Benefits of Multi-Model Process Improvements in Small – Medium Businesses

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Agenda: Benefits of Multi-Model Process Improvements in Small – Medium Businesses

- Process Improvement Factors in Small – Medium Businesses
- Multi-Model Process Improvement Scenarios
- Multi-Model Commonalities
- Multi-Model Process Improvement Staff
- Steps for Implementing Multi-Model Process Improvement in Small – Medium Businesses
- Strategy Map for Using Audits and Appraisals
- Depth of ISO 9001-2000/CMMI-DEV v1.2 Coverage
- Multi-Model Process Improvement Benefits and Success Factors for Small – Medium Businesses
- Lessons Learned
Process Improvement Success Factors in Small – Medium Organizations

Success Factors in Small – Medium Organizations

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
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<tbody>
<tr>
<td>Simpler organization structure</td>
<td>Efficient communication skills</td>
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<tr>
<td>Flexible processes</td>
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Scenario for Implementing Multi-Model Process Improvement in Small – Medium Businesses

Small to medium businesses often function in focused markets as:
- suppliers of specialized on-site technical services or products
- domain specialists
- staff augmentation

Costs of implementing process improvement models are considered key investments in these vulnerable cash flow environments.

Both near and long term cash flow analysis typically includes factors such as:
1. customer base stability
2. revenue cycles
3. costs of acquiring appropriate resources and skills in the process improvement models
Understanding and taking advantage of commonality and overlap in model functions and architectures is a key factor in planning implementation of different models.

Planning implementation activities typically includes assessment of critical factors such as:
1. required resources
2. training
3. non-intrusive scheduling and
4. risk management.

The resources and skills required for depth of understanding the functions and architectures of multi-models is acquired from a range of possibilities such as outsourcing, hiring expertise, training current staff or combinations.

Selection of any of these possibilities is both costly and risky as there are no guarantees of success in process improvement.
Planning a risk management strategy typically includes identifying sources such as:

1. Limited resources
2. Potential disruptions in cash flow
3. Staff turnover rate
4. Stability of current customer base
5. Projection of market growth
6. Required schedules for certifications or appraisals

Improving processes when implementing any model requires some changing of current staff functions. As a risk mitigation technique, small – medium businesses often customize a path of small, adjustable steps to improve functions. A path of small steps is typically effective in minimizing the initial staff disruption and controlling the spending rate.

An example of a path of small steps is a hybrid approach of acquiring expertise in ISO 9000 first, then leveraging on the implemented quality system to implement other models, such as AS9100 and CMMI constellations.
Multi-Model Commonalities

Measurement and Analysis

Continuous Improvement

CMMI

AS9100

ISO 9001:2000

Resource Management

Process Approach

Customer Focused
Frameworks of the ISO/CMMI models provides:

1. Increases in implementation efficiency due to redundancy in model functions

2. Minimal opportunities for conflicts with staff and resources with adequate model understanding
Steps for Implementing Multi-Model Process Improvement in Small – Medium Businesses

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Steps in Implementing Multi-Process Improvement Models

Understand business objectives of the company

ISO 9001-2000
AS9100
CMMI v1.2

New customers

Collect lessons learned and review status in customer base

Lost customers

Schedule slips

Model expertise

Revenue stability

Risk strategy

Staff disruptions

Implement model and track status

Develop implementation schedule

Provide cost, time & resource needs estimate

New customers

Lost customers

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Provide cost, time & resource needs estimate
A key activity in planning implementation of multi-process models is using the risk management functions of models, such as:

- ISO 9001–2000 internal audits
- CMMI SCAMPI Class C and B appraisals.
Depth of ISO 9001/ CMMI v1.2 Coverage

CMMI

Maturity Levels

Corrective / Preventive Actions
Design & Development Verification Validation
Purchasing CM Process
Document Control
Control of Records
Quality Manual
Internal Quality Audits
Control of Nonconforming Product/Service
Measurement & Analysis
Management Responsibility

Process performance managed using statistical tools and methods

AS9100 / ISO

 OID
 CAR

 OPP
 QPM

 RD
 PI
 VER

 OPD
 IPM
 VAL

 OPF
 OT
 TS

 DAR
 RSKM

 REQM
 PP
 PMC
 SAM

 MA
 PPQA
 CM

 Maturity Levels

 0
 1
 2
 3
 4
 5
### Multi-Model Process Improvement Benefits and Success Factors for Small – Medium Businesses

#### Process Improvement Implementation Success Factors

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<thead>
<tr>
<th>Success Factor</th>
<th>small settings</th>
<th>large organizations</th>
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#### Success Factor | Multi-Model Benefits

- **Flatter organization**
  - Less management levels in planning
  - Increased visibility
  - Increased staff interactions
  - More efficient buy-in
  - Increased sponsor commitment

- **Efficient communication skills**
  - More efficient cross training
## Multi-Model Process Improvement

### Benefits and Success Factor for Small – Medium Businesses (continued)

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### Success Factor

- **Flexible processes**
  - Early identification of improvements are less challenging to implement in existing processes.
  - Institutionalization cycles are usually shortened.

- **Depth of understanding of business goals and costs**
  - Documentation of process improvement goals increases staff awareness of business goals and impact on profitability.

- **Staff involvement**
  - Few staff members are often “owners” of key processes.
  - Staff members may wear “many different hats” and become cross-trained.

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CMMI Implementations in Small & Medium Organizations

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<td>Staff receptiveness to new ideas</td>
<td>Early identification of improvements are easily identified and more efficient to implement.</td>
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<td>Single staff members are the process “owners” and understand the process.</td>
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<td>Simpler process performance models</td>
<td>Existing processes usually have a simple measurement baseline established and rely on some type of forecasting to improve business health.</td>
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### Multi-Model Process Improvement

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<td>Process variance simpler to control</td>
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<td>Simpler to focus improvements on smaller set of services and products.</td>
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Lessons Learned in Implementing Multiple Process Improvement Models in Small – Medium Businesses

Avoid costly problems by understanding and taking advantage of commonality and overlap in the architectures of different process models.

Adequate model understanding is a prerequisite to plan implementation activities, required resources and manage risks.

Acquire resources and skills required for adequate understanding of multi-models from a combination of outsourcing, hiring or training existing staff.

The selection of the alternatives to gain expertise in the target process models is highly influenced by current revenue stream stability, staff turnover, required schedules and projected growth in the customer base.

Develop an affordable “small steps” process improvement path by hiring expertise in ISO 9001 - 2000, providing required staff training, and then leveraging on the implemented quality system to implement other models, such as AS9100 and CMMI constellations.
You have just seen benefits of multi-model process improvements in a small-medium business from the “30,000 feet” level.

Questions or Comments?