



Adapting CMMI for Acquisition Organizations: A Preliminary Report

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General Motors Corporation — Largest Global Automotive Company



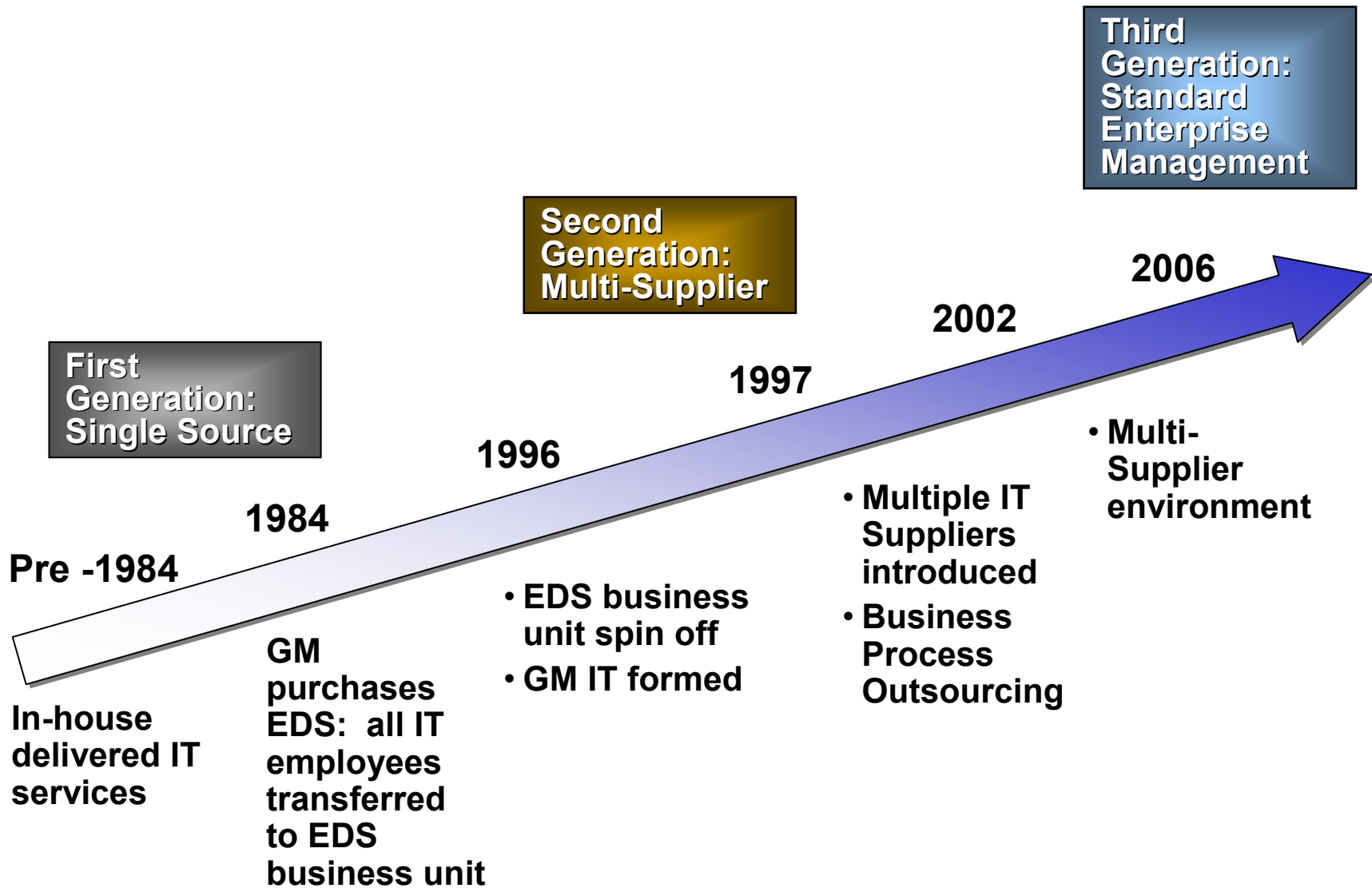
2004 Sales
Product Sales
Manufacturing Operations
2004 Vehicle Production
Dealers
Average # Parts / Vehicle
Supply Chain - Daily

\$193 Billion
In 200 countries
In 32 countries
9.1 million units
14,000
5,000
180 M lbs of material
from 12,000 sources
“Just in Time”
Multi-vendor environment
approx. \$3 Billion/year





GM Information Technology: Outsourcing Journey





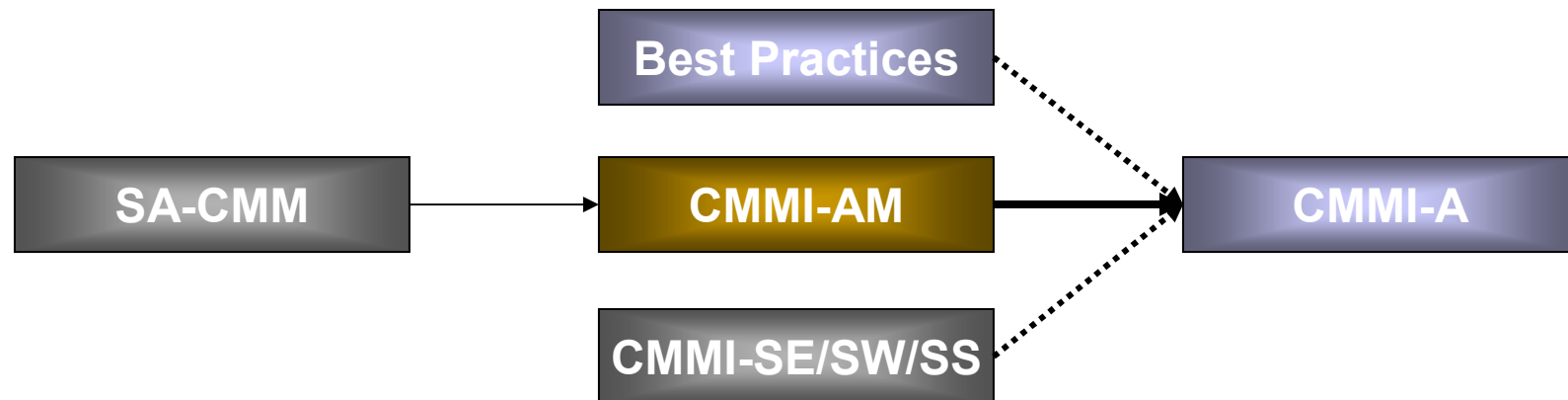
Challenges and Inhibitors of Using Today's CMMI for Acquisition Organizations



- **CMMI does *not effectively* address acquirer needs**
 - Some elements of CMMI are not executed by the acquirer
 - Example: implementing the design
 - Some required elements are not addressed
 - Example: acquisition strategy and contract development
- **CMMI Acquisition Module (CMM-AM) *partially* addresses acquirer needs**
 - Some required elements are not addressed
 - Example: architecture, quantitative management
 - Elements lack precise definition of the acquirer-supplier relationship
 - Example: acquirer sub-practices, typical supplier work products
 - CMMI-AM does not support appraisals using SCAMPI A



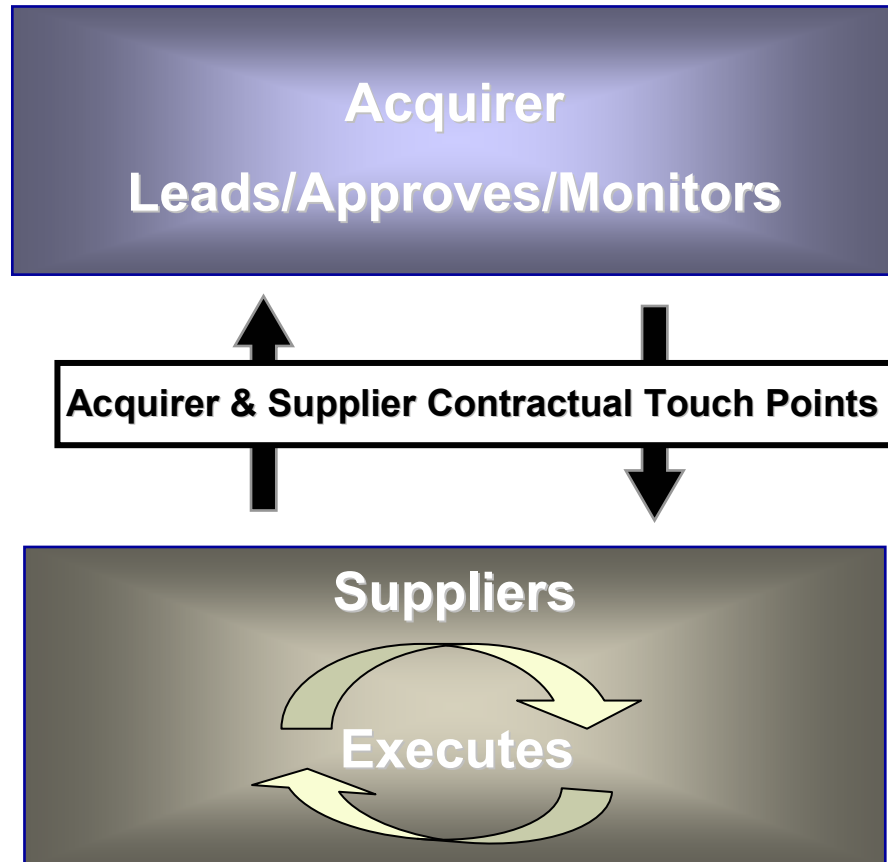
Moving Towards a CMMI for Acquisition Organizations: Long Term Goals



- **Lean CMMI Model for Acquisition (CMMI-A) usable by any acquirer**
 - Clearly delineate the minimum practices that an acquirer must perform to be successful
 - Clarify typical supplier work products in a successful acquirer-supplier relationship
- **Complete model (not a module) with similar structure as CMMI**
- **Staged representation and appraisable using SCAMPI A**
- **Approved by CMMI Steering Group and Industry**



Acquirer vs. Supplier Roles



Key Acquirer Roles*

- Business analysis/relationship management (incl. requirements)
- Contract development & supplier management
- Program ownership / project management
- Technical architecture, standards, security

Key Supplier Roles

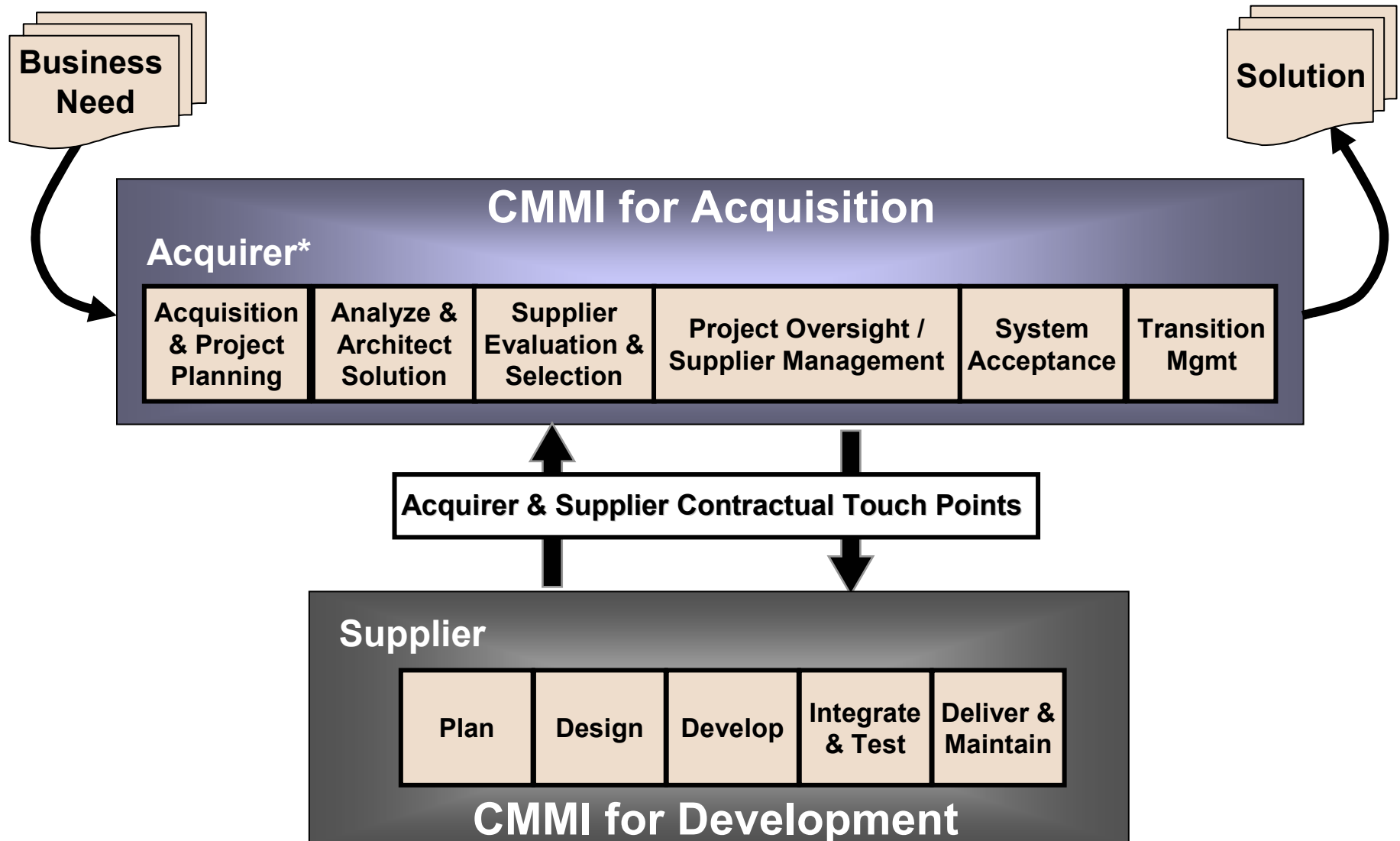
- Application Design/Development
- System Maintenance
- Desktop / Service / Help Desk
- Hosting
- Data center / mainframe



* Based on Forrester, "Functions to Retain when Outsourcing" (July 2004)



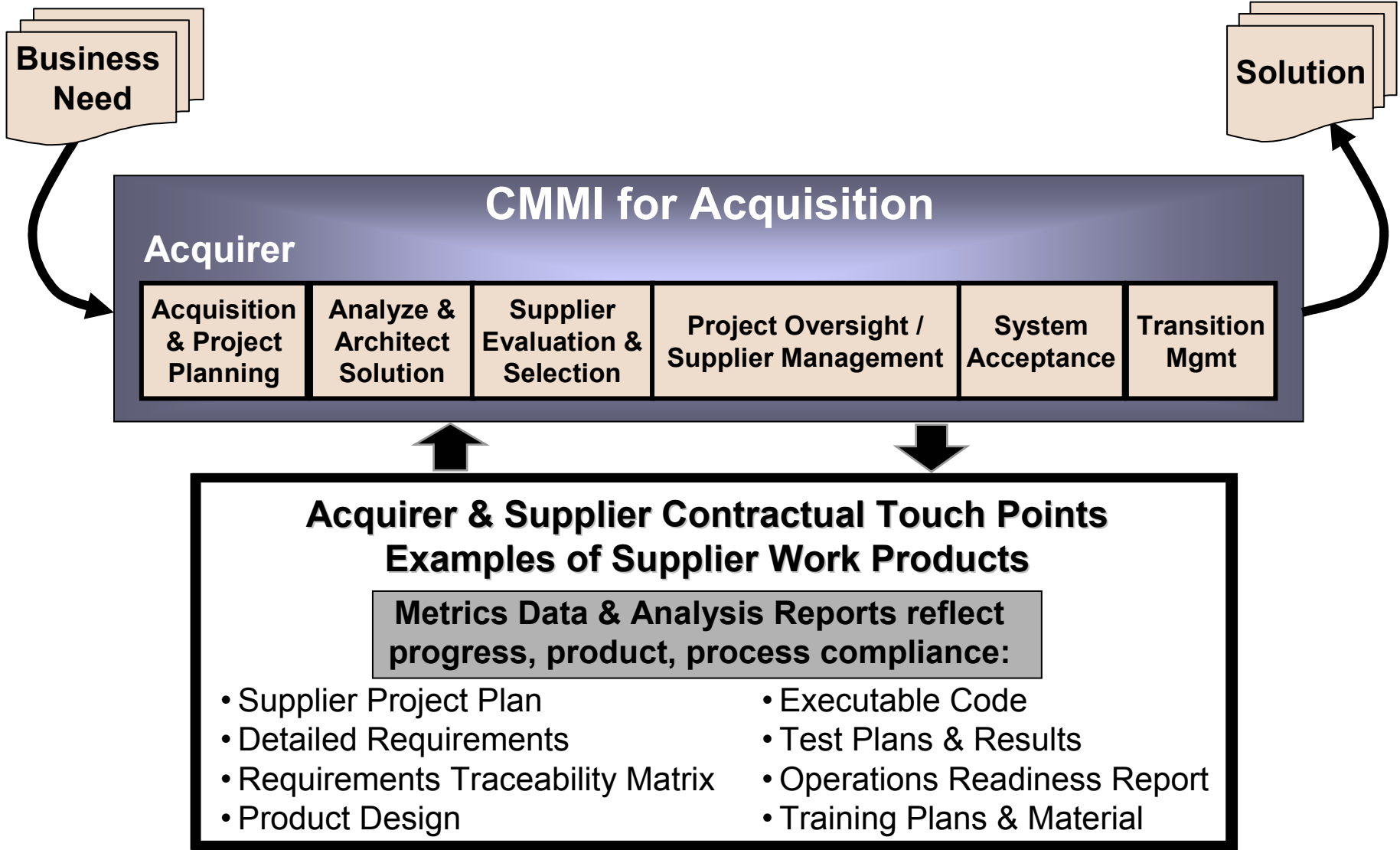
Acquisition Life Cycle



* Based on B. Gallagher "Using the CMMI in Acquisition Environments", Software-Intensive Systems Conference (2004) and S. Eslinger "Software Acquisition Best Practices", Acquisition Conference (2003)

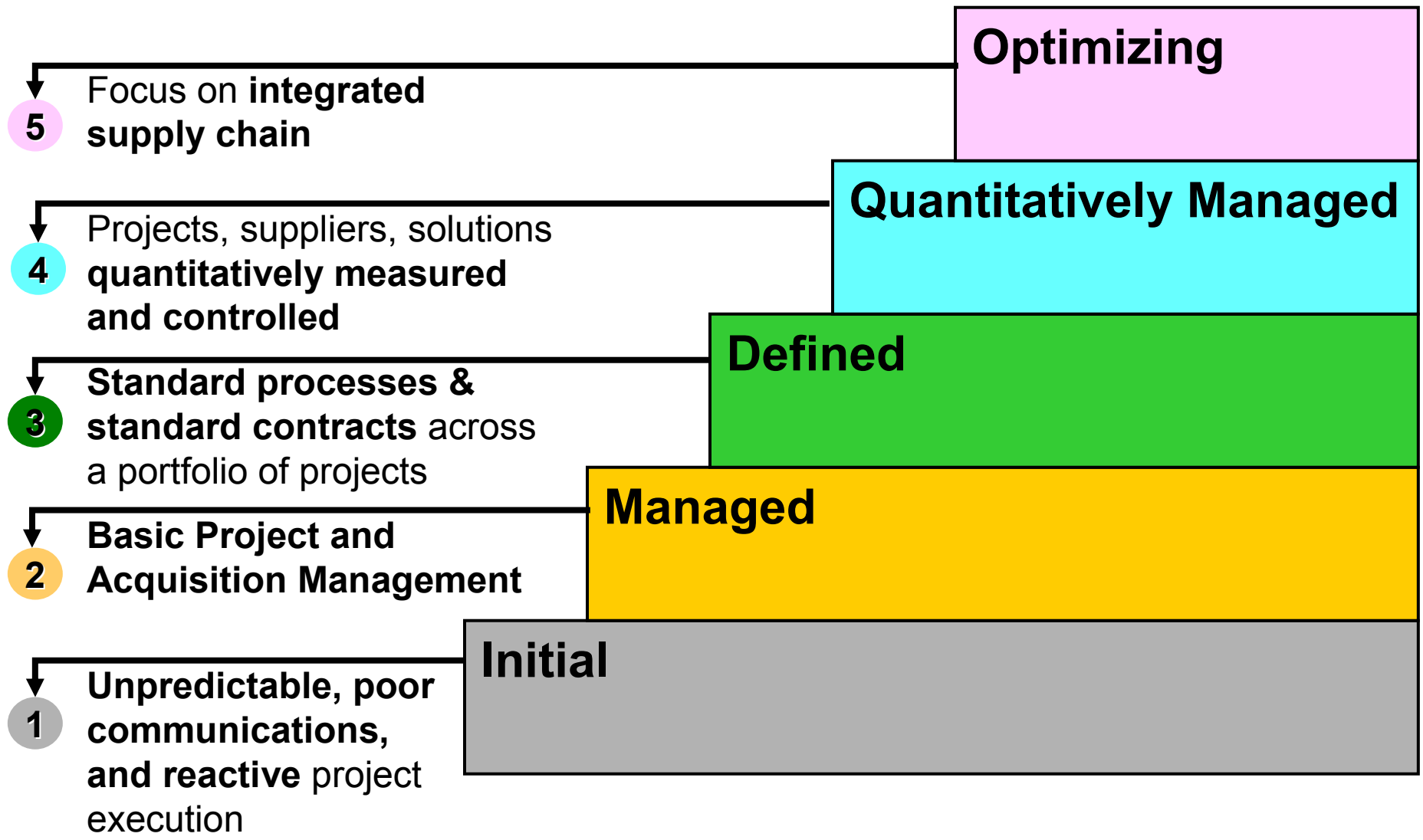


Acquisition Life Cycle





Maturity Levels for Acquirers





Project Execution: Acquisition Life Cycle and Roles



Life Cycle / Roles	Acquisition & Project Planning	Analyze & Architect Solution	Supplier Evaluation & Selection	Project Oversight / Supplier Mgmt	System Acceptance	Transition Mgmt
Supplier Management	Project Planning	Solicitation & Contract Development		Supplier Agreement Management		
				Integrated Supplier Management		
				Quantitative Supplier Management		
Project Management		Project Monitoring & Control				
		Integrated Project Management				
		Risk Management				
		Quantitative Project Management				
Requirements / Validation	Requirements Management					
	Requirements Development			Verification & Validation		
Architecture	Technical Solution				Transition to Operations	

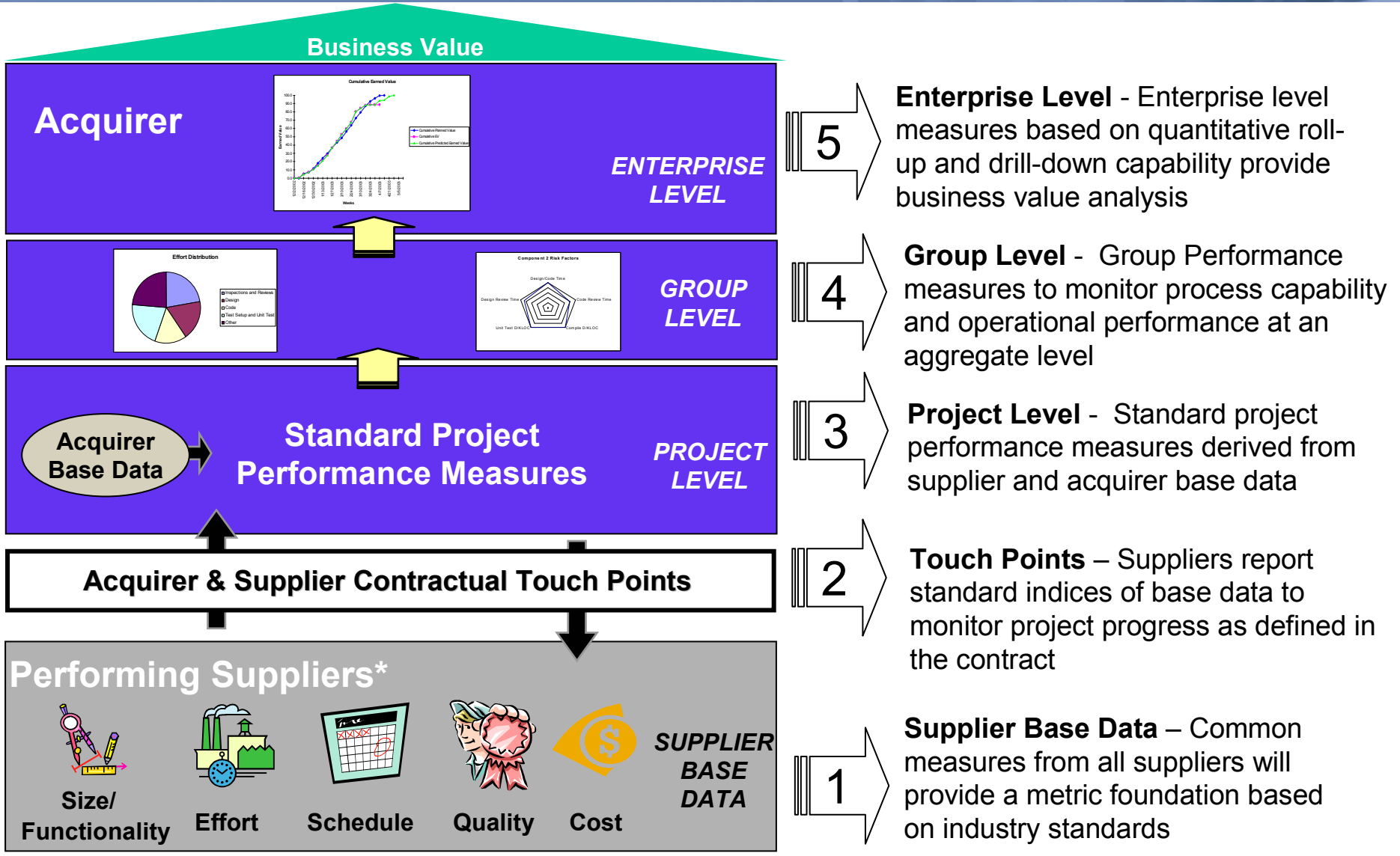
Level 2
 Level 3
 Level 4



* Process management and support processes are also required.



House of Measures – Key Principles





Next Steps

- Conduct pilots with General Motors Information Technology and its strategic suppliers
- Join CMMI for Acquisition (CMMI-A) requirements development team
- Publish special report about “Adapting CMMI for Acquisition Organizations: A Preliminary Report”
- Implement the new CMMI for Acquisition Organizations within General Motors
- Pilot GM internal appraisals against the new CMMI for Acquisition Organizations
- Present keynote at the SEPG 2006



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