Strategic Planning: Selling a CMMI-based Improvement Effort to Senior Management

Aldo Dagnino and Andy Cordes
ABB Inc.
US Corporate Research Center
Raleigh, NC
Agenda

- ABB Overview
- Selling CMMI-based Improvement to Senior Management
  - Business Unit Level
  - Business Area Level
  - As a Strategic Technology at the Division Level
- Supporting CMMI-based Improvement as a Strategic Technology
- Summary
ABB Overview

- Leader in power and automation technologies
- Enable utility and industry customers to improve performance while lowering environmental impact
- The ABB Group of companies operates in more than 120 countries and employs approximately 110,000 people
- ABB became the first company in the world to sell 100,000 robots
- A vast majority of products at ABB have software and hardware components
ABB’s Products

- Power Products
- Power Systems
ABB’s Products

- Automation Products
- Process Automation
- Robotics
- ABB Software Process Initiative (ASPI)
- ASPI is composed of members from 2 ABB Corporate Research Centers (CRCs):
  - United States: Raleigh
  - Sweden: Vasteras
- Responsible for: Development of appraisal and improvement methodologies, evaluation and deployment of pilots within ABB for CMMI transition, PSP/TSP, etc.
Evolutionary Approach to Selling CMMI-based Improvements in ABB

- **First phase:**
  - CMMI sold at the level of local product development units

- **Second phase:**
  - CMMI sold at the level of Business Area within a geographic region as a project

- **Third phase:**
  - CMMI sold at the Division level as a strategic technology
CMMI Sold at Local Product Development Units

Characteristics of effort:
- At the beginning of the Process Improvement Program, the selling effort was focused on local development units
- Units are relatively small organizations
- No history of CMMI-related benefits within ABB was available
- CEPG needed high level of training
- CEPG needed to develop support tools and methodologies
- Product development projects always have priority over process improvement activities

Lessons learned
- Commitment highly dependent on local organizational changes
- Commitments are short-term due to annual budget constraints and short-term changes (I’m not sure what you mean by “short-term changes”)
- High degree of flexibility within the organization to make changes
- High budget constraints of local development units (is this covered in the second bullet?)
- No synchronization of improvement activities and solutions with other units in the same group
- Commitment to process improvement based primarily on sponsor’s beliefs rather than business objectives
- Need to constantly monitor commitment from sponsor and organization
CMMI Sold at Business Area (BA) within a Geographic Region

- **Characteristics of effort:**
  - A BA consists of clusters of development units
  - CMMI-based improvement was sold as a unifying activity to the BA managers within geographic regions
  - Process improvement activities were viewed as projects that compete for resources with product development projects
  - CMMI-based activities sold as projects competing with product development projects

- **Lessons learned**
  - Commitment to CMMI not as highly dependent on organizational changes
  - Commitment to process improvement based more on business benefits
  - Need to have a portfolio of documented benefits of CMMI-based process improvement efforts
  - Commitment to CMMI-based improvement medium-term
  - Some level of coordination among development units within the region
CMMI Sold at the Division Level as a Strategic Technology

Characteristics of effort

- Clear business objective needs to be defined
- Commitment is sold at high Senior Management level
- Process improvement is considered as a program not a project
- Senior Management supports program at the global Division level
- Longer term commitments are established
- Process improvement is seen as competitive advantage
- Process improvement is not as dependent on changes in organizational structure
- Local development units receive funding and objectives from higher-up in the organization
Process to Sell CMMI as a Strategic Technology

Process for any Strategic Technology

- Corporate Research Program Manager selects Strategic Technology Plan (STP) Lead
- Lead selects team members to develop STP
- Review and document state-of-the-art in Strategic Technology proposed
- Estimated Business and Technology impact in ABB
- Identify current solution within ABB
  - within a program
  - in other programs
  - academia collaborations
  - existing BU projects
- Identify proposed solution within ABB
  - anticipated results
  - collaboration with BUs
  - collaboration with academia
  - competences required
  - estimates of costs
  - estimate of potential revenues

Application to CMMI-based Process Improvement

- Selection of STP lead from CEPG
- Engagement of CEPG members and potential partners in Development Units
- Identify new developments in CMMI and other process improvement related fields
- Identify benefits within ABB both quantitative and non-quantitative
- Analyze current improvement projects with BUs and their impact. Assess current collaborations
- Develop a plan for the future and outline the importance of CMMI as a strategic technology
Use of the ABB Gate Model for CMMI-based Process Improvement Projects

- ABB Gate model used on all projects to ensure that:
  - Projects are linked to strategy and business requirements
  - Projects are executed in control of the management
  - Project investment is structured in phases to minimize risk
  - Projects are visible and transparent to the organization
  - Project deliverables have the right quality
  - Projects are delivering the benefits as promised

- CMMI-based improvement projects follow the Gate Model as well
  - Keeps the focus on the business benefits of the improvement effort
  - Actively involves management
Supporting CMMI-based Process Improvement as a Strategic Technology – Knowledge Base

- One-stop web-based source for Product Development Resources and Best Practices – Organized by CMMI Process Area
- Target Audience: Change Agents, QA, Project Managers
- Monthly reminder e-mails listing new additions
- Top contributors recognized
- Weekly metrics collected and analyzed to gauge the effectiveness of the knowledge base
Supporting CMMI-based Process Improvement as a Strategic Technology – Newsletters

Purpose:
- “Provide insight into good product development practices”
- Issued quarterly via rich-text e-mail
- Concise, easy-to-digest
- Contents:
  - Conference reports
  - Brief summaries of new technologies
  - Successful ABB development practices
  - Development/Process Improvement cartoon
  - Etc.
Lessons Learned

- Selling CMMI as a Strategic Technology at higher levels in the organization increases the probability of success of the effort.
- It is essential to make a business case for CMMI-based improvements to sell them to Senior Management.
- Tracking the economic benefits of CMMI-based improvements is essential.
- Think Global and act Local brings the best of both worlds.
Questions ?