BPM Workbook 2
Master Level

aiim certificate program
business process management

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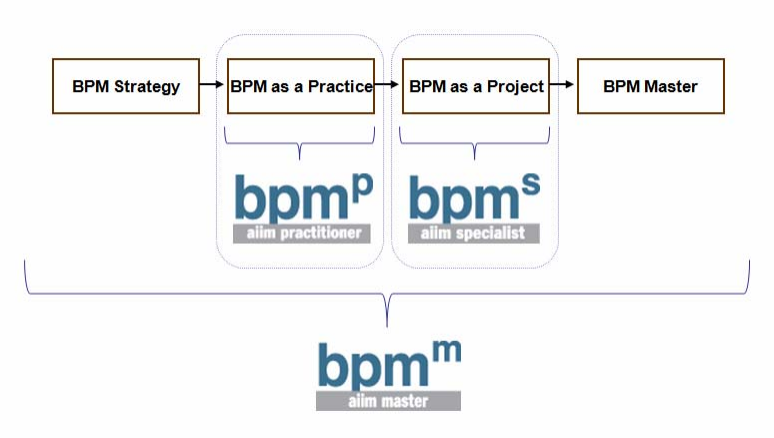
AIIM BPM Certificate Program



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Agenda

8:45 am – 5:00 pm	STRATEGY	PRACTITIONER	SPECIALIST	MASTER
8:45 am – 9:00 am	Breakfast / Introductions			
9:00 am – 10:00 am	What is BPM?	Flowcharting 101	Strategy Concepts Review	Improvement Methodologies
10:00 am – 10:45 am	Role of ECM & BPM	Process Modeling	Building the Project Team	Enterprise BPM
10:45 am – 11:00 am	Morning Break			
11:00 am – 12:00 pm	Business Case	BPM Approaches	Gathering Requirements	Ethics
12:00 pm – 12:45 pm	Lunch Break			
12:45 pm – 1:45 pm	BPM as a Practice	BPM Technologies	Design Processes	Industry Case Studies
1:45 pm – 2:45 pm	BPM as a Project	BPM Tools Overview	Implement Change	
2:45 pm – 3:00 pm	Afternoon Break			
3:00 pm – 4:00 pm	Business Analysis	Intro to EAI	Manage Change	BPM Futures (optional)
4:00 pm – 5:00 pm	Process Improvement	Collaboration & BPM	Monitor Processes	Review Take-home Case
5:00 pm	Adjourn			

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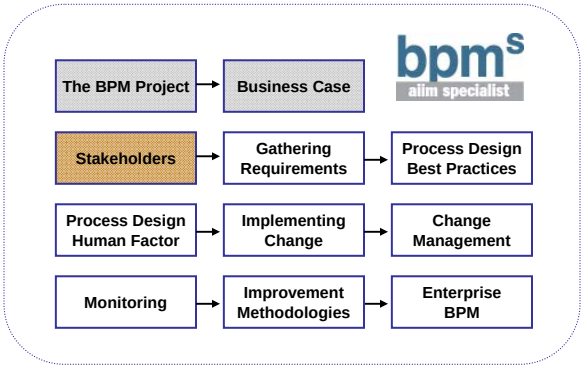
BPM Specialist Track



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Stakeholders and the Project Team – Learning Objectives

- At the end of this session you should be able to:
  - Select and build a valid BPM project team
  - Understand the customer as a key stakeholder
  - Better manage Stakeholder expectation

Stakeholders Defined

- *A **stakeholder** is defined as person or group that has a stake or interest in the success of a project.*
- Representative stakeholders may be appointed by individuals or enterprises to act on behalf of the stakeholder.
- An important part of stakeholder information gathering is to determine the representatives role, decision-making authority, and level of expertise.

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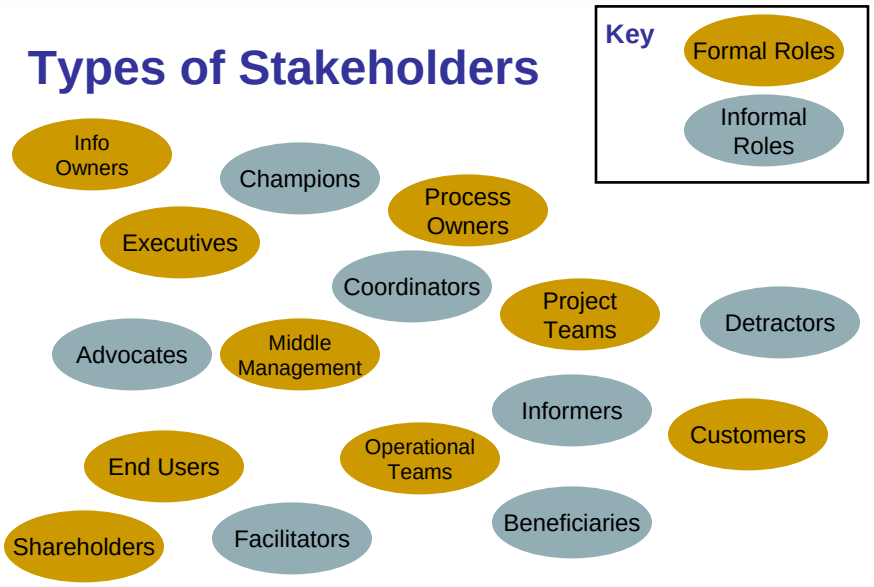
Types of Stakeholders



Early Identification

- Identify project stakeholders at the beginning of the project.
  - Late arrivals may introduce changes to scope
  - Stakeholders brought in late may be reluctant to participate or may cause conflict
  - Determining stakeholder needs early helps decrease cost, avoid delays and facilitates resource planning
- Stakeholder needs and objectives are what drive the project
- Review existing project reference materials and artifacts such as
  - Organisational chart
  - Project charter
  - Project scope
- Identify people associated with the project
- Review list with management to finalize the project stakeholders

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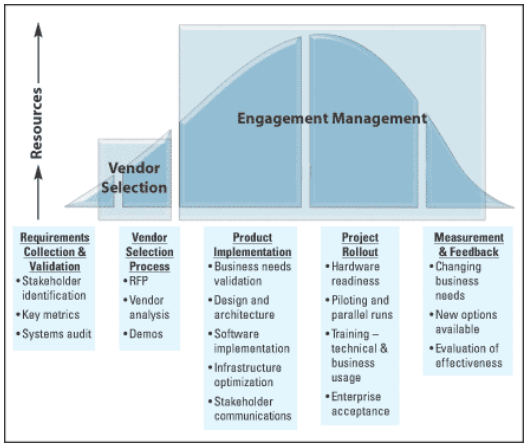
Requirements Signoff

- Ideally, all stakeholders review and sign off on all requirements. This promotes a more detailed view, and more consistent expectations.
- In some projects, it may be more practical to ask each stakeholder to sign off only on those requirements which directly relate to them

Project Involvement



Source: DM Review

The End User / Staffer

- The role of “the average user” is decisive in any project
- Interfaces and features that make sense to an information professional or an information technology specialist may be impenetrable to a user
- Usability presents many challenges, including:
  - intuitiveness of the interface
  - acceptability of processing time
- The project may strive to make the enterprise more effective, but success hinges on end-user adoption
- Be sure the end user is involved from the outset
  - In defining the problem, requirements gathering, and phased testing

Process Specialist

- A rare find
- Ability to interview and analyze feedback
- Able to create accurate flow charts
- Good understanding of one or more improvement methodologies
- Outstanding interpersonal communication skills
- Understanding of business and interpersonal dynamics

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Project Management and Information Professionals

- **Project Manager**
  - Any new process or automation project needs leadership and coordination
  - In many small businesses and departments of larger enterprises, one or two key people are often supported by vendors or consultants
  - Therefore, a project manager's job is to oversee that any technology selection, testing, deployment, and assessment are conducted on time and within the budget available
- **Information Professional**
  - Information professionals – sometimes called librarians, business intelligence professionals, information scientists, data architects, enterprise information architects, or some variation of these terms
  - Have responsibility for the content and how it should best be structured to meet business goals

Finance & IT

- **Finance**
  - The Financial Professional deals with budgeting for and often procuring the software and resources necessary for the BPM project
  - In larger enterprises, one or more financial analysts and possibly a project financial manager may be needed to stay on top of the costs and paybacks
- **IT**
  - The Information Technology professional is responsible for the initial set-up and maintenance of the ECM/BPM tools, and determines how it fits into the overall organizational architecture
  - In larger enterprises, engineering teams may need to be dedicated to the BPM system(s).
  - Only a skilled IT professional with programming or system and network administration skills can resolve some of the problems that may arise with BPM tools

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The Consultant

- Many enterprises avoid hiring consultants. There may be a desire to avoid a situation where problems occur and the consultant is long gone
- A consultant with specific credentials in implementing successful BPM systems can be an asset
- Look for qualified individuals, check references, then double-check references
- Consultants run the gamut from strategic advisors to nuts-and-bolts integrators

- There are also consultants who specialize in product selection
  - Be sure to choose an impartial party that is not compensated by or a customer of a software vendor you may be considering

The Customer

- The customer is your most important stakeholder
- The customer can be your client - or more likely your client's client
- By managing the customers expectations and needs we can add value
- Methodologies such as Six Sigma focus on the customer
- Even if not the most important stakeholder - the customer perspective in the process is central in all improvement work

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Customer Statements

1. I search the web for refrigerators options
2. I want choice and energy efficient options
3. I want a fair price
4. Delivery time and costs are important to me
5. Ongoing support (local) important
6. Customer support options matter to me

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The Customer Process

1. How can we keep our website relevant and up to date - capture more search traffic - make the experience easier
2. A sudden spike in interest in ‘Green’ options has taken us by surprise, how to offer energy efficient models, and still manage our legacy inventory
3. My sales process is more costly than my competitors - how to reduce yet stay competitive
4. Why can my competitors deliver in 7 days - yet it takes me 14 days
5. How can I provide some kind of local service, without blowing my budget
6. How well do we manage exceptions

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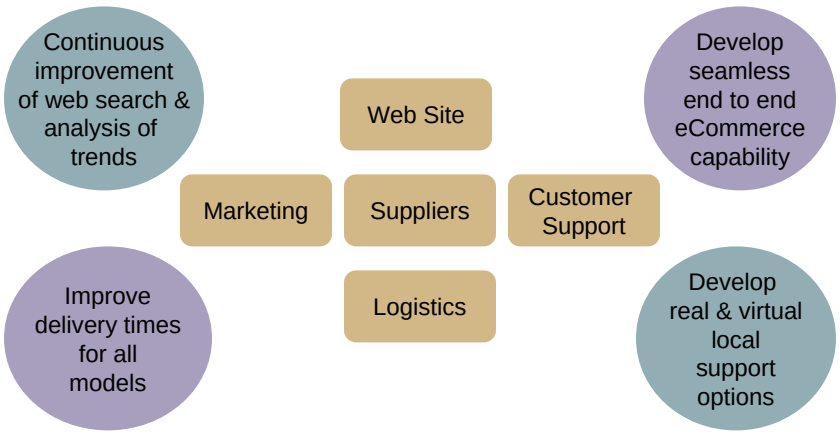
Improving the Customer Process



Communications

- Considerations
  - How communications will be handled
  - Frequency and medium (style) of communications
  - Who is responsible for communications
  - Details stakeholders needs and expectations
- Methods
  - As detailed in the plan
  - 1st preference face to face meetings
  - Weekly email blasts - progress reports
  - More than one level of communication
  - Different stories for different players
- Issues
  - Need to keep an issues log
  - Project manager owns, reviews and assigns for resolution
  - Details a change process

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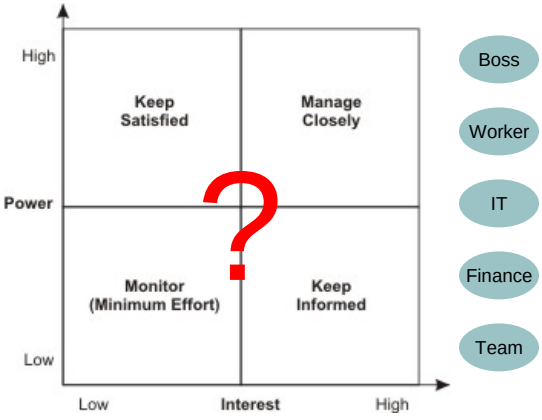
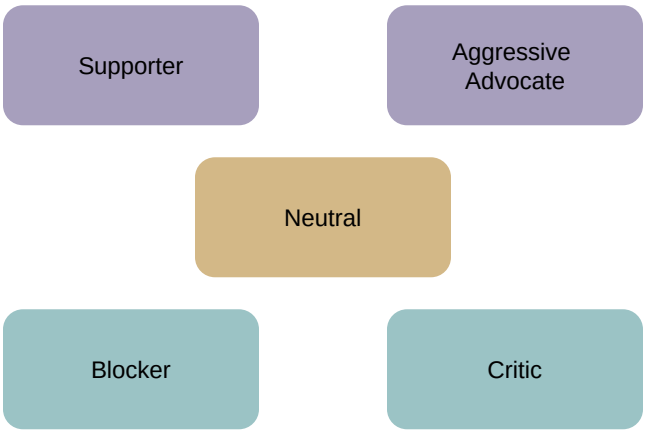
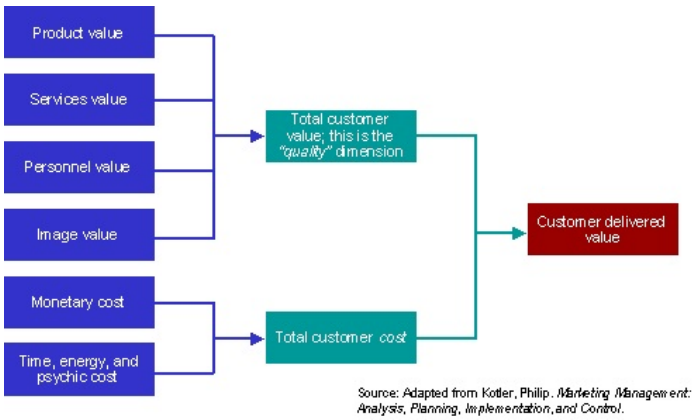
Stakeholder Power and Interest



Stakeholder Dynamics

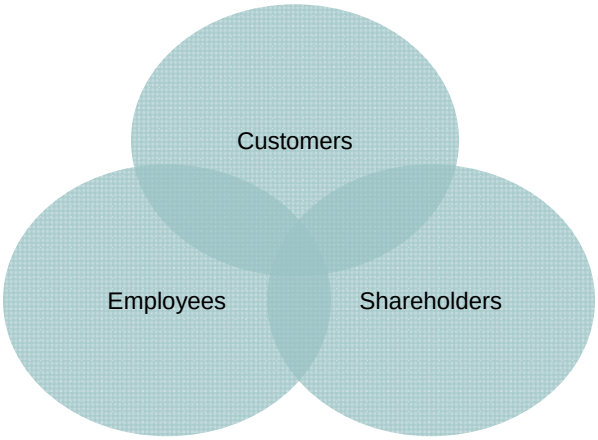


Measuring Value



Source: Adapted from Kotler, Philip. *Marketing Management: Analysis, Planning, Implementation, and Control.*

Balancing Needs & Desires



Change Management

- **Change management** is a structured approach to change in individuals, teams, organizations and societies that enables the transition from a current state to a desired future state.
- In the context of a project, the ability to track requirements throughout the development lifecycle is critical to finding missing functionality or identify work that is out of scope. This will:
  - Enable stakeholder notification of changes
  - Improve communication
  - Increase quality
  - Facilitate change control
- We'll return to change management methodologies later in this track

Source: wikipedia.com

Best Practices

- Determine what the primary problem is that you're trying to solve (and who for)
- Don't lose sight of the business plan you created, among the cross-currents of internal politics and group management
- Remember that individuals hold formal and informal roles throughout the process

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Caveats

- Early identification of stakeholders is critical
- Stakeholder information gathering is time consuming, but will save time later by identifying potential conflict early

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Apply What You Have Learned

Exercise: Identify Stakeholders

Instructions: In the chart below, identify stakeholders in your organization who should participate in a BPM program you are preparing to conduct. Identify individuals as possible by Role or Title, or simply list relevant teams, departments or locales. Then for each, describe why they should be included and where you expect their interests to lie. Use the back for additional rows as necessary.

TITLE/ROLE	WHY?	INTERESTS?

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Apply What You Have Learned

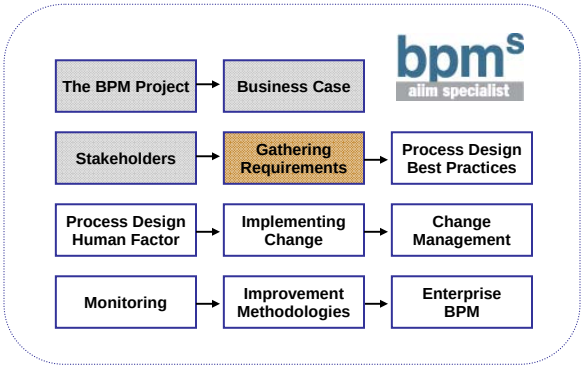
Case: Stage A

Instructions
The in-class Case Study is broken into 4 phases which we will complete as group tasks over two days. Each phase will last about one hour.

Work only on that specific phase (do not look ahead to the following phase).

Task: Each Team
As a group, take 40 minutes to identify some strategic business benefits that a business process improvement project could bring to this firm. Do this in the form of a simple business case that could be summarized in the form of basic PowerPoint slides. In your business case, be sure to elaborate in terms of value, efficiency, and risk reduction. Decide whether a Return-on-Investment or Cost-of-Doing-Business approach would be more persuasive. Identify likely cost and risk factors in addition to benefits. Identify the ideal make-up of the Project Team.

BPM Specialist Track



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Gathering Requirements Learning Objectives

- At the conclusion of this module you should be able to:
  - Articulate to senior management the central role of requirements gathering in the BPM project process
  - Identify various requirement elicitation techniques, their strengths and inherent drawbacks
  - List the skills required for this stage to maximize your chances for success

BPM & Requirements Gathering

- Arguably the most important element of the BPM process
- Many projects fail due to poor requirements gathering
- Most who have undertaken this work say it is difficult, very difficult to do well
- Requirements are also challenging for stakeholders to articulate
  - They may know what they want, but not what they need in context with the process improvement planned

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Key Considerations

- Requirements need to be gathered in relation to overall enterprise strategy and direction
- All requirements must relate to specific business goals and objectives
- All requirements gathered need to be *in scope*
- There is a high likelihood that customers will suggest requirements that promote their own activities and perspectives, and are out of scope

A Practical Approach

- Rather than simply *gather* requirements you need to *elicit* requirements
- Focus down to 2 or 3 key business objectives
  - Reduce production costs
  - Improve delivery time to customer
  - Ensure quality is maintained

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Business Problems

- Any requirements gathered should solve business problems
- Often projects start with proposed solutions based on insufficient information
- Projects should start with a clear understanding of the business problems and the underlying needs for the solution
- You need to first figure out what the business problems are

Uncovering Business Problems

- Key questions to ask:
  - What is the driver for this effort?
  - When did you first realize things had to change?
  - What is currently limiting you?
  - What is the business pain?
  - What are you trying to solve?
- Bottom line: Always focus on the specific task in hand, and relate it to the project objectives

Gathering Requirements

- Address individual concerns rather than the broader project
- Assess the stakeholders commitment
- Address negative stakeholder behavior - look for underlying reasons for it

Barriers

- Insufficient time allocated to elicit requirements (For a 6-month project, 2 weeks for requirements gathering is not sufficient)
- Failure to understand the political situation fully (fixation on job titles)
- Distrust (fear)
- Physical distance between analyst and source of information

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The Requirements Process

The exact process and structure for eliciting requirements will vary according to enterprise methodologies

- Depends on specific software development methodologies
  - Waterfall / Rational Unified Process (RUP)
  - Spiral / Iterative / RAD / Agile / XP
- Relies on collateral skill-sets
  - Technical writing / Configuration Management / Project Management / User Experience Design
- All methodologies rely on a *combination* of techniques
  - So we will explore some techniques commonly used in BPM projects

Techniques

- There are clear and standardized methods for eliciting information
  - Document Reviews
  - Questionnaires
  - Workshops
  - Brainstorming
  - Interviewing
  - Among others
- By using a suitable combination of these techniques you can go along way to addressing many of the barriers and issues you will undoubtedly encounter
- Reviewing documentation is a technique for use in all projects, the others need to be selected and matched to your specific enterprise culture

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Document Reviews

- Typically the starting point for any requirements gathering exercise
- Pull together a list of all relevant documents and procedures from identified stakeholders
- On initial review of documentation - typically new stakeholders and resources will be identified
- When all documentation and stakeholders are identified - key elements from documentation will be summarized

Document Review Limitations

- Locating relevant documents can be time consuming
- Important documents may be ignored
- Some documents may be redundant or outdated
- Reading and summarizing disparate documentation is difficult
- There is a danger of getting sucked into detail and not seeing process-level information
  - Nevertheless, documentation review is essential and stakeholders can reasonably expect you to have done your research before working closely with them

Questionnaires

- A questionnaire can be one of the most effective tools available to gather requirements
- Too frequently overlooked in requirements processes that rely solely on face-to-face interaction

Questionnaires:

- Follow the document review
- Gather *fixed* data and information
- May include questions such as:
  - How many people work in the department?
  - What are the typical working hours?
  - How many work at any one time?

Questionnaire Limitations

- Should only gather facts, *not* opinions
- Questionnaire may well be ignored by recipients
- Can be time consuming to produce
- Requires a concise and very well thought out explanation to each recipient
- Can be the cause of much speculation and disruption due to the blunt nature of a blank questionnaire

Workshops

- Workshops may or may not include stakeholders
- By pooling resources in a single meeting, you can:
  - Reduce time to gather information
  - Generate valuable discussion
  - Validate assumptions and statements in real time
  - You can facilitate and encourage open debate
  - Utilizes the synergy of the group to build relationships and trust

Workshop Limitations

- Can be difficult to schedule
- Can be difficult to decide who should attend
- Are ruled by group dynamics
- Can be difficult to get around the inherent confidentiality of output and issue
- Can be complex to document output
- Require experienced consulting skills to manage effectively

Brainstorming

- Brainstorming is a form of workshop – but rather than a structured discussion, it:
  - Focuses on a specific problem
  - Encourages many angles to be explored and suggested
  - Pushes ideas to test them
  - Deliberately avoids analysis and critical discussion of suggestions
  - Promotes a creative approach to problem solving

Brainstorming Limitations

- Not a replacement for formal requirements gathering
- Can be difficult to keep the discussion on topic
- Sessions can quickly be dominated by one or two people
- Facilitation skills need to be expert
- May produce many ideas - but none that are useable
- Not a replacement for formal requirements gathering

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Interviewing

- Most direct way of gathering requirements information
- Intimacy means you can drill into as much detail as you require per task
- Information from the *source*
- Allows you to address an individuals concerns
- Supports those who are not comfortable expressing views in groups (office politics and personalities)

Interviewing Limitations

- Requires strong interpersonal and interviewing skills on the part of the interviewer
- Can be intimidating for the interviewee
- Interviewee may be reluctant to reveal information
- Interviewee may tell you what they think you want to hear rather than the truth
- Can be time-consuming

Other Requirements Gathering Techniques

- Scenarios & Persona analysis
- Focus groups
- Interface analysis
- Prototyping and “Agile” development
- Shadowing/Observation
- Reverse engineering

The Paradox of Process Automation

- We often expect peers to explain what they need for a system they've never seen or touched
  - This is unfair to everyone
- Requirements may not fully solidify until after first prototyping and proofs-of-concept
- Meter your expectations accordingly
  - System users may not fully understand or be able to articulate what will really work until they try the application
  - Consider adding "agile" techniques into the mix with application prototyping
  - Be sure to phase in large projects accordingly and do not go for "big-bang" implementations

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Best Practices

- **"Personal" Qualities for Gathering Requirements:**
  - Ability to listen
  - Diplomacy
  - Compassion
  - Ability to separate key issues from noise
  - Confidence to the draw the line
  - Humility to recognize the source is the expert
- **Remember to:**
  - Avoid jumping to conclusions
  - Save analysis and recommendations for that phase of the process
  - Measure twice - cut once

Caveats

- Extracting requirements is as much an art form as a specific technique
- Consider using experienced professionals to facilitate and guide
- The act of gathering requirements is never passive
  - The activity of gathering requirements will change reality
- Not all responses are accurate
- Politics exist everywhere
  - Accept it: there is no apolitical change
- The resulting analysis will *always* be subjective and never 100% accurate

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Wrapping Up

- The clearer your requirements, the better your chances for success
- There are a variety of approaches to gathering requirements
- There is an art and science to gathering requirements
- Strong interpersonal skills, the right teams, and choosing the appropriate approach will lead to better requirements
- Tip: always use the *language* of your customer

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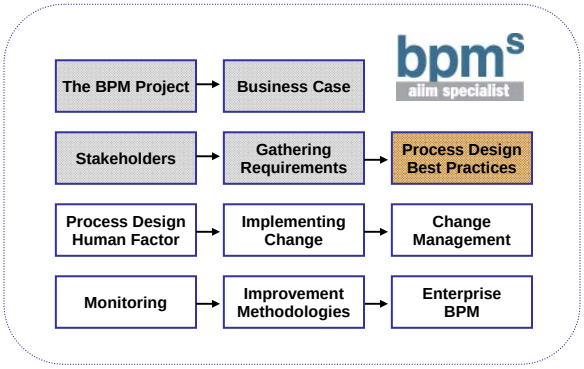
BPM Specialist Track



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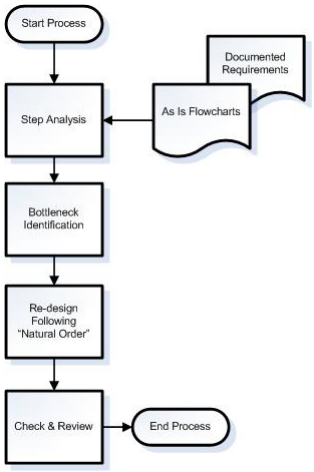
Process Design Best Practices-1 Learning Objectives

- At the end of this module you should be able to:
  - Understand the limitations of flowcharting processes
  - Ask the right troubleshooting questions and evaluate each step in a process
  - Better manage process “clusters”
  - Develop parallel processing as a solution to bottlenecks
  - Understand the value of “natural” routes and main processes

Overview

- Requirements have been gathered and flowcharts have been created detailing the ‘As-Is’ stage of a process
  - Now the *current* situation needs to be initially assessed
  - At a high level
  - At a detailed level
- In this module we will look at how to analyze the status quo
  - In the context of a *particular outcome*
  - Toward a particular set of objectives outlined in your business case
- Utilize best practices and move the project toward necessary process changes
- This is more advanced work for the *specialist.*
  - At this point the organization will be impacted by your recommendations

Process Design
Best Practices Structure



Beginning Your Analysis

- Re-confirm the business objectives for change
- Start with “troubleshooting”
  - Ask the right questions
  - There could be a lot to ask...
- Evaluate each step in the process
  - Take a value-oriented approach

Initial Troubleshooting

- Do we have unnecessary sign off’s and approval activities?
- Are we asking for data we don’t really need?
- Are hand off’s smooth?
- Do we have good communication between process steps?
- Do people understand the process?
- Is the process elegant - or messy?
- Where are the major bottlenecks in the process?
- Do we need to reengineer or simply streamline?

More Troubleshooting

- Do I understand the purpose of each step?
- Is there a clear and logical input and output to each step?
- How else could this process step be accomplished?
- Could we do something 'upstream' to eliminate the step?
- Are repetitive steps boiler plated?
- How do exceptions impact individual steps?
- What are the timings and metrics for each step?
- Are we fully utilizing data sources?

Evaluate Each Step in a Process

- Step adds **real value**
  - Actually makes a difference to the final output of the process to meet customers requirements
    - OPTIMIZE (SPEED UP OR DO LESS EXPENSIVELY)
- Step adds **business value**
  - Step is required by the organization but does not add customer value (ordering materials, accounting, reporting etc)
    - ELIMINATE OR MINIMIZE COST
- Step adds **no value**
  - Activity adds no value to the business or the customer (correcting errors, approving requests, photocopying files)
    - ELIMINATE (REORGANIZE OR AUTOMATE)
- *Note: It's not unusual to find 75% plus of steps in a process add no value*

Clusters & Bottlenecks Defined

- Clusters are a *close group of typically similar things*
- Number one issue in poorly constructed process maps

- Bottlenecks are a point in the enterprise where *the flow is impaired or stopped*
- Number one issue in inefficient processes

Questions to Ask - Clusters

- Questions to ask about clusters:
  - Why does this cluster exist?
  - Is it a “natural” cluster?
  - Do I have sufficient information?
  - Do I have too much information (comparatively)?
  - Do I truly understand this stage of the process?
  - Is this an opportunity for parallel processing?
  - Are steps really steps or sub-processes?

- If inputs coming into the process *naturally* cluster, then you may need to consider separating out into multiple sub-processes

Questions to Ask - Bottlenecks

- Were people already aware of this bottleneck?
  - If so why did it continue to exist?
- Is it always a bottleneck such as *batch processing overloads*?
- Can I move some elements up stream?
- Can I split the task up into multiple tasks and parallel process?
- Can the bottleneck be resolved via better workload balancing?
- Do we need to reallocate resources?
- Resource, time, volume, complexity, politics/structure?

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Best Practices

- Identify all clusters and bottlenecks as a priority
- Separate clusters from bottlenecks - and prioritize bottlenecks
- Any improved process needs to plan around or eliminate current bottlenecks
- Be aware that bottlenecks often shift - and typically re-appear - they may need continuous attention
- Clusters may or may not be a bad thing
  - But where excess complexity exists, try to simplify it

What To Do About It

- Streamlining both bottlenecks and clusters is usually undertaken via:
  - Parallel processing, and
  - Following a “natural” flow

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Parallel Processes Defined

A process (or processes) that run/s simultaneously to another related, but separate, process - with the same originating points and the same concluding elements

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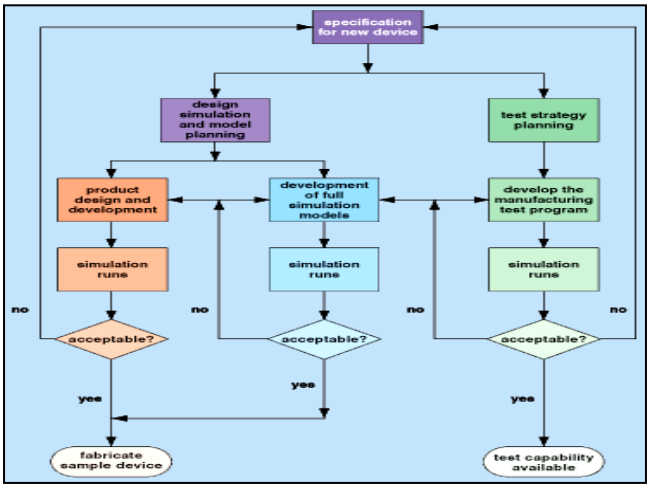
Parallel Processes Example



Source: Institute of Engineering & Technology

Using Parallel Processes

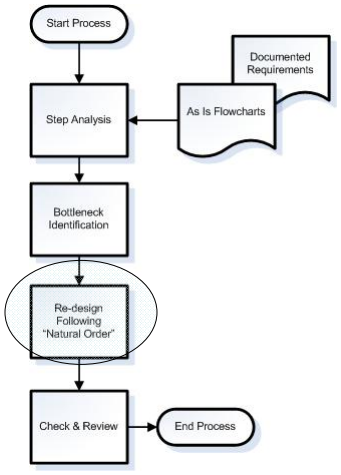
- In many true business processes, there will be multiple sub-processes running in parallel
- Number one method for increasing process efficiency
- In “As Is” processes, can identify inefficient activities
  - Either best use of resources, or duplication of effort
- First option to resolve bottlenecks

Best Practices & Recommendations

- When developing parallel routes, you need to be sure that added quality assurances and checks are built in
- In more complex process maps involving multiple parallel processes, simulation tools can be invaluable
- Pay particular attention to rendezvous points and capabilities when reconciling parallel modifications
  - Not all parallel processes require a rendezvous
  - But they are particularly prevalent in content-oriented workflows

Improving the Flow

- Everything has a "*natural*" order
  - But recognizing it requires a great deal of skill
- Look to design around a natural flow once you have identified and decided how to deal with step and bottleneck issues



Natural Order Defined

- It requires the skill of the business analyst to identify that order
- Identifying the “natural”’ order is a very difficult task - flow charts of captured processes seldom identify this
- Flowcharts layer a “logic” to abstract processes to help us make sense of them
- Work should be performed where it makes most sense
- When redesigning a process, ignore current boundaries

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Natural Order’s Main Sequence

Main Sequence:

- The key steps to make and deliver a product or service
- Sometimes called the “Value Stream” (Similar to Michael Porter’s Value Chain concept)
- The process that your customer “pays” for
- Some methodologies demand that the main sequence should be identified immediately, and that nothing should ever impact or slow this particular process
- There should always be a continuous flow to the main sequence - otherwise your business is in trouble

Inputs & Outputs

- As process specialists we should understand that the logic of methods - does not always translate to reality
- Flowcharts, IT systems, and logic suggest that all tasks and activities have clear inputs and outputs
- Reality dictates that things are seldom so clear cut
- Consider inter-relationships rather than isolated tasks (counter to clusters)
- Always consider inter-relationships when streamlining or re-engineering
- Inter-relationships can be easy to miss

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Check and Reviews

- In many organizations unnecessary checks and reviews in the process stream are the cause of bottlenecks
- Yet trying to streamline them can be difficult due to expectations around QA and regulatory requirements - real or mythical
- Need to ensure quality, but also need to question value of checks and reviews
- No value, if review always results in a Yes or alternatively always results in a No situation
- Consider “For Information” checks
- Focus on time taken and stage within the process checks and reviews are executed
- Consider building QA into ongoing tasks

Best Practices

- Always question the sequence of steps - never assume they are in the *right* order
- Remember that the “natural” flow is different from the “Main” Sequence
- Consider bringing downstream activities - upstream adding value upstream can massively impact downstream activities
- Capture once - every time

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Caveats

- Regular throughput may be increased, but exceptions can be more complicated to resolve
- Logic can get lost easily
- Parallel processes often bring great demands on technology with them
- Simple routing and state-transition tools typically cannot manage parallel processes
- Usability of “rendezvous” interfaces will vary substantially

Wrapping Up

- Start with a set of business objectives, or you will just be seeking random improvements out of context
- It's one thing to take information you gather and to map to a flowchart. It's another thing altogether to do that *well*, and to use the very process itself as one of discovery
- Once you master the basics of business analysis, business process, and management, you need to advance your skills to the next level
- Reminder: A flow chart is never more than a sketch and you can never map a process with 100% accuracy

How to Apply What You've Learned

- Take As-Is charts and requirements documentation and develop improved alternatives
  - This is an advanced skill - you are changing the way the organization works
- Understand the strengths and weaknesses of the current process
- Analyze models for clusters and identify bottlenecks
- Use parallel processing as your initial tool for change, but recognize the limitations and inherent challenges
- Consider the natural flow for your proposed alternative
- Be aware of the main value sequence and protect it
- Look for unnecessary checks in the flow - but recognize the difficulty of resolving them
  - Problems removed from one area of the process can re-emerge elsewhere

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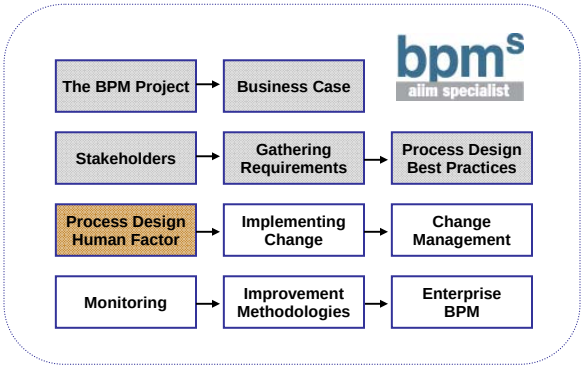
BPM Specialist Track



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Process Design Best Practices-2 Learning Objectives

- At the end of this session you should be able to:
  - Utilize activity theory in the context of BPM
  - And then make use of:
    - Role based routing
    - Name based routing
    - Groups and Relationships
    - Effective Queuing
    - Workload balancing

Overview

- Aspects of what we model (*the tasks*) cannot be fully mapped or understood
  - They are ad hoc *human* interactions
  - The human dimension may be where the ultimate value in the process lies
  - Flowcharts and models can help to iron out logical problems, but that's not always the complete picture
- Therefore understanding *who* and *how* to route is essential to achieving the best quality process outcome
  - In short the dynamics of human activity

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People Undertake Tasks

- We cannot hope to fully understand all the dynamics that affect a person undertaking a task on any one day, although we can make use of structures and methods to view the *personnel* elements of a process
- We should make use of appropriate tools to effectively route tasks to the right people at the right time
- Activity Theory provides a structure to do this
- Once we have analyzed our process and streamlined it we then need to interpret how to best structure the individuals, roles and group involved in undertaking each step

Addressing Traditional Limitations

- Complex interactions (business processes) are multidimensional - yet our process charts are at best two dimensional
- We tend (naturally) to base our process assumptions around generalized (standardized) assumptions
- We view workers involved in tasks without regard for the individual, the work environment etc
- We seldom consider the relationship of the individual with the task object
- In short our models provide generic representations of what are in fact multi dimensional sets of activities
- In recognizing that limitation we can enhance them - by considering the interactions between the task activity and the person undertaking the activity

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Activity Theory

- An *Activity* is a system of human *doing*
  - You do something specific to get something specific as an outcome in return for your action
- To undertake an activity we use internal or external *tools*
  - Internal tool examples include expertise, plans, methods
  - External tool examples include documents, forms, computer systems
- The *tool* empowers and limits at the same time
- *Activities* are undertaken in a community context
  - Community rules - how the worker fits into the community (rules can be explicit or implicit)
  - Division of Labor - how the object of the activity relates to the community

RAT

- Role-Based Activity Theory - provides a structure of six objects….
  - Users (human or system)
  - Roles
  - Resources
  - Activities
  - Interactions
  - Logical Conditions

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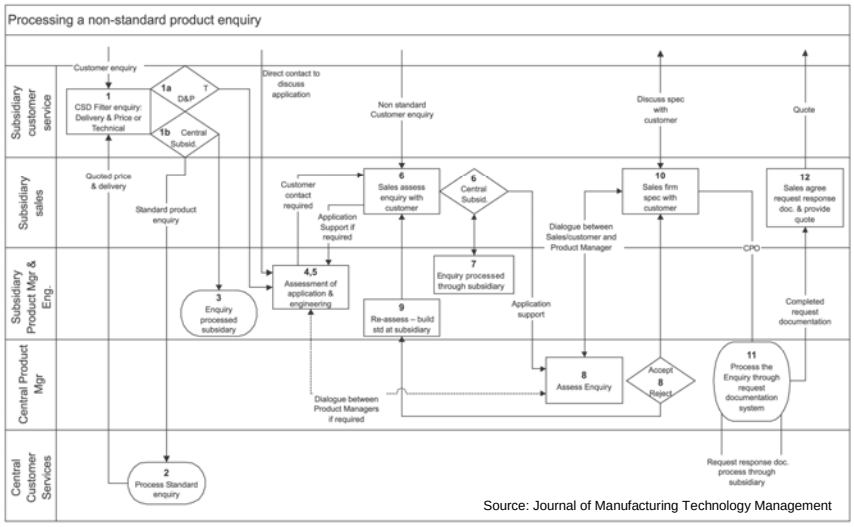
RAD

- Role Activity Diagrams depict:
  - The roles of the users
  - The information resources available to each role
  - The activities undertaken by the role
  - How the roles interact
- Use traditional flowcharting techniques
  - But take to the next level with a human dimension
  - Typically represented via “swim lanes”

RAD Example



Source: Journal of Manufacturing Technology Management

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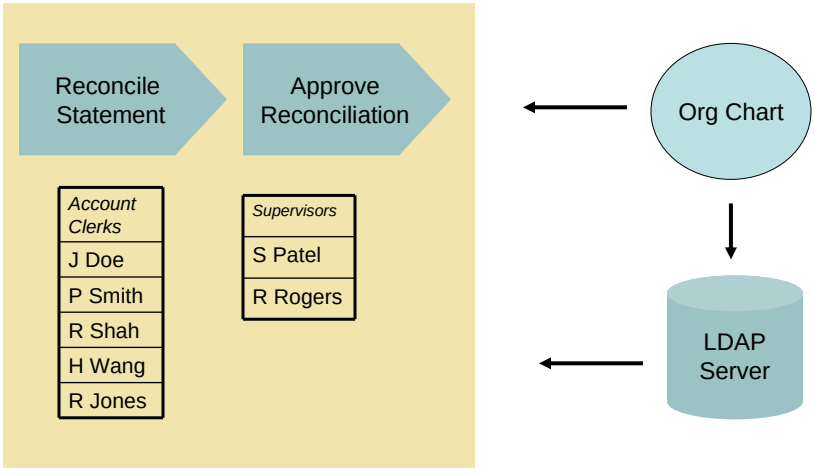
Routing Methods

- Once we have considered the human elements in the process we can make appropriate decisions as to whether to make use of the following routing methods:
  - Role
  - Relationship
  - Group
  - Dynamic

Role-based Routing

- Assigns tasks to job functions
  - (*accounts payable clerks A-M*)
- Generally considered most practical approach
- Covers for most eventualities
- Demands that roles are effectively mapped and defined

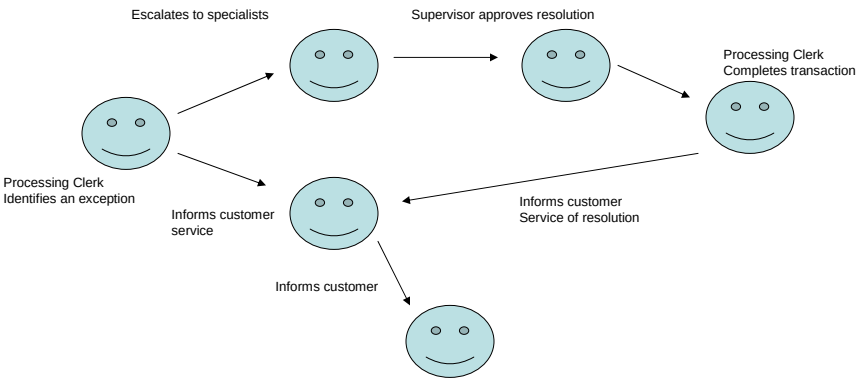
Example of Role Based Routing



Relationship Routing

- Added layer of complexity
- Individual users with similar roles - may report to different supervisors/managers
- Relationship routing supports attaching job functions to relations to other job functions

Relationship Example



What kind of exception determines who to escalate issue to
Type of resolution determines which supervisor needs to approve and who will complete the transaction

Group Routing

- Distinctly individual roles - but combined for specific tasks
  - Reporting
  - Reviewing and Feedback etc
- Utilizing Parallel processes
- Potentially combined with sequential processes

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Dynamic Routing

- In most business processes - routing steps will be based on variable parameters
- Usually rules based parameters that decide who or where the task needs to be routed to

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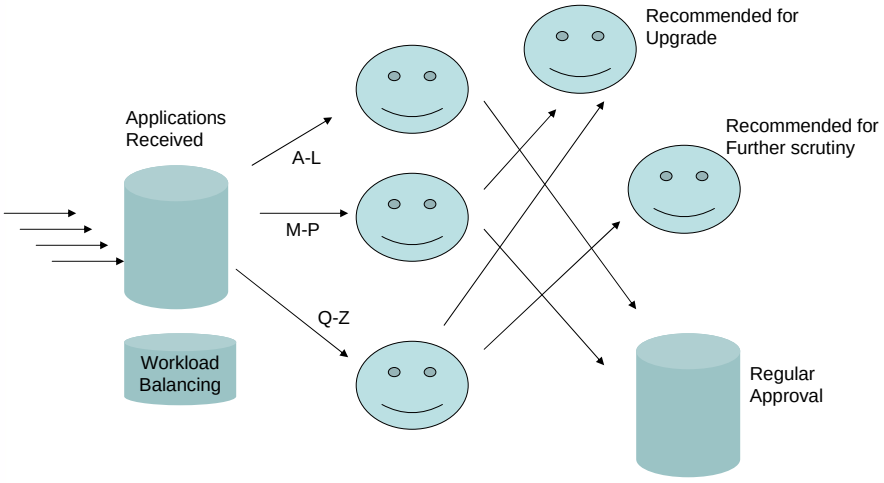
Dynamic Routing Example



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Balancing Workloads

- We now have a solid flow to our process - we have decided who the most appropriate person to route work to is - we now need to consider:
  - Work volumes and the need to queue tasks
  - Balancing work across groups/roles
- This way we make the most efficient use of our chosen resources, and maximize the throughput and overall efficiency of our improved process

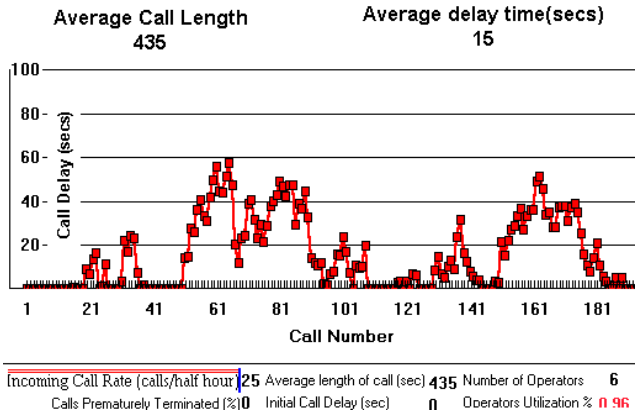
Work Queues

- Human tasks seldom get completed in the same manner and time, every time
- Tasks will often need to be queued..
  - By sending to a users inbox
  - By sending to a group/shared inbox
- Once in the inbox they may or may not be prioritised and ordered
- Once taken from the inbox they need to be monitored and checked out
- Once checked out it may be completed, returned uncompleted or stagnate

Workload Balancing

- One of the keys to avoiding bottlenecks
- Can be as simple as allocating no more then 5 tasks at one time to a ‘group’
- Could be as complex as weighting typical resolution time per group member to push work to workers who resolve tasks fastest
- Workload balancing can be tied to process analysis and monitoring tools to predict and recommend routes

Example



Source: Visualrota

Applying the Theory - 1

- BPM sits above the application layer in the technology stack
- BPM sits immediately below the user access layer
- Therefore, BPM provides 'human-side' integration and should correspond as closely as possible to the business *reality*
- Remember the value of *swim lanes* in your flowcharts
- Be aware of complexity - but don't be overwhelmed by it - capture *essentials*

Applying the Theory - 2

- When gathering requirements and information always be aware that the individual who is supplying the information:
  - Is providing a personal perspective
  - Is part of a social community and will naturally be influenced by that
- Recognize the *politics* as *implicit* rules that show how the subject must fit into their community
- Place their requirements into the context of the requirements of their community
- Recognize the importance of motives, goals and rules at each stage of the process
- Remember that everyone is part of a community (possibly more than one), and a community may itself be a part of other communities

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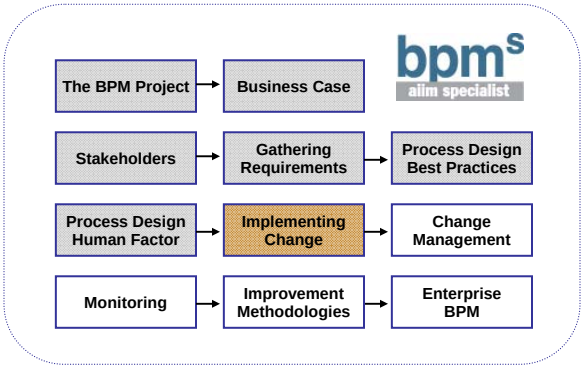
Caveats

- Be sure to start with the anticipated business objectives and benefits
- Role/Group analysis is almost always worth the upfront effort
- Intelligent use of routing techniques helps to manage ongoing dynamic change
  - The simplest route is not always the best
  - Both role and user routing must be kept current
  - Requirements gathering needs sufficient detail to establish routing rules
- Routing issues are far more complex when dealing with human-to-human interactions as opposed to system-to-system

BPM Specialist Track



Implementing Change – Learning Objectives

- At the conclusion of this module you should be able to
  - Understand where implementation fits into the broader picture of process improvement
  - Articulate the value of Proofs of Concept (POC) and Pilot projects
  - Run a proper technology selection process
  - Identify the steps required to add new technology, if needed, into the enterprise

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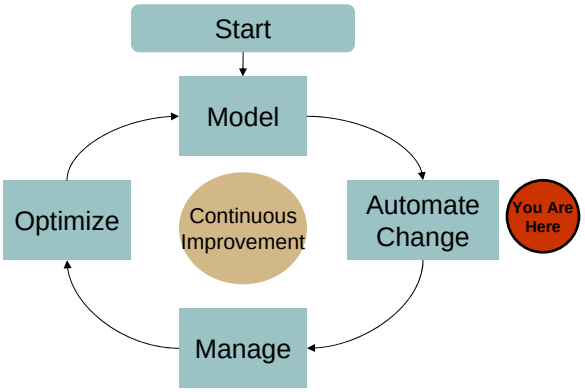
Business Process Lifecycle



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Implementation Steps

Identify → Research → Tender → Test → Train → Evaluate → Roll Out

- Identify: Proof of concept and Pilots
- Research: existing and potential technology alternatives
- Tender: Competition for products and services
- Test: Suppliers and technologies
- Train: Staff and partners
- Evaluate: Solution(s) against POC and Pilot
- Roll-out: Full project

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Identify: POC and Pilot

- Before you vet technologies
  - Use POC to help select supplier(s)
  - Some use the term “Model Office” or “Prototypes” in lieu of POC. Term is not important; concept is very important
- Both used to refine design and implementation of new environment
- POC approach
  - Test environment to design, develop, and test functionality to “get it right,” before moving to a Pilot
- Pilot approach:
  - Trial of draft proposed environment with subset of users in their normal working environment

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POCs & Pilot - Benefits

- Technical evaluation
  - Compatibility with IT infrastructure and other applications
  - Performance and network considerations
- Functionality evaluation
  - Does the system really do all that is specified and required
  - Test essential usability considerations in low-risk environment
- Finalise configuration
  - Ensures all aspects of environment are defined
  - Establish and ‘freeze’ a configuration for roll-out
- Training development
  - Develop and assess training materials and methods
  - Train the trainers, Help Desk staff, Developers, others

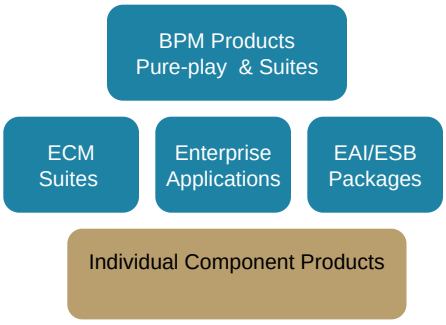
Research What You Have

- Consider what tools your enterprise is already using in-house
  - Your existing ECM/EAI/BPM/etc. toolset may support the changes you seek
    - New tools rarely solve old problems
  - Consider running a Proof of Concept to evaluate suitability incumbent technologies
- Only when you are sure your existing toolset will not suffice should you go out into the marketplace

Marketplace Review

Many different types of process improvement tools

- ECM
  - Full-blown suites, some with “BPM” modules
  - Industry solutions with workflow
  - “Basic Content Services”
- EAI
  - Integration toolsets
  - ESB
- Enterprise Software
  - ERP with workflow
- BPM
  - BPM Suites
  - Industry solutions
  - Specialized tools
    - Rules engines
    - Process engines
    - Monitoring
    - Modeling and Simulation tools



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Review: Marketplace Options

System to System:

EAI/ESB Platform
BPM

Making Decisions:

Rules Engine
Enterprise Applications

Human to Human:

BPM
ECM

Processing Documents:

ECM Tools

Caution: focus more on real capabilities, rather than acronyms and labels

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Developing the Tender

- Also known as “RFP”
  - Consider “Request for Information” (RFI) first
  - Saves time and effort in the long run
- Avoid long checklists
  - Focus on business scenarios and outcomes, and allow the supplier to propose a solution
- Include test cases for vendors to solve
  - POC should be one of them
- Describe an iterative, hands-on process

Vetting the Solution

- Use the POC phase to enable finalist suppliers to compete
- Review the supplier as closely as the solution
  - Perform viability due diligence
  - Attend User Group meetings and training
  - Meet the team who would work with you
- Go through an iterative selection process until you are comfortable with the solution and the team
- Remain flexible as possible about supplier make-up
  - Software vendors vs. Systems Integrators vs. Consultancies

Product Vendor or Systems Integrator?

	Integrator	Vendor (incl. PSO)
Consider first when…	Need strategic and requirements advice	Have very solid business case and specifications
Scope	May see business forest but not process trees	Know BPM principles, but may not see bigger picture
Product Expertise	Vendor Neutral vs. Vendor Partnered	Know their own system best
Resources	Can staff up and across, but tend to emphasize 'do' over 'teach'	Can supply talent on flexible basis, but tend to be pricier
Duration	Partnership	Sales Cycle
Final thought:	Where is the best relationship fit? Focus on people and corporate culture fit [Consider "key personnel" clauses]	

You may well need both

Running a POC

- Purpose
  - Create a new working environment with new or revised processes
  - Involve users, trainers, managers, admin staff
  - Software comparison / selection
    - Remember: this is part of your product selection process
  - Refine functionality and user interface
- Environment
  - Purpose-built
  - Users away from own desks
  - May employ new IT infrastructure

Note: other terms used for POCs:

"Prototypes"
"Model Offices"

Identify → Research → Tender → Test → Train → Evaluate → Roll Out

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POC Caveats

- Often perceived as an "extra" to skip
  - Will need its own management and support
  - How much time and money do you have for a failed project?
- May not reflect real-world environments
- Users daily work interrupted
- Needs office space and facilities

Pilot Benefits

- Starts roll-out of new technical environment
- Pilot users
  - Use ‘real’ IT infrastructure
  - Sit at own desks, in normal office, doing normal work tasks
- Real world evaluation of new environment
  - Provides realistic assessment of performance achieved
  - Tests entire project, *not* just technology
- User feedback on functionality and performance, suggesting improvements
- Documentation and training can be refined in light of experience

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Pilot Practicalities

- Planning
- Duration
- Transition / Migration
- Contingencies
- Support
- Training

This is a “real” Project

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Training

- Remember that many stakeholders need specialised training
  - System end-users
  - Managers and Analysts
  - Technologists (Developers and System Admins alike)
  - Support staff
- It is never too early to develop a training plan
  - Start during the POC
- It is never too early to start training
  - Remember that people are going to need “refreshers” regardless
  - Integrate Training and Support functions

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Pilot Caveats

- Pilot probably will
  - Need careful, time-consuming preparation and planning
  - Disrupt normal work
  - Disappoint some users
  - Adversely affect other applications
  - Require effective IT and user support
- However
  - Benefits almost always outweigh these disadvantages
  - Almost always too risky to roll out without one
  - This is your ultimate vetting step

Roll Out

- This is when you complete…
  - The transition to a new application and/or process, or
  - The application of that new system across a full set of stakeholders
- Best to do this incrementally
  - Continue to monitor, measure and learn
  - Lots of little “big bangs”
- At some level, the project is never fully complete

Identify → Research → Tender → Test → Train → Evaluate → Roll Out

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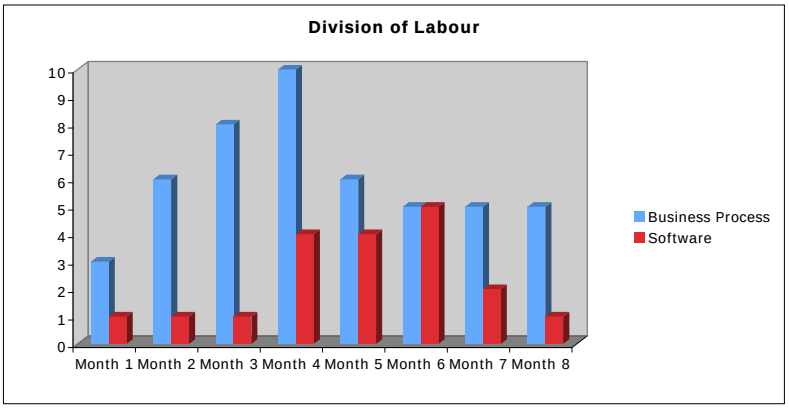
Pitfall: Underestimating Costs

- Work to normalize license pricing:
  - per CPU
  - per server
  - per department
  - per user
  - per power user
  - per connector
  - per developer
  - per year, and, frequently...
  - ...some combination of the above
- Remember:
  - Real costs are in Services
  - Consulting
  - Customization
  - Extension
  - Integration
  - Training
  - Support
- Usually 2-8x software costs

Consulting Effort



Wrapping Up

- Carefully assess your existing technology base before spending resources to explore new tools
- To the extent new technology is required, take an iterative selection and test process
  - Integrate product selection into your test and validation process, and vice-versa
- Consider an RFI in addition to Tender/RFP on large projects
- Reduce risks and improve learning through formally-managed and staffed POC and Pilot projects
- Roll out incrementally
- You may need more implementation resources than you think.

How to Apply What You've Learned

Exercise: Develop Project Schedule

This is an individual exercise and necessarily involves guess-work on your behalf. For your organization, estimate, rather than calculate times. Also, it is OK to skip and consolidate steps.

Be realistic. Check to see what steps could be taken in parallel or collapsed.

What are the communications and governance implications?
For example, what are the costs of hurrying it up?

How could a more agile (less waterfall) methodology be applied here?

Are there any extraneous steps?

Any key steps missing?

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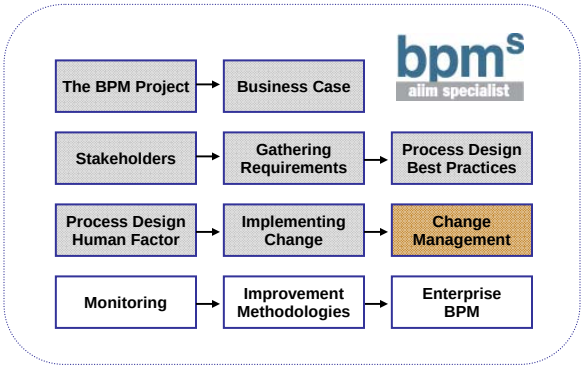
BPM Specialist Track



Learning Objectives

- At the end of this module you should be able to:
  - Identify different types of change
  - Contrast technology change with process change
  - Understand the 4 dimensions of organizational change readiness
  - Identify different models for change management
  - Articulate best practices for change management

Reasons for Change

- Process change makes things work:
  - Faster
  - More efficiently
  - At a lower cost
- Process change may be driven by:
  - Structural change
  - Cost cutting initiatives
  - Strategic and Cultural Change

Two Types of Process Change

1) Economic

- To improve cash flow
- To increase share value
- To reduce overhead

Employee or cultural impact is secondary to the economic driver

2) Organizational

- To become more productive
- To reduce errors
- To encourage innovation and learning

The driver is a stronger organization that can deliver ever increasing benefits

- Almost all BPM projects entail some mix of these
  - But tend to emphasize one over the other

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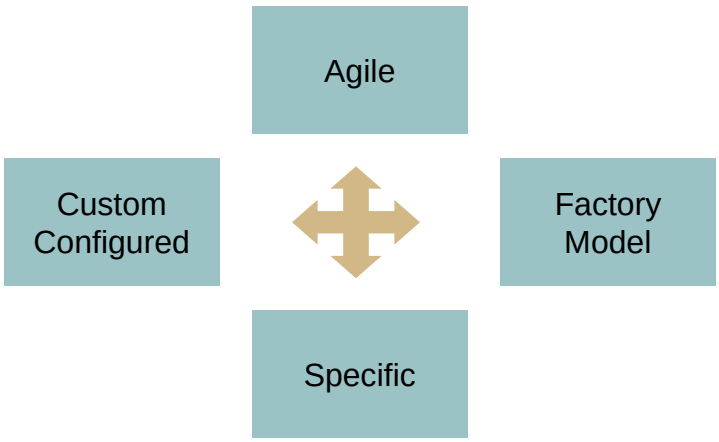
Technology or Process Led

- May be technology led
  - Upgrades
  - New approaches
  - System limitations
- May be process led
  - New processes demand new or altered technologies
- Beware conflating technology change with real business change

Technology Change



Caveats

- Limitations and dependencies may be more difficult to change than leadership realizes
- Technology change will not automatically change behavior
- A single disgruntled employee can derail a multimillion dollar IT project
- No point automating an already dysfunctional process

Change Readiness

- Organizational change will always appear threatening
  - People think of job security
  - Some enterprises more freely disseminate information regarding change and strategy than others
- You need to assess your enterprise's readiness to change
  - Both the readiness of management and the workers affected by the change
- Thus, in this section we'll consider the major questions that need to be asked to assess your enterprise readiness

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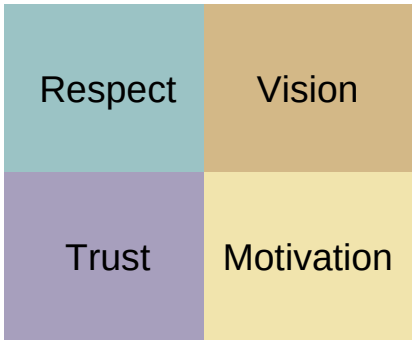
Change Readiness



Respect

- Is the leadership that is recommending change respected?
- Are the employees impacted by the change respected?
- Are the consultants and business analysts respected by both?
- How is the respect expressed?
  - Flexibility
  - Delegation
  - Tolerance
  - Encouragement
- By asking these questions we get to the truth

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Vision

- Whose vision?
- Is there a shared vision?
- Do employees, leaders, and change agents have the same interpretation of the vision?
- Is the vision realistic?
- Is the vision relevant?

- Visions can be notoriously vague - but you need to understand *how* the vision is *perceived*

Trust

- Is the leadership trusted?
- Are the employees trusted?
- Is the reality of change exposed honestly and openly?
- Is there a history of mistrust?
- Are the consultants trusted?
- Do employees and leaders trust each other?

- Often trust is not that high
  - Therefore your goal is to pinpoint hotspots of distrust and manage accordingly

Motivation

- What is the leadership's motivation to change?
- What is the employees' motivation for change?
- Do these two reconcile?
- What is in it for me (WIIIFM)?
- Is the motivation to co-operate? To support? To enjoy the outcome?
- Motivation for change is normally stronger at the management level
  - Your goal is not so much to measure the strength of the motivation than the reasons for it

Assessing Change Readiness

- Is anybody ready for change - if so who and where?
- Why are they not ready?
- Use change to bring about change
  - Devolve decision making
  - Share information more vigorously
  - Start to communicate - both listen and talk
  - Explain why change is necessary and elicit feedback
- You will likely need to deal with more resistance than the management realizes
  - Plan for it and identify it early on -- and your chances of success will rise substantially

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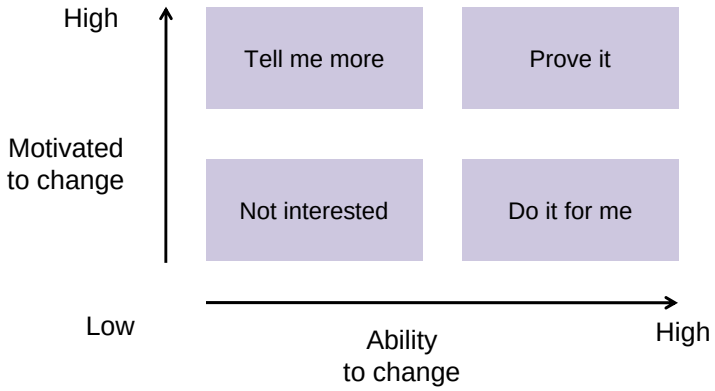
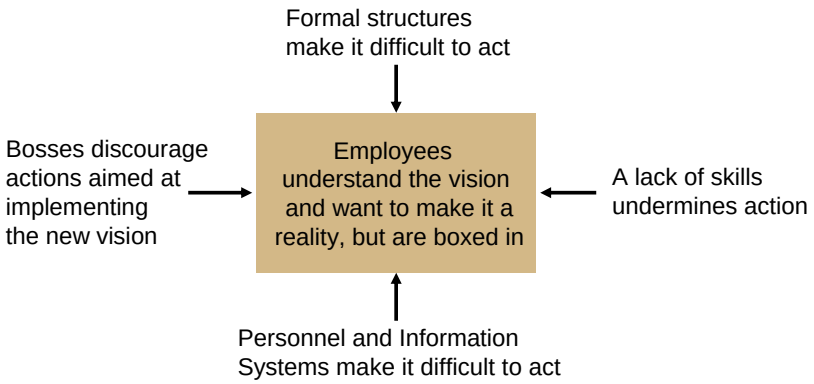
Best Practices for Implementing Change

- Change needs to be managed, but there are many different methods for this
  - However, these methods share common themes
- Most important theme: change occurs in the context of the enterprise's natural and recognized capabilities
- All successful models
  - Address all elements of change
  - Provide a process for introducing change
  - Address critical success factors
- Lets give a context for change and look at a couple of the methods in more detail

Interested in Change?



Addressing Empowerment



Source: Harvard Business Press

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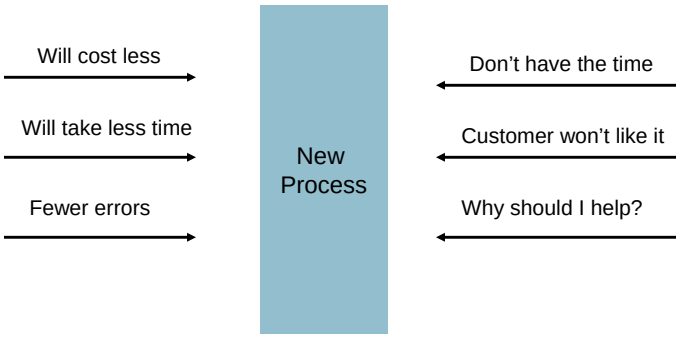
Analysis of Resistance



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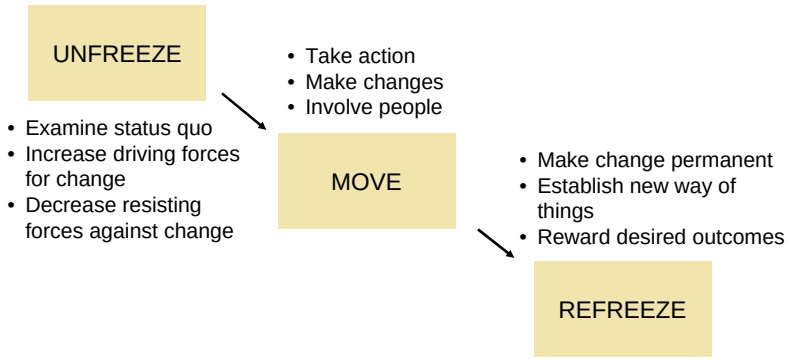
Letwin's 3 Steps



Kotter's 8 Steps

1. Establish a sense of urgency
2. Form a powerful guiding coalition
3. Create a vision
4. Communicate the vision
5. Empower others to act on the vision
6. Plan for and create short term wins
7. Consolidate improvements and produce still more change
8. Institutionalize new approaches

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Best Practices for Implementing Change

Aim for the short term:

- Early wins create a "Yes" environment
- Wins should be visible and promoted widely
- Wins should be clear cut - not open to interpretation
- Wins should bring benefits to all
- Wins should appear to come easily
- Even a big bang approach can be delivered via a series of smaller wins

Caveats

- Some may argue that BPM activity does not always involve change
  - "We're just automating an existing process"
  - In reality, all BPM activity involves change
- Change can be a win-win
- Yet change is often/usually managed very badly
- **Nobody** changes without a good reason
- Friction is normal as is conflict
  - Don't avoid it altogether

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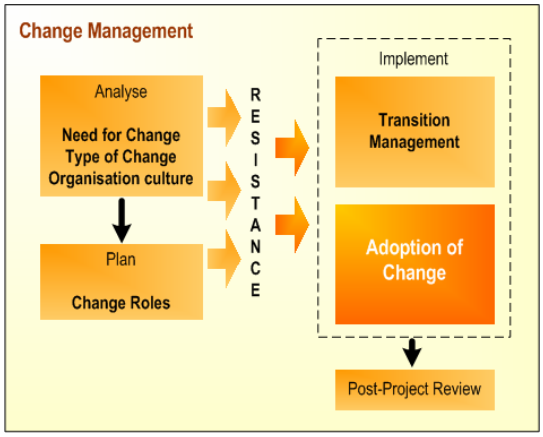
Wrapping Up



Source: JISC

Further Reading

- *Making Sense of Change Management: A Complete Guide to the Models, Tools & Techniques of organizational Change* By: Esther Cameron, Mike Green
- *Managing Change and Transition* By: Harvard Business School Press
- *The Heart of Change: Real-Life Stories of How People Change Their organizations* By: John P. Kotter, Dan S. Cohen
- *Managing the Change Process: A Field Book for Change Agents, Team Leaders, and Reengineering Managers* By: David K. Carr, Kelvin J. Hard

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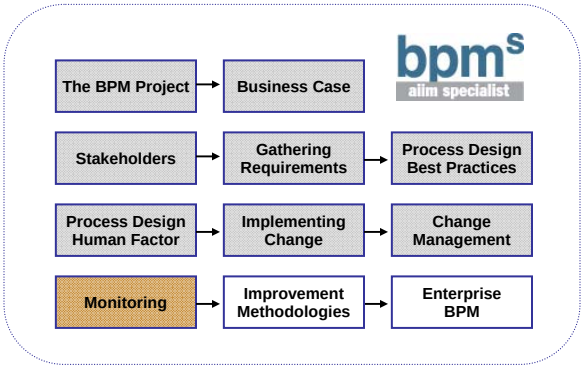
BPM Specialist Track



Monitoring Learning Objectives

- At the end of this session you should be able to:
  - Understand the value Process Monitoring
  - Identify different metrics to capture and oversee
  - Distinguish On-Demand vs. Automated Reporting

Introduction

- In the past
  - You structured a workflow then let it run
  - You figured once you had modeled a “best practice” process, the job was done
- *Now we know that is only part of the work*
- Agile approaches to technology and business are now required
  - Kaizen and Continuous Improvement approaches demand a granular level of data for metrics
  - Monitoring and reporting are becoming hot areas in BPM
    - Although essential, they are difficult to do well

Example Monitoring Dashboard

Source: Opensourcery

Business Activity Monitoring

- Business Activity Monitoring (BAM) is popular acronym
- BAM tools are an extension of BI (Business Intelligence) toolsets
- They provide monitoring of all kinds of IT systems from network and infrastructure to CRM and ERP systems
- BPM activities *may* be monitored via BAM
  - Our focus is on BPM Monitoring and Reporting not broader BAM technologies

Why Monitor?

- Processes are complex and many *instances* will be running at any one time
- You need to be aware of the status of tasks and whether progress is being made

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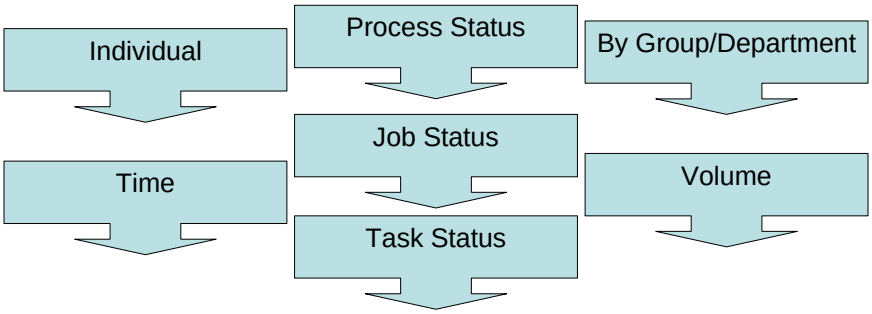
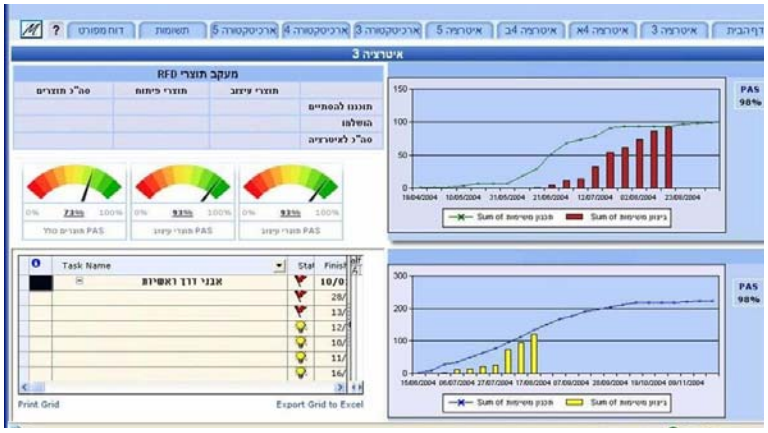
Capturing Key Metrics

- By capturing key metrics you can either:
  - Improve existing processes
  - Modify process routes dynamically
- Metrics may be captured in real time - but may not represent all available data (only data understood by the BPM, ECM, or activity monitoring tool)

Levels of Reporting



Monitoring Example



Source: Matan Consulting

What to Monitor?

- Volume
- Costs (& Revenues)
- General tasks and processes
- User workload
- Jeopardy reporting

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Volume

- How many jobs are currently active?
- How many are at what stage?
- How many are on time - overdue?
- When did they start - when were they completed - what patterns are emerging?
- How many jobs are typically active at any one time?
- Can we use this information to predict future activity?

Costs

- Costs per process completion (*time to execute a customer order, resolve a query, dispatch goods, etc.*)
- Provides analysis as to whether specific cost related activities need to be built into the process (*approval levels, for example*)
- Time/Costs need to be accurately factored into the process model to have real value
  - Assumes you have complete and accurate data here
- *Use with caution*
- Apply same concepts to revenues, with same caveats

General Tasks and Processes

- Tracks the status of specific tasks
- Where things *are* in the process
- To be of value needs to be highly accurate and in near or real time
- Can give an indication of the length of time left to complete a process

User Workload

- How much work has Alan or Role Y done this week/month/hour?
- How long does it take them to complete a task?
- How does this compare with Paul or Role W?
- How many overdue/backlog tasks do they have - can I reallocate this work?

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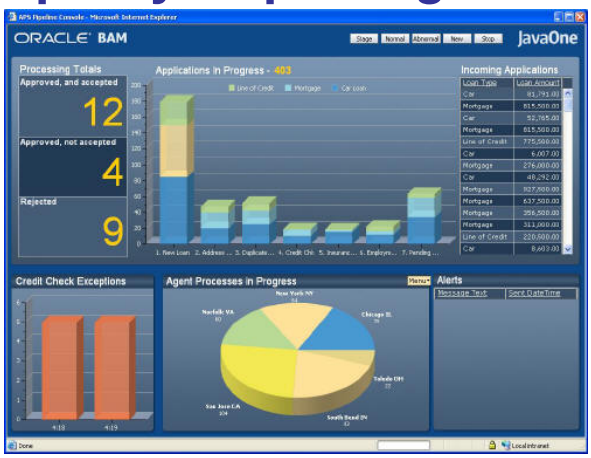
Jeopardy Reporting

- Which process tasks/steps are causing problems?
- Can I see which are starting to fall behind?
- Can I identify problem resources (backlog due to person sick/incompetent)

Jeopardy Reporting Example



Source: Oracle

On-Demand vs. Automated

Reports come in two broad types

- On-Demand
  - Activated by a human
  - Often a canned (pre-set) query, but…
  - May also include ad-hoc reporting
  - Complex reports may take a long time to run
- Automated
  - Activated by system
  - Typically using a canned query
  - Often delivered directly to user
- Some systems do not have *any* reporting facilities, but make logs available to your own query or alerting tool

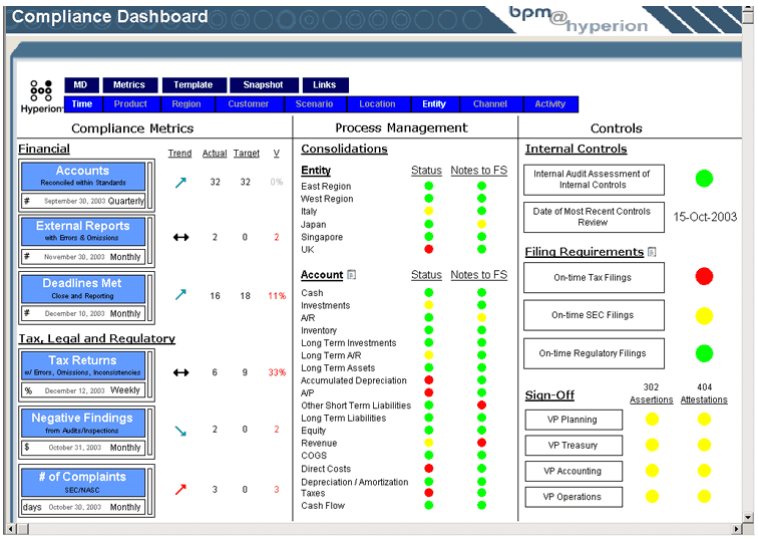
Notifications and Alerts

- Generated automatically by the BPM System
- Configured by users of the BPM system
- Typical examples:
  - Number of (new/active/complete) jobs
  - Task level (how many jobs waiting to step through task/overdue)
  - Thresholds exceeded - escalation to supervisor
  - System stopped/no response
- Particularly useful for jeopardy reporting
- Usually notification by e-mail

Simulations

- Simulations can be quite useful, and are fairly unique to BPM/BAM technology sets
  - Typically do not see simulation capabilities in ECM tools
- Allow you to undertake a dry run of processes
- Can show you bottlenecks, breaks, unresolved loops
- Can range from highly complex tools to simple logic checks

Simulation Example



Source: Hyperion

Limitations and Expectations

- Processes can be viewed from many different perspectives - which one are you going to monitor?
- Reports can be misleading - particularly at the individual worker level
- Reports are an indicator - not judge and jury
- Bottlenecks and slack may be the result of poorly designed processes, rather than poor worker productivity levels
- Executives who read reports and view monitoring dashboards tend to:
  - Disbelieve them
  - Take them as absolute truth

Wrapping Up

- Set realistic expectations for monitoring
- Understand in advance how the data will be used and interpreted by end users
- Provide limited but accurate monitoring data
- Be clear whether provided data is real-time or historical
- Make full use of alerts and warnings
- Help structure reports and related business intelligence

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Day 3 Review

- Review of Key Concepts
- Building Project Teams
- Gathering Requirements
- Design Processes
- Implementing and Managing Change
- Monitoring Processes

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Day 4 Overview

- Improvement Methodologies
- Enterprise BPM
- Ethics
- Industry Case Studies
- BPM Futures
- Review: Take Home Case Study

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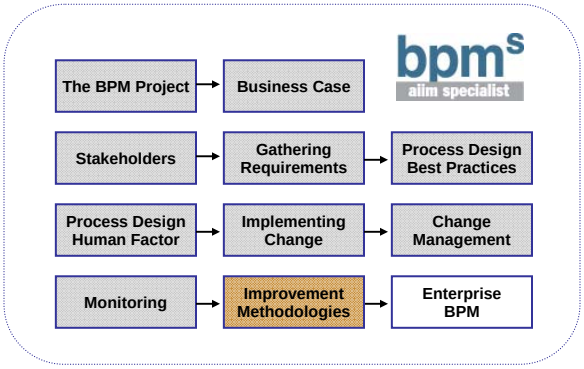

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Improvement Methodologies Learning Objectives

- At the end of this session you should be able to:
  - Understand the value of utilizing an improvement methodology
  - Articulate the key differences among and relative merits of the following approaches:
    - TQM
    - BPR
    - Six Sigma & Lean

What is an Improvement Methodology?

Methodology: *A system of principles, practices, and procedures applied to a specific branch of knowledge*

- There are many hundreds of improvement methodologies
  - Some universally known, most are variations on a theme
- This module contrasts three well-known approaches *as examples only*.

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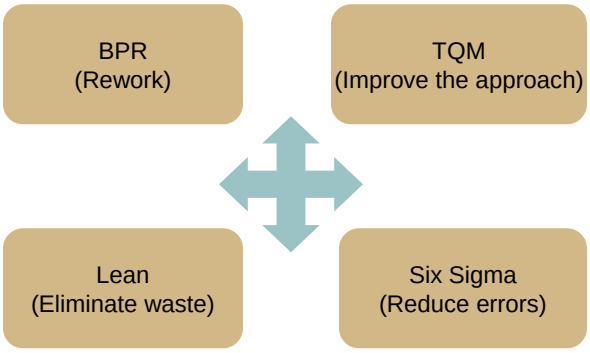
Why Use a Methodology for Process Improvement?

- Processes typically need continuous improvement throughout their lifecycles
- Enterprises can position themselves to respond to changes
  - And give IT a chance to accommodate those changes in a timely manner.
- Enables enterprises to thrive in competitive environments, using proven and standard methods for change

- Appropriate methodologies must be adapted to face hard realities:
  - At best about 70% of requirements can be defined in the initial project phases
  - The process itself needs to be continuously improved by disciplined redefinition and refinement

Some Methods in Detail

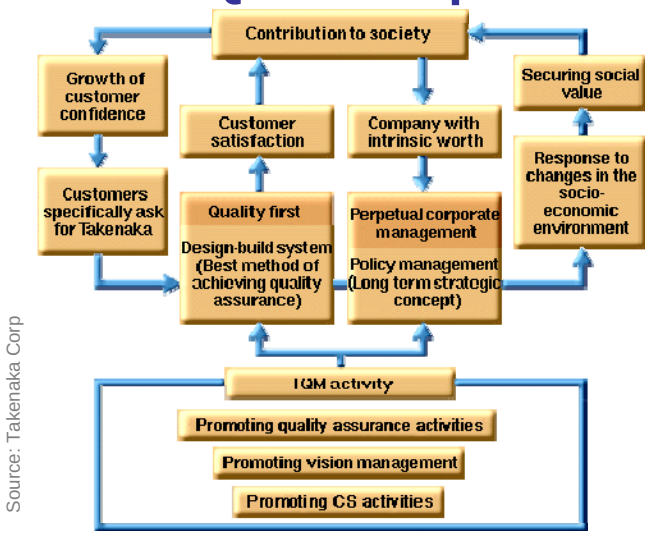


TQM Defined

TQM - **Total Quality Management** is sometimes referred to as Total Quality Leadership

- Origins are disputed, but incorporates many Japanese management concepts
- TQM is a management strategy focusing on awareness of quality in all organizational functions
- TQM views an organization as a collection of processes

TQM Example



Source: Takenaka Corp

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TQM Fundamentals

- TQM comprises four key steps, namely:
  - **Kaizen** – Focuses on Continuous Process Improvement, to make processes visible, repeatable and measurable.
  - **Atarimae Hinshitsu** – The idea that things will work as they are supposed to (a pen will write).
  - **Kansei** – Examining the way the user applies the product leads to improvement in the product itself.
  - **Miryokuteki Hinshitsu** – The idea that things should have an aesthetic quality

Plan, Do, Check, and Act

- TQM processes are divided into four groups: Plan, Do, Check, and Act
  - **Plan**: people define the problem to be addressed; collect relevant data; and ascertain the problem's root cause
  - **Do**: people develop and implement a solution; and decide upon metrics to measure effectiveness
  - **Check**: people confirm the results through before-and-after data comparison
  - **Act**: people document results; inform others about changes; and make recommendations

TQM Uses

- TQM is a comprehensive and structured approach to *organizational* improvement
  - Recall the distinction with economic improvement
- TQM is focused on ongoing refinements in response to continuous feedback
- TQM is often based on quality improvement from the customer's point of view

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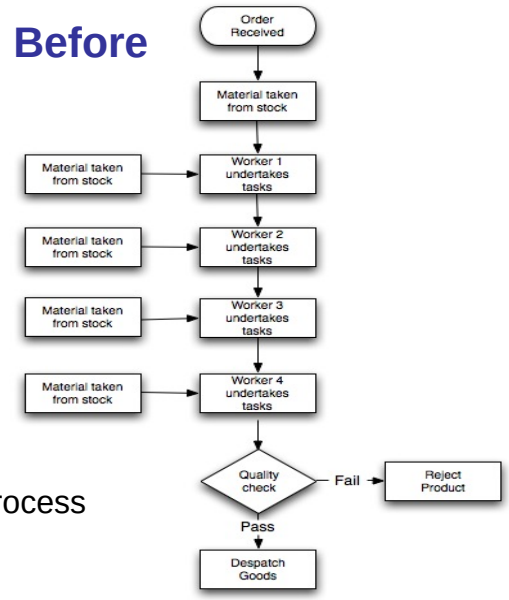
TQM in Practice: Before



Generic Factory Line Process

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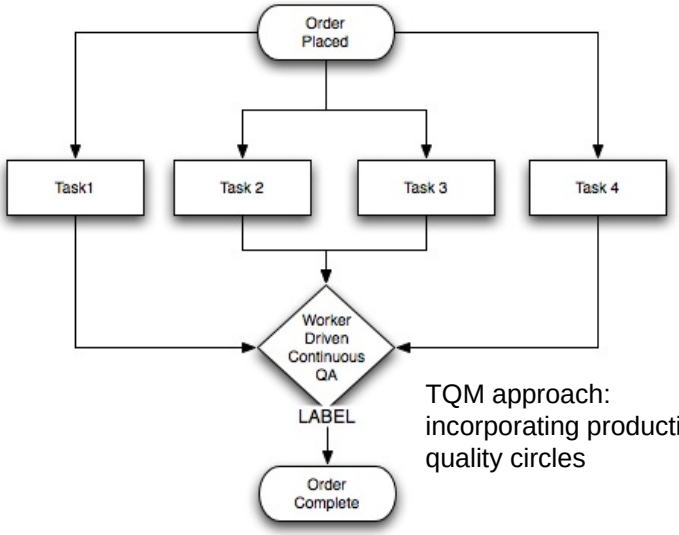
TQM in Practice: After



TQM approach: incorporating production quality circles

BPR Defined

BPR - Business Process Reengineering

- BPR is *not* BPM – a common misperception
- BPR is radical redesign and reorganization of an enterprise
- Information Technology (IT) considered the key enabler for *radical* change
- BPR is often linked to “downsizing” and “right-sizing” and Enterprise Resource Planning (ERP)

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Evolution of BPR

- BPR was highly popular in the 1990s
  - Now seldom formally applied
  - But many elements of it remain in common usage
- BPR today is often more of a hybrid approach - used (under whatever name) to manage major IT implementations

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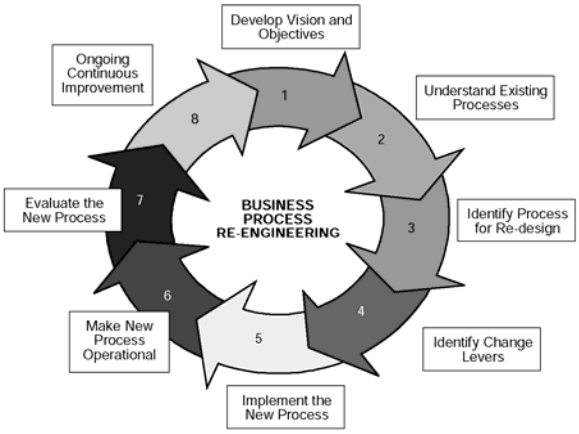
BPR Model



Source: Vakola *et al.* (1998)

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BPR Principles

BPR adheres to seven principles to undertake the change process:

1. Organize around outcomes, not tasks.
2. Identify all the processes in an organization and prioritize them in order of redesign urgency.
3. Integrate information processing work into the real work that produces the information.
4. Treat geographically dispersed resources as though they were centralized.
5. Link parallel activities in the workflow instead of just integrating their results.
6. Put the decision point where the work is performed, and build control into the process.
7. Capture information once and at the source.

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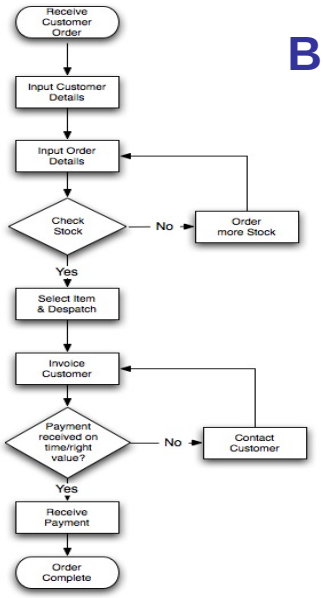
BPR in Practice: Before



Process customer order

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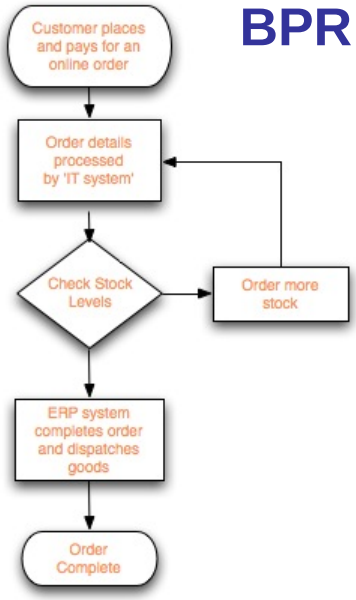
BPR in Practice: After



Radical re-design:
total automation

Six Sigma Defined

Six Sigma - A system of practices originally developed by Motorola to systematically improve processes by eliminating defects.

- Defects are defined as units that are not members of the intended population. Since it was originally developed, Six Sigma has become an element of many TQM initiatives.
- The goal of the methodology is to reduce defect levels below 3.4 defects per 1 million opportunities (DPMO).

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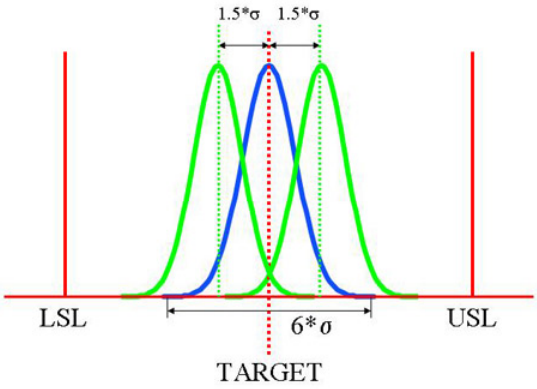
Six Sigma



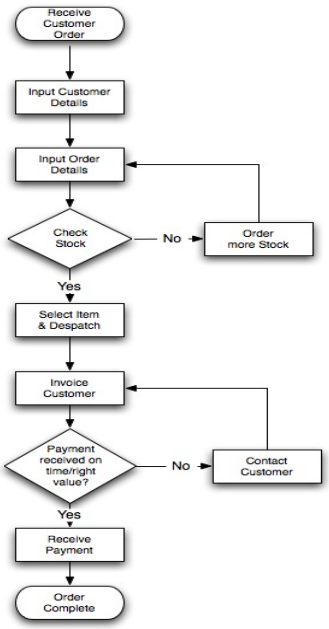
LSL: Lower Specification Limit
USL: Upper Specification Limit

DMAIC

- Basic methodology consists of DMAIC:
  - ***D*efine** the process improvement goals
  - ***M*easure** the current process and collect data for future comparison
  - ***A*nalyze** to verify relationship and causality of factors. *Determine* what the relationships are
  - ***I*mprove/optimize** the process based
  - ***C*ontrol** to ensure that any variances are corrected before they result in defects

Six Sigma in Practice

6σ



"Lean Manufacturing"

Source: beyondlean.com

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7 Forms of Waste

- **Overproduction** - Producing things ahead of demand
- **Waiting** - Inability to move to the next processing step
- **Transport** - Unnecessary movement of materials between processes
- **Over-processing** - Inappropriate processing of parts, due to poor tool and or product design.
- **Inventory** - Storing more parts than the absolute minimum.
- **Movement** - Unnecessary movement of people during the course of their work.
- **Defects** - Production of defective parts

Ways to Improve

- Put simply, waste elimination is accomplished through Just In Time and Jidoka, maintained through Standardized work, and improved through Kaizen.
  - Just In Time (JIT) - Producing what is needed, when it is needed, in exactly the amount needed.
  - Jidoka - The ability of production to be stopped in the eventuality of a problem, either by the machines themselves or people.
  - Standardized work - Standardize procedures concentrating on the most efficient human movements and work sequence for each process.
- In summary the idea is to reduce waste through the application of a variety of process improvements

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Relationship to BPM

- All methodologies require you to
  - Gather requirements/information
  - Analyze potential changes
  - Manage change
  - Monitor and continuously improve
- The difference is in the amount of emphasis each one places on individual steps

When to Use?

- TQM
  - When your enterprise is looking to build strong products and relationships. When you are looking to develop smooth, elegant and timeless processes
- Lean
  - When you have defined processes and want to improve efficiencies by reducing waste elements from your processes. Typically in manufacturing scenarios.
- Six Sigma
  - When you have corporate support to focus on error reduction - and you want to empower your employees to take control of this reduction process
- BPR
  - When you are making a strategic shift and need to re-orient your process(es)
  - When you need to change fast

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Caveats

- **Six Sigma**
  - Can involve a lot of training
  - Can seem highly complex
  - Hierarchy system can be a challenge in the corporate culture
  - Can appear to be overly focused on manufacturing sector
- **TQM**
  - Can be difficult to get equal support from all improvement layers
  - Often associated with (and mocked for) “enthusiastic and motivational” approaches to Improvement
  - Can be difficult to allocate effort to priority issues

Caveats

- **BPR**
  - Subject to a lot of bad press
  - Workers may immediately assume job losses are imminent
  - Can over emphasize technology
  - Radical change can mean big disaster

Wrapping Up

- What we are teaching fits into a broader (structured) debate about change
- There are formal methodologies that you at least need to be aware of
- You may well find your BPM project falling under the aegis or thinking of something similar to these methods
- The three we talk about are just examples - but probably the best known

Apply What You Have Learned

Case: Stage B

Instructions

These are group exercises with specific tasks to complete based on what you have learned. For each phase, the instructor will divide you into different teams; those teams may work on the same problem in some instances, and on different problems in others. Each team will need to present their findings to the class.

Work only on that specific phase (do not look ahead to the following phase).

Take 40 minutes as a group to brainstorm how you would go about gathering the initial requirements and structuring this first phase of the project. What techniques would you apply, in what order, and why? What improvement methodologies might be applicable to a firm like Deep House Music – why?

Further Reading

Total Quality Management: Strategies and Techniques Proven at Today's Most Successful Companies (Portable Mba Series) by Stephen George and Arnold Weimerskirch

TQM: Text with Cases, Third Edition (TQM: Text with Cases) by John S Oakland

TQM in Action : A Practical Approach to Continuous Performance Improvement by R.J. Pike and R.J. Barnes

The Six Sigma Way: How GE, Motorola, and Other Top Companies are Honing Their Performance by Peter S. Pande et al, Robert P. Neuman, and Roland R. Cavanagh

The Certified Six Sigma Black Belt Handbook by Donald W. Benbow and Thomas M. Kubiak

Implementing Six Sigma: Smarter Solutions Using Statistical Methods, Second Edition by Forrest W. Breyfogle III

Reengineering the Corporation: A Manifesto for Business Revolution (Collins Business Essentials) by Michael Hammer and James Champy

Beyond Reengineering: How the Process-Centered Organization is Changing Our Work and Our Lives by Michael Hammer

The Reengineering Revolution by Michael Hammer

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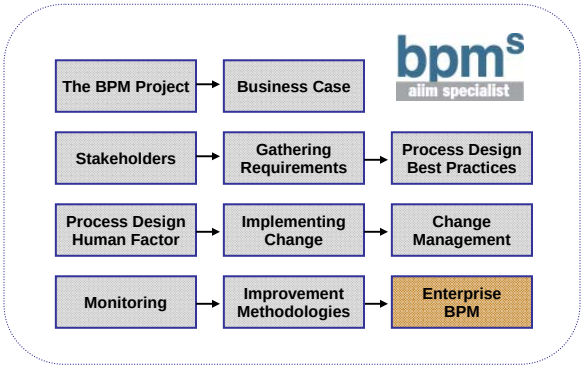

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Learning Objectives

- After this module you should be able to:
  - Identify and contrast various BPM maturity models and their applicability for your enterprise
  - Articulate the value, purpose, and potential disadvantages of a Project Management Office
  - Distinguish the role of Enterprise Architecture in Enterprise BPM

Introduction

- Interdepartmental process improvement is qualitatively more difficult than departmental
  - Some departments may not assign adequate resources
  - Competing projects sap energy
  - Fundamental disagreements about scope and nature of change
  - Uneven distribution of expertise
  - Much spinning of wheels across the enterprise, or
  - Lots of little wins, but no big ones
- Enterprises can address this more systematically through BPM maturity analysis and roadmaps
- Some sort of governance framework is needed
- The practice of Enterprise Architecture can add value here

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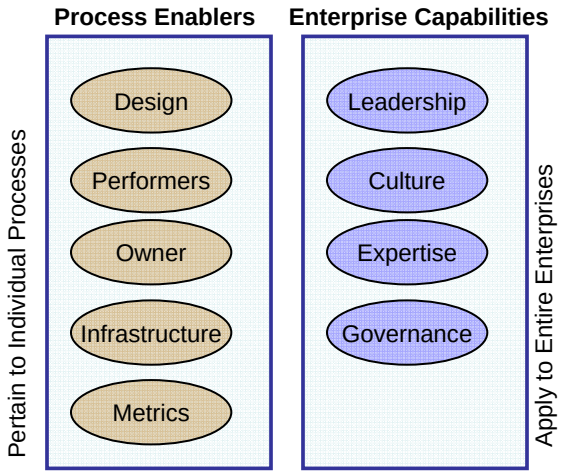
Why Have a "Maturity Model?"

- A simple way to focus top executives on process improvement issues
  - Executives tend to intuitively understand maturity concepts
  - Can present an audit or a roadmap as one-page diagrams
- Directs you to specific areas of improvement
- Can point out flaws or missing pieces in a strategic approach
- Looks at process improvement as an enterprise endeavor, and BPM capabilities as an enterprise asset

A Sampling of Maturity Models

- There are many competing business process maturity models in the marketplace
  - Capability Maturity Model (CMM) and CMM Integration (CMMI)
  - Process and Enterprise Maturity Model – PEMM (Michael Hammer of BPR fame)
  - BPMM (Object Management Group)
  - BPMM (Queensland University of Technology)
  - BPM Maturity and Adoption Model (Gartner Group)
  - There are others

PEMM Basics



- Hammer argues that all of these must mature roughly in sync for enterprise roll outs, even though you can and should start in individual departments
- Highly skilled performers with sub-par infrastructure (and vice versa) will not be sustainable
- Process improvement expertise without cultural and leadership orientation is wasted knowledge

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BPMM (OMG Proposed)

Level 5: Optimising	Pro-active emphasis on closing gap between objectives and capabilities
Level 4: Predictable	Common, integrated assets and processes with measurement and predictability
Level 3: Standardized	Enterprise-wide process improvement competencies with product and service orientation
Level 2: Managed	Stabilization of local work through department-level expertise, control, and metrics
Level 1: Initial	Enterprise lacks consistent practices and management is reactive

Strong roots in CMM for Software Development

More assessment- and prediction-oriented than prescriptive

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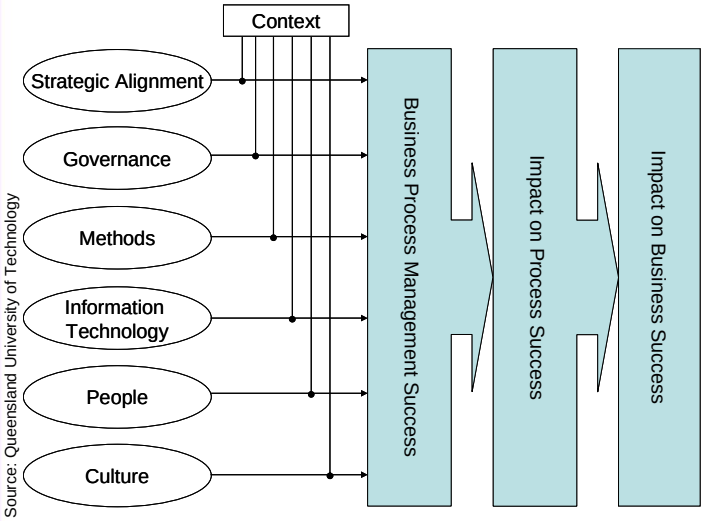
QUT BPMM Model



More complex but potentially richer

Looks at multiple dimensions ("factors" across five stages

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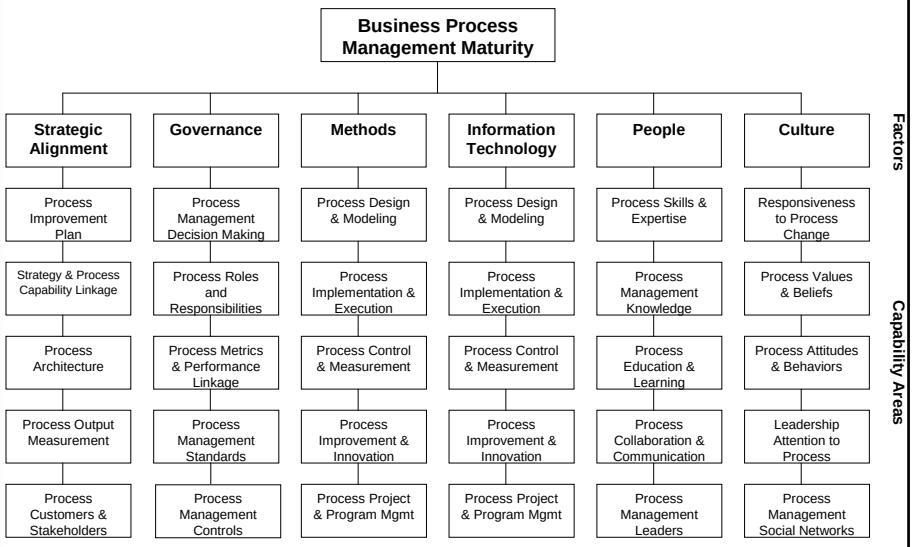
The Entire BPMM Model



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Sample BPMM Assessment Questions

- Strategic Intent

Process decisions are made by people that have influence over final process outcomes.					
1	**2**	**3**	**4**	**5**	**N/A**
Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	

- Operational Practice

Rate the way in which **process decisions** are made on the basis of your…						
	Low		**Average**		**High**	
Awareness	**1**	**2**	**3**	**4**	**5**	**N/A**
Understanding	**1**	**2**	**3**	**4**	**5**	**N/A**

Source: Queensland University of Technology

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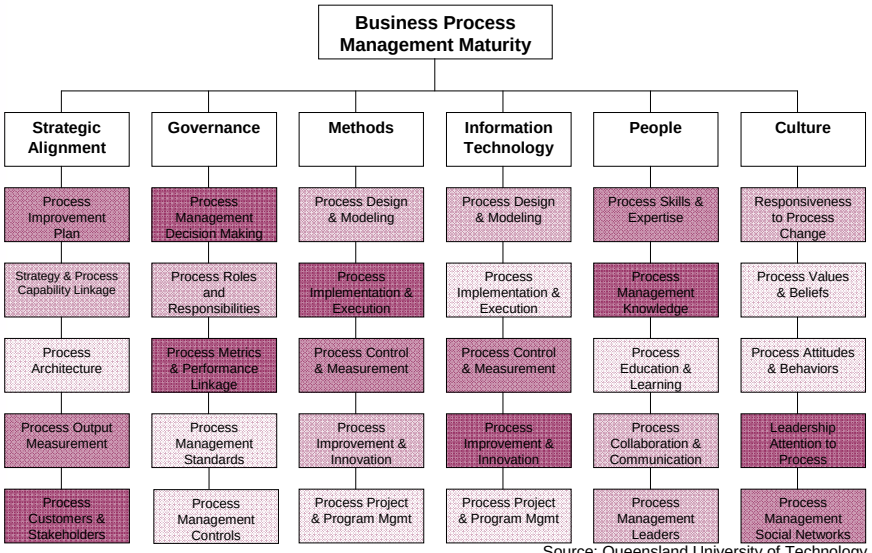
Example Outcome



Source: Queensland University of Technology

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A Critique of Maturity Models

- Don't incorporate ethical dimension
- Same approach is not always ideal for both description and prescription
- Maturity models rarely make explicit connection between process maturity and business outcomes
  - Tend to underplay strategic alignment in favor of building general capabilities
  - When not aligned to explicit business value, they tend to generate busy work
- Stage-gate approach over-emphasises intra-state synchronisation
  - "Everything needs to be at Stage 1 before we leap the gate to Stage 2" – not realistic in the real world

Maturity Model Best Practices

- Remember that there are many maturity models to chose from
- *The best model/diagram is the one that most persuasively communicates business opportunities to executives*
- More important to begin an process improvement assessment than to dither over approach
  - While sometimes disparaged as insufficiently solutions-oriented, a good assessment can help the whole team get on the same page with a common understanding and vocabulary
- Use models to communicate that process improvement is not a project, but a way of doing business

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Enterprise BPM as a Practice

- Nearly all maturity models connect process maturity to enterprise organizational maturity
  - They all put forward process discovery/analysis, process improvement, and process agility as enterprise skills
- How do you approach BPM from an enterprise perspective?
- Governance:

  Set of rules and decision-making norms that govern how an enterprise conducts business

BPM Governance

- Interdepartmental process improvement is qualitatively more difficult than departmental
  - Some departments may not assign adequate resources
  - Competing projects sap energy
  - Fundamental disagreements about scope and nature of change
- It takes pro-active effort and dedicated resources to capture knowledge and build enterprise proficiencies
- Some sort of governance framework is needed

PMO-based Governance

- Project Management Office (PMO) as governance mechanism
  - PMO: *Structure for standardizing project practices and facilitating project portfolio management, as well as fostering methodologies for repeatable processes*
- Also known as “Project Offices” or “Centers of Excellence”
  - Latter implies domain knowledge, but you want that in a PMO, too
- Benefits:
  - Ensure consistency and standards to projects
  - Apply best practices
  - Supply knowledgeable resources
  - Align projects with business objectives
    - This needs rigorous attention

What PMOs Do

- Establish policies and standards
  - Implementation methodologies and notations
  - Development platforms and integration protocols
- Prioritize BPM projects
  - *Typically: the most achievable first*
  - Look for feasibility, impact, sponsorship
- Enforce rules
  - Conduit to executive authority
- Maintain best practices
  - Process libraries, process best practices, process metrics

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PMO Best Practices

- Most BPM projects start from the bottom up
  - "Start small, build on success" can lead to non-strategic projects
- A PMO should add significant value:
  - Strategic perspective
  - Senior management participation
  - Governance mechanisms and standards
  - Roadmap for continuous improvement and enterprise integration
  - Business value orientation (as opposed to functional orientation)
    - This is the most important shortcoming of tactical projects

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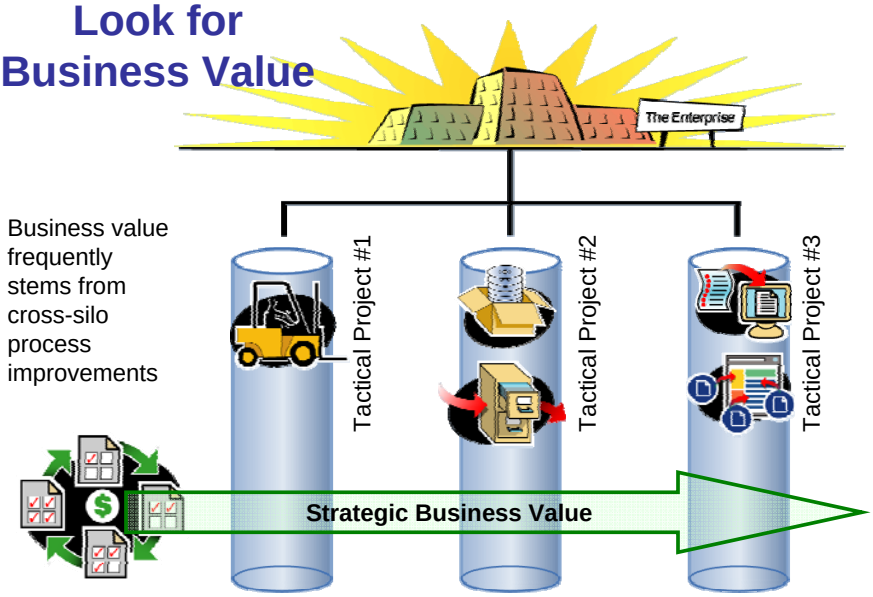
Look for Business Value



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Risks of PMO Approach

- PMO can focus overly on “successful” tactical projects than advancing the business
- Can lead to poor project selection; projects selected because…
  - Functional VP was a believer
  - The process was easily measured
  - The loudest complaints emanated from it
  - There was process improvement expertise and resources in that business unit.
- This is not the same as adding *value* to the business
  - Can emphasize busy work and maturity elevation over core value

Alternative to PMO Approach

- "Value Chain Management Team"
  - Looks across silos at core business problems and opportunities
  - Deal with basic business objectives (order-to-cash) rather than "easy wins"
  - More of a "red"/"tiger"/"SWAT" team than a standing administrative body
    - Avoid PMO "cocoon"
- Includes two tiers
  - Executive Board (4-6 senior leaders)
  - Design Team
    - Mixture of line business leaders and process improvement experts
    - Oversees projects and draws internal and external resources as necessary
    - But focus remains on business management rather than process management

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Governance Best Practices

- More important to *have* a governance structure than to figure out which type to build
- Tying program to core business drivers is the best assurance of executive attention and success

Classic EA a' la Zachman

	Data	Function	Network	People	Time	Motivation
Scope (contextual) Planner	List of things important to the business entity= class of business thing	List of processes the business performs process= class of business process	List of locations in which the business operates node= major business location	List of organizations important to the business people= major organizational unit	List of events/ cycles significant to the business time= major business event/ cycle	List of business goals/strategies ends/means= major business goal/strategy
Business model (conceptual) Owner	Semantic Model entity= business entity relationship= business relationship	Business Process Model process= business process I/O= business resources	Business logistics system node= business location Link= business linkage	Workflow model people= organization unit work= work product	Master schedule time= business event cycle= business cycle	Business plan end= business objective means= business strategy
System model (logical) Designer	Logical data model entity= data entity relationship= data relationship	Application architecture process= application function I/O= user views	Distributed system architecture node= I/S function (processor, storage, etc) link= line characteristics	Human interface architecture people= role work= deliverable	Processing structure time= system event cycle= processing cycle	Business rule model end= structural assertion means= actior assertion
Technology model (physical) Builder	Physical data model entity= segment/ table/etc. relationship= pointer/ key/etc.	System design process= computer/ function I/O= data elements/ sets	Technology Architecture node= hdw/system software link= line specifications	Presentation Architecture people= user work= screen formats	Control structure time= execute cycle= component cycle	Rule design end= condition means= action
Detailed representations (out-of-context) Subcontractor	Data definition entity= field relationship= address	Program process= language statement I/O= control block	Network architecture node= address link= protocol	Security architecture people= identity work= job	Timing definition time= interrupt cycle= machine cycle	Rule specification end= sub-condition means=
Functioning enterprise	Data	Function	Network	Organization	Schedule	Strategy

Source: IBM

Other Models

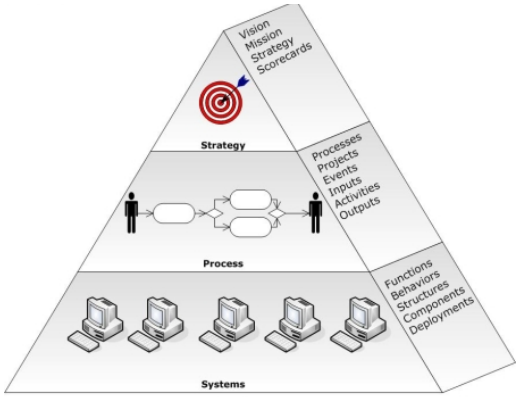

Figure 1. Enterprise Layers

Source: Expedian.com

Note the similarity to many BPM models:

- Business strategy
- Processes
- Systems

However, EA in the real world often tends to leave out *people* and over-emphasize technologies, although this was not what Zachman et. al. intended

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Enterprise Architecture & BPM

- Purpose of EA is fundamentally to align business and IT
- Therefore useful to enterprise BPM efforts
  - Some argue that all EA is really the same thing as BPM, though more precisely, they are cognate disciplines
- EA approaches can support BPM efforts
  - Documentation of the enterprise
    - Including inventory of systems, data, processes
  - Emphasis on integration and unification
  - Dedication to common vision of future on behalf of business and IT

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EA and BPM: Best Practices

- Involve enterprise architects as a resource to BPM efforts
  - They should be able to help you relate different pieces of the enterprise puzzle together
- Avoid EA downsides in real world
  - Lack of emphasis on human-oriented processes
  - Tendency to see systems consolidation as an end in itself
  - Tendency to conflate systems architectures with business architectures

Caveats

- Governance may require a PMO and/or Centers of Excellence, but they may encourage overly coarse solutions
  - Throwing an available tool at a business problem rather than simplifying or fixing it
  - Using the same methods and approach for all process problems
  - Search for projects rather than attacking business need
- Governance elaboration is an essential stage in a maturity process, but should not take the place of making real progress
  - Balance tactical and strategic objectives

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Enterprise BPM Best Practices

- Involve HR as well as senior leadership; successful business process improvement at an enterprise level usually requires
  - Job and managerial redefinitions
  - New or increased training
  - Revised reward systems
- Involve Enterprise Architects in the effort
- When managing multiple, cross-enterprise business process improvement projects, be sure to understand the particular business context of each one individually
  - Different scenarios require different approaches

Apply What You Have Learned

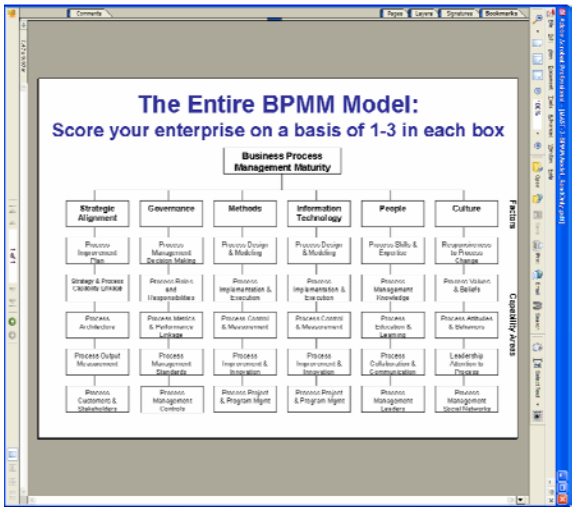
Exercise: BPMM Assessment

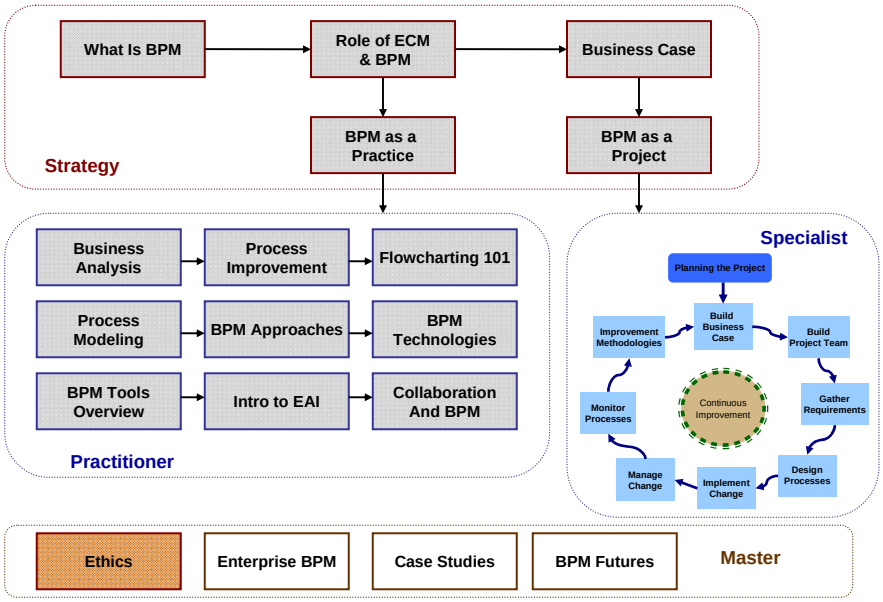
This exercise expects you to know a lot about your enterprise and can be highly useful and revealing. In those cases where you do not know, guess or just put a "dash"

In the matrix provided, score the various aspects according to how you see them in your organization.

1 means very immature or non-existent.
2 means somewhat prevalent
3 means mature or readily available

Exercise: BPMM Assessment





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Learning Objectives

- At the conclusion of this module you should be able to:
  - Articulate primary importance of business and personal ethics
  - Identify conflict and need to balance differing needs and motivations
  - Understand how to manage ethical conflicts
  - Be aware of issues relating to monitoring and surveillance
  - Value Stakeholder versus Shareholder requirements

What are Ethics?

- Ethics is difficult to define
  - In essence it is doing what is right as opposed to what is wrong
- Taking an ethical stance is not the same as:
  - Following the law (*laws can be wrong -- for example slavery and torture*)
  - Doing what society believes to be acceptable *(society is not inherently ethical)*
- Taking an ethical stance entails recognizing obligations, rights, fairness and common decency
- Corporations want to make and grow profits
  - But they should do so ethically

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Business vs. Professional

- Business Ethics
  - Ethics applied in a commercial setting
  - *Dealing with the obligations and issues surrounding moral and ethical issues in business*
- Professional Ethics
  - Ethics applied at the individual or role level within an organization

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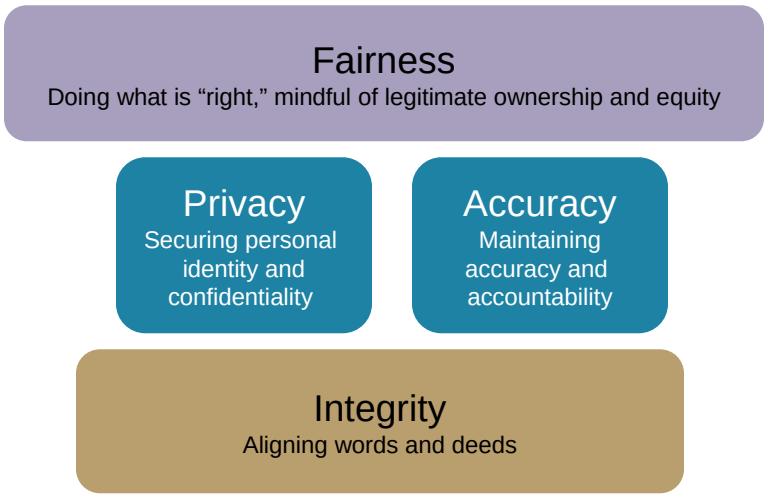
Four Dimensions of Ethics



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BPM & Ethics

- BPM changes the way we work
  - Our projects will commonly impact the day to day work activities of individuals and groups
    - Often reducing human involvement in a process
  - Our projects will typically utilize confidential and secure data
  - Our projects will commonly have an impact on the enterprise as a whole (increased profit/efficiency)
- As such every BPM project needs to consider and be aware of the ethical issues that will occur on a daily basis
- Process consultants often face difficult or conflicting ethical situations

Closer Look at Privacy

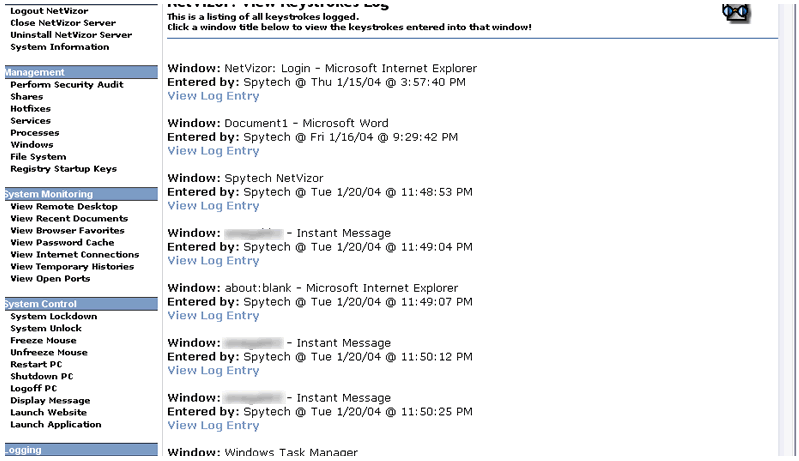
- Let's look closely at Privacy as just one example of the broader ethical issues involved in BPM
- Two risks here
  - Release customer information
    - To employees, to industry, to public
  - Release employee information
    - To peers, to management
    - Monitoring is frequently an issue here with BPM

Privacy
Securing personal identity and confidentiality

Monitoring - Overview

- Privacy in the workplace is legally (in most countries) a clear-cut issue
  - However, employees typically have little legal recourse if an employer spies on them
- That does not mean that you should spy on employees
  - Nor that it is morally acceptable
  - Monitoring to one person is spying to another
- BPM tools can and are used for monitoring activities

Keystroke Monitoring



Source: NetVizor

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The Case for Monitoring

- Typical BPM monitoring requirements
  - How long does it take to do a task?
  - How many tasks are undertaken in a specific time period?
  - Who is doing what - and when?
  - How many keystrokes - how many bathroom breaks (and for how long)?
- There is good logic to this
  - Enterprise pays for 8 hours of work and wants 8 hours of work delivered
  - Employees work on enterprise premises, so their time and attention should belong to the enterprise whilst at work
  - Enterprise is accountable and liable for the activity of the employee and has an obligation to protect itself
  - If employees are working hard and doing right, they have no reason to be concerned

Ethical Questions Posed

Because it is legal - does not always make it ethical

- Question: Are you paying by the hour or are you paying for value?
- Question: Is monitoring the only or best way to gather information?
- Question: Does the same degree of oversight apply to managers as well as blue collar workers - is this fair?
- Question: If you are monitoring activities, do the employees know you are doing this, or are you doing it behind their backs?
- Question: If you can behave in a less than open and honest manner - could your employees reward you in a likewise manner?

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Privacy Best Practices

- Recognize Business Process Improvement frequently raises new privacy challenges
- Be especially mindful of data capture and flow in your process models
  - New data from customers (or employees, or partners)
  - Data crossing internal or external business units
  - Data crossing legal jurisdictions (especially international)
  - Data getting stored in new repositories
- Metadata becomes increasingly vital in processing personal information securely
  - But also needs to be protected itself

More Best Practices

- At a base level, understand the legal requirements around privacy and monitoring
  - These vary from country to country
- Leverage the decision rules in your BPM to enhance security
  - For example, only reveal certain data at certain steps
  - Many non-BPM tools cannot do this
- Use the tool to apply controls and audits
- But don't rely overly on systems
  - Systems can be compromised
  - You need human oversight

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Privacy Policies

- Dealing with privacy challenges requires a privacy policy, dictating
  - What and how data is being used
  - Individual opt out and review of data
  - Security measures
- Consult your enterprise privacy officer or their stand-ins (in Legal, HR, Customer Care) before beginning a BPM project

Brief Look at Accuracy

- BPM projects can inadvertently reduce accuracy and accountability.
- This is because process integration often requires or begets data integration
- As data gets recombined, it can lose accuracy
- Critical to involve data warehouse specialists here
  - Quickly run into ETL (extract, transform, load) requirements
  - Tendency to rely on primary keys (e.g. social insurance numbers) throughout long processes can elevate security and privacy challenges.

Accuracy
Maintaining accuracy and accountability

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Fairness and Integrity

Fairness
Doing what is "right," mindful of legitimate ownership and equity

BPM requires balancing legitimate interests of different stakeholders

Integrity
Aligning words and deeds

Business Process Analysis exposes how the business *really* works

Typical BPM Business Drivers

- Perceived or Expected Benefits:
  - Reduce staff and office overhead numbers
  - Process business critical activities faster
  - Reduce the number of errors and exceptions
  - Reduce overall IT costs
  - Reduce duplications
  - Increase visibility into operational efficiencies and bottlenecks
  - Reduce business risks
  - Improve customer service and retention

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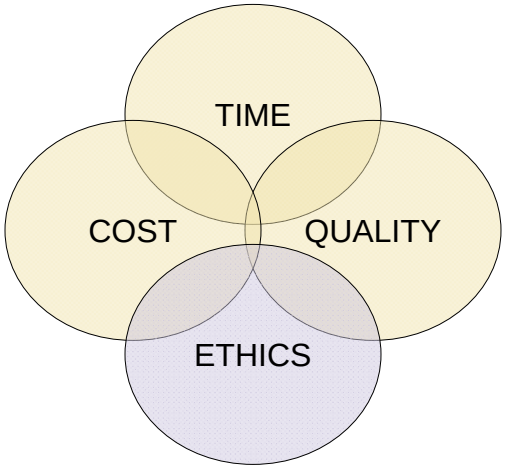
The Ethical Dilemma



Some Ethical Dilemmas

- Improved Efficiency can bring unexpected results
  - Old inefficiencies provided an efficient cloak for a comfortable status quo
  - New way of working exposes old tricks
  - New efficiencies impose more transparency and less to hide behind corporately
  - Once exposed, push back can come in all forms
    - But not always in an honest guise
- Business expectations may clearly exceed the project's potential
  - Interested parties oversold the project at the outset
  - Do you expose this at an early point, or continue knowing the project will fall short?
  - Does everyone *know* that the project will derail, and use this for their own ends (delay outsourcing, for example)

These are fundamentally issues of integrity

Dealing With Ethical Issues

12 questions

1. Have you defined the problem accurately?
2. How would you define the problem if you stood on the other side of the fence?
3. How did this situation occur in the first place?
4. To whom and to what do you give your loyalty as a person and as a member of the corporation?
5. What is your intention in making this decision?
6. How does this intention compare with the probable results?
7. Whom could your decision or action harm?
8. Can you discuss the problem with the affected parties before you make your decision?
9. Are you confident that your position will be as valid over a long period of time as it seem now?
10. Could you disclose without qualm your decision or action to your boss, your CEO, the board of directors, your family, society as a whole?
11. What is the symbolic potential of your action if understood? misunderstood?
12. Under what conditions would you allow exceptions to your stand?

(adapted from: Nash, L. (1981). Ethics Without the Sermon. Harvard Business Review)

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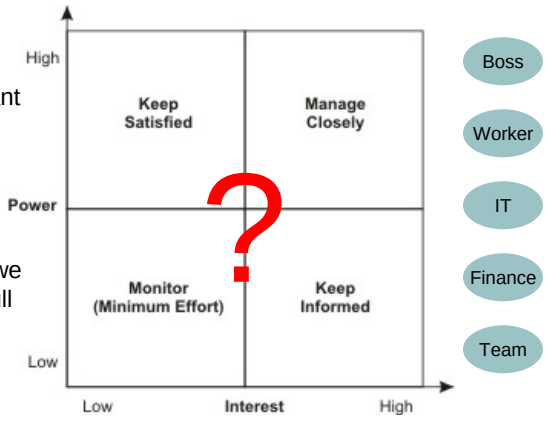
Stakeholder Power and Interest

How do we satisfy, manage and inform stakeholders?

By telling them what they want to hear or by telling them the truth?

All their wants and needs cannot be satisfied equally - they often conflict - nor can we ever truly understand their full needs and interests

What are the ethical implications for the process consultant?



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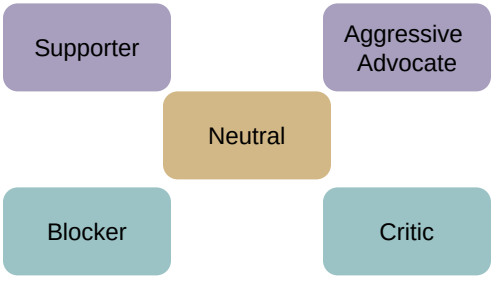
Stakeholder Dynamics

What motivates somebody to advocate on your behalf?

What motivates somebody to block you?

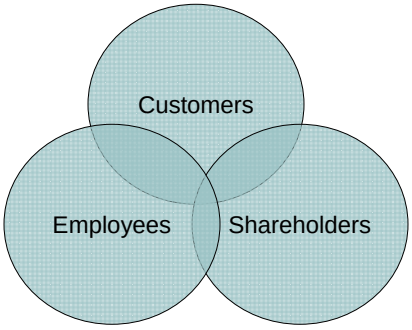
Are they doing so in an ethical manner?

Are you responding in an ethical manner?



Balancing Needs & Desires

- If the purpose of our company is to make money and maximize the value to our shareholders…….how much consideration should we give to our employees and customers?
- The needs and desires of stakeholders and those of shareholders (*potentially represented by senior management*) may differ substantially - and can create ethical conflicts
- Shareholders may want short term profits - stakeholders long term improvement - your project may for example require you to re-engineer to lay off good and loyal workers - to improve the next quarters earnings
- Many BPR projects in the 90's sacrificed loyal employees for short term gains



Implications

- Unanticipated and undesired consequences of change…
- We will always have unanticipated outcomes due to:
  - Sheer complexity of the process situation
    - Our process modeling activity can only ever scratch the surface of the reality
  - Corporate and personal dynamics
    - Systems people and groups all exhibit dynamics
  - Opacity in the process
    - Some elements of the process activity cannot be seen
  - Mistakes
    - Everybody makes them, including you

Dealing with the Unexpected

- You can never know everything - but you need to be sure that you have sufficient checks and balances to avoid obvious illegality or non-compliance
- Personal and System dynamics are a reality - things will not always react in ways you expect - but you need to show and prove that you at least tried to identify major risks and mitigate against them upfront
- Not everything can be seen - but we need to recognize that what we can't see can hurt you
- Mistakes happen, but obvious mistakes should not - our goal should be to reduce uncertainty

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Gresham's Law

- "Bad money drives good money out of circulation"
  - Same applies for business and professional ethical situations
- "Bad ethical behavior will drive good ethical behavior out"
- Ethics is about what we ought to do - we have to make decisions for our projects, our organizations and most importantly - ourselves

Wrapping Up

- All BPM deals with complexity - motivations and destination can differ
- You need to be clear on your ethical stance, and that of the organization you are working for
- Be honest about conflicts and raise concerns immediately
- Not everyone is honest - and many simply don't consider the impact of their actions
- Technology can be used to hide as well as reveal
- If you are ethically conflicted - then you need to resolve the conflict or move on - you should never ignore it
- Ethics are seldom clear cut *right* versus *wrong* - don't just jump to conclusions

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Apply What You Have Learned

Case: Stage C

Instructions

Tasks: 3 Teams

It is clear that things have gone very wrong. Consider the change management implications of Joe and Herbert's actions. How would you have gone about this differently – how could you have managed the situation more constructively?

Team A: Develop an alternative project management plan across the full lifecycle of a business process improvement effort, including addressing change management.

Team B: Elaborate a suitable governance structure to get the project back on track.

Team C: Identify potential ethical issues and suggest an approach for dealing with them.

Further Reading

- Business Ethics: Case Studies and Selected Readings by Marianne M. Jennings
- Business Ethics by William H. Shaw
- Harvard Business Review on Corporate Ethics (Harvard Business Review Paperback Series)
- Case Studies in Information Technology Ethics by Richard A. Spinello
- Ethics in Information Technology, by George Reynolds
- Society, Ethics, and Technology by Morton Winston and Ralph Edelbach
- Ethics in an Age of Technology: Gifford Lectures, Volume Two (The Gifford Lectures 1989-1991, Vol 2) by Ian G. Barbour

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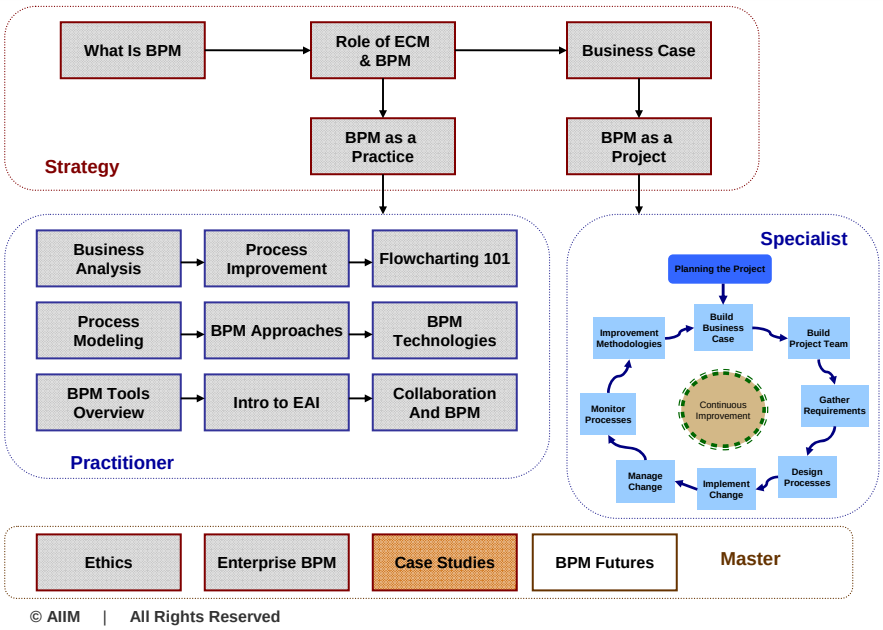

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Learning Objectives

- After this module you should be able to
  - Identify the 3 main types of BPM projects and 2 types of typical BPM processes
  - Recount at least one case study demonstrating each approach
  - Apply lessons learned from successful cases
  - Identify common attributes of failed BPM projects

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Introduction

- BPM is not a “one-size-fits-all” undertaking
  - After all, processes are a competitive advantage
- As a process analyst, you will want to apply different approaches to different scenarios
- We’ll examine three case studies
  1. System centric / Strategy driven
  2. Human centric / Business issue driven
  3. System and human centric / Process driven

BPM Choices

- Not all business process improvement efforts should be treated the same
  - Even within an enterprise, may require:
    - Different methodologies
    - Balancing long-term strategic gain and short-term practical fixes
- One approach will not fit all, but we cannot be ad-hoc either
- Different ways of categorizing BPM projects
  - Type of project
  - Type of process
- Key is to perform proper scenario/use-case analysis, then proceed from there

Types of Projects

- Three different types of BPM projects
  - Strategy driven
  - Business issue driven
  - Process driven

- They each tend to emerge and play out in different ways
- Each has their value and shortcomings
- The greater the enterprise BPM maturity, the more its process improvements become strategy driven
  - But each type is legitimate and potentially useful to the business

Source: managementbyprocess.com

Strategy Driven Approach

- Assumes an enterprise strategy
- BPM becomes at least in part the implementation of that strategy
- Executives (or Board) sets objectives, and management must convert to a set of projects in a structured manner
- Business goals often revolve around an acute need to change

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Business Issue Driven Approach

- Typically driven by enterprise operational needs or business issues at a departmental level
- Myriad potential triggers, but often a “burning” problem
  - New regulatory requirements
  - High error rates, backlog, duplication
  - Poor customer service
  - Unmet sales opportunity
- Tend to be more tactical (and practical?) than strategic
- Still should be aligned against enterprise business objectives

Process Driven Approach

- Process improvement team investigates business from process perspective
  - Proactive search for improvement
  - Can sometimes seem like justifying busy work or a PMO or a new methodology
- Strong emphasis on best practices, metrics, and continuous improvement
- Typical drivers
  - Reducing expense ratios
  - Improving quality
  - Improving customer satisfaction

Types of Processes

• Recall from earlier in this course that typical business processes can be divided into system-centric or human-centric

• These tend to have substantially different profiles that significantly impact process improvement methodologies and efforts

Requirements	System-Centric	Human-Centric
Number of Participants	Few	Many
User Interface	None	High
Need for Collaboration	None	High
Exceptions	Few	Many
Change in Roles	None	Many
Process Definitions	IT	Business
Resource Allocation	IT	Business

Source: Rashid N. Khan, ultimus.com

1) Near Real-time Product Delivery

Large, diversified, computer components manufacturer

- Has unusually complex supply and demand chains

Problem

- Needs to ship product faster and more effectively, plus deal with growing set of channels and exceptions
- Highly volatile product demand and activity makes automation more difficult

Source: BPTrends.com

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The Solution

- Integrated internal product team tasked with process improvement
  - Interviewed process participants to understand complexity
  - Defined specific rules to control order processing and shipment
    - Developed complex exception, re-routing, and decision support logic
  - Simulated new process, tweaked, and validated with participants before going live
- BPM software now orchestrates process among multiple IT systems
  - Application of new software
    - Modeling tools
    - Sophisticated rules engine
    - Simulation tool
    - Process engine

Some Lessons

- Simulations are always useful, but essential when implementing complex rules engines
  - Cannot fully predict what will happen in “live” environments
- Exception handling was the hardest part, but likely where the most efficiencies were achieved
  - System escalated potential solutions to managers along with each problem
- Some logic from the integrated modeling tool could be implemented automatically in the BPM process engine
  - But coordinating with line IT systems in different departments required integration work, including coding custom connectors
- The BPM system itself needs care and feeding
  - This is an additional expense in the picture

2) Customer Service Crisis

Wealth Management Company

- Sells financial products through intermediaries
- Develops promising new product
- Management does not wish to revise product processing until it is proven in the marketplace

Problem

- Processing new product orders proves unwieldy
- Manual work-arounds create high error rates and delays
- Distribution channel virtually stops selling product

The Solution

- New COO authorizes “tiger” team to address problem within one month
  - No new technology could be applied
  - Bring 30% error rate to zero
- Team Leads recruit members from existing staff
  - Set performance targets
  - Staff given broad leeway in how to resolve problems

Results

- Backlog cleared in five weeks
- Error rate to zero (team accountability and checking)
- 300% increase in sales as channel confidence restored

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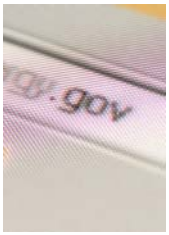
Some Lessons

- Sometimes, neither new technologies nor formal new processes are required
- Tiger team members recruited largely on positive attitude for change
- Distilling and repeating process improvements took additional time and effort after problems resolved
  - Won the battle, but not the war
- Performance goals require metrics
- Sometimes suitably motivated teams can work out process improvements on their own

Source: managementbyprocess.com

3) Achieving Communications Agility



Large national government web portal

- Mission: organize and annotate links to other national government website resources, according to citizen needs
  - "First stop" for government resources

Problem: could not respond to breaking news or national crises with enough agility.

- Web pages updated manually
- Had to manually keep track of where all content was placed
- Promotion of "live" pages required software build process that took 2 to 3 days and monopolized engineers' time
- Unable to consistently respond quickly to topical issues like influenza outbreak

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The Solution

Improved Process:

- Staff use new Web Content Management System (WCMS) to enter and apply metadata to content items (annotated links) in a database
  - Metadata drives content delivery
  - Automated workflow replaces manual page review
  - Right content appears in the right place
  - Stored once; published multiple
- System promotes content to live server automatically when approved
  - Update cycles reduced from days to minutes
  - Engineers re-assigned to developmental projects
- Staff can respond to breaking news or requests for information almost instantaneously, reaffirming site as legitimate "first stop" for citizen information

Some Lessons

- WCMS allowed team to get organized, but they needed a commitment to organize
- Simple act of categorization made the tool much more powerful
- Staff still needed to be trained and supported (additional overhead), and work re-oriented
  - Emphasis on librarianship skills probably better suited for the mission in any event
  - Real-time newsroom culture adopted better by some than others
- There was immediate feedback on benefits of new system
  - Producers could see new information go live upon approval
- Security of publishing mechanism enhanced by replacing multiple engineers with one system login to live server
  - Although system itself needs to be properly secured

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Why Things Go Wrong

Failed BPM projects tend to suffer from familiar shortcomings:

- No business plan
- Inadequate executive involvement
- Lack of analysis of existing processes
- Application of wrong software for the problem
- Imperial overstretch: trying to accomplish a mega-project in one go
- No change management plan
- Insufficient job and organizational change to accompany process change

Who's Doing BPM

- In 2007 only 5-10% of G2000 companies* employed BPM tools
- Gartner Group estimates this growing to 20% in 2009
- Anecdotal evidence of many stillborn BPM projects
  - Or never conceived…
- What seems more likely is that enterprises are indeed undertaking business process improvement
  - It's just that these efforts may not be reflected in the sales of BPM software tools
- Business process improvement is fundamentally technology agnostic
  - You can start today

*Source: Rashid N. Khan, Ultimus.com

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Apply What You Have Learned

Exercise

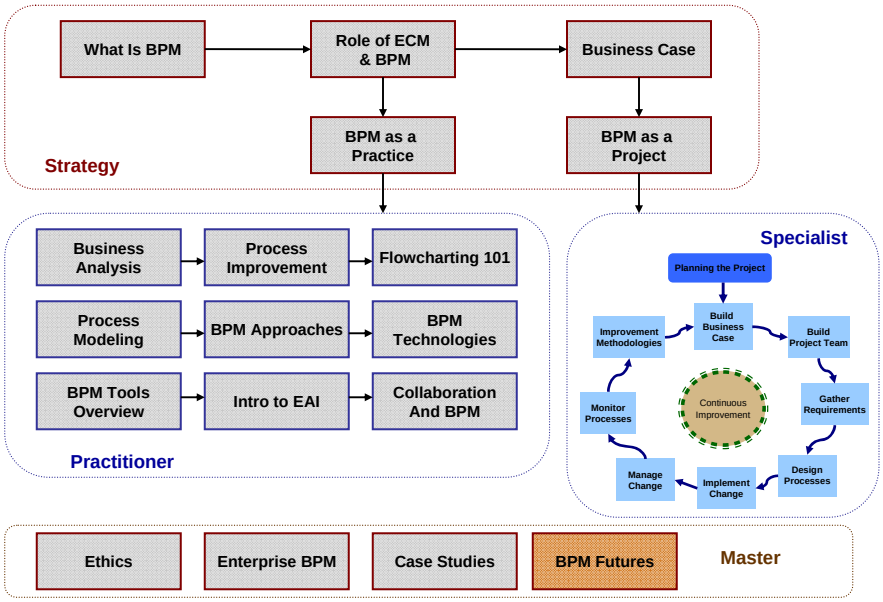
Instructions

Task – Total: 90 minutes

The instructor will divide you into two groups – each group should then sub-divide into units to represent R&D, the consulting team, Assembly, and Dispatch (depending on numbers, some role members may need to wear more than one hat). The consulting group should be the largest, as they will have to lead the creation of flowcharts and recommendations, for the entire team to validate.

Take the initial information provided in the case study and role play a joint requirements gathering exercise (remember its role play, so use your imagination!).

With the information you gather – build a detailed flow chart of the current As Is situation – and identify key areas for streamlining or redesign (Time permitting draw a To-Be situation recommendations. Identify expected business benefits.



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Learning Objectives

- After this module you should be able to
  - Articulate the relationship between SOA and BPM
  - Define the role and purpose of a “mash-up” application
  - Identify key emerging trends in BPM technologies and practices

Introduction

- It's dangerous predicting the future…
  - But we all need to anticipate
- And several key topics are worth exploring
  - SOA and BPM
  - Enterprise "mashups"
  - Role of Portals and other technologies
  - Emerging technologies
  - Emerging practices

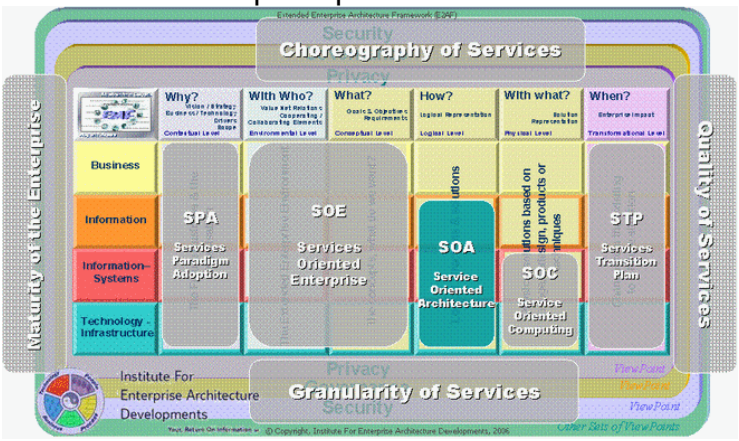
SOA Refresher

Services Oriented Architecture

- A set of design principles to structure and expose information resources as context-independent services
  - So that another application can call a generic service as needed when needed without knowing much about how the service works
    - "Process credit card"
    - "Extract metadata"
    - "Generate e-mail"
- Tends to be equated with Web Services
  - But they are actually not the same thing
  - Web Services represent a set of (quite heavyweight) integration protocols
  - You can have SOA without Web Services

SOA Rivals BPM in Complexity

And perhaps exceeds…



Source: Institute for Enterprise Architecture Development

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SOA or BPM?

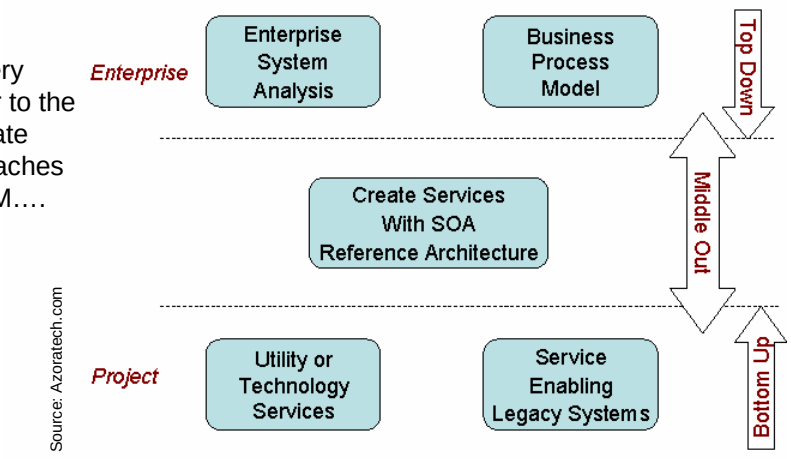
- Vendors in both SOA and BPM fields tend to argue that you don't need the other
  - Both argue that the other's toolsets are too complicated
    - And they are both right
  - Both argue that their platforms are ideal for enterprise business orchestration
- "SOA is the future of BPM"
- "BPM is *real* SOA"

SOA *and* BPM

- In the end, they are complementary technologies and approaches
  - SOA: Architectural philosophy for designing standards-based services
  - BPM: Management practices and tools for improving processes
- Very similar program tensions and challenges
  - Both wrestle with the complexity of "choreography" – specification of a business process
  - Both promote strategic (top-down) approaches but tend to see tactical (bottom up) implementations
  - Both tend to emphasize automation over "human-driven" work
- BPM offers ideal practical application of SOA
  - Most BPM tools expose APIs as Web Services
  - Process steps frequently need access to services

Alternative Approaches to SOA

Are very similar to the alternate approaches to BPM….



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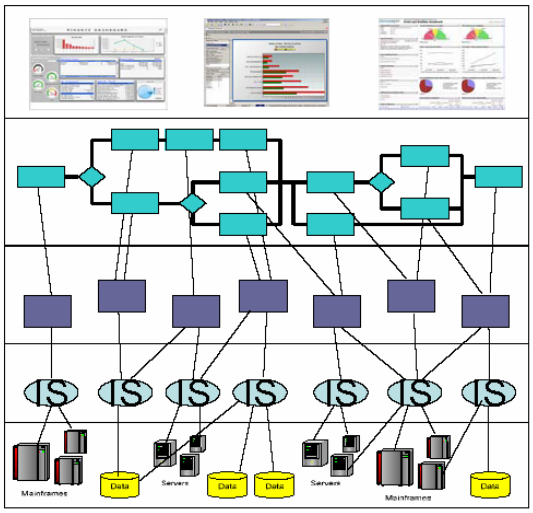
SOA & BPM as Alternate Layers



Source: Azoratech.com

Outcomes

…from….

Business Processes

…that need access to….

Services

…that rely on…

Integration

…with enterprise….

Systems

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Internet “Mashups”

- A “mashup” is a website or application that combines information from more than one source into an integrated experience
- For example, Copenhagen Metro station finder and Google Maps
- Tend to be point-to-point integrations

Enterprise Mashups?

- More discussion than action
- Some early experimentation looks promising
  - Example: Combining private XML feeds from Salesforce.com into SAP dashboard (and vice-versa)
- Simple integration by any other name, **but**
  - Happens over a network
  - Uses standard web protocols
  - Uses very lightweight methods and models (e.g., RSS)
  - May integrate public and private resources
- More oriented towards information integration, but process integration is the next logical step
- Presages a trend in more easily configurable integrations
  - Contemporary portal software is taking this a step further

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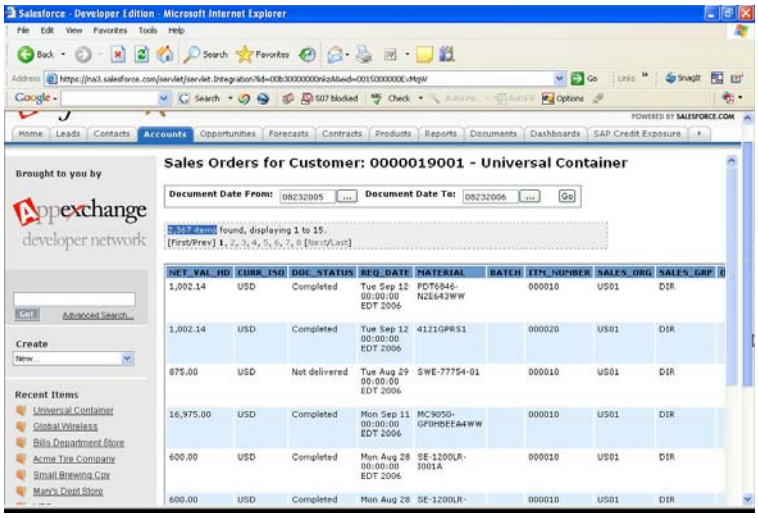
Salesforce.com + SAP



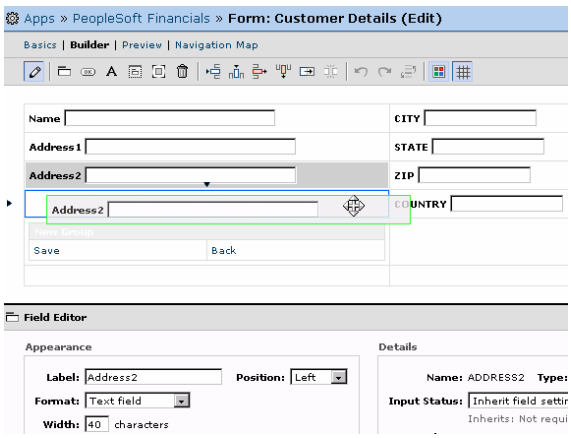
Not Just BPM

Rise of Portals as Enterprise Dashboard

- Portals may have been over-hyped, but the phenomenon is real
- At a minimum, Portal/BPM integration may be increasingly important to your enterprise
- Many portal products now include workflow and lightweight BPM tools
  - Including modeling, monitoring, and measurement
  - Emphasis on power-user configuration and management
- Portals just as (or more) likely to become the enterprise SOA platform as BPM tools
  - Emphasis on power-user "composability" of composite applications as a possible alternative to BPM
  - Although here, too, emphasis tends to lie with information-oriented applications than process-oriented applications

Developing a Composite App

Building an application to access PeopleSoft and a bespoke database application using GUI design tools.



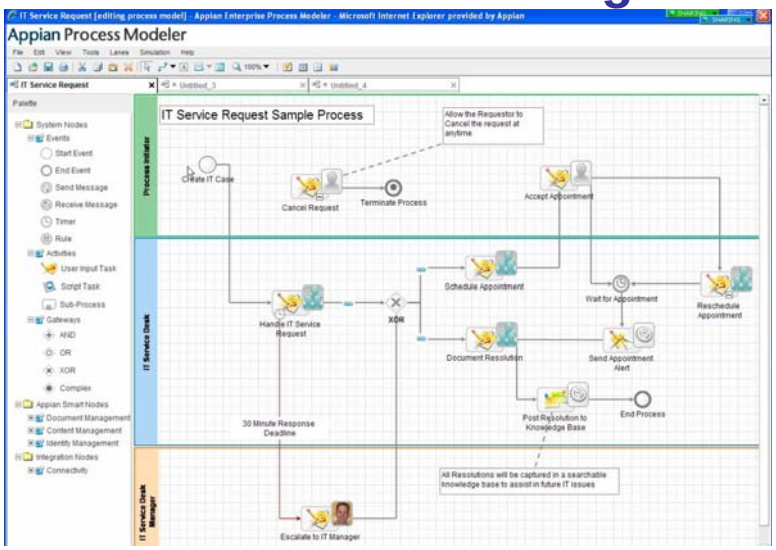
Source: Vignette

BPM Technology Trends

Some emerging BPM technology trends

- Web-based process modeling
  - And increasingly, simulation too
  - Eases collaboration and validation in the modeling process
  - Also opens up opportunities for…
- BPM Software-as-a-Service (SaaS)
  - Already happening in modeling and simulation
- Better integration within BPM Suites
  - Going with less difficulty from model to testing to implementation to monitoring to measuring within the same vendor's product
  - Unlike other software "suites" these are not adjacent technologies but stages in a lifecycle and therefore better suited to real integration (especially at the code level)

Web-Based Modeling



Source: Appian

More Technology Trends

- Monitoring leading to automated process discovery
  - Especially useful when dealing with already-digital processes as in the ERP arena
- Closer attention to analytics
  - Measurement is a never-ending quest
  - But true analytics (as opposed to simple metrics) requires more sophisticated tools
- Real-time decision-support
  - BPM tools making pro-active recommendations to users
- Process technology ubiquity
  - ECM, ERP, Portal, and other software increasingly embedding business process and automation subsystems
  - They cannot match BPM tools for cross-system orchestration, but provide increasingly powerful resources to business process analysts
  - Investigate the tools you already have

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BPM Industry Trends

- Greater attention to enterprise-wide processes
  - Vast majority of BPM projects today are departmental
  - Will likely require PMOs to be versed in multiple methodologies
  - Will often require more sophisticated ROI models
- Greater understanding that *people* are the primary actors in any process, especially as competitive advantage shifts to knowledge assets
  - Less about automating their work as an end in itself and more about making humans more effective
  - Necessarily growing emphasis on tool usability

The Rise of Collaboration

- Greater focus on managing and monitoring ad-hoc, collaborative, human-intensive projects that are not easily modeled
  - Collaborative (even “social”) tagging, rating, and discussion as part of processes
  - More room for dynamic process change at run-time that wasn’t anticipated at design-time
    - Greater end-user configurability of systems
    - Mirrors growing trend of “composable applications” in Portals
  - Faster process evolution more generally outstripping static process models

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What Have We Not Covered?

- Questions before we conclude the Masters Track?

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Home Case Study: Vermont Airways

- Instructions:
  - Read the provided case materials on Vermont Airways
  - Use standard methodologies and practices identified in the course, and follow proper flowcharting/modeling techniques.
  - Answers across the different task segments should be internally consistent (for example, a business case justified on a CDB model should then later not lead to ROI measures of success).
- Select one:
  - Assignment 1: Project Startup
  - Assignment 2: Planning (As is/To be)
  - Assignment 3: Implementation
  - Assignment 4: Continuous Improvement

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Next Steps

- Apply
  - All that you have leaned here
- Take the Exam
- Submit the Masters Thesis

Thank You

BPM Masters Class Exercises

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In- Class BPM Case Study

INSTRUCTIONS

The in-class Case Study is broken into 4 phases which we will complete as group tasks over two days. Each phase will last about one hour.

These are group exercises with specific tasks to complete based on what you have learned. For each phase, the instructor will divide you into different teams; those teams may work on the same problem in some instances, and on different problems in others. Each team will need to present their findings to the class.

Work only on that specific phase (do not look ahead to the following phase).

Part A (Specialist Day)

Introduction

Deep House Music has long been seen as the premier home entertainment technology manufacturer. It's audio systems are seen in the homes of successful people around the world – and with over 35 years in business, they have cornered a market that not only appreciates high quality audio, but also appreciates the aesthetic design quality of Deep House Music's product range. The products have never been cheap, but the high cost has been justified, in terms of the superior sound quality, construction of the products and the relative exclusivity and cutting edge innovation of the products. The company has grown to support over 300 personnel with most of those located at its headquarters in Reading, England.

The company's motivation to change

The company faces various strategic challenges. Due to unrelenting pressure from US and Japanese audio manufacturers – the technology gap between Deep House Music's products and those of competitors only half the price or less has shrunk. In danger too is the firm's status as an innovator – with more and more buyers moving over to the MP3 music file format, and running their home audio systems from their iPod or Laptops – the Deep House Music brand is looking dated and coming in at an unjustifiably high cost.

In response, the senior leadership has decided to focus its efforts on serving a small but lucrative niche market – and to improve its R&D and product development processes to ensure that they continue to meet the needs of their demanding customers – in other words to move back up market. However, the firm recognizes that they have been very slow to react to the changing market, and costs will now also need to be trimmed as profits have fallen and continue to fall. Deep House Music needs to create major improvements in their current processes, quickly, to turn things around.

The Firm

Deep House Music is situated in Reading, England – just outside of London and within easy reach of Heathrow Airport. It employs approximately 300 staff with 260 of them at the Reading headquarters. Most of the staff have been with the company for years if not decades, and the firm credits itself with having a loyal and dedicated workforce. Deep House Music has won awards for being a '*desirable employer.*' All R&D and all final assembly of the products is undertaken in Reading, with many parts procured and manufactured overseas.

The majority of Deep House Music's customers are based in Germany and the US, where the firm enjoys a dedicated following amongst well-off and design-conscious audiophiles.

Of the 260 staff at Reading approximately 60 are designated as managers – with 80 employed in the assembly, warehousing and dispatch divisions – alongside the remaining corporate personnel in sales, accounting, customer support, marketing, and human resources.

The R&D department employs some of the most experienced audio designers available, some of whom have worked all their careers at Deep House Music. They continually test and develop new approaches and new products – releasing a major upgrade (new product) approximately once every two years. The R&D staff of 10 work separately from the rest of Deep House Music, with dedicated test and development facilities. Some of the designers have won the highest awards in their industry for their work and are considered the cornerstone of Deep House Music's past success.

The production teams are split into groups/teams – building speakers, accessories, amplifier units, and control systems. A separate group then QAs the output of these teams, and approves units for collation and transfer to packaging and then to the warehouse ready for dispatch. Error rates are considered to be quite low – running at around 15% of output being discarded or rebuilt. Due to seasonal peaks and troughs, the firm tends to carry a surplus stock in its warehouse – a stock that due to competitive pressures in the marketplace has grown substantially over the past year.

Once assembled and boxed – the dispatch department sends each individual unit to its destination – usually directly to retailers in Europe or the US, but sometimes directly to consumers who contact the firm individually via phone, letter, or email to purchase units.

Deep House Music has strong partnerships with its component suppliers, and has worked with some of its leading suppliers for many years. These suppliers are in the main located in Germany and Japan. Senior Managers travel once a year on average to visit these suppliers and ensure the relationships are strong and remain effective.

Marketing is run by 3 people in Reading, who outsource much of their activity to an outside advertising agency, and occasionally to a design firm to help with packaging design.

Product support is also based in Reading – 6 people work on this element of the business: 2 that handle the receipt and management of the issues, and 4 that undertake repairs to the units.

TASK: EACH TEAM

As a group take 40 mins to identify some strategic *business benefits* that a business process improvement project could bring to this firm. Do this in the form of a simple business case that could be summarized in the form of basic powerpoint slides. In your business case, be sure to elaborate in terms of value, efficiency, and risk reduction. Decide whether a Return-on-Investment or Cost-of-Doing-Business approach would be more persuasive. Identify likely cost and risk factors in addition to benefits. Identify the ideal make-up of the Project Team.

BPM Case Study – Part B (Specialist Day)

Evolution of the situation

In January, the board of directors decided that an internal consulting team needed to be formed to identify where costs cut be cut to improve profitability. At the same time they asked for the team to look at general efficiency gains that could be made in the production environment. A rising manager *Joe* was asked to head up this taskforce and provide it with executive sponsorship and to report back at the April AGM on improvements to date.

Joe decided quickly that due to the sweeping remit he had been given that in the initial stages at least it might be best to keep the project under wraps, and undertake the initial requirements gathering in a discrete manner. He co-opted *Herbert* a bright young graduate from Accounts Payable to work with him and be his project lead. Herbert then undertook the work of confidentially interviewing one key person in R&D and one in Assembly to gain a basic understanding of the current situation in these departments. The information they gathered proved to be substantial and they were able quickly to recognize that one group in particular were working in a highly inefficient manner and that improvements should be fairly straightforward to come by.

Herbert and Joe, sketched out a potential redesign of both the assembly and distribution processes – with the new process making much more extensive use of technology than was currently the case. New technology would track and monitor orders and stock closely and potentially reduce the time and cost taken to produce units. The proposed redesign would require a lot more work and analysis, but the basic outline was agreed between them, and presented to senior staff as a potential way forward at the April AGM.

TASK: Each Team

Take 40 minutes as a group to brainstorm how *you* would go about gathering the initial requirements and structuring this first phase of the project. What techniques would you apply, in what order, and why? What improvement methodologies might be applicable to a firm like Deep House Music – why?

BPM Case Study – Part C (Masters Day)

At the AGM, the proposed process redesign work was quickly and enthusiastically approved, and budget allocated to build a project team, and fund information technology acquisitions. It was recommended that in the interests of open-ness and good management that the project be presented to the staff as quickly as possible, and that a 'Town Hall' style meeting, involving all staff giving them an open forum to discuss and share their views would be a good way forward.

In May the open forum was assembled, and things did not go well – the staff rebelled, there was a great deal of anger expressed, and even a threat of an all out strike. In the meeting various views were expressed and information provided including:

- That staff have been working to long ago approved procedures, that have been rigidly enforced by supervisors and lower management.
- Complaints from staff about inefficiencies and suggestions for improvement have been long ignored.
- That morale is low, and has been for a year.
- That R&D felt angry and hampered by managements iron grip on suppliers – and have had to make many compromises in design
- That things had come to a boiling point in spring of this year – and that key members of staff had left, or were planning to leave as a result

TASKS: 3 Teams

It is clear that things have gone very wrong. Consider the change management implications of Joe and Herbert's actions. How would you have gone about this differently – how could you have managed the situation more constructively?

Team A: Develop an alternate project management plan across the full lifecycle of a business process improvement effort, including addressing change management.

Team B: Elaborate a suitable governance structure to get the project back on track

Team C: Identify potential ethical issues and suggest an approach for dealing with them.

BPM Case Study – Part D (Masters Day)

Herbert's Notes

Interview with Jolene – Production (Bass Units) Supervisor 7th March

The production group is split into 7 groups :-

- Control Unit Assembly (24 people)
- Cables and Accessories (6 people)
- Bass Unit Assembly (12 people)
- Speaker Assembly (10 people)
- Testing & QA (6 people)
- Packing/Despatch (8 people)
- Warehousing (6 people)

The groups all work in two alternating shifts – Early 7am-3pm and Late 12-8pm – peaking with a full team at Midday to 3pm.

Each group works separately and once they have completed assembly of a unit – moves it to the Testing/Packing area of the factory – here all the individuals components are pulled together to form a single product unit, stickers added where appropriate along with instruction books and other literature – wrapped and boxed. Prior to sealing the box some units (approximately 1 in 20 are selected for Testing and QA) – once complete the QA, the units are then either returned for sealing – or rejected. Once boxed and sealed – the units are moved to the warehouse for storage until being dispatched to buyers. Dispatching occurs twice a day – once at 11am to catch the 1pm Express pickup – the other at 3pm to catch the 5pm Express pickup.

Each individual group has a supervisor who line manages the team – each team member has a specific task that they undertake – for example (*screwing components to the product shell – wiring elements – or soldering wires to circuits etc*)

Most component elements (*circuits/switches/boxes etc*) are pre-built and ordered in bulk – they are stored in the warehouse – a stock is signed out by each shift group, and remainders checked back in at the end of each shift. Damaged or defective component elements are listed in a log, and disposed of.

Jolene estimated that approximately 500 complete products are assembled per week. She said that QA had told her that error rates of tested units was around 15% and that this was considered normal for the industry.

Jolene said she thought that particular improvements could be made in the *Control Unit* assembly process, as often production of product elements was considerably higher in other groups, and as such stockpiles of Bass Units, Speakers etc occurred – she said she was not sure if this was due to poor leadership or a lack of motivation – she stated that most other teams were

very motivated and enjoyed working at Deep House Music, and were proud to be a part of audio system history.

Interview with Hank - Research Manager 10th March

Hank has been with us for over 20 years, and has designed 10 different systems for us. He told me the team is very experienced, and works well as a separate unit, able to track trends in the industry and take best practices and emerging trends, incorporating them into our newest products. There are no specific processes as such for R&D as that would be counter to the creative nature of the work they have to do – he has stayed within his allocated budget every year. He did say that they work best when allowed to do the work asked of them, and when there is no interference from 'corporate' – he stated that the base design of our systems has fortunately stood the test of time, and their work today was as much about refining the system, rather than radically designing a new system.

What process there is can be summarized by the group being given a mandate to create a new system once every two years – and that designs and prototypes are created within the group – and once tested, are presented to senior management for approval. Once approved, designs and orders are sent to component manufacturers and assembly supervisors briefed on the changes to the unit – along with cutover dates for the new system to become active.

Overall, from the time I spent interviewing Hank and looking at the departments work, it would suggest we allow their work to go ahead as it currently does, they have won many awards and stay within budget – I doubt we will find our cost savings here.

Recommended Improvements

Joe and Herbert's high level recommendation for quick win cost reduction and process improvements:

- Change the current shift overlap system to a day and night shift to boost productivity
- Move from a paper based order and unit tracking system – to a computerized system
- Move the current assembly process to a linear process – so that unit components are assembled serially – avoiding over assembling some unit elements and causing stockpiles to accumulate
- Move to a computerized Express shipment system – and dispatch just once a day
- Undertake testing and QA prior to boxing the systems

Part D: Task -- total: 90 minutes

The instructor will divide you into two groups, each group should then sub-divide into units to represent R&D, the consulting team, Assembly, and Dispatch (*depending on numbers some role members may need to wear more than one hat*). The consulting group should be the largest, as

they will have to lead the creation of flowcharts and recommendations, for the entire team to validate.

Take the initial information provided in the case study and role play a joint requirements gathering exercise (*remember its role play so use your imagination!*). With the information you gather – build a detailed flow chart of the current As Is situation – and identify key areas for streamlining or redesign (*Time permitting draw a To Be chart*) – along with bullet pointing key improvement recommendations. Chose an improvement methodology for your project and incorporate this into the To Be situation recommendations. Identify expected business benefits.

BPM Masters Class
Home Case Study

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Home Case Study: Vermont Airways

Background

Vermont Airways was formed in 1997 to provide an extensive carrier program that would serve primarily North East and Central US Regions, with partner connections onto the rest of the world. The firm was formed out of the acquisition of two small regional airlines that had fallen into bankruptcy.

Headquartered in the city of Quechee, Vermont, the airline currently serves 20 airports in the US, with around 300 daily departures. It has regional hubs in Boston, Philadelphia, Washington, Minneapolis, and Chicago.

Vermont Airways is not a particularly large airline compared to competitors such as American Airlines or United, and it has relatively modest footprint, even via its partner network outside of continental USA. However the firm does employ around 2,200 staff.

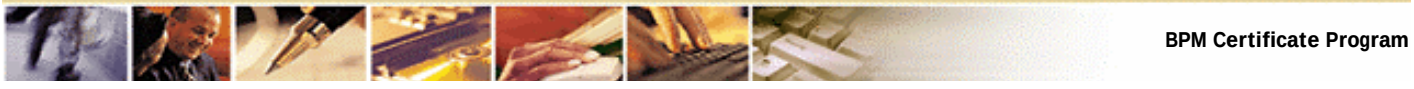
World events such as the rising price of fuel, global security threats, and increased governmental oversight programs have impacted the firm. And though not large in comparison to many other airlines, the firm has garnered a strong reputation for reliability and comfort and is something of a local favorite and certainly an important regional employer.

Still, times are tough for Vermont Airways, and pressure is on to make a strategic move. The Board of Directors have decided to move the company beyond its small but loyal base – to bring in new approaches, new airplanes, and grow its route network. But Vermont Airways is cash-strapped, and will need to balance initiatives against savings elsewhere. The CFO has demonstrated that the company has not hopes in the near term for a large injection of cash, as the firm already carries considerable debt.

The divisions and differences between the two firms that originally formed the new Vermont Airways have long dissipated; however, it took a long time to unify the systems and procedures of both. The technology that was introduced in the 1999/2000 period has become dated and new demands of regulation, customer expectations for online booking access, and the sophistication of new airplanes and updated maintenance procedures demands an overhaul.

Although it seems evident that Vermont Airways' technology will need upgrading, the company recognises this will be a huge task – and one that could cripple the company if it fails. Driving the need for change then are the following (somewhat conflicting) business drivers:

- The complexity and difficulty in meeting information demands relating to increased security measures
- The complexity and difficulty in meeting information demands relating to aircraft maintenance and safety
- Customer demand to be able to book tickets and manage flights on line
- Creating a more flexible organization that can make use of resources on demand



to react in a timely manner to issues and events
- Automating many currently manual activities to increase efficiency and reduce costs

As a first step the Board has decided to fund a special project to kick start this initiative under the executive command of the CIO. The CIO in turn has in turn appointed a Program Director for what is being called the *2010 Initiative*.

The CIO has correctly noted that not only are the IT Systems dated, they are often not utilized as they should be. A great deal of data is missing, or located on local hard drives, and that many processes are undertaken using paper forms, with information only infrequently re-captured and input to the system. This raises serious accountability issues that concern the CIO deeply, indeed should Vermont Airways be audited by the U.S. Federal Aviation Administration (FAA), the firm could be fined, or worse closed down. Worse still, the CIO is aware of a great deal of anecdotal evidence that Safety and Maintenance information that is distributed electronically is not being accessed or utilized.

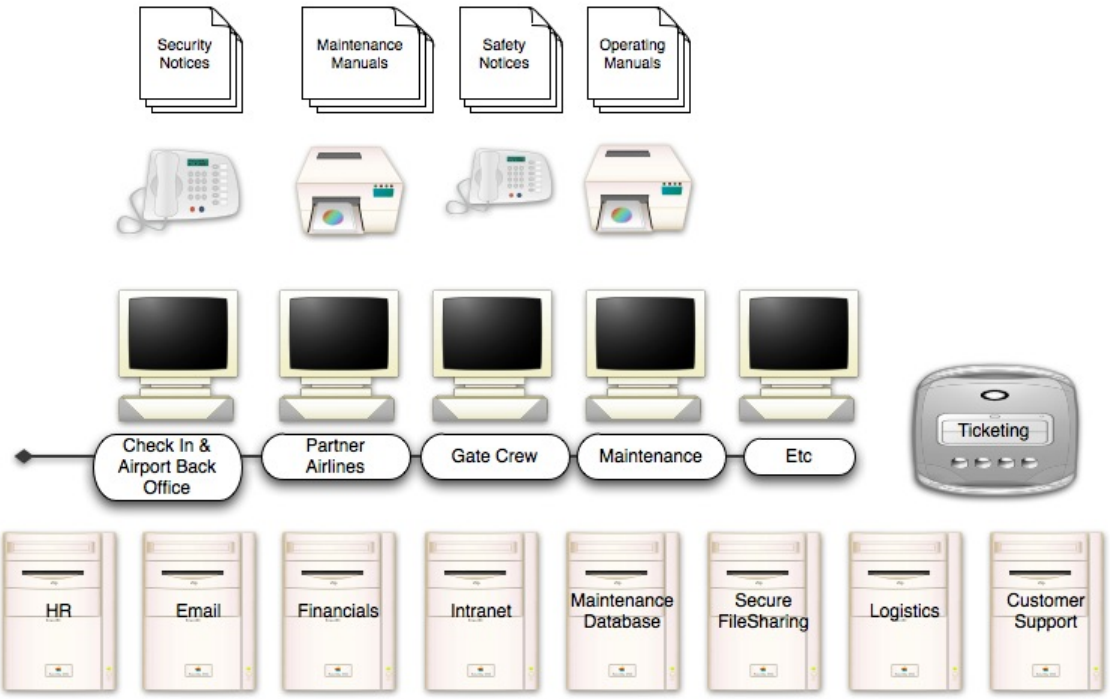
The CIO has expressed to the new Program Director that the *2010 Initiative* needs to be all encompassing, building a structure that will be agile and flexible seeing the firm through the next 10 years, but that it also needs to be focused with issues prioritized. This will be difficult, since Senior Management in Quechee, to airline crews, to regional support teams all have different ideas about what is important. The CIO has also stressed that is little in the way of new funds available – that money will have to be made available by finding savings elsewhere. Any available funding is operational, for running the project, rather than capital investments in new technology.

With respect to technology, Vermont Airways has always purchased what it considered best of breed technology, and today runs a wide variety of database and operating systems. Fortunately, though, the firm does have a centralized financial, HR and Logistics systems (albeit from different vendors). Ticketing has been outsourced, and the main form of communication remains the phone, due to connectivity issues at airport locations – although email has grown dramatically for office based staff.

There is no doubt that procedures and processes across the firm need a major overhaul, but this is difficult in a firm that is always operating – there can be no down time. For the Program Director, this is a career-making opportunity to essentially turn around the fortunes of Vermont Airways. For the company itself, the program simply must succeed.

Hence, this major Process Improvement exercise will need to be closely managed, aggressively driven and deliver benefits quickly, without compromising safety, operational, or regulatory requirements.

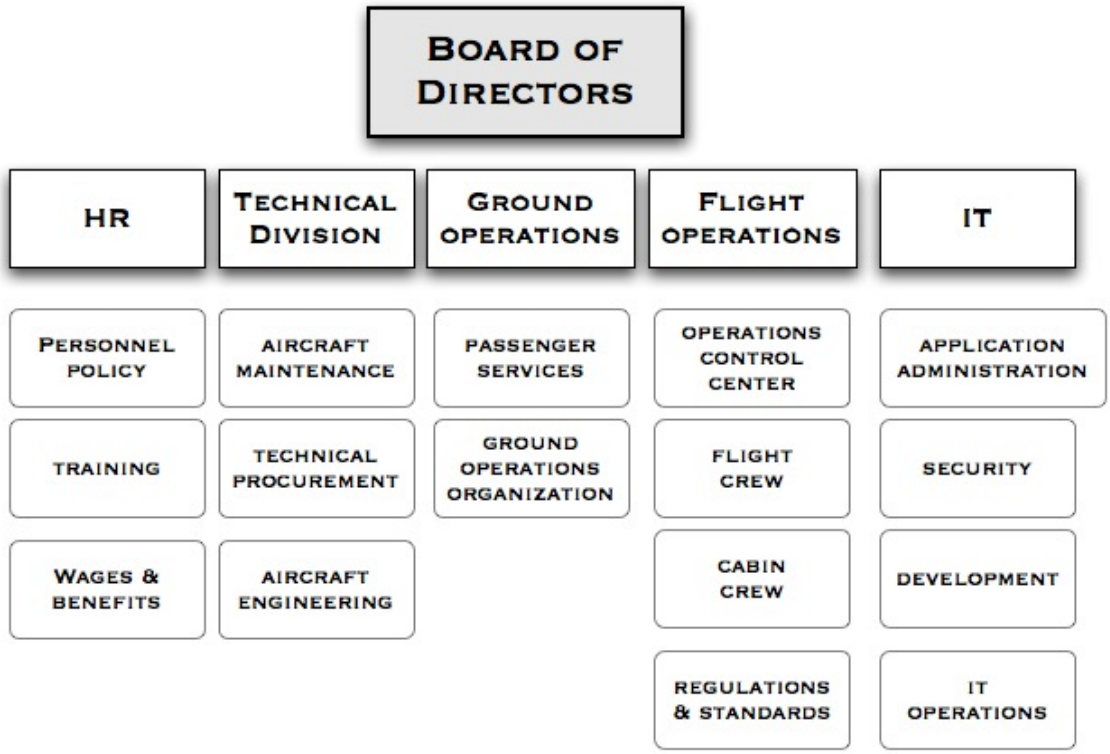
Vermont Airways – IT Systems



Vermont's IT infrastructure is dated and runs on a variety of operating systems – likewise it utilizes various databases and versions. Connection to the back end systems is user driven, via terminals at airport and office locations. Typically once accessed, staff prints out and collates information – or phone calls made to staff to transfer the information.

Vermont Airways – Organizational Structure

The organization of Vermont Airways is loosely structured as follows (*we have not listed operations such as Sales & Marketing, Accounts etc for reasons of simplicity – however non listed departments may be of importance*):



Note that the organization structure of Vermont Airways mirrors typical industry standards that have been approved by the FAA.

Vermont Airways Issues and Observations

(Your role: Program Director)

Following an initial day-long meeting with the CIO you have established that this process improvement project will be exceedingly difficult. At a high level you have established that:

- There is little interaction or co-operation among departments or even groups within departments – the firm resembles a number of separate companies that perform discrete functions.
- To get up to date information you need to know the right person to ask – rather than there being in any order or procedure to find that information
- The company relies on the knowledge of a small group of supervisory level workers who have been with the airline for 10 years plus
- Information resides all over the enterprise and it takes a lot of effort to locate it
- Many processes are only known to a small number of people, in many cases one person, and few if any are documented
- Email is the most common information store
- There is heavy reliance on paper manuals and documents including Cockpit Operations Manuals, Flight and Aircraft Operations Manuals
- Some groups have lost patience with IT and have begun their own initiatives using Microsoft SharePoint to share information
- Ground Operations Manuals change on a daily basis due to incoming information from the FAA and U.S. Transportation Security Administration (TSA) regarding safety and security issues
- Morale is currently quite low due to concerns about the Airline's future, and a squeeze on wages over the past few years

Assignment 1: Project Start-Up

The CIO has appointed you the Program Director for his *2010 Initiative* a major project that will look at improving the business processes and bring about greater efficiencies and cost reductions for Vermont Airways. Therefore you have been tasked with:-

- Outline the business case for the early stages of this major undertaking, and provide a brief narrative rationale, using charts as necessary to justify your presentation to Vermont Airlines executives
- Identify project phases and outline a project management plan that identifies the scope of the project and prioritizes areas to tackle first
- Identify potential key stakeholders (internal and external) and categorise them
- Identify and justify a business improvement methodology that will be used, or explain why you will not employ one.

Due to the urgency of this work, the CIO has only given you 10 weeks to undertake the above tasks. He understands that within that time only limited progress can be made, and that you will need to make assumptions (*though these need to be documented and supported*) to move forward so quickly. You have been cross-assigned analysts or other representatives from the major business units identified in the organisation chart above.

Assignment 2: Planning (As Is & To Be)

The business case has been approved and you now have the budget to build a full project team and undertake a significant requirements gathering process. You have the support of the board of directors to move forward – however they want the project accelerating and expect recommendations back within 16 weeks.

Therefore your team has been tasked with the following:-

- Identify and justify specific methods to capture process requirements
- Flowchart a prioritized process that you believe needs urgent attention
- Analyze the chart for potential areas of improvement, applying simple notes to the chart itself, or as a brief separate narrative
- Create "To Be" chart for a prioritized process, showing not just the process flow, but the complete model for the improved process

Due to the urgency of this work, the CIO understands that within that time only limited progress can be made, and that you will need to make assumptions (*though these need to be documented and supported*) to move forward so quickly – therefore your deliverables need to reflect the overall picture, but should drill down into only one specific process in detail.

Assignment 3: Implementation

The recommendations have been approved, and you need to move ahead quickly to implement the prioritized process improvements.

Therefore your team is tasked with:-

- Outline technology assessment, test, and implementation plan; identify what existing or new technologies will be employed, and why
- Outline a change management plan, identifying the types of change likely to be encountered, organizational impact, a particular change management methodology to employ
- Chart a risk mitigation and cost-containment plan

The CIO wants to get the first changes to the business made within 8 weeks – and wants to see a rolling forward plan for the next 12 months. Due to the urgency of this work, the CIO understands that within that time only limited progress can be made, and that you will need to make assumptions (*though these need to be documented and supported*) to move forward so quickly – therefore your deliverables need to reflect the overall picture, but should drill down into only one specific process in detail.

Assignment 4: Continuous Improvement

You successfully planned for a period of continuous improvement once the project elements had 'gone live'. Your team is tasked with:

- Document what you will continuously monitor and how, listing key metrics
- Identify the results of the project and evaluate those against the original business objectives. What business improvements were achieved? Which were not?
- Having completed the project, assess Vermont Airway's enterprise BPM Maturity Level and identify whether and how you should improve internal business improvement capacity in the context of larger *2010 Initiative* program goals

You will need to make assumptions (*though these need to be documented and supported*) to move forward so quickly – therefore your deliverables need to reflect the overall picture, but should drill down into only one specific process in detail.

READY – AIIM - LEARN

Business Process Management

AIIM Master Class

Handout: Workshop Evaluation Sheet

Name:	Email:
Company:	Tel No:
Job Title:	Date:
Trainer:	Trainer:

We hope that you have enjoyed participating in this programme and found it to be of value to you. Please assist us in our continual drive to improve standards by taking a few minutes to complete the following evaluation questions and adding your scores to the questions overleaf.

1. Why did you attend this workshop?

2. What were the key points learned?

3. What particular aspects do you plan to put into practice at work?

4. Are there any aspects you feel you will be unable to practice at work?
(Please state briefly your reasons for this?)

5. Which features of the workshop were most useful and why?

6. Which features were least useful and why?

7. How could we improve upon this course?

8. Who else in your organisation would you recommend to attend this course?

READY - AIIM - LEARN

Certificate Programs

Please provide feedback of the service you have received in the following areas:

ADMINISTRATION	Poor									Excellent
	1	2	3	4	5	6	7	8	9	10
▪ **Joining Instructions**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Training Facilities**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Meals/Refreshments**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Overnight Accommodation (if applicable)**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

COURSE CONTENT										
▪ **Relevance of course content to my job**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Impact of what I have learned on my thinking**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **How well learning points were supported by examples and opportunities to practice**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Pace and structure of the course**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Quality of supporting materials**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Overall value of the course**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

TRAINERS	Lead Trainer					Co-Trainer				
Please score on a scale	Name:					Name:				
1 = Poor to 5 = Excellent										
	1	2	3	4	5	1	2	3	4	5
▪ **Communicated with enthusiasm and conviction**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Appeared to have a sound knowledge of the subject**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Invested time to understand our needs**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Adapted their training style to suit individual needs and circumstances**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Kept good control of the way in which we used our time**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Encouraged everyone to participate**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Understood specific job and organisational demands and related course content to these**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Supported feedback by specific examples**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Encouraged us to develop our own action plans**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
▪ **Quality of presentations**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐