

Make Middle Managers the Process Owners



Klasse Initiatives

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Agenda


- ◆ History of Assessment and Process Improvement
- ◆ Managing Process Change
 - ◇ Building Support for Change
 - ◇ A Sample Change Model
 - ◇ Attributes of Successful Changes
 - ◇ Sponsors
 - ◇ Middle Managers



Agenda - 2

- ◆ Sample Process Improvement Infrastructure
 - ◆ Senior Management Advisory Board
 - ◆ Steering Committee
 - ◆ Process Group
 - ◆ Working Groups
- ◆ Middle Managers as Process Owners
- ◆ Summary
- ◆ Case Study (ING (Postbank))

In the Beginning (Short History of Assessment and Process Improvement 1988 - 1991)

 Quality Management Maturity Grid

Measurement Categories	Stage I: Uncertainty	Stage II: Awakening	Stage III: Enlightenment	Stage IV: Wisdom	Stage V: Certainty
Management understanding and attitude					
Quality Organization Status					
Problem Handling					
Cost of Quality as % of sales	20	18	12	8	2.5
Quality Improvement Actions					
Summation of company quality posture	We don't know why we have problems with quality				We know why we do not have problems with quality

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History of Assessment and Process Improvement

- ◆ Organizations were encouraged to conduct an assessment
 - ◆ Team was predominantly from the SEI
 - ◆ 5-6 SEI Assessment Team Members
 - ◆ 2-3 Organization Team Members
 - ◆ SEI Assessment Team Leader led the assessment, and was responsible for the Draft and Final Finding presentation
 - ◆ Final Report was written at the SEI based on the assessment results but only by SEI people
 - ◆ Recommendations were developed by SEI assessment team members – approved by Watts Humphrey



History of Assessment and Process Improvement - 2

- ◆ Most of the organizations assessed in the early days of the SEI's development of the Software Process Assessment method were ML 1
 - ◇ Had problems with basic project management functions
 - ◇ Most had difficulties writing a decent Project Plan
 - ◇ The SEI's assessment recommendations almost inevitably suggested that the organization develop a process improvement or "Action Plan" and carry it out!!!!
 - ◆ OK, we cannot plan therefore the SEI suggests we make an Action Plan which is like a Project Plan for process improvement and implement it – Sure!



Managing Process Change

Managing Process Change

- ◆ There have been continuous advances in technology and process modeling:
- ◆ Technology
 - ◆ Hardware capability and performance advances
 - ◆ New user interfaces and application areas
 - ◆ New tools
 - ◆ New methods
 - ◆ Web-based





Managing Process Change - 2

◆ Process Modeling:

- ◆ ISO 9000:2000
- ◆ Capability Maturity Model (CMM)
- ◆ EIA – 731 – Systems Engineering CMM
- ◆ Capability Maturity Model Integration (CMMI®)
- ◆ BOOTSTRAP
- ◆ ISO 15504 (SPICE)
- ◆ EFQM (Quality Management Model)

◆ But even with all of the process models and with our passion to incorporate technology to help us, **we** (the industry) **seem to be getting worse, not better**

Managing Process Change - 3

- ◆ WHY? - Because we have not paid sufficient attention to process, people, and their reactions to change!

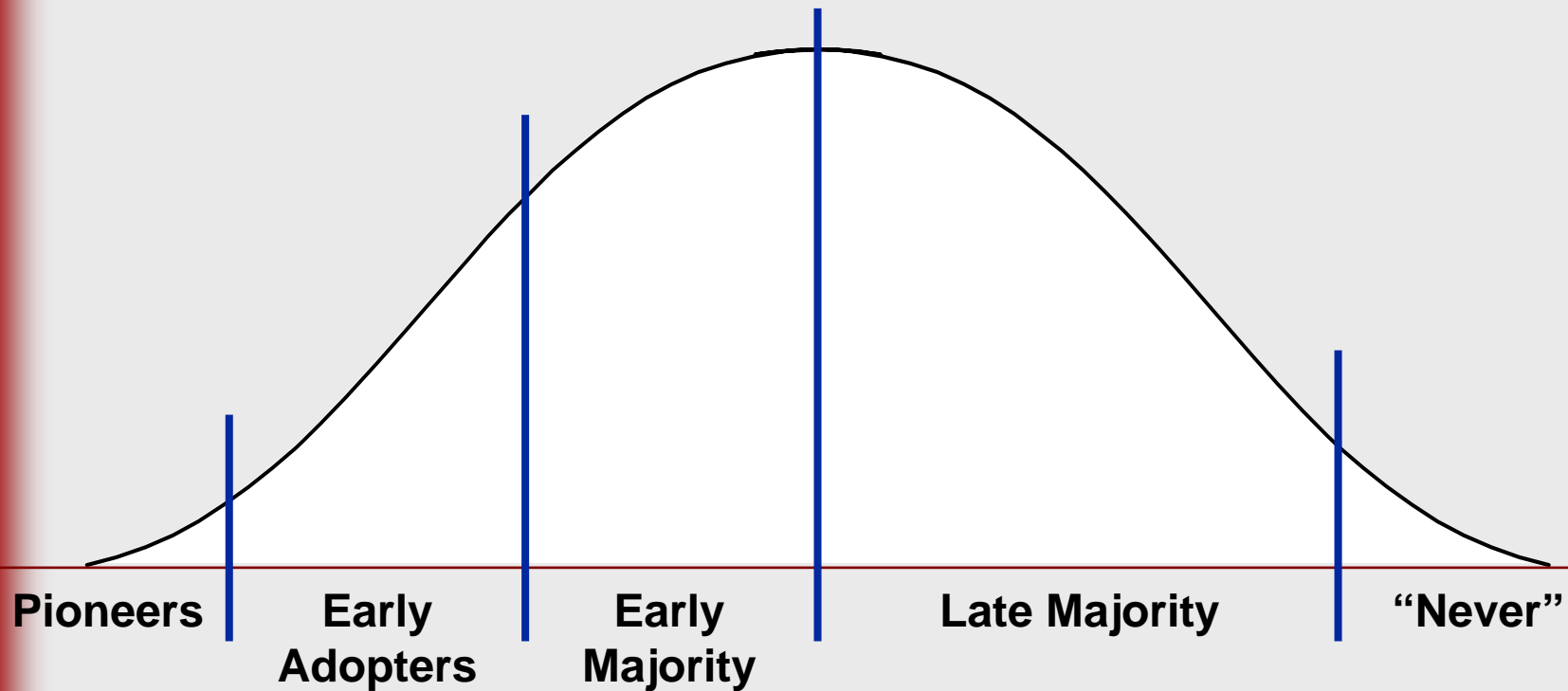


Change

- ◆ Change is a pervasive aspect of our lives and almost a necessity for economic survival.

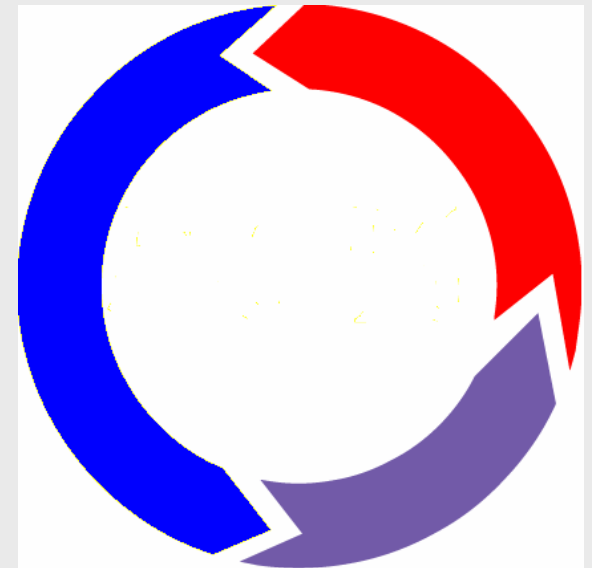


Process Adoption Curve



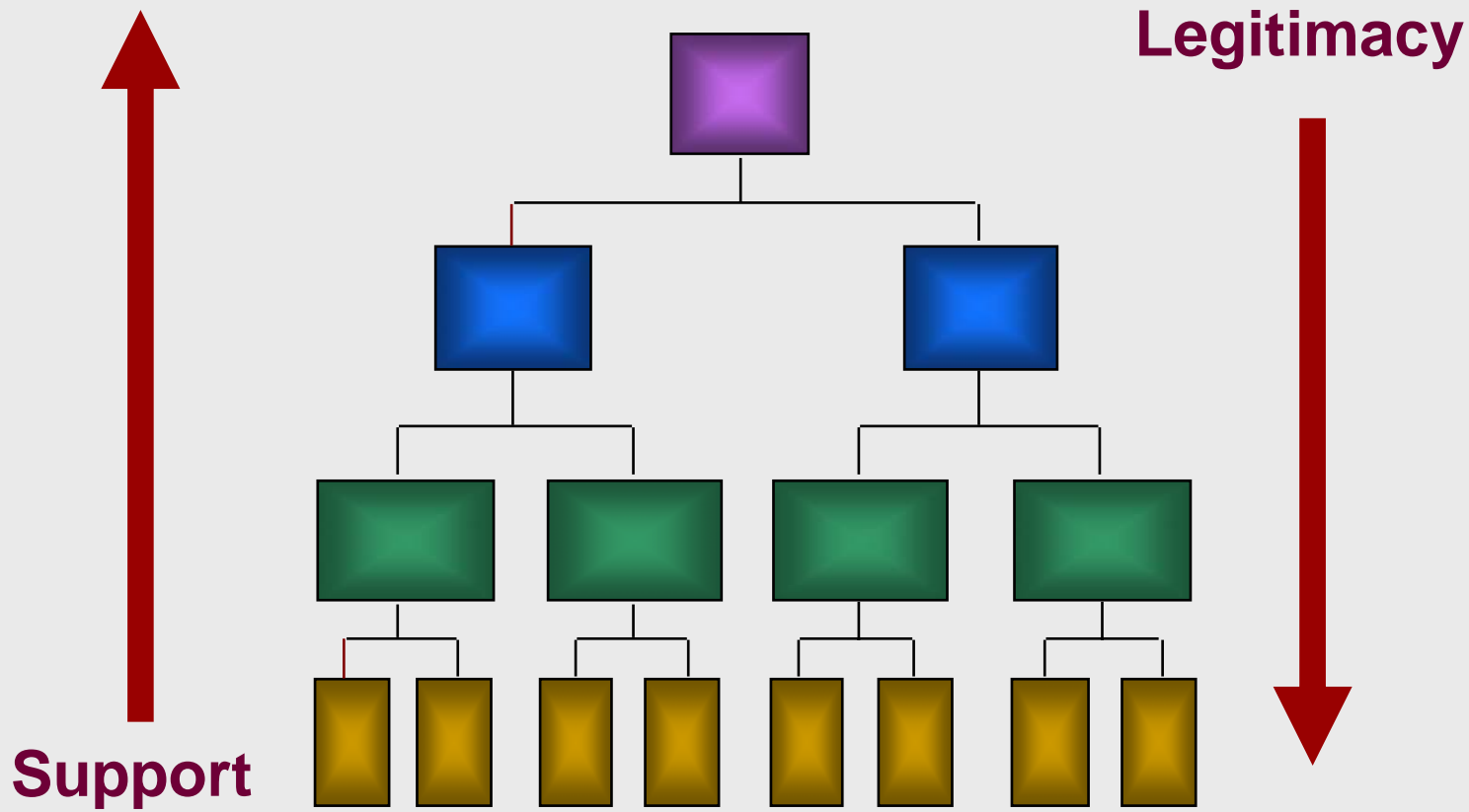
Principles of Process Change

- ◆ Major changes must be sponsored by Senior Management
- ◆ Focus on fixing the process, not assigning the blame
- ◆ Understand current process first
- ◆ Change is continuous
- ◆ Improvement requires investment
- ◆ Retaining improvement requires periodic reinforcement



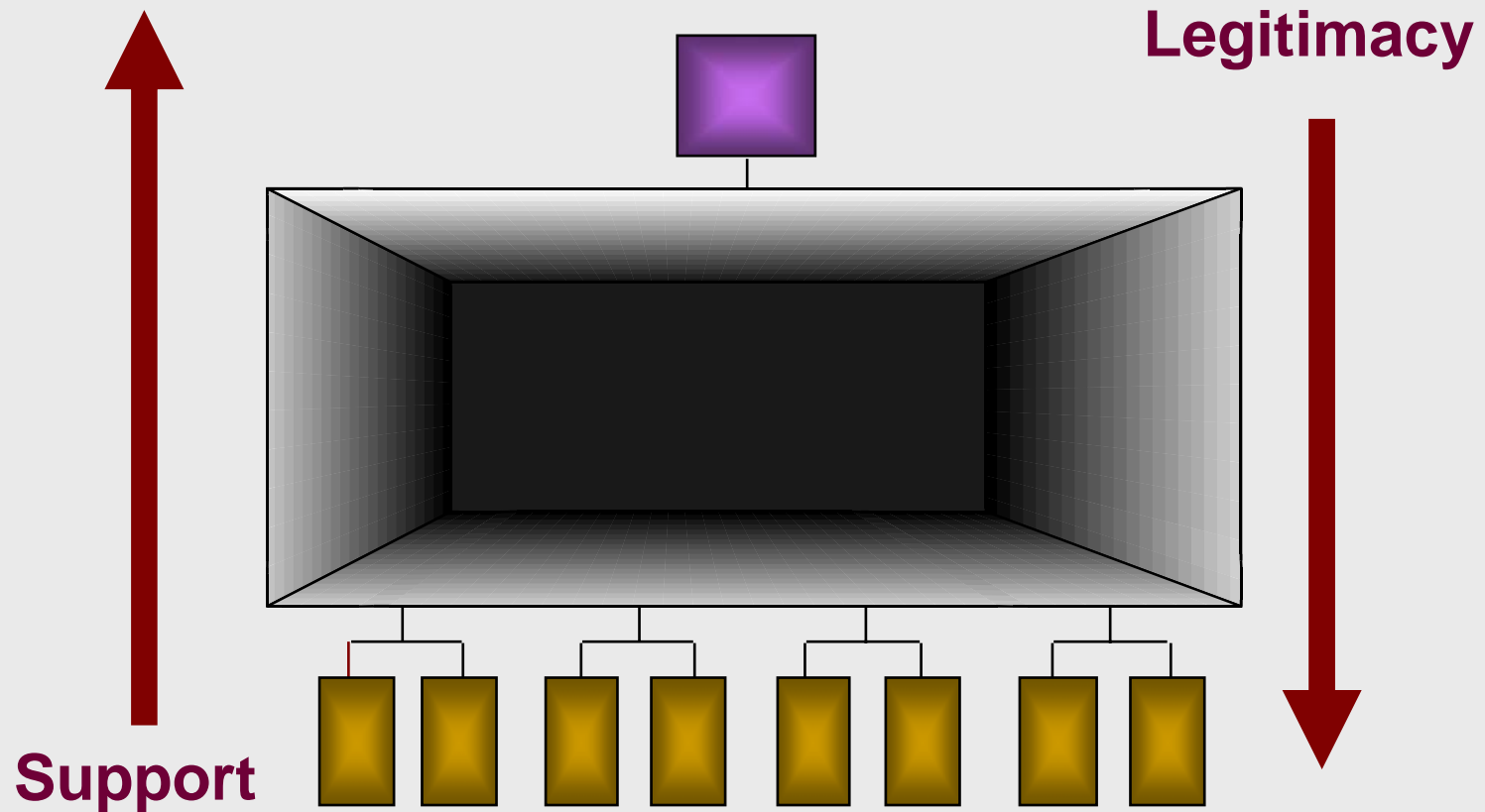


Building Support for Change

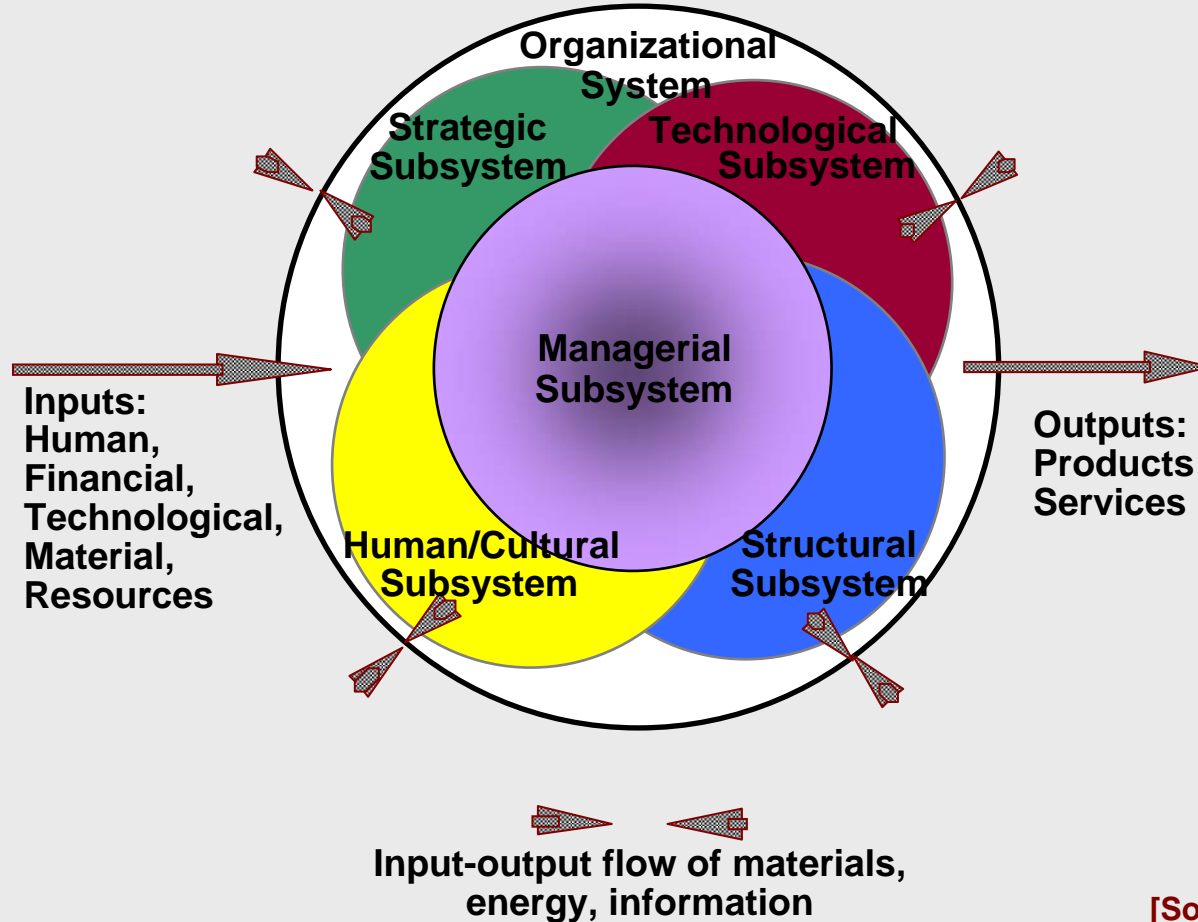


[courtesy JMahr]

Building Support for Change - 2



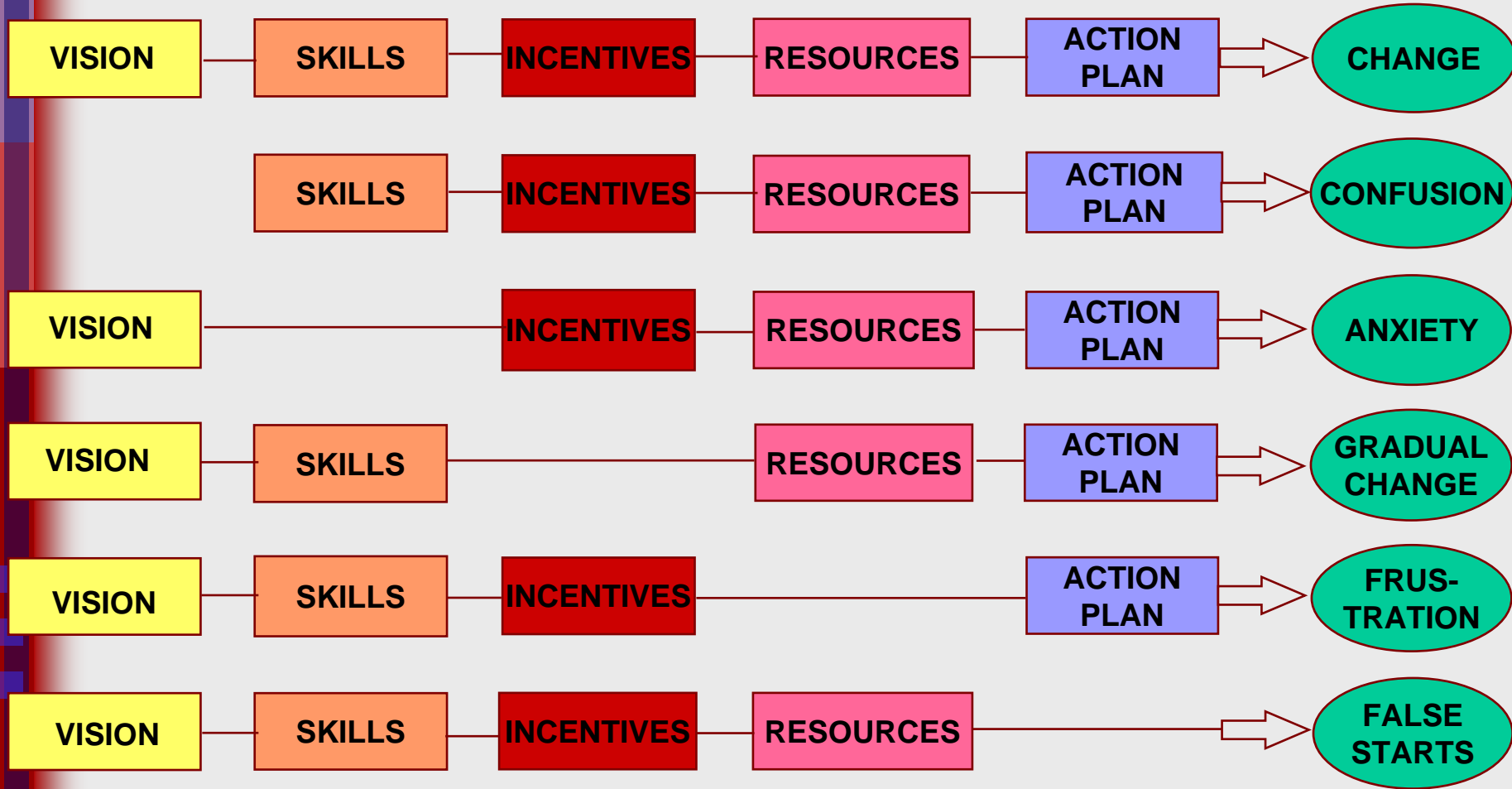
Organizations as Systems



[Source: Morgan, 1986]



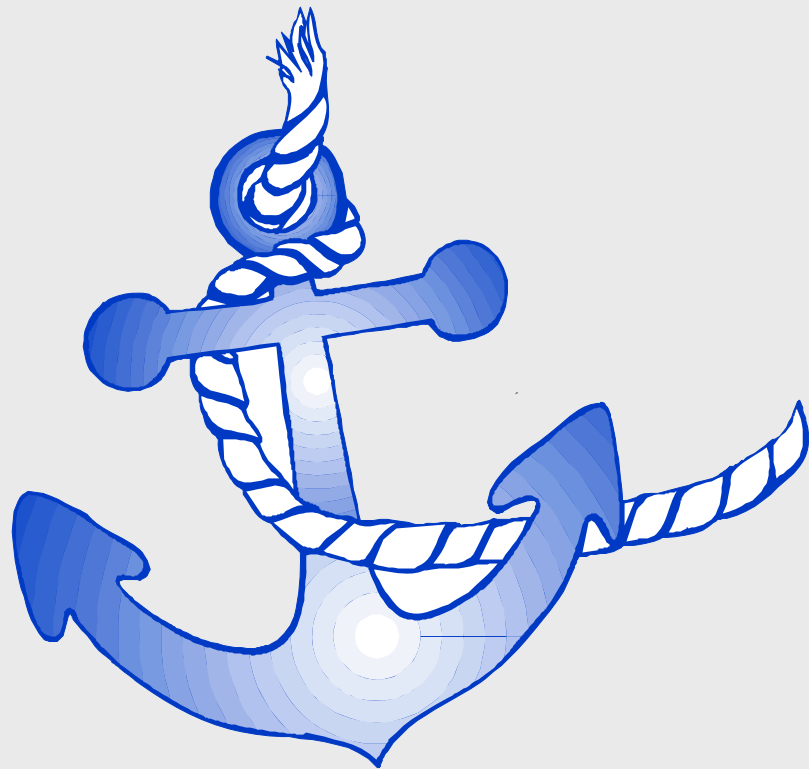
Managing Complex Change Requirements



“Managing Technological Change”
Carnegie Mellon University
Software Engineering Institute

What People Need During Transition

- ◆ Information
- ◆ Inclusion
- ◆ Support
- ◆ Safety
- ◆ Skills
- ◆ Freedom from blame
- ◆ Rewards



“Managing Technological Change”
Carnegie Mellon University
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Attributes of Successful Changes

- ◆ Management Sponsorship
- ◆ The change is consistent with the organization's values, mission, and strategy
- ◆ Buy-in by those who will be affected
- ◆ Training
- ◆ Communication
- ◆ Reward system is changed



Change Effort Roles

- ◆ Inventors
- ◆ Entrepreneurs
- ◆ Integrators
- ◆ Experts
- ◆ Managers (Middle Managers)
- ◆ Sponsors (Senior Managers)





Sponsors / Senior Managers

- ◆ Provide top management credibility and support for change projects
- ◆ Are prime communicators in interpreting how the change fits into the overall culture and vision of the organization
- ◆ Focus on relating the change effort to the broader goals of the organization
- ◆ Communicate why the change is needed to the total organization

Middle Managers

◆ Middle Managers

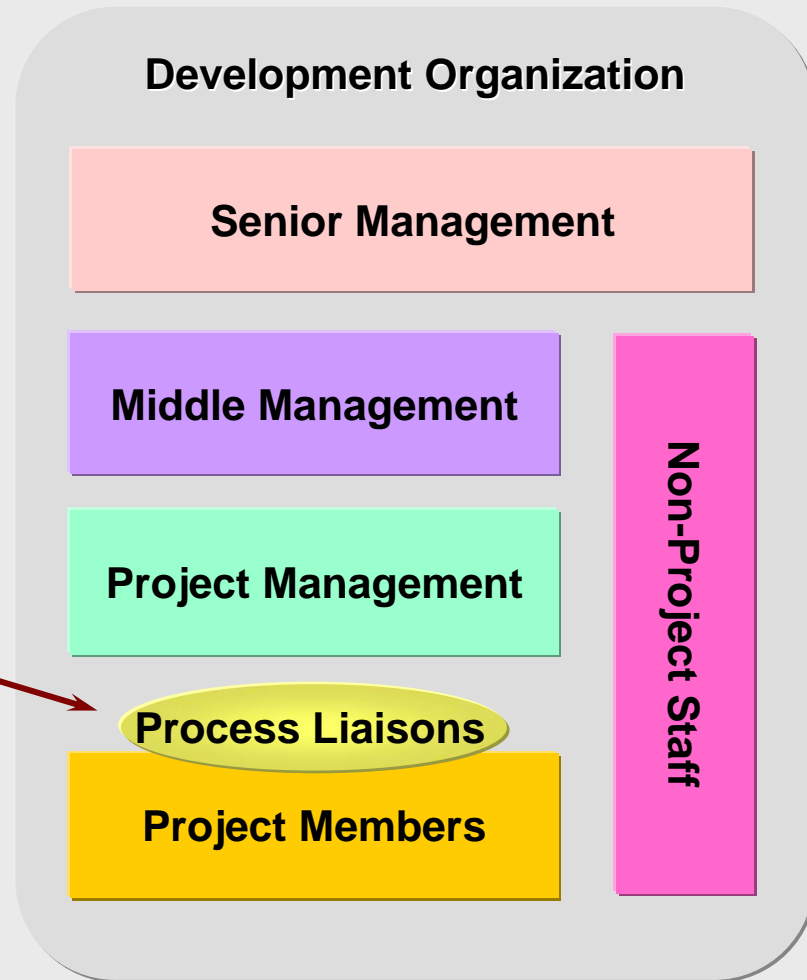
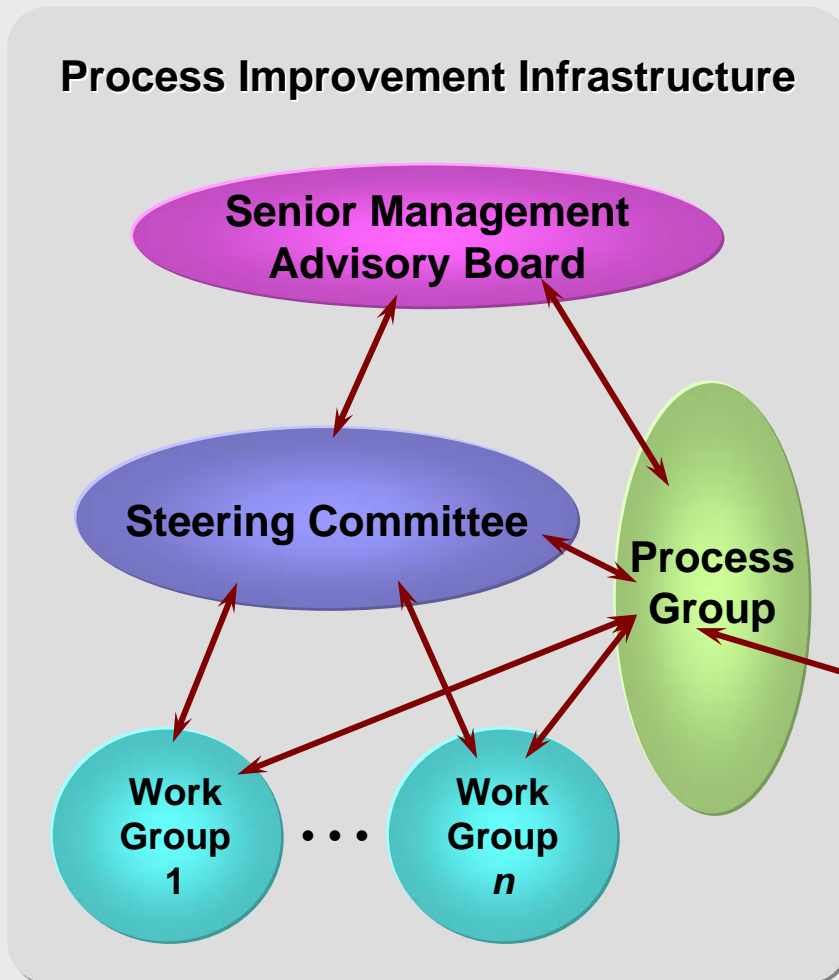
- ◆ Simplifies/interprets the direction provided by Senior Management
- ◆ Delegates responsibility to Project Managers and Leads
- ◆ Assigns priorities based on organization's business objectives and vision
- ◆ Focuses on getting the job done at all costs
- ◆ Serves as part of the Process Improvement Steering Group
- ◆ Reports progress to the Sponsors or Senior Management including process improvement progress





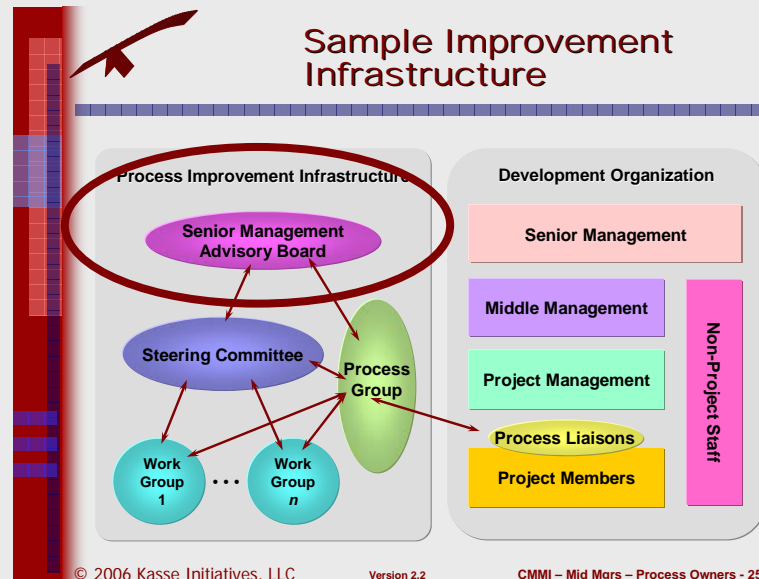
Sample Process Improvement Infrastructure

Sample Improvement Infrastructure



Senior Management Advisory Board (SMAB)

- ◆ Initially and continuously share the organization or business unit's vision and business objectives
 - ◇ Helps individuals to realize the value of their efforts in their everyday work and the value of the process improvement effort
- ◆ Relates the change effort to the broader goals of the organization (business strategy)



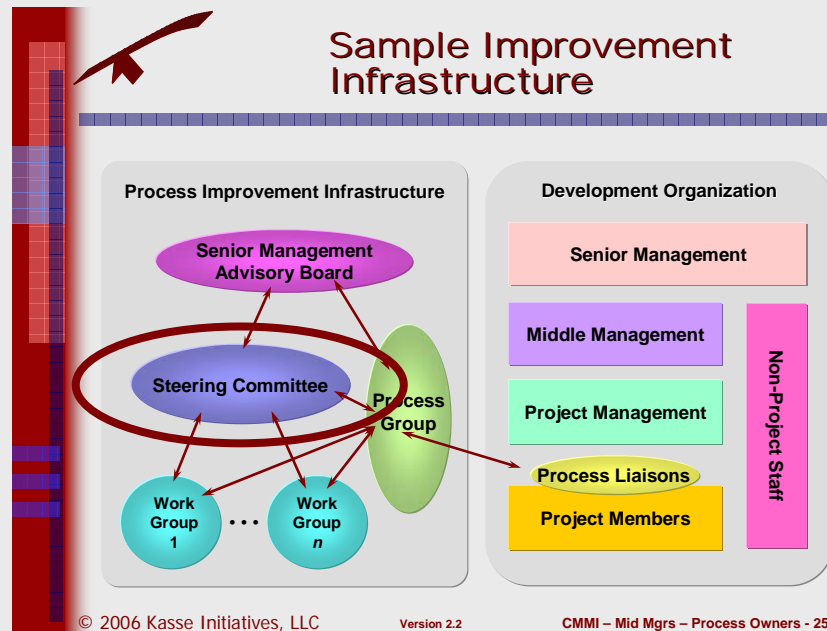


Senior Management Advisory Board (SMAB) - 2

- ◆ Looks for measurable improvements to support the business objectives
- ◆ Creates the environment to ensure process improvement becomes a part of the culture and vision of the organization
 - ◇ Demonstrates regular and consistent visible support
 - ◆ for specific change actions
 - ◆ for continuous process improvement in general
- ◆ Communicates why the change is needed to the total organization
 - ◇ Approves/protects budget for the process improvement initiative
- ◆ Ensures that the necessary resources are available in a timely fashion

Steering Committee

- ◆ Ensures that process improvement activities are in line with the business goals as established by the SMAB
 - ◇ Reviews the proposed budget for the improvement effort
 - ◇ Makes recommendations to the SMAB regarding program direction, budget, and program risks



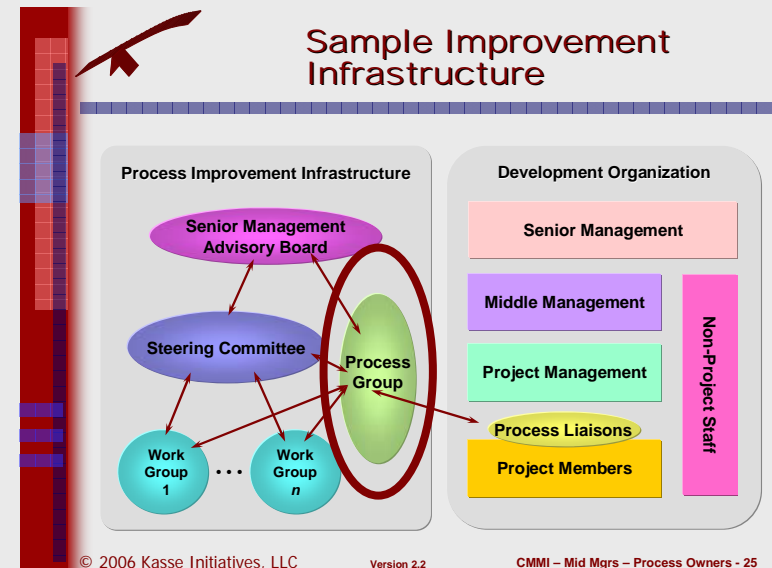


Steering Committee - 2

- ◆ Ensures that the necessary resources for the Working Groups and Process Group are available in a timely fashion
 - ◇ Establishes the WGs for specific purposes
 - ◇ Supports, where needed, negotiations for people's time
- ◆ Conducts program oversight reviews on a periodic basis
 - ◇ Ensures process improvement activities progress in line with documented budgets and plans
 - ◇ Performs or delegates review/approval of WG deliverables
- ◆ Provides visible support for the Process Group and WGs

Process Group

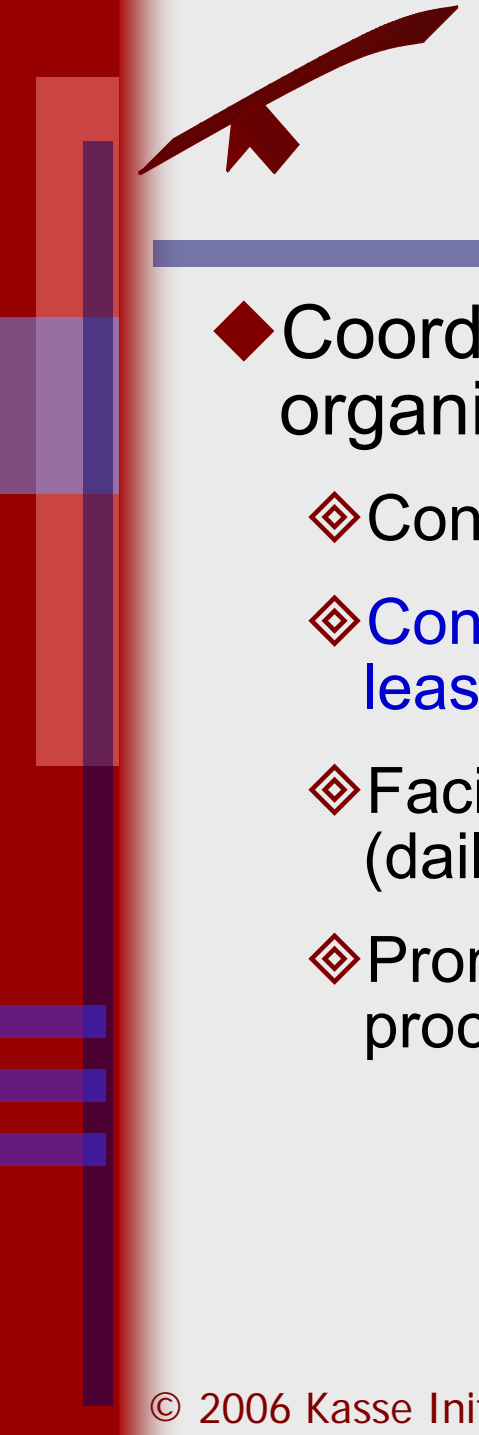
- ◆ Focal group for action planning, process improvement, technology insertion, etc.
- ◆ Channel for institutionalizing knowledge of process methods, practices, and technology
- ◆ Champion of change
- ◆ Facilitator of improvement efforts at all levels
 - ◇ Organization
 - ◇ Project
 - ◇ Individual





What Does the Process Group Have to Know?

- ◆ Senior management strategic direction
- ◆ Organizational culture
- ◆ Organizational structure
- ◆ General knowledge of application domains
- ◆ Knowledge of modern software engineering techniques and methods
- ◆ Knowledge of software engineering standards (DoD, MOD, IEEE, ISO)
- ◆ Knowledge of software support activities such as QA and CM
- ◆ Managing Change
- ◆ Team Building
- ◆ Collaborative Consulting Skills
- ◆ Technology Transition
- ◆ Project Management
- ◆ Metrics

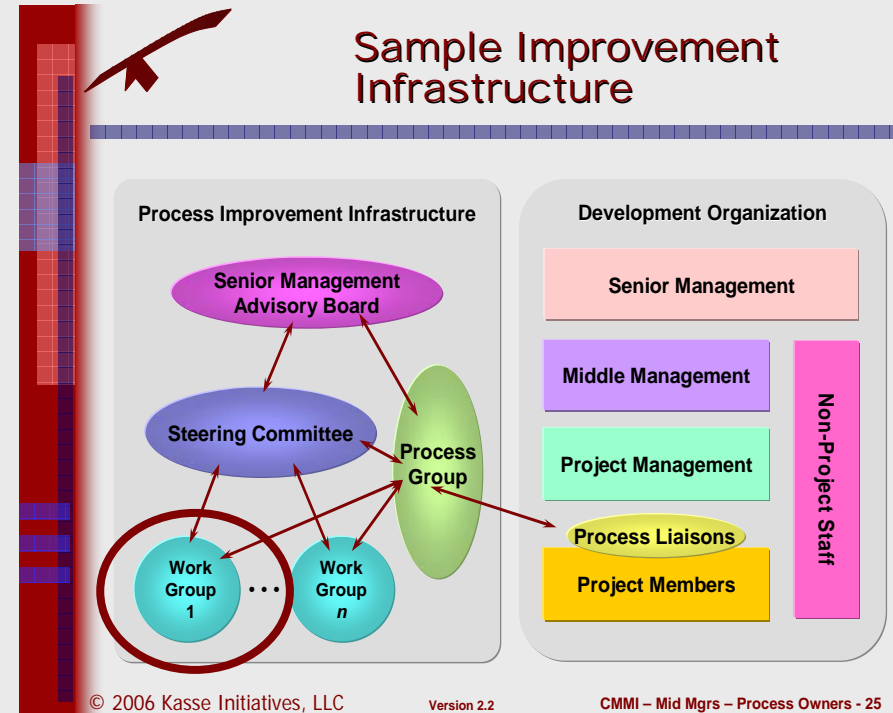


Purpose of the Process Group

- ◆ Coordinate up, down, and across the organization
 - ◆ Conducts periodic SMAB reviews (at least quarterly)
 - ◆ Conducts periodic Steering Committee reviews (at least monthly)
 - ◆ Facilitates the activities of the Working Groups (daily)
 - ◆ Promotes technical awareness and education about process improvement

Working Groups (WGs)

- ◆ Develop the action plan for a specific focus area
- ◆ Develop new or improved processes, procedures, guidelines, templates, etc.
 - ◇ Based on a formally documented and approved plan
- ◆ Identify and evaluates technologies based on the organization's and project's processes
- ◆ Suggest and/or develop training plans
- ◆ Support the piloting of those processes



- ◆ Evaluate pilot performance and revise the processes as necessary
- ◆ Report process improvement progress to the Steering Committee
- ◆ Share lessons learned on the Working Group with other Working Groups and project members
- ◆ Support the institutionalization of the tested and approved processes



Proposed Membership of WGs

- ◆ WG Leader - ($\geq 50\%$)
- ◆ Core Members - ($\geq 30\%$)
- ◆ Process Group Representative - ($\geq 100\%$)
- ◆ QA Representative - ($\geq 30\%$)
- ◆ Members - ($\geq 20\%$)
- ◆ Consultants - (5-10%)
- ◆ Reviewers - (5%)



Middle Managers as Process Owners



Middle Managers as Process Owners

- ◆ Process owners are often associated with those individuals who have the most technical expertise to lead a working group
- ◆ Middle Managers are the “owners” of the resources that must make the project successful AND the process improvement effort to happen
- ◆ When Middle Managers are the Process Owners, Senior Management is ensured that his or her vision and business objectives are being considered for each piece of the process improvement effort
 - ◇ Process improvement is no longer an exercise to satisfy the requirements of a model such as the CMMI



Middle Managers as Process Owners - 2

- ◆ Middle Managers **take the responsibility** to ensure that the Process Group and especially the Working Groups have the **proper resources, tools, and guidance** to develop new processes or review existing ones and get them deployed on the projects
- ◆ Middle Managers must communicate with the Process Group and the Working Group members that are performing the process improvement activities for their focus area to:
 - ◇ Understand what progress is being made against the CMMI and other related standards and models
 - ◇ What barriers are holding the process improvement progress back
 - ◇ What changes must be made to make the process improvement effort more effective



Middle Managers as Process Owners - 3

- ◆ Middle Managers can:
 - ◆ Offer the Working Groups guidance based on their interaction with the Senior Management team
 - ◆ Effectively utilize their power and status to overcome problems hindering the process improvement progress
 - ◆ Run interference for the change team
 - ◆ Protect resources for critical projects including the process improvement project so that all necessary work gets done
 - ◆ Continually update Senior Management on change process steps



Middle Managers as Process Owners - 4

- ◆ Middle Managers can then ask for measures from the processes that are being developed and deployed on the projects and put themselves in a position to make risk management decisions based on data from process measures and not just “hope”
 - ◇ Increases their overall decision making capability
 - ◇ Puts them into a “control” position
- ◆ Senior Managers can expect accurate process improvement progress reporting




Summary

- ◆ Make Middle Managers the Process Owners ensures that:
 - ◆ Ensure that Senior Management' vision and business objectives are being considered for each piece of the process improvement effort
 - ◆ They take the responsibility to ensure that the Process Group and especially the Working Groups have the proper resources, tools, and guidance
 - ◆ They communicate regularly with the Process Group and the Working Group members
 - ◆ Their power and status are effectively utilized to overcome problems hindering the process improvement progress
 - ◆ They protect resources for critical projects including the process improvement project
 - ◆ Accurate process improvement progress is reported to senior management against vision and business objectives




Case Study ING (Postbank)

- ◆ Process improvement effort started in June 1996 with training and an assessment
- ◆ Process Group leader was given responsibility for the success of the process improvement effort and for achieving Maturity Level 2
- ◆ Middle Managers were not involved and frequently put up barriers to the Process Group
- ◆ Quality Assurance was not treated seriously
- ◆ Measurement existed at a bare minimum level



Case Study ING (Postbank) - 2

- ◆ After one full year had passed there was little progress to report
- ◆ Middle Managers were identified and assigned as “Process Owners”
 - ◆ Hated Process Consultants
 - ◆ Hated CMM
 - ◆ Hated Process Improvement
- ◆ Senior Manager held monthly process improvement progress meeting and asked Middle Managers what the progress was in regards to the focus area to which they had been assigned




Case Study ING (Postbank) - 3

◆ Quality Assurance became Quality Management

- ◆ Core Team Members had 15-20 years of experience as developers, managers, and supplier managers (1%) of total development staff of 600
- ◆ Every project had a less experienced Quality Coordinator

◆ The cultural change component of the process improvement effort was recognized and one culture coach was trained and assigned to every 10 developers



Case Study

ING (Postbank) - 4

- ◆ Chief Architect became head of organizational-level CCB representing the architecture and business direction of the organization
- ◆ Process Group gained adequate numbers of full and part-time ($\geq 50\%$)
- ◆ Middle Managers started to receive quantitative information about the successes and failures of the process improvement initiatives they were supporting putting them in the control position they had always sought
- ◆ Senior Manager clearly saw the process improvement initiative supporting their vision and business objectives



Thank You





Kasse Initiatives Contact Information

United States Address

Tim Kasse
CEO & Principal Consultant
Kasse Initiatives LLC
PMB 293
1900 Preston Road # 267
Plano, Texas 75093
United States of America
+1 972 – 987 – 7606
Business
+1 972 – 987 – 7607 FAX

Europe Address

Tim Kasse
CEO & Principal Consultant
Niedereschacher Strasse 6
78052 Villingen-
Schwenningen
Germany
49(0)7721- 407 851
Business
49(0)7721- 407 852 Fax

tim.kasse@kasseinitiatives.com

www.kasseinitiatives.com

Kasse Initiatives Contact Information

Pamela S. Rost
Executive VP
Business Development

Kasse Initiatives LLC

PMB 293

1900 Preston Road # 267

Plano, Texas 75093

United States of America

+1 972 – 987 – 9878 Business

+1 972 – 987 – 7607 FAX

pamelia.rost@kasseinitiatives.com

www.kasseinitiatives.com



Kasse Initiatives Contact Information



Ingo Tegtmeier
Operations Manager

Kasse Initiatives LLC

Niedereschacher Strasse 6

78052 Villingen-
Schwenningen

Germany

+49 7721 407 851 –
Business

+49 7721 407 852 – FAX

Ingo.tegtmeier@kasseinitiatives.com

www.kasseinitiatives.com