Business Process Maturity Model
- A CMM-based Business Process Reengineering research

Danny Ho
Center of Excellence in Business Process Innovation, Stevens Institute of Technology
Project Motives, Goals & Initial Findings

- **Motivations:**
  - Business Process Maturity hasn’t been well defined and standardized at current stage
  - CMM framework is broadly implemented and regularly refined to fit various industries
  - This is our hypothesis CMM framework

- **Current Goals:**
  - To find out the feasibility of creating Business Process Maturity Model (PMM) based on CMM framework
  - To create fundamental elements/theories to construct/standardize PMM

- **Initial findings:**
  - The possibility of Applying CMM to PMM is currently being studied and tested by expertise from industry and academia
  - Our hypothesis is supported by reports/papers that published by field expertise
**Introduction of CMM**

**Capability Maturity Model:**

A stage-structured guideline invented originally for optimizing software engineering in terms of process and management.

Each stages contains key process areas and sub-goals:

- **Initial**
  - Repeatable Practice (disciplined)
- **Repeatable**
  - Common development Processes (standard, Predictable)
- **Defined**
  - Quantitative understanding & control (predictable)
- **Managed**
  - Continuously improving practices
- **Optimizing**
History of CMM

Crosby’s Quality Maturity Grid → Humphery’s Process Maturity Framework → Shewart, Deming SPC & PDCA

System Engineering CMM → CMM for Software → People CMM

Acquisition CMM

CMMI → Process Maturity Model

(The arrows represent causal relationships)
Introduction of PMM

- General Definition:
  - Business Process: series of work activities existed in businesses
  - Maturity = Predictability + Control + Effectiveness

- In addition to the CMM-like structure:
  - PMM must include guidelines on management strategies (planning, executing, monitoring, and controlling)
  - PMM must involve business alignment strategies both vertically and horizontally

(Fisher, “The Business Process Maturity Model A Practical Approach for Identifying Opportunities for Optimization”, '04)
Organizations with an mature mastery of their processes.

1. Initial
   The process is ad hoc. Few activities are explicitly defined, and success depends on individual effort and heroics.

2. Repeatable
   Basic project management processes are established to track cost, schedule, and functionality. The necessary discipline is in place to repeat earlier successes.

3. Defined
   The process for both management and engineering is documented, standardized and integrated by an organization methodology.

4. Managed
   Detailed measures of the process and product quality are collected. Both the process and products are quantitatively understood and controlled.

5. Optimizing
   Continuous process improvement is enabled by quantitative feedback for the process and from piloting innovative new ideals and technologies.

Organizations with an immature mastery of their processes.

(Source: Harmon, “Evaluating an Organization’s Business Process Maturity”, '04)
Evolution of Maturity Model

- Process Management Maturity Model (PM-MM, Brett Champlin, 04’)
- Business Sector (P-MM, ISO, MBNQA)
- IT Organization (IT-MM, ITIL, COBIT)
- Application Development (CMMI, SW-CMM)

Degree of Involvement within the Organization

Time
Research methods

- Examination of existing models:
  - Take inputs from samples cases
  - Simulation and result comparison

- Refining models:
  - Conducting surveys
  - Analyzing laboratory data and survey results by cross-referencing
  - Demo creating
  - Conducting surveys based on resultant demo
Conclusion

- The theory of this project is based on the hypothesis that CMM can be successfully applied on determining maturity of business processes.
- The literature research will be continued and focus on published papers that support/against our hypothesis.
Question?
Figure 3. A Basic Process Management Model (After Rummler.)

(Source: Harmon, “Evaluating an Organization’s Business Process Maturity”, ’04)
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Corporate Strategy and Goals / Business Process Architecture

Manage Delivery Process

Product Delivery Process

Provision Process → Feedback → Corrective Action

Automation/Monitoring

IT Resources
- CSM/ERP Management Applications
- Manufacturing Control Application
- CRM/ERP Database
- Manufacturing Database

HR Resources
- Job Description
- Training
- Knowledge and Skill Required for Performance

1. Align Process Goals with Corporate Goals and Identify Measures to Assure Processes are Aligned
2. Align IT Components and Human Performance Systems with Process Activities
3. Use Process Measures to Determine when Human and IT Systems are Functioning Correctly

(Source: Harmon, “Evaluating an Organization’s Business Process Maturity”, '04)