Choosing the Right PI Pilot: Using Readiness & Fit Analysis for Adoption Feasibility Pilots

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AGENDA

Two Types of Pilots are Needed for Process Improvement

Goals of an Adoption Feasibility Pilot

Using RFA to Find the Right Adoption Feasibility Pilots

Brief Description of Readiness & Fit Analysis (RFA)

Summary

Two Types of Process Improvement Pilots

Technical Feasibility Pilots

Goal: Ensure that the process being piloted meets its purpose and objectives when performed by appropriately skilled personnel

Appropriate Approach: Find people of appropriate skill level and do a process peer review or walk through, or if feasible, observe the execution of the process. Once technical feasibility is established, move on to adoption feasibility

Adoption Feasibility Pilots

Goal: Ensure that the adoption risks of the process being piloted are understood and that mitigations are effective within the intended population

Appropriate approach: Identify the relevant characteristics of the adopter population, identify adoption risks and mitigations, and observe execution of the process by groups that reflect those characteristics

What Happens if You Ignore….

Technical Feasibility Pilots?

- New process may not meet its objectives
- New process may cause unintended negative consequences to other processes that were working before
- When you get resistance to the new process, you won't know if it's a technical issue or an adoption issue

Adoption Feasibility Pilots?

- Some segments of your population may adopt the process readily, while others do not
- Surprises in where and what level of resistance to the process are being seen
- A "good" process technically may be rejected due to adoption risks not being properly mitigated

Focus of this Presentation

Finding the right groups for ***adoption*** feasibility pilots

Selected criteria for good adoption feasibility pilots:

- Technical feasibility of the process has already been established
- Relevant characteristics of the adoption population are understood
  - Rogers adoption curve categories
  - Predisposition to new processes
  - …..
- **Adoption risks for each pilot population are understood**
  - **This is what Readiness & Fit Analysis supports directly**
- Where feasible, risk mitigation actions have been taken to minimize effects of adoption risks
  - Transition mechanisms have been tailored to the needs of the population
  - Rewards and incentives have been adjusted to minimize negative effects of perceived failures
  - ….

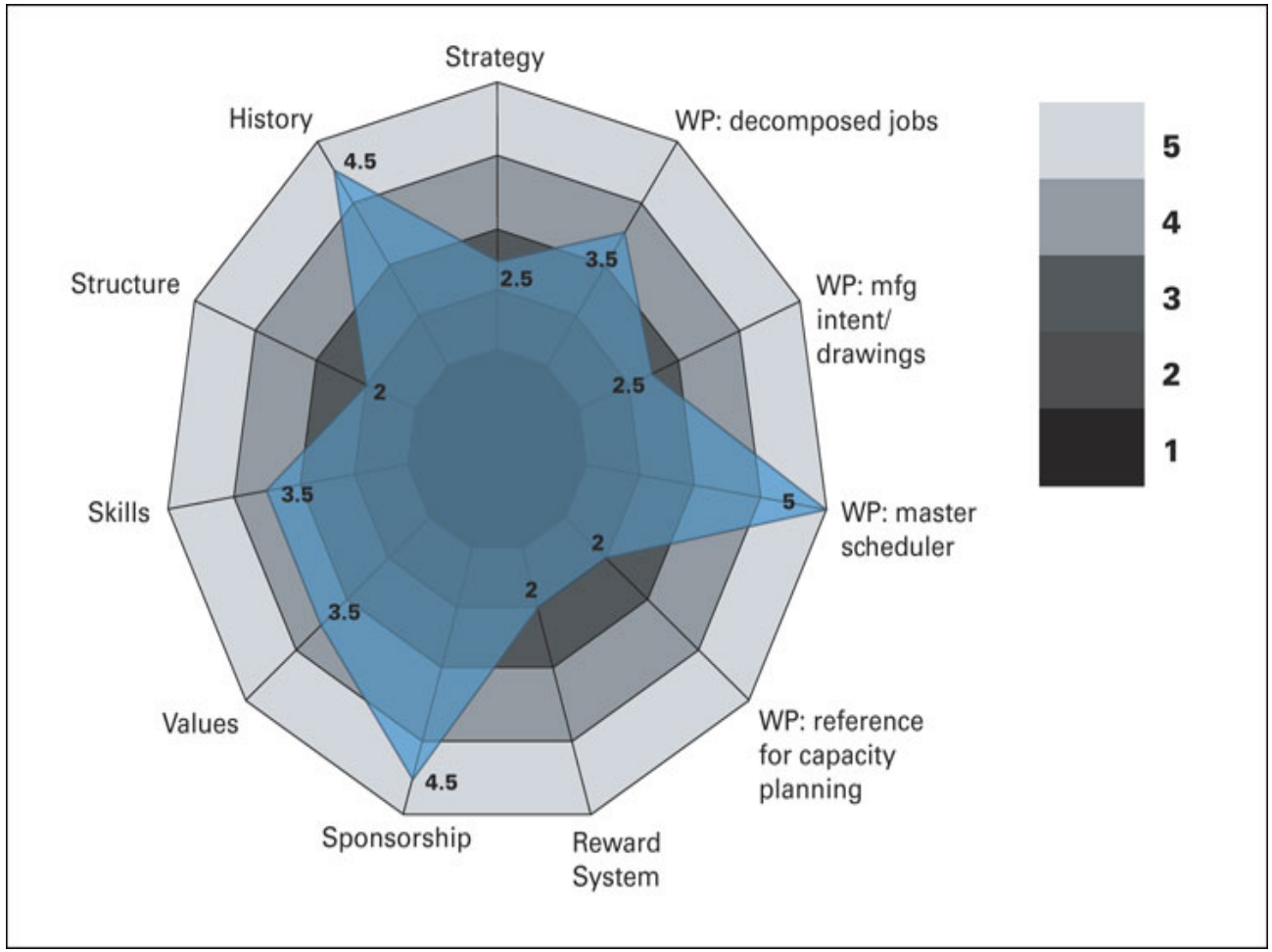
RFA Organizes Typical Adoption Mismatch Areas For You to Analyze/Deal With Explicitly

Readiness/Fit Analysis Categories include:

- Fit of technology with business strategy
- *Fit of technology with current work practices—this is actually the main focus of CMMI appraisals, but when adopting other technologies, this still needs to be considered*
- Fit of technology with current organizational climate (skills, structure, values, reward system, sponsorship)
- Prior history of technology adoption success/failure

A profile that shows the general "fit" of the technology to the organization can be generated by analyzing the technology's implications for each factor against the organization's current state

Example RFA Profile for Company Adopting a Manufacturing Execution System (MES)



The Dimensions of Fit

- business strategy
- *work practices — for practice-based technologies like CMMI, these are covered in a practices appraisal like SCAMPI-for Quickstart, Workshop 3*
- reward system
- sponsorship
- values
- skills
- structure
- history (with technology adoption success/failure)

General Approach to Conducting RFA

Get together the “right” team to do the evaluation:

- For a practice-based technology (i.e. CMMI), likely to be the “management steering group” for the improvement and the EPG
  - In using with pilot evaluations, including leaders from the potential pilot areas is strongly recommended
- For a software technology implementation (e.g. a collaboration tool selection/implementation), the management team responsible for the group adopting the tool and the selection/implementation team

Each individual receives a form to use to provide their individual evaluation of the fit of the technology with their perception of the organization along each dimension

Gather the individual forms and do a simple aggregation/averaging to get a first cut at a profile

- Be sure to differentiate results from different pilot candidates!

Technology Assumptions Table for CMMI-1

Fit Dimension	CMMI Assumptions
Strategy	• Improving operations is a priority • Improving effectiveness of processes to achieve better performance is an accepted approach
Work Practices	• Will be covered in workshop 3
Reward system	• Orgn rewards participation in overall efficiency over individual dept efficiency • Orgn rewards improvement in skills related to process management and support • Orgn rewards fire prevention more than firefighting
Sponsorship	• Strong, consistent support for "new way" is exhibited by leadership • Penalties for avoiding new system are consistently applied

Technology Assumptions Table for CMMI-2

Fit Dimension	CMMI Assumption
Values	• Metrics are used to improve, not punish • Participative management is encouraged • Mistakes are tolerated, as long as they lead to improved processes/performance
Skills	• Project planning/mgmt skills (enough to manage a process improvement project) are available • Organization change management skills are available
Structure	• Clear definition of roles/ responsibilities exists • Management is a role that is responsible for effectiveness of the processes in use within the organization, not a performing role, in terms of delivering products and services • Activities can be rationalized and organized around the concept of projects
History	• Helpful if other practice-based technologies have been successfully adopted with this mgmt team

Things to Think About for *Strategy Fit*

CMMI Assumptions:

- Improving operations is a priority
- Improving effectiveness of processes to achieve better performance is an accepted approach

Where is your organization's strategy focused in comparison to the strategy focus of CMMI?

- For example, is improving operations, or focusing only on bringing the most advanced technology to the market, regardless of operational efficiencies/effectiveness?

What other strategies is the organization engaged in that may affect fit (either positively or negatively) with the assumed strategies that CMMI supports?

Things to Think About for *Reward System Fit*

CMMI Assumptions:

- **Organization rewards participation in overall efficiency over individual dept efficiency**
- Organization rewards improvement in skills related to process management and support
- Organization rewards fire prevention more than fire fighting

- Are the current performance measures used consistent with the new technology's requirements?
- Does the current reward system support the change (promotions and bonuses)?
- Is the current reward system able to support the new way (even if the results are NOT perfect)?
- Is the current system able to penalize the old way (even if the results ARE perfect)?
- Do we reward fire fighting or fire prevention?

REMAINING SLIDES WITH QUESTIONS ARE IN THE BACKUP SECTION OF THIS PRESENTATION

Not presented due to time constraints….

Selected Sanitized Risks from a Customer

Strategy-related:

Given new business and regenerated growth, resources will be fully utilized in this quest rather than improving process performance.

A higher force here than process improvement is customer management.

The focus is toward winning business versus improvement.

Sponsorship-related:

Rotation of top management is frequent, and consistency of sponsorship is not maintained.

Given that we built a fear culture at the senior management review, there is a possibility that we will drive a fear-based culture throughout the organization.

Top-management time may not be sufficient to support full rollout.

What do you do with the Risks?

For *selecting* pilots:

- Review the profiles and the actual risks that were identified and match them against individual adoption feasibility goals.
- Choose the pilot that appears to best meet your adoption pilot goals

Once a pilot has been selected:

- Decide which of the risks to actively mitigate with new/improved transition mechanisms
- Develop/acquire the selected transition mechanisms
- Deploy the process to the pilot site and observe/record results
- Review pilot results against the risks predicted:
  - Which risks manifested?
  - Which risks manifested but were effectively mitigated though your actions?
  - Which risks appear to have been avoided? Was one or more of your new/improved transition mechanisms a likely reason?
- Incorporate lessons learned from this pilot into RFA guidance for future pilots

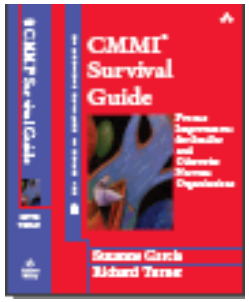
Summary

It is useful to differentiate technical feasibility pilots from adoption feasibility pilots

RFA is a useful approach for finding the right adoption pilots for your PI effort

- Its profiles can be used to compare different choices
- The identified risks can be used to develop or acquire transition mechanisms that help to mitigate specific risks

More detailed guidance on conducting RFA can be found in:



CMMI Survival Guide: Just Enough Process Improvement

Chapters 9 and 15

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BACKUP SLIDES

Things to Think About for *Sponsorship Fit*

CMMI Assumptions:

- Strong, consistent support for "new way“ is exhibited by leadership
- Penalties for avoiding new system are consistently applied

When a significant technology is being introduced:

- Are leaders willing to visibly change the way they conduct their business to support the change?
- Do leaders behave in a way that is consistent with and supports the new technology?
- Do leaders focus an appropriate amount of their time on activities that directly support a change?
- Are scarce resources allocated in ways that support a change?
- When problems occur, are resources pulled from projects doing it the old way and not pulled from those doing it the new way?
- Is the new reward system honored without exception?

Things to Think About for *Values Fit*

CMMI Assumptions:

- Metrics are used to improve, not punish
- Participative management is encouraged
- Mistakes are tolerated, as long as they lead to improved processes/performance

- Are measures used fairly to make decisions rather than politics?
- Is it acceptable to talk to people outside your part of the organization to accomplish management and coordination tasks?
- Are staff rewarded for highlighting problems “in process” rather than waiting until after your part of the process is complete?

Things to Think About for *Skills Fit* 1

CMMI Assumptions:

- Project planning/mgmt skills (enough to manage a process improvement project) are available
- Organization change management skills are available

Do **managerial skills** include

- scoping the work
- resourcing the project
- planning the work
- communicating the plan and schedule
- tracking performance
- dealing with issues before they become problems

Things to Think About for *Skills Fit* 2

CMMI Assumptions:

- Project planning/mgmt skills (enough to manage a process improvement project) are available
- Organization change management skills are available

Do **people management** skills include ability to recognize the difference between

- a skill problem
- a behavior problem
- an understanding problem
- a motivation problem

and the wisdom to know how to deal with each?

Things to Think About for *Structure Fit*

CMMI Assumptions:

- Clear definition of roles/ responsibilities exists
- Management is a role that is responsible for effectiveness of the processes in use within the organization, not a performing role, in terms of delivering products and services
- Activities can be rationalized and organized around the concept of projects

- Are hand-offs between people/organizational units clear ?
- Does management focus on building and supporting the infrastructure needed to use the processes more than focusing on actually building the products/delivering services?
- Are there clear lines of authority and responsibility to deal with those aspects of the new way that may be the failure points in the use of the new technology?
- Is it easy/hard to characterize work in the organization as projects?

History—Why Look at History as a Separate Factor?

Without some change in the organizational climate to improve the fit with the technology (or a change in the technology to improve its fit with the current climate), prior success/failure history in implementing a new technology is one of the best predictors of future performance.

Things to Think About for *History Fit* 1

CMMI Assumptions:

- Helpful if other practice-based technologies have been successfully adopted with this mgmt team

In relation to recent technology adoptions…

- are the people who were intended to use the technology actually using it today?
- were the changes in work practices that were needed to make the technology successful understood ahead of the adoption? During? After? Did the work practice changes actually take place?
- did leadership support (or its lack) make it easier or harder to successfully adopt the technology?

Things to Think About for *History Fit 2*

CMMI Assumptions:

- Helpful if other practice-based technologies have been successfully adopted with this mgmt team

In relation to recent technology adoptions…

- was authority/responsibility changed to support the adoption?
- were rewards and incentives changed to support the new way and sanction the old way?
- was training/skill development in the new technology effective and timely?