Measuring Organizational Maturity

Presented by

Dr. Terry Cooke-Davies
Human Systems
University of Technology, Sydney
University College, London

Milan, January/February, 2006  cooke-daviest@humansystems.net

Today’s Presentation

Set the scene.

Spend some time on each of four issues.

Draw tentative conclusions and present 3 challenges.

Share some relevant new insights.
Developing a Picture

- Started own business in 1968.
- Managed first project in 1969.
- Introduced global PM framework to Letraset in 1979/80.
- Developed present concept in 1993.
  - Members Network
  - Comparative Benchmarking
  - Focussed Consultancy
  - Measurement is Key
- 1994 1st Network formed with 15 members.
- Research based BUT Grounded in Reality!
- Not looking for the “Next Quick Fix”
- Identifying what really works and what doesn’t
- 5 Networks now cover Europe, Australia, USA, Africa & the Pharmaceutical industry.
- 10+ years of robust, comparative data.

Some Human Systems’ Customers

- abbey
- colesmyer.com
- Microsoft
- Lundbeck
- Motorola
- Ericsson
- National
- Lloyds TSB
- HBOS plc
- BAE Systems
- Defence Procurement Agency
- GlaxoSmithKline
- AstraZeneca
- Nationwide
- Pfizer
- NASA
- DWP Department for Work and Pensions
Maturity and Measurement

Why My Interest in This Topic?

Current Interest in Performance Management.

OPM3™ 1999-2001

Issues with Measuring Maturity

• Is there a set of measures that shows how “mature” an organization is?
• What are the benefits of being “mature”?

What does “maturity” mean?

Is “maturity” the same in different contexts?

Is “maturity” an asset?

How can “maturity” be assessed?
General Meanings of Maturity

- Grown up
- Ripe or fully aged
- Ready to pay out.
- Perfected or fully considered.

Maturity in Capability/Maturity Models (1)

As a process develops through stages of “maturity”, its “capability” becomes first defined, and then improved.

Before Lessons

Lessons

After Lessons

Maturity in Capability/Maturity Models (2)

As a “meta-process” develops through stages of “maturity”, additional processes are developed.

Each process must itself be developed to the same stage of maturity as the “meta-process”.

Maturity Models in Project Management

- **Group 1**: 8 or 9 Knowledge areas, 5 maturity levels, and create a matrix.
  - Examples: Berkely PM Maturity model, PM Solutions model.
- **Group 2**: Incrementally adds processes at each maturity level – 3, 4 or 5 levels.
  - Examples: Kerzner, PMProfessional, Gareis, Office of Government Commerce (P3M3)
- **OPM3**: Redefines both “maturity” & “capability”, introduces “best practice”, and encompasses 3 domains.

What does “maturity” mean?
What does “maturity” mean?

586 “Best Practices” are each supported by multiple “capabilities” and “pre-requisites”.

Each “capability” belongs to a specific “domain” (PPP) and a specific level of maturity (SMCI).
Project Management Maturity

- There is semantic confusion about key terms like “maturity” and “capability”.
- “Maturity” is a useful idea, but means many things to many people.
- Do “mature” organizations measure different things than “immature” ones, or simply score higher on those things that they do measure?

Organizational Dependence on Projects – Different Perspectives.

<table>
<thead>
<tr>
<th>Procurer</th>
<th>Operations-based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process industries, Manufacturing</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>In-House</th>
<th>Project-based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Services IT/IS.</td>
<td></td>
</tr>
<tr>
<td>Pharmaceutical R&amp;D, Product Development</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Bechtel, Fluor, BAE Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is “maturity” the same in different contexts?</td>
<td></td>
</tr>
</tbody>
</table>
Not All Industries Are Equally Strong

Different Types of Project Present Different Challenges.
One Model of Maturity for All?

- A case can be made out for variations
  - By Context (Supplier vs Procurer)
  - By Industry or Sector
  - By Project Type
- PMBOK® Guide talks about “most projects, most of the time”.
- Do we now need to shift focus to optimising practice for specific contexts?
- Do “mature” organizations measure different things depending on their context?

Is PM Maturity Like PIMS?

Does Maturity Confer Benefits (1)?

- Various claims are made, e.g. “mature” organizations are able to:
  - Manage all the projects undertaken by an organization effectively (Suases, 1998)
  - Improve continually the performance of all projects undertaken by an organization (Peterson, 2000)
  - Improve dialogue between the project management community and organizational top management (Peterson, 2000)
  - Improve PM ROI (Ibbbs and associates, 1997 to 2002)

- Newer models promise:
  - Organization-wide standard, defined processes that can be tailored for individual projects;
  - All project-related activity roles defined & clear throughout organization;
  - Strategic goals advanced through application of PM principles and practices.

Projects are Means to Different Ends

- Transport companies . . . Operate profitably and competitively.
- Pharmaceuticals . . . Develop and produce blockbuster drugs.
- Local Government . . . Provide excellent & efficient services.
- Manufacturing . . . Make current products better & develop new ones.
- Corporate Success
- Ports and Airports . . . Transfer Passengers and Freight comfortably & economically.
- Transport companies . . . Operate profitably and competitively.
... But All Require Successful Projects...

Projects to improve the performance of current activities...

Projects to develop new business, new products, new markets...

Projects to introduce new technology, new processes, new ways of working...

Projects to build new infrastructure, new physical assets...

... which requires 3 distinct Project Management Capabilities.

**Project Management Capability**

Capability to manage each project to time, cost, quality, scope, safety, technical performance etc.

Capability to make sure that the product produced by each project is what the organisation needs, that it delivers the benefits that are promised from it, that the product is operated as designed etc.

**Project Sponsor Capability**

Capability to make sure that the project portfolio is the right one to implement the organisation’s strategy, that scarce resources are used productively.

**Organisational Project Capability**
The three capabilities lead to different kinds of success . . .

Organisational Project Capability

Consistent project success. (Do we consistently do the right projects, and do them right?)

Project Sponsor Capability

Project success. (Did we do the right project?)

Project Management Capability

Project management success. (Did we do the project right?)

. . . And Look Different From Different Viewpoints.

Portfolio Mgmt.

Business Strategy

Programme Mgmt.

Sponsorship/ championing

Project Management

The World of Projects

The World of Business
Is Maturity a “First” or a “Second Thing”?

“Every preference of a small good to a great, or a partial good to a total good, involves the loss of the small or partial good for which the sacrifice was made.”
(C. S. Lewis, 1942)

Examples:
Happiness, Literature & the Arts, Enjoyment of alcohol.

Implication:
“Maturity comes through consistently delivering the right projects successfully.”

Does Maturity Confer Benefits (2)?

• Projects are a means to an end:
  – Achievement of strategic intent, and
  – Organizational prosperity rank more highly.

• Project success looks different at different “levels”
  – And from different viewpoints

• Maturity Models may confer benefits, but
  – They are not silver bullets,
  – They do not represent the whole picture, and
  – They may deflect excessive resources and attention.

• To what extent is it possible to generalise about the links between project success and business success?

• Does increasing “maturity” lead inevitably to increasing success?
Maturity Models Do Not Cover the Whole Field

Conceiving projects, developing & managing portfolios, initiating programmes?

Governance of projects?

Operating the product or service to harvest benefits?

5 Process Groups, and 9 Knowledge Areas?

Project Management → Managing Projects.


Social Science | Technology

People | Workform

Managing Projects
Novices act on the basis of context-independent rules.

**Advanced Beginners**
also use situational elements, which they have learned to interpret on the basis of their own experience from similar situations.

**Competent Performers**
are characterized by the involved choice of goals and plans as the basis for their actions. Goals and plans store both context-dependent and context-independent information.

**Proficient Performers**
identify problems, goals and plans intuitively from their own experientially-based perspective. Intuitive choice is checked by analytical evaluation before action.

**Experts**
behaviour is intuitive, holistic, and synchronic, understood in a way that a given situation releases a picture of problem, goal, plan, decision and action in one instant.

---

**Beyond Maturity Models?**

<table>
<thead>
<tr>
<th>Experts</th>
<th>And beyond?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proficient Performers</td>
<td>Level 5: Continually improved.</td>
</tr>
<tr>
<td>Competent Performers</td>
<td>Level 4: Optimised</td>
</tr>
<tr>
<td>Advanced Beginners</td>
<td>Level 3: Managed</td>
</tr>
<tr>
<td>Novices</td>
<td>Level 2: Planned</td>
</tr>
<tr>
<td></td>
<td>Level 1: Ad Hoc</td>
</tr>
</tbody>
</table>

**How can “maturity” be assessed?**

---

Intervento di Terry Cooke-Davies
What do Organizations Actually Measure? Goals of a Relevant Study.

- Assess the quality of input data.
- Assess the extent to which ERP solutions help or hinder.
- Understand the nature of the hierarchy of metrics in terms
  - Different levels of the hierarchy, and
  - Component metrics for each level.
- Assess what metrics are relevant to what job roles.
- Describe how input data is audited.
- Collect samples of good practice.

How can “maturity” be assessed?

The 27 Participating Organizations

- USA
  - Anonymous Contributor, Centocor, Covansys, Ericsson, Honeywell, NASA, NCR, Paccar, Raytheon, Shell Information Technologies.
- UK and Europe
- Australia
  - Coles Myer, Defence Acquisition Agency, Australian Broadcasting Corporation, NSW Department of Public Works & Services, Resitech Australia, NSW Roads and Traffic Authority, Western Power.
Headline Findings of the Study

- Metrics are about governance, not operational control.
- The hierarchy of metrics is two dimensional: Tier and job type.
- Most hierarchies are fragmented, and unsatisfactory metrics reveal underlying problems with culture, process or communications.
- Pockets of excellent practice are visible.
- Good practice principles seem to be applicable to all organizations, but context (industry, perspective, strategy and process) determines some specific metrics.
- Accuracy of metrics is the most worrying aspect, and ERP appears to improve accuracy at the cost of timeliness.
- Financial officers are the least happy group, where metrics are concerned.

Metrics from Different Industries...
...and Different “Levels”.

How can “maturity” be assessed?

Levels by Industry
Organizations Use Many Measures.

Financials:
- Cost vs budget;
- Margin delivered;
- Accuracy of forecast

Time:
- Completion vs programme;
- Milestone performance;
- Learning curve – roll-out.

Quality:
- Customer satisfaction;
- Aggregate risk;
- Planning accuracy.

Human Factors:
- Competency profiles;
- Capability forecast;
- FTEs performing PM

Resources:
- Hours used vs budget;
- Effort variance analysis;
- Resource productivity.

Benefits:
- Benefits realized;
- ERP integration;
- Risk-adjusted NPV.

Composites:
- Single data entry + roll-up & drill-down;
- Standard input to tollgate reviews;
- Departmental maturity measures.

Miscellaneous:
- Attrition rates, and time to attrition;
- Specific technical metrics;
- Value created/destroyed.

Different Types at each Level

Metrics Level

1. Project
2. Sponsor/ Program
3. Organization/ Portfolio

Metrics type
- Time
- Cost
- Composite
- Other
- Financial
- Quality
- Performance
- Resources
- Scope
- Human Factors
- Risk
- Benefits
The “Quality Criteria” for “Metrics”

1. Completeness & Relevance.
2. Reliability of Data
3. Effective Use
4. Continual Improvement

How can “maturity” be assessed?

Self-assessment Worksheets

2. Scope of Project Metrics

<table>
<thead>
<tr>
<th>Managers at each level of the business receive appropriate information about projects.</th>
<th>Total Score =</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project metrics are “rolled-up” from project, to programme, to portfolio, to business unit level.</td>
<td></td>
</tr>
<tr>
<td>Our organisation is satisfied that we keep the right metrics about projects.</td>
<td></td>
</tr>
<tr>
<td>Our project management metrics provide a solid basis for predicting the benefits that will be realised.</td>
<td></td>
</tr>
<tr>
<td>There is no disagreement between financial departments and project managers about the accuracy of project metrics.</td>
<td></td>
</tr>
<tr>
<td>Our organisation is clear about what aspects of project performance interest which functions.</td>
<td></td>
</tr>
<tr>
<td>Aggregate project data is presented to different job functions, so that they can readily make decisions appropriate to their function.</td>
<td>21</td>
</tr>
</tbody>
</table>
How Can Maturity Be Assessed?

- Examine Performance Measures
  - For all 3 levels,
  - For both viewpoints,
  - Applying quality criteria.
- Start from Strategic Measures
  - Integrate down through levels,
  - Integrate across all businesses.
- How can Performance Management be used to focus attention on relevant elements of process maturity, and other relevant aspects of the management of projects?

Tentative Current Conclusions

- 4 issues each need better answers.
  - What maturity really means.
  - How maturity differs by context.
  - The value of maturity.
  - How best to assess maturity.
- Measurement and success are topics of common concern to business AND project management.
  - Maturity models can either hinder or help.
- Measuring maturity involves the whole management community, not simply project management.
Three Challenges

1. The future of project management:
   • as a specialized profession
   • as a discipline within general management
   • In its relationship with performance management.
2. The discourse about projects that involves the whole management community, including
   • the scope of what involved in managing projects.
3. The theoretical underpinnings of project management practice as broader than systems/control theory.

The Critical Role of the Sponsor.

Portfolio Mgmt.  Business Strategy

Programme Mgmt.  Sponsorship/ championing

This Level is Crucial to Maturity

The World of Projects  The World of Business

Project Management
Capabilities & Success...

Organizational Capabilities and Results.
Agility of Organization

Governance or Sponsor Capabilities and Results.
Effectiveness of Program or Project

Project Management Capabilities and Results.
Efficiency of Project

- Multi-project management and governance capability.
- Effective, reliable metrics.
- Continual improvement of key processes.

- Strategy implemented effectively.
- Key resource productivity.
- Overall success of all projects undertaken.
- Overall level of PM success.

- Clear & attainable project goals
- Sponsor capability & attitude
- Benefits realization & management
- Appropriate project strategy.

- Benefits realized.
- Satisfactory technical performance.
- Stakeholders satisfied

- Clear project goals
- Adequate resourcing
- Effective planning and control
- Clarity about technical performance requirement.

- Time
- Quality
- Safety

- Project team
- Risk management

- Cost
- Scope

Intervento di Terry Cooke-Davies
Indicators of Agility (Success Criteria)

- Strategy Implemented More Effectively Than Competitors.
- Critical Strategic Resources Used More Productively Than Competitors.
- High (and Known) Level of Project/Program Effectiveness.
- High (and Known) Level of Project Management Efficiency.

Organizational Success Achieved
Key Factors That Deliver Agility (CSFs)

- Multi-Project Management Ability.
  - Portfolio Management.
  - Programme Management.
  - Resource Management.
- Effective, reliable metrics
- Continuous Improvement of Key Processes
  - Business Processes
  - Programme/Project Processes
  - Support Processes

Organizational Capability Claimed
Organizational C&RT Analysis

Indicators of Effectiveness (Success Criteria)

- Benefits realized.
- Stakeholder satisfaction.
- Technical performance of delivered product or service.
Key Factors That Deliver Effectiveness (CSFs)

- Clear and Doable Project Goals.
  - Business Case.
  - Stages/Gates to Maintain Alignment.
  - Resources Appropriate to Goals
- Sponsor Capability and Attitude.
- Benefits Realisation & Management
- Appropriate Project Strategy.
**Governance/Sponsor Capability Claimed**

![Bar chart showing mean capability scores across various categories for all industries.](chart1.png)

- Clear Goals
- Business Case
- Stakeholder Support
- Strategic Options
- Valuable Outputs
- Benefit Tracking
- Product Benefits Changes
- Benefits Owners
- Benefit Realization
- Integrated Financial Systems

**Impact of Governance/Sponsor Capability**

![Graph illustrating the impact of governance/sponsor capability.](chart2.png)

- Better result than expected
- Results as expected
- Results worse than expected
- Terrible results

- Non-existent
- More than present
- More present than present
- Fully present

*Intervento di Terry Cooke-Davies*
Which Capabilities Matter Most?

Effectiveness
Mean = 2.47
N = 114
50% Improvement

Precise Questions

- Before seeking formal approval, each project team considers the options available to accomplish the project objectives before finally deciding on the most appropriate way of planning, implementing and controlling the project.
- The project is assured of receiving the resources required (including, e.g., people, money, facilities, equipment and materials) for the activities that are necessary to achieve the project goals.
- The project team possesses the necessary authority to deliver the project goals as specified.
- Risk management lies at the heart of project management such that the processes of risk identification & assessment, risk response identification, management and control underpin all decisions affecting the project.
Impact of Considering Strategic Options

Impact of Fully Resourcing Projects
Impact of Necessary Authority.

![Graph showing the impact of necessary authority on project effectiveness.]

Project Management Efficiency.
Indicators of Efficiency (Success Criteria)

- Time.
- Cost.
- Quality.
- Scope.
- HSE or equivalent.

Project Management Success Achieved
Key Factors That Deliver Efficiency (CSFs)

- Clear and Doable Project Goals.
- Adequate Resources.
- Effective Planning and Control.
- Clarity About Technical Performance Requirements.
- Effective Risk Management.
- Project Team Capability
  - Competent Project Manager
  - Right Mix of Social and Technical Competence
  - Adequate Authority to Deliver Project Goals
  - Effective Teamwork.

PM Capabilities Claimed.

<table>
<thead>
<tr>
<th>Capabilities</th>
<th>Mean Capability - All Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective Teamwork</td>
<td></td>
</tr>
<tr>
<td>Clear Goals</td>
<td></td>
</tr>
<tr>
<td>Competent PM</td>
<td></td>
</tr>
<tr>
<td>Business Case</td>
<td></td>
</tr>
<tr>
<td>Clear Technical Performance</td>
<td></td>
</tr>
<tr>
<td>Necessary Authority</td>
<td></td>
</tr>
<tr>
<td>Fully Resourced</td>
<td></td>
</tr>
<tr>
<td>Acceptance Criteria</td>
<td></td>
</tr>
<tr>
<td>Technical &amp; Social</td>
<td></td>
</tr>
<tr>
<td>Accurate Information</td>
<td></td>
</tr>
<tr>
<td>Validated Output</td>
<td></td>
</tr>
<tr>
<td>Risk Management</td>
<td></td>
</tr>
<tr>
<td>Proven Planning Methods</td>
<td></td>
</tr>
</tbody>
</table>

© Human Systems Limited 1999-2004
Impact of Capability on Efficiency

But What Matters?

Efficiency
Mean = 2.58
N = 157

Proven planning methods
<<Largely
Mean = 2.44
N=17

Effective teamwork
<<Largely
Mean = 2.97
N=13

Clear technical performance
<<Largely
Mean = 3.20
N=12

Business case
Largely
Mean = 2.65
N=142

Benefit owners
Largely
Mean = 2.72
N=27

Fully
Mean = 2.73
N=23

Fully
Mean = 2.91
N=48

Fully
Mean = 3.06
N=25

70% Improvement
Precise Questions

- The planning systems, processes and practices used to develop the project plan are rigorous and proven, and incorporate effective review processes.
- The project has been approved on the basis of a well-founded business case linking the benefits of the project to explicit organizational goals (whether financial or not).
- The benefits realization process for each project assigns clear and unambiguous responsibility for the realization of business benefits.
- The project team works together effectively to deliver the project goals as specified.
- The technical performance requirements from the product of the project have been specified clearly and unambiguously.

Which Depend on Sponsor?

2. Risk Management.
3. Effective Teamwork.
5. All strategic options considered.
6. Project assured of receiving resources.
7. Project team possesses necessary authority.
8. Assuring the quality of the business case.
Measuring Organizational Maturity

Thank you for listening.

Milan, January/February, 2006  cooke-daviest@humansystems.net

Human Systems