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# **Pilot Projects: “Do They Work for CMMI Implementation?”**

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# Why Pilot?

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Organizations use Pilots for several reasons the following:

- ✓ To get the data to make an informed decision about next steps in the improvement efforts
- ✓ To build buy-in for the change
- ✓ To control the learning curve

## Lessons Learned

- ✓ Define business benefits upfront
- ✓ Specify business metrics
- ✓ Use the metrics to measure business performance
- ✓ Establish accountability for achieving business benefits and ROI from Pilot Solutions



# Can Pilots Work for Initial CMMI Roll Out?

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- ✚ Pilots are specifically mentioned in the following CMMI Process Areas:
  - ✓ Organizational Process Focus (Level 3)
  - ✓ Decision Analysis and Resolution (Level 3)
  - ✓ Organizational Innovation Deployment (Level 5)
- ✚ Organizations general transitions from CMM to CMMI, include:
  - ✓ CMM Levels 2-3 to CMMI Levels 2-3
  - ✓ CMM Levels 3-5 to CMMI Levels 3-5
  - ✓ No previous CMM experience to CMMI
    - This requires great efforts
    - Little stability in process to determine what works and what doesn't work - Any process analysis discussion becomes personal and defensive



# Pilot Roll Out Selection Criteria

**Striking a Balance To Achieve Custom Solutions**

**Full Life Cycle Development**

**Transfer Solution**

| Full Life Cycle Development   |  | Transfer Solution  |   |
|---|--|--|---|
| Pros (+)  | Cons (-)   | Pros (+)   | Cons (-)  |
| <ul style="list-style-type: none"> <li>⚡ Best-fit Business Processes</li> <li>⚡ Best-fit Technical Infrastructure</li> <li>⚡ Tight Control Over Quality</li> <li>⚡ Good Documentation</li> <li>⚡ Capitalize on Latest Technology</li> </ul> | <ul style="list-style-type: none"> <li>⚡ More Costly</li> <li>⚡ Slower to Deliver</li> <li>⚡ Requirements Management Difficult to Enforce</li> </ul> | <ul style="list-style-type: none"> <li>⚡ Faster to Implement</li> <li>⚡ Less Costly Up-front</li> <li>⚡ Proven Solution</li> </ul> | <ul style="list-style-type: none"> <li>⚡ Back-end Cost (Customization)</li> <li>⚡ May Not Fit Current Technology Infrastructure</li> <li>⚡ Based Upon Aging Technology</li> <li>⚡ Users Need to be Trained in New Processes / Workflow</li> </ul> |



# Why Accelerate Process Implementation?

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- ✚ Organizations cannot afford to wait while bureaucracy plays itself out, especially over long trail/pilot cycles
- ✚ The consequences can be overwhelming:
  - ✓ Projects over cost and over schedule
  - ✓ Extensive overtime
  - ✓ Confusion
  - ✓ Loss of staff
  - ✓ Misdirection
  - ✓ Distrust
  - ✓ Frustration
- ✚ By accelerating the process improvement effort and getting processes in place quickly, an organization can concentrate on improving their processes over time and still remain competitive in a business environment



# Prerequisites to Any Improvement

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- ✚ A real understanding of your organization
  - ✓ Business drivers
    - Why does the business want or need to improve?
- ✚ Senior management support
  - ✓ Visible demonstration of commitment
  - ✓ No hidden agendas
- ✚ Make it clear you are NOT improving people
- ✚ Realistic expectations
  - ✓ What have other similar organizations achieved?
- ✚ Readiness and capability to improve
  - ✓ Are you ready to make improvements?
  - ✓ What are you capable of taking on?



# A Word for a Phased Roll Out

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- ✚ Prioritization
  - ✓ Not practicable to roll out all processes at a time
  - ✓ CMMI Continuous Representation allows progress to be acknowledged at the Process Area level via a Capability Level
- ✚ 'Big Bang' approaches accentuate risks
  - ✓ Impractical and can render unviable
- ✚ Phasing enables testing and fine-tuning
  - ✓ ***Start and improve versus start, stop, analyze, and convert***
  - ✓ Accept 80% stability and fine tune the last 20%
- ✚ Provides an opportunity to experience benefits
  - ✓ Enables early organizational gains
- ✚ Allows phasing of investment and resources to project

***Without a compelling value statement, cost becomes the ultimate determinant of value***



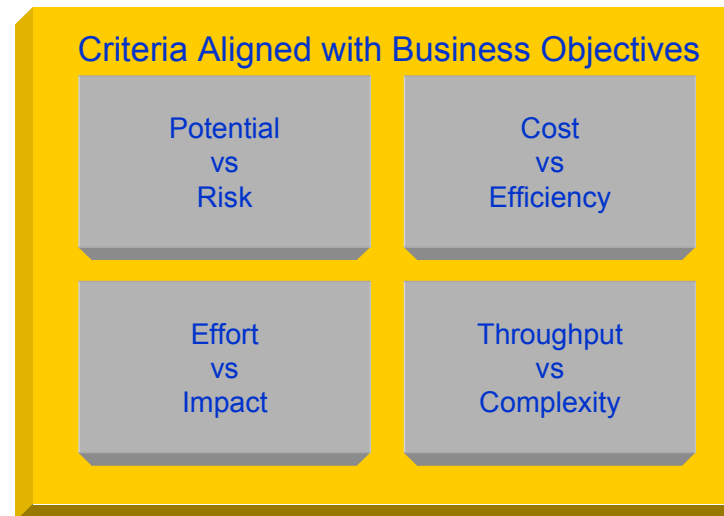
# Holistic Approach for Phasing Roll Out

**NATURE OF PRODUCT DEVELOPMENT ENVIRONMENT**

**Customer**

|                      | <b>BUSINESS VIEWPOINT<br/>Why?</b> | <b>PRODUCT VIEWPOINT<br/>What?</b> | <b>IMPLEMENTATION VIEWPOINT<br/>How?</b> |
|----------------------|------------------------------------|------------------------------------|--|
| <b>COMPANY LEVEL</b> | Business strategy                  | Product and technology strategy    | Strategic action plans                   |
| <b>PROJECT LEVEL</b> | Business objectives                | Product and technology objectives  | Project implementation                   |

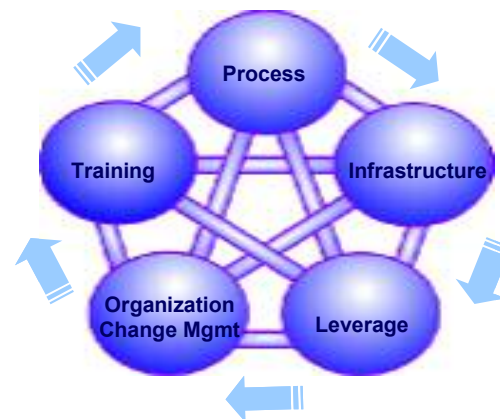
- ✚ Provide a solution that satisfies ongoing Company Level and Project Level business needs





# A Pragmatic Pilot Approach

- ✚ Five Common Elements exist in a Pilot, regardless of the organization's process maturity:
  - ✓ Process – It's what you do; formal or informal. Improvement is always possible.
  - ✓ Infrastructure – Some structure exists or the organization would not exist
  - ✓ Leverage – Every organization has some “pockets of excellence”
  - ✓ Organization Change Management – People's response to change occurs at all maturity levels in varying degrees of acceptance
  - ✓ Training – Learning organizations focus on business needs and provide abilities to maintain an established process asset

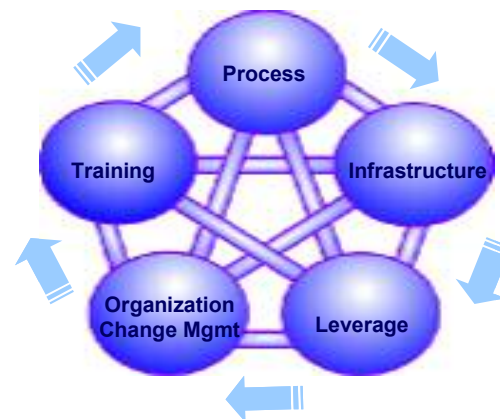


# Process

Why should you focus on process?

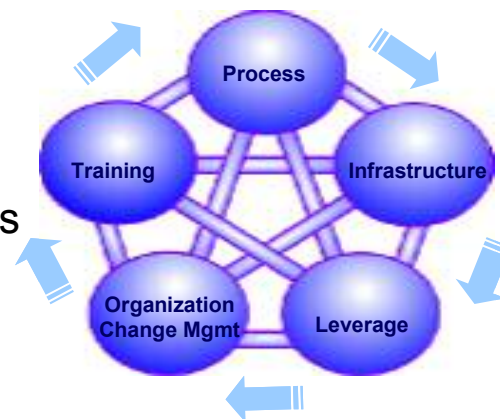
- ✚ Improved Predictability
  - ✓ More accurate projections of revenue
- ✚ Increased Control
  - ✓ More precise understanding of business development costs
- ✚ Enhanced Efficiency and Effectiveness
- ✚ Improved management visibility into business development
  - ✓ Decide where value is being lost in the current process steps
  - ✓ Involve ultimate users of the new process in all phases from design to acceptance to ensure ownership of completed process

***Only way to get widespread early use is to remove the redundant processes – fast!***



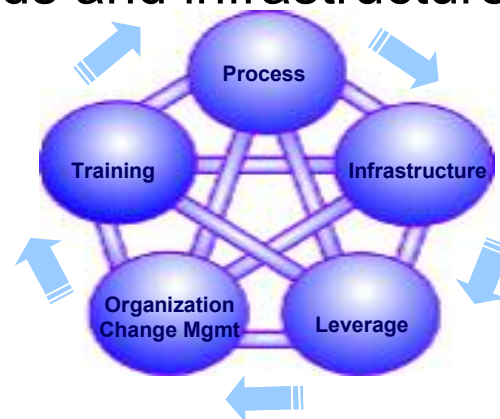
# Infrastructure

- ✚ Infrastructure is the underlying framework which supports the organization's process:
  - ✓ Policies
  - ✓ Standards
  - ✓ Training
  - ✓ Facilities
  - ✓ Tools
- ✚ Establish/Identify the support structure for involvement and ownership/commitment to change
- ✚ Establish communication
  - ✓ Open and honest
- ✚ Make it clear what is valued
  - ✓ Feedback
  - ✓ Leadership by example
    - People will do what their manager values



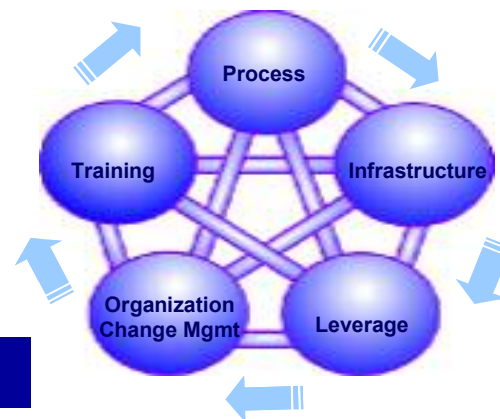
# Leverage

- ✚ Capture current practice (whenever possible)
  - ✓ Identify best practices and build upon them
    - Every organization has some process that works really well – why?
  - ✓ Don't design “Yet another process”
- ✚ Identify weakest link in any process
  - ✓ Strengthening any link other than the weakest is a waste of time and effort
- ✚ Leverage existing standards and infrastructure wherever possible and only create new standards and infrastructure where required



# Organizational Change Management

- ✚ When implementing a new process or program, ask, “What behaviors need to change?”
  - ✓ Big difference between “Initiation vs. Implementation”
- ✚ Understand nature and range of resistances
- ✚ Drive change from your business objectives
  - ✓ Keep focused – Clear targets
  - ✓ Don’t get seduced into compliance with any model
  - ✓ Plan with those affected
    - You need systematic approaches
    - Ensure frequent reviews
  - ✓ Often difficult for a Level 1 organization
- ✚ Keep it simple - at first
  - ✓ Ensure some quick wins
  - ✓ Make it relevant to people (projects)



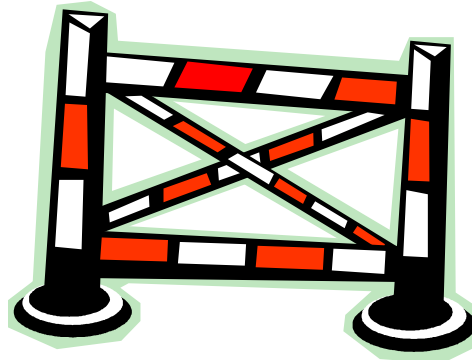
***Balance long term strategy with short term needs***



# Culture is the Biggest Barrier

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- ✚ Collective behavior rules
- ✚ Culture bleeds through new structures and processes
- ✚ Need critical mass to change
- ✚ Leadership models the real values and norms



# Resistance to Change

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## ✚ Cognitive/ amenable to some control

- ✓ Lack of information
- ✓ Lack of skills
- ✓ Lack of resources
- ✓ Lack of support

## ✚ Emotional/ beyond direct control

- ✓ Anxiety
- ✓ Perceived threats to status
- ✓ Perceived threats to power
- ✓ Fear of failure
- ✓ Lack of trust
- ✓ Unwillingness to take risks
- ✓ Underlying culture and norms

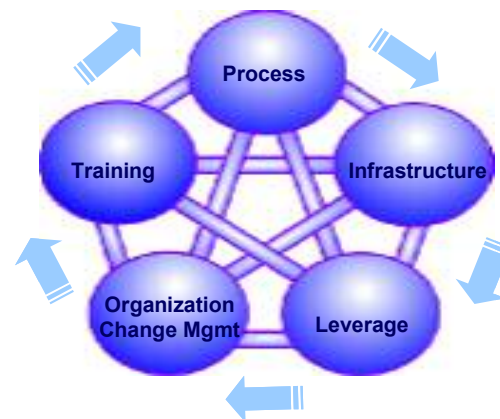
***Build culture change into the business strategy***

- “The way we do things here”



# Training

- ✚ Sustainable performance requires continuous training
- ✚ Any new process change should be coupled with the appropriate training (GP2.5)
  - ✓ Plan for institutionalization from the beginning





# Critical Success Factors

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- ✚ Effective Project Management
- ✚ Timely Decisions and Resolution of Issues
- ✚ Availability of Resources When Needed
- ✚ Executive Support (Both Real and Perceived)

**The #1 Most Documented  
Critical Success Factors are .....**

- ✚ Change Management
- ✚ Communications
- ✚ End-User Training



# How do I Prioritize, Focus and Align?

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**“The main thing is to make sure  
that the main thing  
stays the main thing.”**

**James Barksdale  
The Markel Foundation  
(Task Force on National Security)**



# Contact Us

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