motors?
Crash Tests Through the Years

Crash Test - 1936
Crash Tests Today
OnStar: Innovative Services for Subscribers

- Automatic Airbag Crash Notification
- OnStar Vehicle Diagnostics which is a monthly email from vehicle to its owner
- Turn by Turn which is a new navigation service that has just launched
- OnStar is the 2005 CIO Enterprise Value Awards Grand Winner
The IT Outsourcing Process at GM

First Generation
1984-1996

- GM purchases EDS: all IT employees transferred to EDS

Second Generation
1996-2003

- EDS business unit split off
- GM IT formed
- Adoption of CMMI

Third Generation
2003→

- Multi-Supplier environment
- Business Process Outsourcing
- CMMI for Acquisition
Standardize IT Processes

Create & Sustain Information Systems

1. System Requirements Development
2. System Verification & Validation
3. System Architecture Development
4. System Deployment Management
5. Project Management

Service Delivery using CMMI framework

Service Support using ITIL framework

7. Service Desk Management
8. Incident Management
9. Problem Management
10. Change Management
11. Release Management
12. Configuration Management
13. Operations Monitoring

Security & Compliance

14. Service Level Management
15. Service Continuity Management
16. Availability Management
17. Capacity Management
18. Security Management
19. Audit Management
20. Export Control Management

Manage Architecture & Standards

33. Architecture Management
34. Standards Management

Manage Architecture & Standards

Management Enablers

35. Bill Of IT Management
36. Investment Portfolio Management
37. Balanced Scorecard Management
38. Project Portfolio Management

Contract Management

39. Contract Planning
40. Acquisition Management
41. Performance Management
42. Purchasing Order Management
43. Work Release Management

Supplier Management

22. Contract Approval Management
23. Request Management
24. Payment Management
25. Lease Management
26. Asset Management
27. Software License Management
28. Cost Management
29. Bill Of Contract Management
30. SOX Management

Finance Management

Request-to-Pay

31. Audit Management
32. Export Control Management
33. Bill Of IT Management
34. Standards Management

Human Resource Management

Communications Management

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Key to Outsourced Model
G: Internally Focused

Version: 11 Nov 2005
GM Challenges Using CMMI

CMMI does not effectively address acquirer needs:

- Contains work not executed by the acquirer
- Does not address some required work
- Lacks precise definition of the acquirer-supplier relationship
GM/SEI Joint Project: The Initial CMMI-A

- Develop an Acquisition Model that conforms with the CMMI architecture
- Involve industry and government agencies in developing and piloting the initial CMMI-A
- Make the CMMI-A available for initial industry and government use in 2006
Major Design Goals of Initial CMMI-A

- Clarifies the acquirer-supplier relationship
- Defines minimum set of acquirer practices
- Provides a lean model
- Usable by government and industry
- Results in a complete, appraisable model
The Acquirer-Supplier Relationship

Acquirer

Acquisition Organization

Contractual Touchpoints: Deliverables and Metrics

Supplier

Acquirer Facing Team

Development Center

Deployment Center
Minimum Set of Acquirer Practices

Acquirer

Acquisition & Project Planning
Define Req. & High-Level Solution
Supplier Evaluation & Selection
Project Oversight / Supplier Management
System Acceptance
Transition Mgmt

Acquirer & Supplier Contractual Touch Points: Deliverables and Metrics

Supplier

Plan
Design
Develop
Integrate & Test
Deliver & Maintain

Business Need
Solution
Maturity Levels for Acquirers

1. Initial
   - Unpredictable and reactive execution

2. Managed
   - Basic Project and Acquisition Management

3. Defined
   - Standard processes & standard contracts across a portfolio of projects

4. Quantitatively Managed
   - Projects, suppliers, solutions quantitatively measured and controlled

5. Optimizing
   - Focus on integrated supply chain
Next Steps

- Release initial CMMI for Acquisition Model in May 2006
- Publish CMMI for Acquisition book with GM, industry and government examples in August 2006
- Pilot the initial CMMI-A with government and industry throughout 2006 and 2007
## Acknowledgements

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- Over 150 reviewers from more than 40 companies and government agencies