Raising the Bar: How to Increase Your Organization's Project Management Maturity

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Abstract

Since the advent of a formal body of knowledge for our profession, many project management practitioners have encountered resistance to the use of modern project management methods in their organizations. There are many reasons for this resistance, such as entrenched functional management, cultural inertia, and lack of awareness and understanding of the benefits of a project management methodology that fits their needs.

This presentation will help new and experienced project managers understand their organizational environment and the challenges they face, and will outline a useful set of tools to help the project manager increase the project management maturity of their larger organizations.

Attendees, both pre and post certified, will be enriched with fresh observations, unique ideas, and useful tools to guide their organizations toward more successful projects in the future.

Bob Futrell

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- **PMI® Certified Project Management Professional (PMP-6714)**
- **ASQ® Certified Quality Manager (CQM)**
- **ASQ® Certified Software Quality Engineer (CSQE)**
- **BS – Information Systems Mgmt - Computer Science**
- **MBA – Telecommunications Management**

Projects and Management
- Cooper Consulting – 2005-2011
  TX Sec. of State – VR/EM/JM Sys
- Daman Consulting – AMD Project 2004
- Motorola – 5 yrs.
  Transportation Systems Group
  MOS-11 Wafer Fab
- Texas Instruments - 15 yrs.
  OS Development Mgr
  Knowledge Engineering Mgr
  Software Engineer

Education and Quality
- U.Texas CLEE SQI SWPM -1993-Pres
- U.Texas PDC PM Cert. Pgm -1993-2008
- U.Dallas GSM – 1999 - Pres
- Prentice-Hall Textbook- 2002
- Quality Texas P.E. Examiner - 2 yrs.
- Greater Austin Quality Examiner - 2 yrs
- UT ECE ARiSE Audit Team – 2011-Pres
  OAG/CSD TXCSES2 Dev. Project

Raising the Bar

How to Increase Your Organization's Project Management Maturity

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Why Do You Even *Want* to Be More Mature?

- Capitalize on Your Experience?
- Repeat Successes?
- Be Fiscally Conservative?
- …?

In Turbulent Times, Don't You Want To Be More *AGILE??*

- Improvise?
- Adapt?
- Overcome?
- …?

Why Be Agile?

Managing <u>projects</u> is managing **change**

Present State → *Project* (Start — End) → **Future State**
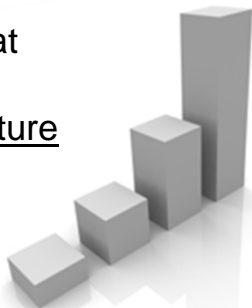

Let's Look at Org Maturity More Closely

What is Organizational Maturity?

The **sum** of characteristics that define an organization's <u>culture</u> and <u>processes</u>

Culture and Processes

Start-ups seem to behave differently from long established corporations

Start-ups are typically characterized as flexible, fluid, energetic, and usually small – they have "thin" cultures

Will work for food!

Characteristics Of Immature Organizations Include:

- Ad hoc processes, improvised by their practitioners & mgmt
- Processes & rules not rigorously followed or enforced
- Highly dependent on current practitioners
- Likely to have cost & schedule problems
- Product or service functionality & quality may be compromised to meet schedule
- Quality is difficult to predict

To an outsider looking in, an immature organization's processes may look like this:

IN ⇶ ⇶ **OUT**

Culture and Processes

More established organizations tend to have "**thicker**" cultures with long established and set ways to behave, embodied in many formal processes for doing almost anything
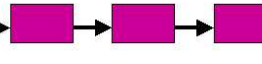

Mature Orgs May Be Characterized as:

- Well controlled processes, that are audited, and enforced
- Processes are defined, documented, and continuously improving
- Product and process measurements are gathered and used
- Documented processes are consistent with the way work actually gets done
- There is a disciplined use of technology
- Supported visibly by management

To an outsider looking in, a mature organization's processes may look like this:

IN → ■ → ■ → ■ → OUT

In Org Maturity: Does Size Matter?

No, not really…

It is more a function of knowledge and skill, applied with discipline, focus, and efficiency

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In Short:

Maturity = Knowledge + Skill

…Not Age or Size, but …

- Discipline
- Focus
- Efficiency

Why is Org Maturity Important?

Why is Org Maturity Important?

The maturity of an organization's processes helps to predict their ability to meet long term goals

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How Do They Do It?

Higher maturity level organizations have increased process efficiency and reduced rework, allowing overall task completion times to be shortened and costs reduced

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Increased Process Efficiency

Separate **Operations** from **Projects**

Because of differing
- Time horizons
- Purposes
- Needs
- Metrics

Operations Differ from Projects

OPERATIONS:
- The Core Business Function
- Day-to-Day Focus
- Desire Consistency
- Changes to procedures made *very cautiously*
- Typical Metrics:
  - Volume: Units / time
  - Availability: Up-Time; Responsiveness
  - Efficiency: High Yield; Low Waste

BUSINESS

Operations Differ from Projects

PROJECTS:
- All About *Change*
- Usually to a key business operation
- Longer Range Focus
- Typical Metrics:
  - Scope
  - Schedule
  - Cost
  - Quality

What Else Do High Maturity Organizations Do?

Defined & Documented Processes

- Say What You Do
- Do What You Say

- Prove It!

How Do You Measure Maturity?

A **Model** Can Serve as a **Map** …

There Are Many Models for Organizational Maturity Maps

Process Nirvana

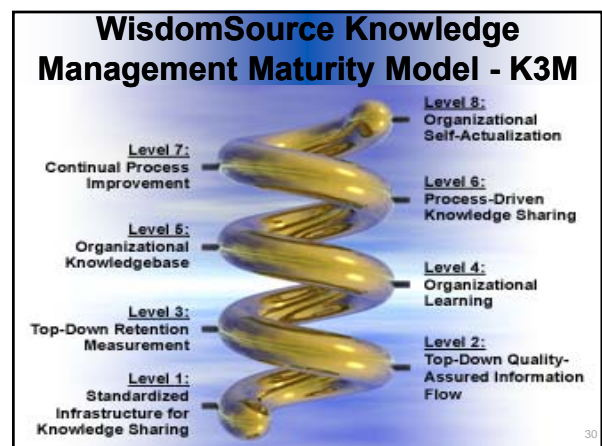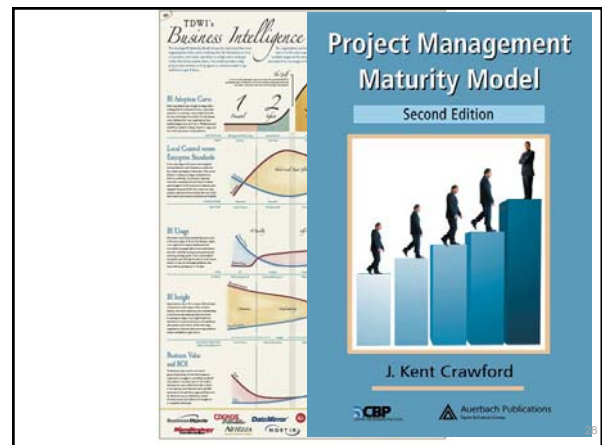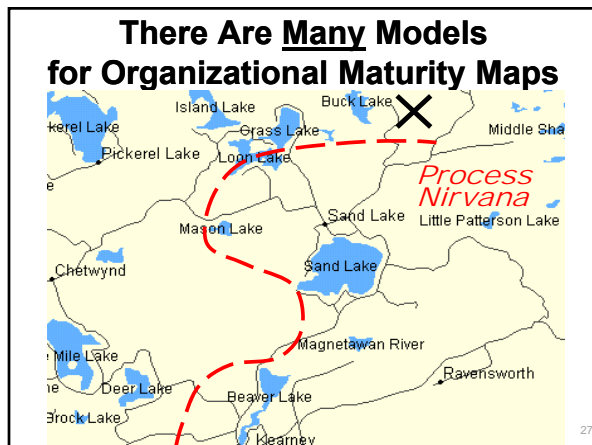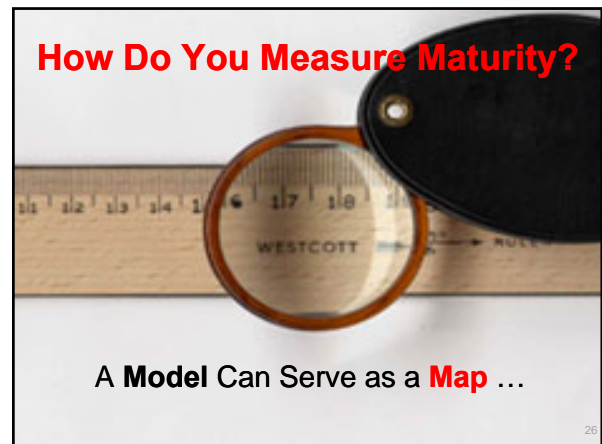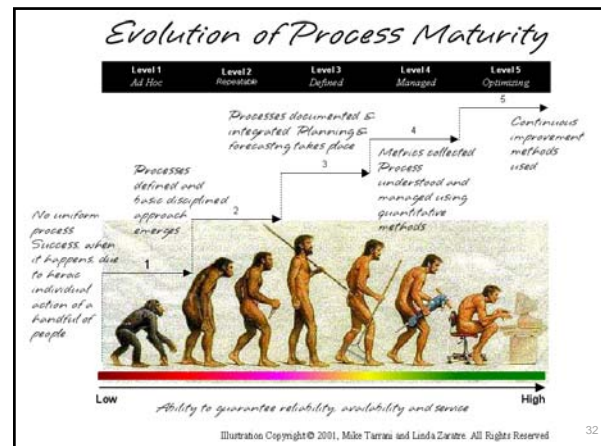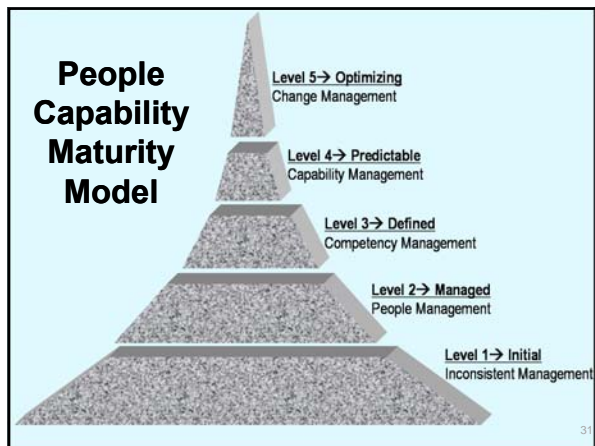(Map labels: Island Lake, Buck Lake, Kerel Lake, Grass Lake, Middle Sha, Pickerel Lake, Loon Lake, Sand Lake, Little Patterson Lake, Mason Lake, Chetwynd, Sand Lake, Magnetawan River, Mile Lake, Ravensworth, Deer Lake, Beaver Lake, Brock Lake, Kearney)

Project Management Maturity Model
Second Edition
J. Kent Crawford

Business Intelligence

What is the BPM maturity of your organization?

5 **excellence** — BPM is implemented enterprise-wide. A continuous review & improvement process is implemented to exchange lessons-learned & address required changes proactively.

4 **managed** — BPM is implemented. [People assigned. Communication to relevant people done. Training done. etc.]

3 **defined** — BPM is defined. Implementation is yet missing or ongoing.

2 **awareness** — Awareness of BPM exists in the organization. [Planning] activities have started for the definition of the subject.

1 **initial** — No structured BPM activities in the area of responsibility of the stakeholder.

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WisdomSource Knowledge Management Maturity Model - K3M

- Level 8: Organizational Self-Actualization
- Level 7: Continual Process Improvement
- Level 6: Process-Driven Knowledge Sharing
- Level 5: Organizational Knowledgebase
- Level 4: Organizational Learning
- Level 3: Top-Down Retention Measurement
- Level 2: Top-Down Quality-Assured Information Flow
- Level 1: Standardized Infrastructure for Knowledge Sharing

People Capability Maturity Model

Level 5 → Optimizing
Change Management

Level 4 → Predictable
Capability Management

Level 3 → Defined
Competency Management

Level 2 → Managed
People Management

Level 1 → Initial
Inconsistent Management

Evolution of Process Maturity

| Level 1 Ad Hoc | Level 2 Repeatable | Level 3 Defined | Level 4 Managed | Level 5 Optimizing |

No uniform process. Success when it happens, due to heroic individual action of a handful of people

Processes defined and basic disciplined approach emerges

Processes documented & integrated. Planning & forecasting takes place

Metrics collected. Process understood and managed using quantitative methods

Continuous improvement methods used

Low ——— Ability to guarantee reliability, availability and service ——— High

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Let's Look at Three Different Models

- Crosby's Quality Management Maturity Grid
- SEI's Capability Maturity Model for Software
- PMI's Organizational PM Maturity Model

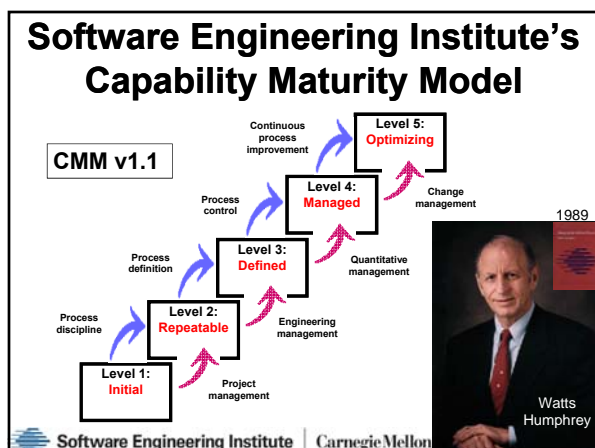
Crosby's Quality Management Maturity Grid

1979

Quality Awareness Model for Corporate Management

5 Levels:

Stage 5	Certainty
Stage 4	Wisdom
Stage 3	Enlightenment
Stage 2	Awakening
Stage 1	Uncertainty

Philip Crosby

Software Engineering Institute's Capability Maturity Model

CMM v1.1

Level 5: Optimizing — Continuous process improvement

Level 4: Managed — Process control — Change management

Level 3: Defined — Process definition — Quantitative management

Level 2: Repeatable — Process discipline — Engineering management

Level 1: Initial — Project management

1989

Watts Humphrey

Software Engineering Institute | Carnegie Mellon


Capability Versus Performance

- **Process capability** – the range of expected results that can be achieved by following a process. A predictor of future project outcomes.
- **Process performance** – a measure of the actual results achieved from following a process. Refers to a particular project in the organization.

Process Determines Capability

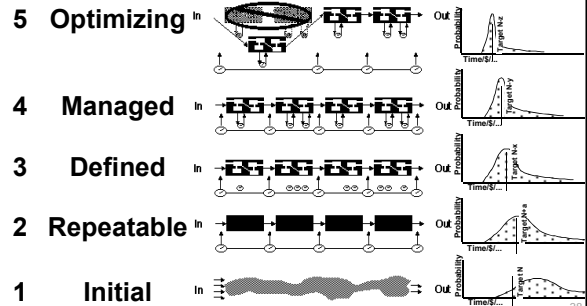**_Process_**: set of <u>activities</u> or <u>tasks</u> which are necessary to accomplish a given mission

Capability: the <u>range of results</u> expected from following a given process

| Process Performance | *Predicted by* → | Process Capability | *Indicated by* → | Process Maturity |
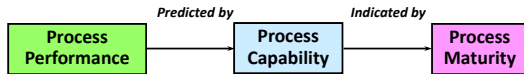
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CMM v1.1 Process View

Maturity Level	Process Clarity	Predictability
5 **Optimizing**		
4 **Managed**		
3 **Defined**		
2 **Repeatable**		
1 **Initial**		

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OPM³: PMI's Organizational Project Management Maturity Model

- Introduced 2003
- 2nd Edition 2009
- 3rd Edition 2013
- Helps organizations understand and assess the state of their current organizational project management maturity, and plan a maturity improvement path
  - Based on market research surveys sent to thousands of project management professionals
  - Incorporates 100's of best practices and capabilities, outcomes, and key performance indicators
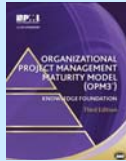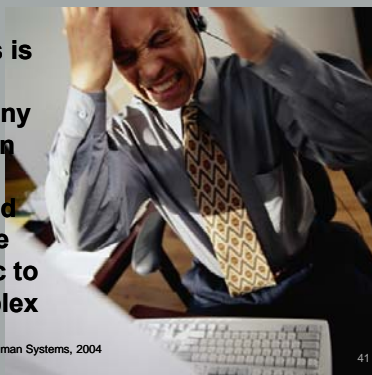
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The Framework & Standards Quagmire
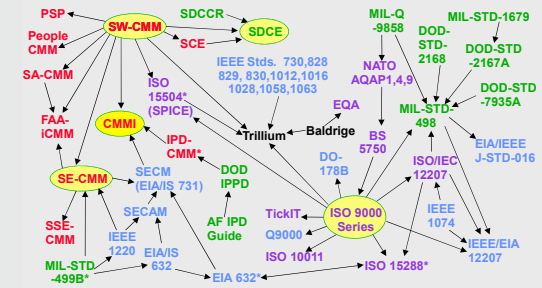
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Maturity Models

The field of maturity models is itself far from mature, with many models based on widely differing assumptions and ranging from the overly simplistic to the overly complex
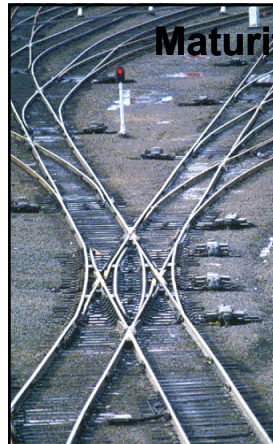
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Maturity Models

Since so many questions remain unanswered about these models, significant investment by organizations in using these as a primary vehicle for improving project success remains an <u>act of faith</u>

Some Common Threads

All Include:

- **Identified Processes** As A Foundation
- A **Roadmap** Through Progressively Sophisticated Activities Toward Future Goals
- **Measurement And Analysis** To Determine Status And Effectiveness
- An **Assessment** Of Where You Are On The Roadmap

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A Simple Approach

Start with an Assessment:

If You Don't Know
Where You Are,
A Roadmap Won't Help
You Find Your Way …

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A Simple Approach

Do an Assessment:

Prepare Your Own Assessment Instrument

– **Focus on Goals Important to Your Business**

– **Go Only As Deep As Your Org Culture Allows**
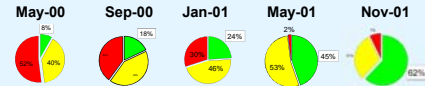
[Re-Assess at Regular Intervals]

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Example PM Maturity Metric

Based on 50 Question Assessment Instrument in 9 areas important to project management at Motorola

Part	Maturity Assessment Area	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	GREEN	YELLOW	RED	POSSIBLE	% GREEN
1	LEADERSHIP										20	13	3	36	56%
2	OWNERSHIP - TEAM & STAKEHOLDERS										14	10	0	24	58%
3	MEETING CUSTOMER EXPECTATIONS										16	8	0	24	67%
4	PROGRAM/PROJECT PROCESS ENGINEERING										10	6	0	16	63%
5	PROGRAM/PROJECT EXECUTION										11	12	1	24	46%
6	PROGRAM/PROJECT PROGRESS REVIEWS										12	12	0	24	50%
7	STANDARDS										8	4	0	12	67%
8	RESOURCE SCHEDULING										0	12	12	24	0%
9	LESSONS LEARNED										4	10	2	16	25%

Periodic Re-Assessment over several quarters:

May-00	Sep-00	Jan-01	May-01	Nov-01
8%	18%	24%	2%	
40%		46%	53% 45%	62%

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Example PM Assessment

Part of one section of 50 Question Assessment Instrument at Motorola:

PROGRAM/PROJECT EXECUTION

There is continuous emphasis on effective monitoring and on recovery from schedule slippage through resolution of issues and contingency planning for identified risks.

R Y G

5.1 Baseline plan milestones and delivery dates are agreed upon with the Customer and any changes are defined and approved using the proscribed change process, or PSG in the absence of a Customer.

5.2 Program/Project schedules are continuously measured for performance and prompt corrective action is taken to resolve issues.

5.3 Program/Project execution success is always measured with respect to meeting agreed upon and committed Customer delivery dates.

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A Simple Approach

Measure Your Strengths & Weaknesses:

– **Be honest In Your Assessments**

– **You May Do Some Things Very Well**

– **Focus on *Process*, not *People***

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A Simple Approach

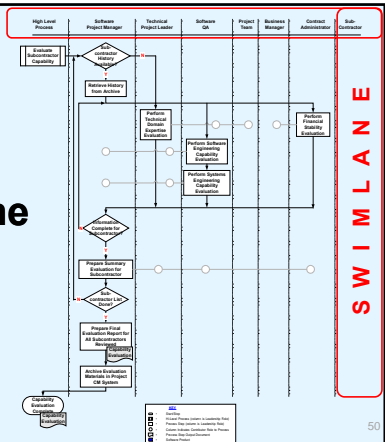**Document your Processes**

– Keep <u>Level of Detail</u> to Match the Culture
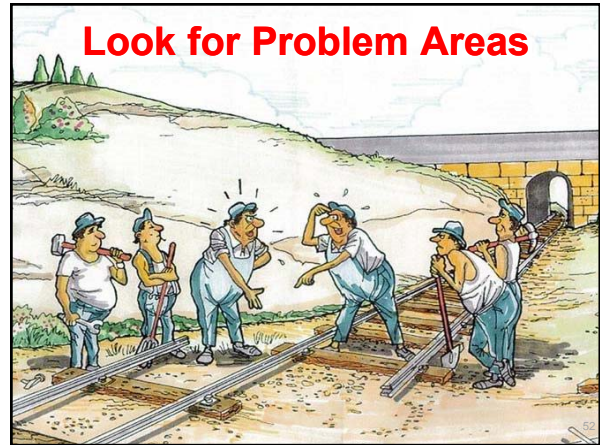– 1-page Swim-Lane Charts Work Well

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Sample Swim-Lane Chart

Roles →

S W I M L A N E

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Avoid Excessive Documentation

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Look for Problem Areas

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A Simple Approach

Design an Improvement Plan Around the Results

– <u>Level of Detail</u> of Processes to <u>Match the Culture</u>
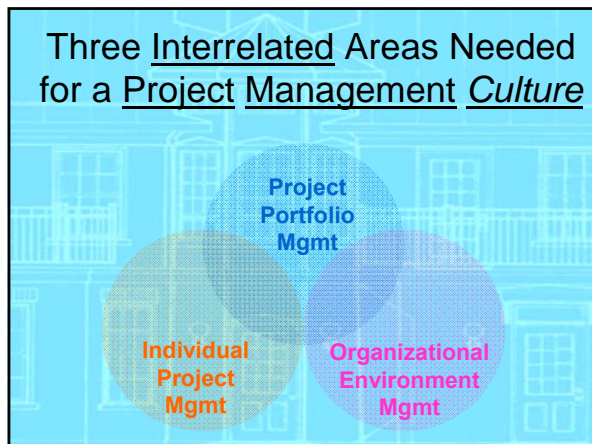– Keep the New Improvements in <u>Balance</u>

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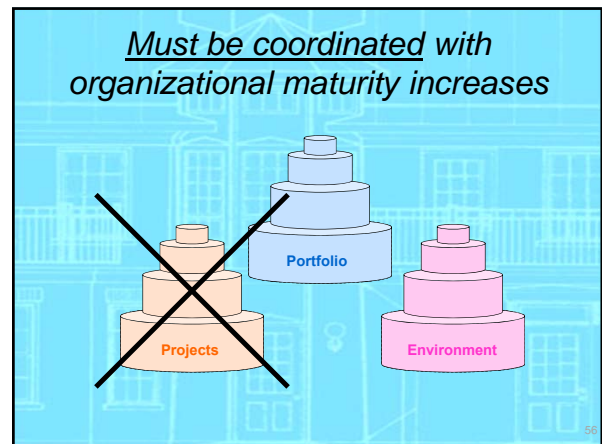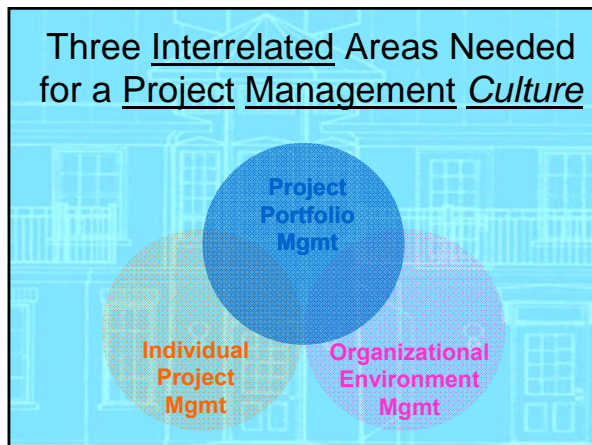## Some Things To Consider As You Plan Your Improvements

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Three Interrelated Areas Needed for a Project Management *Culture*

- Project Portfolio Mgmt
- Individual Project Mgmt
- Organizational Environment Mgmt

Must be coordinated with organizational maturity increases

- Portfolio
- Projects
- Environment

Three Interrelated Areas Needed for a Project Management *Culture*

- Project Portfolio Mgmt
- Individual Project Mgmt
- Organizational Environment Mgmt

1 - Management of the Organization's Project Portfolio

a. Portfolio *Development*
  – **Development of the strategic plan, the annual budget, and the project portfolio is** **integrated**

1 - Management of the Organization's Project Portfolio

a. Portfolio *Development*
  – **Project selection criteria are** **objective**, **documented**, **communicated**, **and** **consistently applied**

1 - Management of the Organization's Project Portfolio

a. Portfolio *Development*
  – **Project selection decisions are** **communicated broadly**

1 - Management of the Organization's Project Portfolio

b. Portfolio *Maintenance*

– **Priorities are consistent across the organization & individual projects are resourced accordingly**

1 - Management of the Organization's Project Portfolio

b. Portfolio *Maintenance*

– **A portfolio change management process is in place and is objective, documented, communicated, and followed**
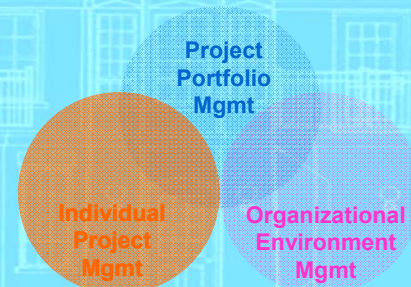

1 - Management of the Organization's Project Portfolio

b. Portfolio *Maintenance*

– **Changes to the portfolio are communicated broadly**

Three Interrelated Areas Needed for a Project Management *Culture*

Project Portfolio Mgmt

Individual Project Mgmt

Organizational Environment Mgmt

2 - Management of the Individual Projects within the Portfolio

a. Repeatable Processes

Ensure that the following are documented, understood, and followed!:

– **Project management processes**
to identify & manage the project work

– **Product-oriented processes**
to specify the characteristics of the project's product

– **Product release processes**
to integrate the product of the project with on-going business operations

2 - Management of the Individual Projects within the Portfolio

b. Access to Decision Making Info

Ensure that the management team has:

– **Ready access to information needed for planning**
(like planning templates, lessons learned from previous projects, the contents of the project portfolio, loaded salary rates, etc.)

2 - Management of the Individual Projects within the Portfolio

b. Access to Decision Making Info

Ensure that the management team has:

– **Timely access to project-specific information** for decision-making during execution (like the project plan & supporting detail, actual results & project status information, etc.)

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2 - Management of the Individual Projects within the Portfolio

c. Knowledgeable and Skilled Team

Ensure the project team has the **necessary skills**. These include:

– **Project mgmt skills** (creating WBS's and network logic diagrams, earned value, etc.)

---

2 - Management of the Individual Projects within the Portfolio

c. Knowledgeable and Skilled Team

Ensure the project team has the **necessary skills** to execute their project. These include:

– **General mgmt skills** (leadership, teamwork, negotiation, decision making, financial analysis, etc.)

---

2 - Management of the Individual Projects within the Portfolio

c. Knowledgeable and Skilled Team

Ensure the project team has the **necessary skills** to execute their project. These include:

– **Application area skills** (skills needed to understand the **product** of the project: software development, operations mgmt, support services, etc.)

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2 - Management of the Individual Projects within the Portfolio

d. Stakeholder Commitment

Ensure that **every project** has the following:

– **A project sponsor** who provides the necessary financial support, and acts as a **project champion** to remove barriers as required

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2 - Management of the Individual Projects within the Portfolio

d. Stakeholder Commitment

Ensure that **every project** has the following:

– **An internal customer** who demonstrates their need for the project's product by **delivering on their commitments** when and as promised

2 - Management of the Individual Projects within the Portfolio

d. Stakeholder Commitment

Ensure that <u>every project</u> has the following:

– **Other Managers throughout the organization** who <u>demonstrate their support</u> for projects by ensuring that individual team members are <u>made available</u> to fulfill their commitments to the project

– **A project manager** <u>consistent</u> from start to finish

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Three <u>Interrelated</u> Areas Needed for a <u>Project</u> <u>Management</u> *Culture*

Project Portfolio Mgmt

Individual Project Mgmt

Organizational Environment Mgmt
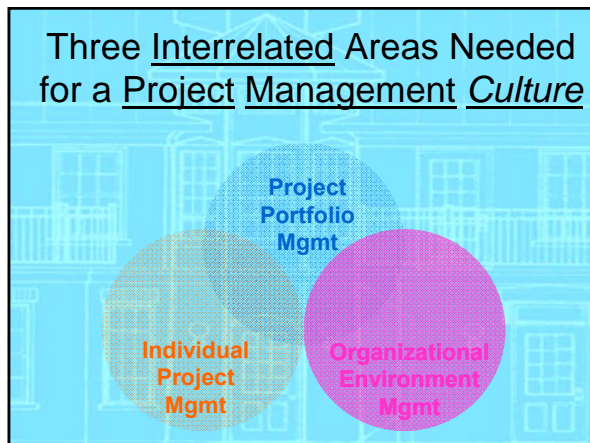
3- Management of the Organizational Environment

a. Common Lexicon

– <u>Project management terms</u> are:
  - **defined**,
  - **documented**,
  - **communicated**, and
  - **used consistently** throughout the organization

3- Management of the Organizational Environment

b. Visible Management Commitment

Management:

– **words & actions align**

– **encourages** and **insists** on development of a **viable project plan**

– **makes it safe** for the team to **admit that a project is in trouble**

3- Management of the Organizational Environment

b. Visible Management Commitment

Management:

– **rewards prudent business decisions** (e.g., life cycle costing)

– provides **staff & funding** to <u>improve organizational project mgmt</u>

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3 - Management of the Organizational Environment

c. Human Resource Practices

– **Criteria** for Project Manager selection & promotion are objective, documented, and followed

3 - Management of the Organizational Environment

c. Human Resource Practices

– **Recognition and reward systems** respond to good practice

3 - Management of the Organizational Environment

c. Human Resource Practices

– **Career opportunities** exist for both *project mgmt* experts and *functional* experts
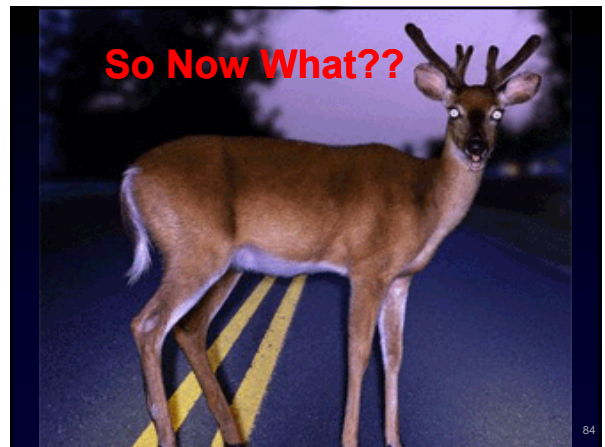

Don't Overload!

Keep the improvement load *balanced!!*

Implementing an Organizational Project Management Culture

• It's a three-legged stool…

• Maturity and progress in each area must occur roughly together, else the stool will be unbalanced …

Project Portfolio Mgmt

Individual Project Mgmt

Organizational Environment Mgmt

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So Now What??

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Move the Bar!

- **Pick a Model or Roll Your Own**
- **Do an Assessment**
- **Invest in** *Gradual* **and** *Balanced* **Org Improvements:**
  - **Portfolio Mgmt**
  - **Individual Projects**
  - **Org Environment**
- **Measure Your Progress**

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Thank You!

Bob Futrell **PMP-6714**

Professional Project Manager and Consultant

BobFutrell.com