



BPR – Business Process Reengineering

Redesigning process

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BPR approach

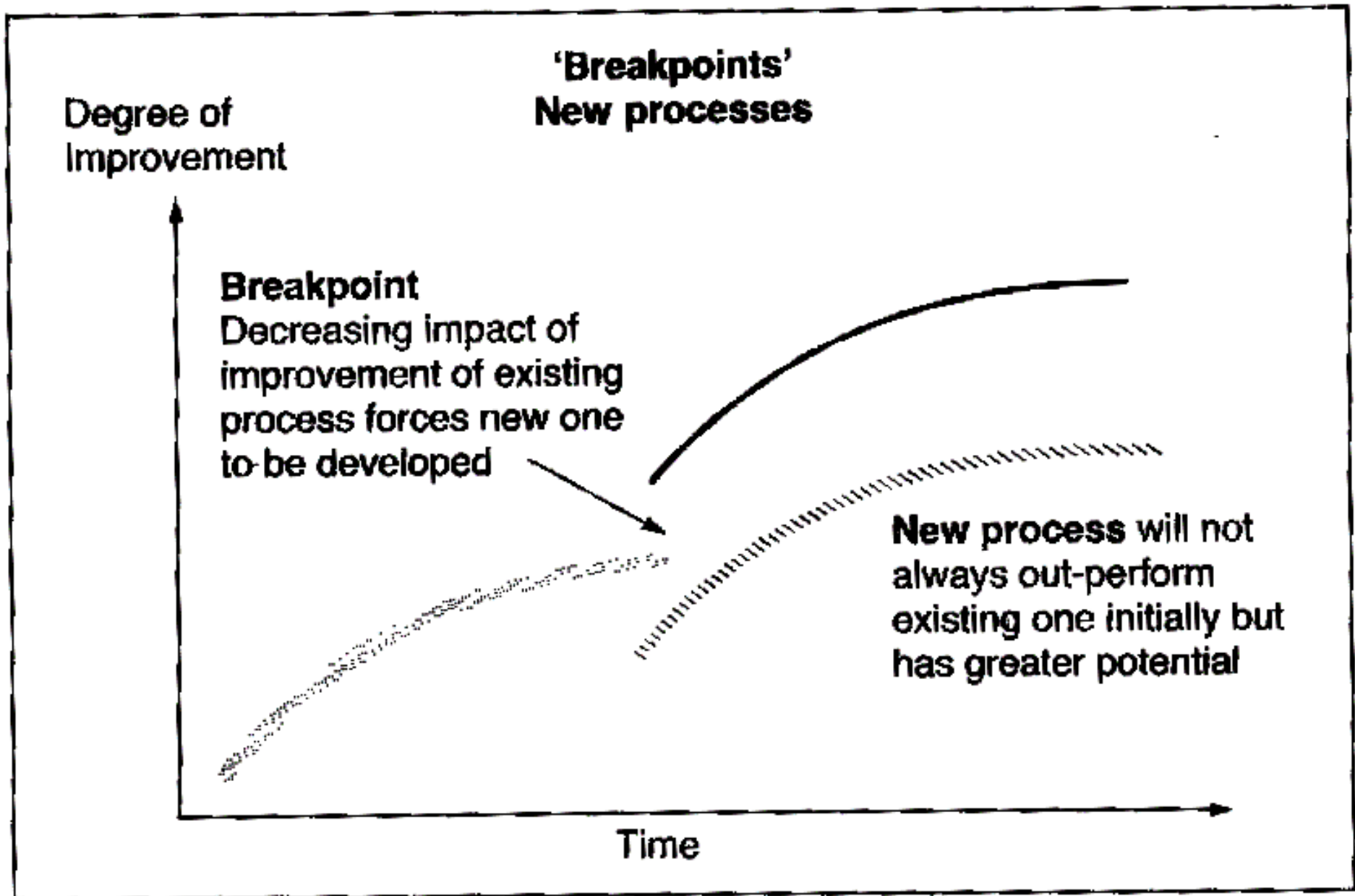
- We classify the different approaches to BPR into two broad categories:
 1. **Systematic redesign**: identify and understand existing processes and then work through them systematically to create new processes to deliver the desired outcomes
 2. **Clean sheet approach**: fundamentally re-think the way that the product or service is delivered and design new processes from scratch

The choice

- **The choice between these two approaches will depend on what the organization is most comfortable with and also on the time scales involved**
- **Always remember that the objective is to obtain significant improvements in performance. More attention should be paid, therefore, to the new process rather than the old, which is merely a starting point**

Systematic vs. clean sheet

- The **systematic approach** is most often used to implement performance improvement in the short term, it requires more incremental changes over time
 - Preferred by Japanese companies
 - Typical with stability of economy
- The **clean sheet approach** allows the company to develop new ways to compete in the medium to long term, it's more synonymous with making radical changes
 - Preferred by Western companies
 - High failure rate (>70%)
 - May not outperform immediately the old process (especially in financial terms): what is important is that new processes have the potential to offer considerably higher levels of performance over the medium period



Systematic redesign

- **Advantages:**
 - Change can be made incrementally
 - Conduced with small chunks
 - Reduced disruptions and risks
- **Disadvantages:**
 - Its base is the existing process
 - It's less innovative
 - It can result in significant step changes in performance when applied on a massive scale

Systematic redesign

- **When systematic redesign become an integral part of organizational life we could define them as “Business Process Management” as opposed to “Business Process Re-engineering”**
- **In this case it has the connotation of a continuous activity like “Kaizen” method**

Clean sheet approach

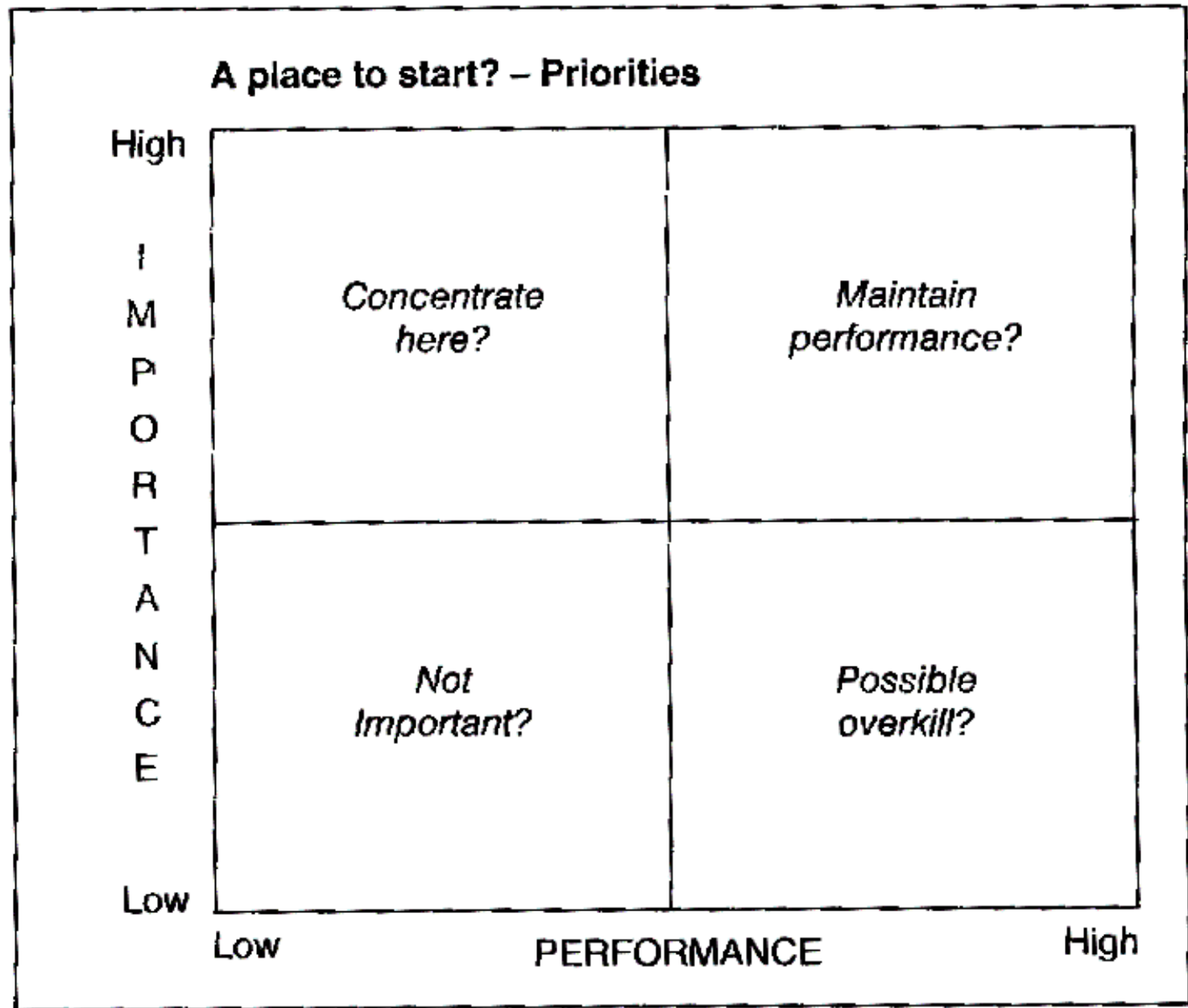
- Organizations adopt a “clean sheet” either because:
 - In their opinion they have reached a breakpoint
 - Previous attempts to re-engineer process through a systematic approach have failed the results
 - Creating the desired culture with a new workforce is easier
- Disadvantages:
 - the required organizational change can be difficult to implement incrementally
 - The risk is higher and the disruption greater
 - Workers may refuse to switch to the new methods

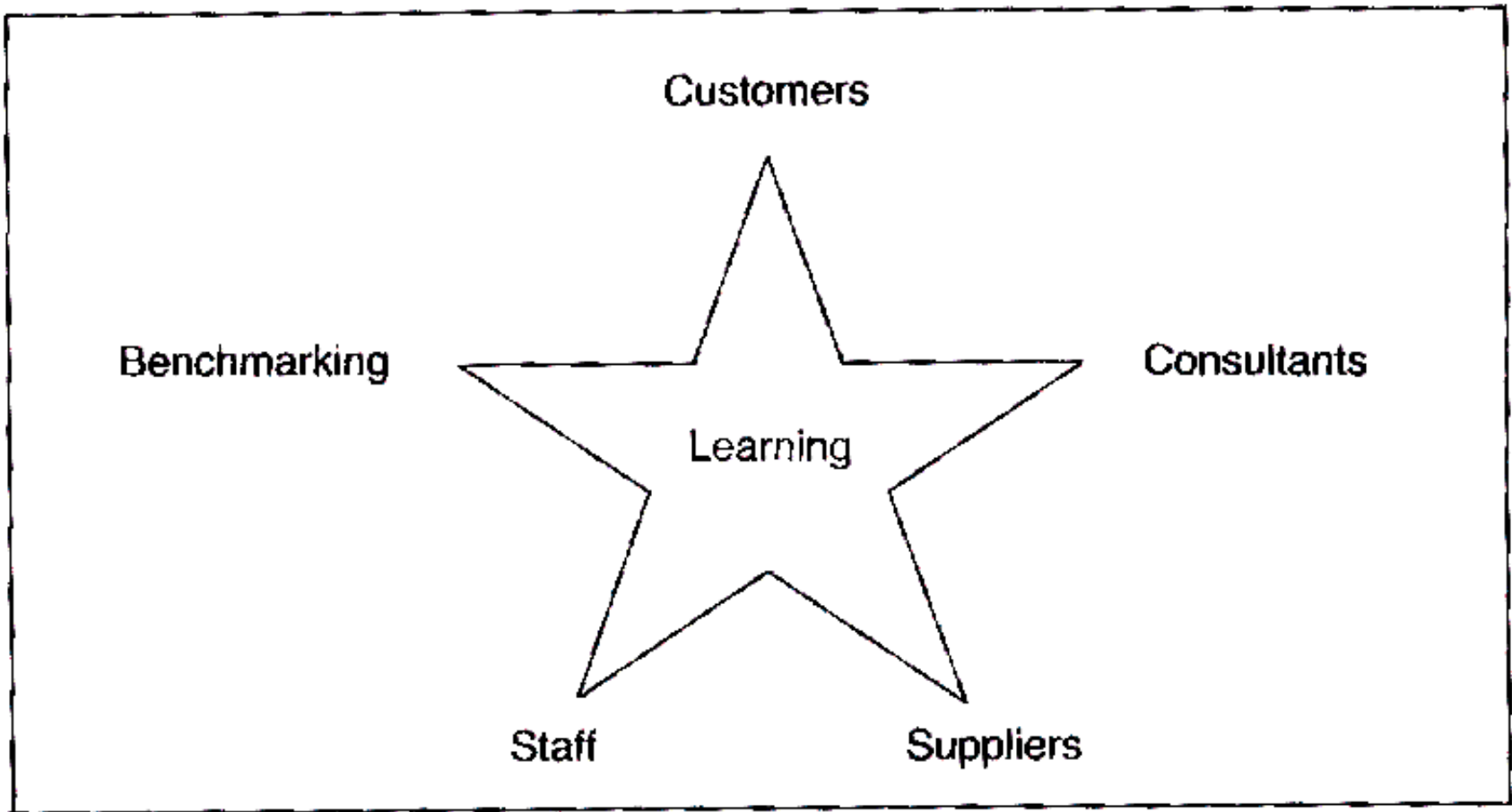
Where to start?

Where to start?

- **Where to start re-design?**
- **Each organization will have to find its own way, however some guidance can be found by utilizing:**
 - **The performance improvement matrix, considering importance and performance level of priorities**
 - **The learning star, considering the different sources for improvement: customers, suppliers, staff, consultants, benchmarking activity**

"Performance-Importance" Matrix





The "learning star" model

Customer and supplier feedback

- **A source of valuable information on how well an organization is performing are customers**
- **The most important customers are the best place to start though if there are others who are particularly innovative**
- **Often any particularly demanding customers may provide a view of what might be possible targets for a clean sheet approach**

Staff & consultants

- **An organization's staff are a key resource which know a great deal about its processes**
- **One of the main mechanism for utilizing this knowledge and expertise is through the generation of process maps**
- **Consultants and academics can provide a useful outsider's view and act as facilitators for the BPR programme**

Benchmarking

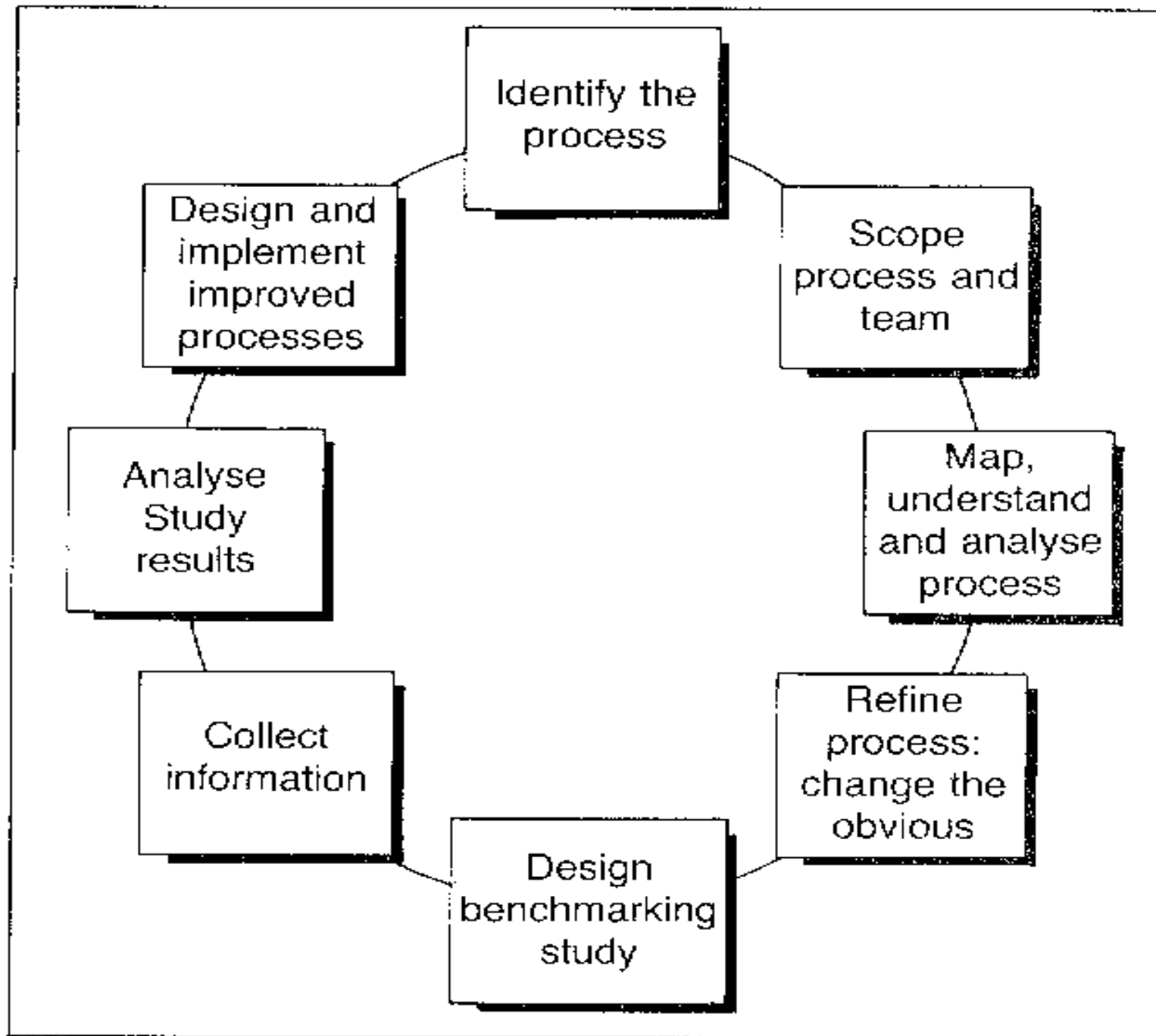
- **It can highlight areas for improvement simply by pointing out what is possible**
 - **When Ford found out that Mazda had only 5 people in its accounts payable department versus their 500, Ford challenged the company's traditional thinking about the process and was able to reduce its staff by 75%**

Benchmarking

- **Can be undertaken at various levels. Comparison can be done between:**
 - **Different departments within a division**
 - **Different division within a organization**
 - **Different organizations within the same industry**
 - **Different organizations in different industries**

Benchmarking

- **The comparison can be made across a range of activities and need not be restricted to a limited set of performance measures and processes**
- **Topics could include:**
 - **Budgetary or financial performance**
 - **Customer service delivery systems and measures**
 - **Productivity measures**
 - **Use of technology**
 - **Planning and project management practices**
 - **Human resources management**
 - **Financial control systems**



Systematic redesign

- **Redesigning an existing process is usually about making it:**
 - **Better:** in that it delivers higher levels of satisfaction to its stakeholders, particularly customers
 - **Cheaper:** in that it does the above to the highest levels of efficiency
 - **Faster:** in that the ultimate goal for every organization is that all its activities should “add value” in some way to the customers

ESIA model

E.S.I.A. model

- **When redesigning existing processes the emphasis is on the elimination of all non-value-adding activities the rule for doing this can best be summarized as ESIA:**
 - **Eliminate**
 - **Simplify**
 - **Integrate**
 - **Automate**

E.S.I.A. - areas of attention

Eliminate	Simplify	Integrate	Automate
Over-production	Forms	Jobs	Dirty
Waiting time	Procedures	Teams	Difficult
Transport	Communication	Customers	Dangerous
Processing	Technology	Suppliers	Boring
Inventory	Problem areas		Data capture
Defects/failures	Flows		Data transfer
Duplication	Processes		Data analysis
Reformatting			
Inspection			
Reconciling			

ELIMINATE

- **All non-value adding steps should be eliminated**
- **Ways of working evolve over the years and few see the waste when working in a functional set up**
 - **Toyota estimate that in many traditional manufacturing operations 85% of the workers may not be working at any given time**
 - **5% may be seen not be working**
 - **25% will be waiting for something**
 - **30% could be building inventory**
 - **25% will be working according to inefficient standards or methods**
 - **Toyota pays a great deal of attention to detail and finds significant efficiency improvements from redesigning the detailed tasks which are performed and applies these lessons also in the office**

Toyota method

- **We use Toyota method as a start point to examine candidates for “elimination”:**
 - **Over-production/over-provision**
 - **Waiting time**
 - **Transportation, movement and motion**
 - **Processing**
 - **Inventory and paperwork**
 - **Defects, failures and reworking**
 - **Duplication of tasks**
 - **Reformatting or transferring of information**
 - **Inspection, monitoring and controls**
 - **Reconciling**

a. Over-production over-provision

- **Producing more than is needed at any given time is a major source of waste**
- **All such over-production achieves is to build up inventories and hide problems**
- **This does not just apply to manufacturing, many services can suffer from this**
 - **for example, too much food prepared in a restaurant which must then be thrown away.**

b. Waiting time

- **There is a cost to material, paper or persons having to wait for something**
- **We are not just talking about storage depots where the manager proudly tells you how many millions of pounds worth of stock is stored there, but all those moments in the day when for one reason or another you have to wait for something, or someone**
- **Where that wait is so long that work on the next item commences, the effect is worsened. Either the worker will be disrupted when what they have been waiting for arrives, or the item will sit in folders or on the floor while the current item is worked on.**

c. Waiting time

- **Paperwork or inventories build up, throughput times are increased, tracking and monitoring become more complex and little is actually being released or available for release to the customer**
- **In manufacturing, operator and machine utilization measures have been used for a long time, however just keeping people busy and not actually producing what is required when it is required does not eliminate waiting time as such, it merely passes the problem into inventory**
- **In services, waiting time, either for people or paper, is less visible yet equally as costly.**

d. Transportation, movement and motion

- **Every time people, material and paper move, it costs money. Something or someone must move material and paper around, and the time taken to move it, is time that could be spent on adding value to it**
- **It is not unknown for some components, worth only a few pence, to travel miles during their manufacture, or for paperwork to zigzag its way round and between office floors without anyone really being aware of this cost, especially relative to the value added.**

d. Transportation, movement and motion

- **Economic factors may have dictated that manufacture take place in different countries; however the complete process must be examined.**
 - **One hi-tech company found that its semiconductors travelled 15000 miles during their transformation from raw material to finished goods delivered to the customer!**
- **Manufacture took place in the Far East, testing in the USA and many were sold in Europe. The movement of people is also costly - why are they moving, what value does it add and could the time not be better spent working on the next piece of material or paper, or even with another customer?**

e. Processing

- **Does the process add value - if not why is it being done?**
- **Even if it is value-adding it may be inefficient either because the product has been badly designed resulting in poor processing, or, the process has not been fully developed or refined**
- **Where the process is 'out of control', i.e. it is not predictable to any great degree of certainty - the cause of this variability must be eliminated.**

f. Inventory and paperwork

- **Why is inventory or paperwork needed?**
- **Is it strictly necessary to ensure immediate customer satisfaction?**
- **Perhaps the paperwork is required for the delivery of another part of the service task, say a legal requirement for a signature.**
- **Excess inventory is the scourge of the factory. Similarly, spurious paperwork and forms tie up armies of bureaucrats, yet contribute little to the services actually being received by the consumer.**

g. Defects, failures and reworking

- **The goal should be to get all things right first time and avoid the cost of labour, materials, disruption and opportunity cost involved in rectifying problems**
- **In the front office this can be especially critical where systems are overloaded, i.e. load exceeds capacity. Under these conditions, quality is likely to be degraded and as customers complain and seek help this will further exacerbate an already poor situation**

g. Defects, failures and reworking

- A classic example of this is airline overbooking

One experience was where even after Air France flights from Paris to London had been cancelled through strikes for over a week, at least one carrier continued to overbook each flight by 10 people! As all the flights were fully booked and passengers were, on the whole, turning up, this seemed extreme folly. As each flight became due for departure a growing melee of angry and frustrated customers sought to get their seats. As the dock struck the hour before departure time these passengers demanded that no-shows be removed from the manifest and their names added. A few minutes later the no-shows arrived, having been detained by the airline itself in a queue elsewhere in the airport, to find their seats gone. And so the situation got worse

- In the back office, rework can also store up problems which later surface with the customer. Where rework is performed by staff at the end of a production line it is unlikely that the work will be completed exactly as it should. Tools which are not calibrated exactly, yet seem to do the job, may be used by these professional people who believe they are reworking the quality back into the item, but may only be delaying failure
- The important thing to remember here is that it is the cause of the failures that should be eliminated and this is most likely to be a process problem, not a people one.

h. Duplication of tasks

- **Each task that is carried out should add value in some way. If a task is repeated it does not add value but merely contributes to costs.**
- **Raising paper work and inputting data to computer systems are often found to be repeated elsewhere in the organization. This search for duplication can be carried beyond the boundary of the individual organization and into the supply chain**
- **Information need be input at one point through the entire supply chain with additional elements of data being added to that already existing. Not only does this eliminate the unnecessary task of inputting the data a second time, but it eliminates an additional source of problems, that of errors and mismatches between first and second, or subsequent, inputs of data.**

i. Reformatting or transferring of information

- **This is another form of duplication. Quite often data is transferred from one form to another, or printed from one computer system only to be input manually to another**
- **This frequently occurs when information moves across organizational boundaries, but that need not mean it has to continue**

I. Inspection, monitoring and controls

- While some may be justified, many exist for historical reasons and have become part of the justification for jobs and management layers.

“Counting all personnel, budget, procurement, accounting, auditing, and headquarters staff, plus supervisory personnel in field offices, there are roughly 700,000 federal employees whose job it is to manage, control, check up on or audit others. This is one third of all federal civilian employees”

(US Vice President Al Gore, National Performance Review, 1993)

- Often monitoring and controls occur where departmental boundaries are crossed. Traditionally this happens a lot through the delivery of products or services and has been an agreed way of apportioning cost to different parts of an operation. Increasingly, as the very structure of the organization is being questioned, many monitors and controls cease to be relevant.

I. Inspection, monitoring and controls

- **It is a good idea to draw a distinction between the different types of monitoring and controls as these must be approached differently:**
 - **Regulatory;**
 - **Customer and consumer bodies or watchdogs;**
 - **Organizational for both quality and productivity.**
- **Clearly the organization must comply with regulatory requirements and there may be every reason to do so, such as with health and safety checks**
- **The organization may be able to influence 'watchdogs' but it has the most scope for redesign in those controls it uses for itself**
- **Organizations should be clear about the necessity of each and everyone either for quality assurance or productivity/financial health.**

m. Reconciling

- **Similar to monitoring and controls and a classic bureaucratic pastime. While it is good to ensure that things match it is important to realize the purpose of the process as a whole. It was the significant reduction, and then automation, of the number of details to be matched that led Ford to achieve a 75 per cent reduction in the staffing levels of its Accounts Payable function**
- **At every point through the process the team should consider what contribution is being made to the service task. Teams are often surprised at the number of steps which do not add value and which have previously been taken for granted. These non-value-adding activities are the first targets in any systematic redesign initiative**
- **How can they be eliminated and/or minimized ensuring that this does not have a negative impact downstream in the process?**

SIMPLIFY

- **Having eliminated as many of the unnecessary tasks as possible it is important to simplify those that remain. The search for areas which are overly complex can be aided by identifying areas which match the following:**
 - **Forms**
 - **Procedures**
 - **Communication**
 - **Technology**
 - **Flows**
 - **Processes**
 - **Problem areas**

a. Forms

- **Do you know what percentage of your firm's forms are completed incorrectly? You should do, and it is not adequate to point the finger at the person who completed it, and should identify the root cause**
- **The chances are that by redesigning the form, significant improvements can be made thus eliminating the need to go back to the originator and ask for clarification or to provide further explanation.**

b. Procedures

- **Often procedures are overly complicated and difficult to understand. In some cases this may be so evident that staff simply cannot be expected to get them right all the time**

“....we have more than 100,000 pages of personnel rules and regulations defining in exquisite detail how to hire, promote, or fire federal employees...”

(N. Venkatraman – The corporation of the 1990s – Oxford University Press, 1991)

c. Communication

- **Both to the customer and to staff must be clear and understandable to all.**
- **Jargon should be avoided wherever possible and simple, clear language used.**
 - **Recognizing this, the Prudential Insurance Company in the UK has launched a new drive for many of its products to ensure that the longest word contained in their documents is 'Prudential'**

d. Technology

- **It is imperative to ensure that any technology is appropriate to the task being performed - avoid high-tech solutions where low-tech will do. In the form of computer screens, technology also accounts for many delays and mistakes.**
- **Poorly designed interfaces which are not appropriate to the job they are used for, are plentiful. Some of the simplest, yet functional interfaces may not receive any software award or run under such and such an operating system, but they may allow for high-speed data capture or validation which is what is most important**
- **Increasingly, software companies are recognizing that as they sought to make ever more functional user-interfaces, they merely made them more user-hostile. Many are now blaming the software, not the user, when the user takes the long route to perform something, or does not use a particular function.**
- **The aim is for more intuitive, simple to use software that does the job it is required to do, and does it well**

e. Flows

- While most processes are initially designed to have a natural flow or order this can become corrupted or impeded as changes are implemented over time on a piecemeal basis
- The order of tasks can be changed to simplify the flow of material or paperwork and make subsequent jobs easier. Sometimes the provision of one further piece of information makes a particular job much easier than having to work out the required data from other information
- If a map is made of the 'flow' of material or paperwork through an organization both logically and physically it can reveal opportunities for simplification
- This material flow is not untypical of many manufacturing plants. Often departments are located in separate offices and paper is sent between them via an internal mail system
- In the same way that manufacturing shop-floors are moving away from areas of specialization in favour of 'cells', by rearranging personnel into customer-focused teams, with people from each department sitting near each other, the unnecessary posting of paper is eliminated

f. Processes

- **Can also be simplified by recognizing when they are trying to serve different products or markets**
- **By breaking down the process and identifying activities which could best be dedicated to a particular customer segment the process can be made simpler in each instance**
- **Sometimes the same process is trying to satisfy customers with quite diverse needs: for example, business and leisure travellers**
- **Either the process will inadequately serve both or it will be weighted to favour one particular segment. If at the crucial stages a different process alternative existed for each customer type then the service to each segment will more closely match the customer's need and pocket**

g. Problem areas

- **Ask your staff what problems they see, your customers and your suppliers too**
- **Jobs that are difficult, dirty or dangerous, are less likely to be completed to a high standard than those which are simple, clean and safe**
- **If people are reluctant to do jobs, the reasons should be clearly understood: people may not have been appropriately trained or developed for it, or, they may have been recruited incorrectly**
- **Where a number of employees are reluctant however there may be some underlying cause. It could be that they end up facing angry customers and feel they can do nothing about it?**

INTEGRATE

- **The simplified tasks should now be integrated to effect a smooth flow in delivery of the customer requirement and service task.**
 - **Jobs**
 - **Teams**
 - **Customers**
 - **Suppliers**

a. Jobs

- It may be possible to combine several jobs into one
- By empowering one person to complete a range of simplified tasks, rather than have them performed by a chain of people, the flow of material or information through the organization will be speeded up considerably
- Whenever work has to be passed between individuals there is opportunity for mistakes to be made. Software to control the flow of work through an office can become extremely complex and serve no other purpose than track the throughput of work
- Some organizations have gone as far as making one person responsible for the processing of the complete product or service from order to shipment. This person is called a 'case worker' or 'case manager' in service organizations. These people act as a 'single point of contact' for the customer.

b. Teams

- **A logical extension of combining tasks is to combine specialists into teams where it is not possible for a single team member to undertake the whole range of activity**
- **Such teams are known as 'case teams' or sometimes as 'account teams'. While the teams may retain some functional reporting lines, for example to sales and to operations, they combine as a single process delivery team for day-to-day working**
- **The physical proximity means many problems they can be quickly dealt with. Information technology enabling physically distant people to co-operate in this way simply cannot replace physical closeness**

b. Teams

- **One day, when virtual reality extends its ability it may be able to do more, however, where possible, teams should be located together and the complex computer systems, that enabled a geographically dispersed group to function as a team, dispensed with**
- **This configuration minimizes the distance that material, information and paperwork must travel and improves communication between those working in the process.**

c. Customers

- **This can be viewed at two main levels, the integration of the individual consumer and the integration of a customer organization**
 - **At the individual consumer level, integration is crucial in certain situations. Customers who do not 'feel' right in a particular place are unlikely to spend money. Those that do feel comfortable can actually be used instead of employees: integration between one organization and another is sometimes called Business Network Redesign**
 - **Integrating one's own service provision into the processes of a customer organization can be extremely powerful, such partnership arrangements 'lock in' the customer to your organization and make it very difficult for competitors to gain the business**

Johnson & Johnson integrate their organization with that of Walmart, delivering the quantities of Pampers that they believe are needed and stacking them directly onto the shelf. Walmart merely receives the bill and pays.

c. Customers

- **This form of integration is often called value-added-services, i.e. they are additional services to the basic need that is purchased, yet provide value to the customer in some way. Value-added services are becoming increasingly popular as companies find ways to retain customers and keep competitors out of their markets**
- **What value-added-services could your organization offer, and what would you do if your competitors started to offer them?**

d. Suppliers

- **Huge efficiency savings can be made if needless bureaucracy can be eliminated between organizations and suppliers**
- **Trust and partnership are, as with customer integration key, although that does not necessarily mean that there are no checks. Just-in-time ways of manufacturing have meant that suppliers and manufacturers have begun to work together in an increasing number of ways, integrating, often through IT, the flow of orders, invoices, and even design data**
- **Integration of the activities has also extended to synchronized deliveries in some cases where suppliers make the required parts and deliver them in the sequence required by the assembly schedule of their customers**

AUTOMATE

- **Information technology can be a very powerful tool to speed up processes and deliver higher quality customer service**
- **If applied to processes which are basically sound it will enhance that process. If the process is problematic then automation can often make matters worse**
- **It is important, therefore, to apply automation after having eliminated, simplified and integrated tasks in the process. Having reached the automation stage it may be possible to go back through the preceding stages and further eliminate, simplify and integrate tasks.**

Automate

- **Many telephone-based businesses invest in information technology to provide their service staff with the necessary customer and product details to provide accurate and speedy service**
- **Clearly when re-engineering these processes IT will be a major factor to be considered. Some 'rules' for greater success in automation are outlined below:**
 - **Dirty, difficult or dangerous**
 - **Boring**
 - **Data capture**
 - **Data transfer**
 - **Data analysis**

a. Dirty, difficult or dangerous

- **A rule which governs much of Nissan's shop-floor investment**
- **Jobs fitting this category cannot always be automated, yet, where they can significantly higher quality levels are likely to result as machines do not mind such tasks and are unaffected by them.**

b. Boring

- **Any task that is boring or repetitive by nature is a good candidate for automation**
- **This again could be a shop-floor task or it could be adding numbers together or matching items on forms**
- **Machines are untroubled by boredom and are actually best at tasks which are repetitive.**

c. Data capture

- **Clearly if the capture of data can be done by machine rather than a person time can be saved, not to mention increased accuracy**
- **Witness the shift to bar code readers at even small grocery stores**

d. Data transfer

- **Transferring data from one format to another, or one person to another, or one system to another is another high priority candidate for automation**
- **Different standards of computers has made this task unnecessarily complicated in some cases, yet avoiding the need to input data to one system which has already been put into another one saves not only time at input but a host of problems when the data does not match!**

e. Data analysis

- **Perhaps the stock exchange has been the quickest to realize the huge potential of computers for data analysis with networks performing pattern matching and trend analysis to support financial traders**
- **Many companies have huge databases containing data but have yet to translate it into information which is actually accessible and valuable to management**
- **Such analysis might be conducted on data collected by ICT dept. who can include details of other company's (competitors) products in their report**

Suggestions

- **Automation should only be applied to processes which are under control**
- **It is rare that automation actually improves the situation as has been learnt in manufacturing from the application of MRP systems. Often the implementation of these systems resulted in problems being exaggerated, inventories increasing and lead times extending, instead of the improvements that had been anticipated. Companies experiencing these problems had usually looked to the MRP systems to sort out basic problems in their processes. In contrast, some other companies, and again notably the Japanese, make very effective use of MRP systems which they use to enhance processes which are under control and performing well.**

Suggestions

- **Our view of automation is that it should be applied using the 80/20 rule**

That is that 80 per cent of the functionality should be delivered in 20 per cent of the cost and time, in preference to the 100 per cent solutions long preferred by many companies. 100 per cent systems solutions, catering for every exception condition take a long time to deliver and invariably are less reliable. They are more costly to maintain and organizations are reluctant to throw them away even when big improvements to the process can subsequently be made, as they cost so much in the first place. There is nothing wrong with manual intervention and humans are employed because of their flexibility and innate intelligence. Automation works best in many processes when applied to routine, repetitive tasks or highly complex modelling.

Applying E.S.I.A.

- **Having gained an understanding of a process it is a good idea to hold a brainstorming session to go through each of the ESIA categories so that a list of potential improvements can be generated**
- **Remember to question everything and do not restrict suggestions to the immediate process but to its reason for being or to its contribution to the business as well**
- **If we return to our stationery request example we can apply the ESIA rules to identify further actions.**

Applying E.S.I.A.

- **Eliminate:**
 - We have already eliminated many of the steps in the process, but is there anything else we can do? Most certainly.
 - What forms of stationery can we eliminate, thus reducing the need for this non-value-adding process in the first place? It goes further than that. If we can identify, for example, a number of forms which could be eliminated then the bureaucratic burden on the organization, not just this process can be reduced. Other actions could include eliminating stock that is rarely, if ever, ordered yet remains a 'standard' item because it has always been there. Such items take up space, make administration a larger task and are totally unnecessary.
- **Simplify:**
 - It may be possible to simplify the coding system used to describe the stationery and forms so that the number of incorrect orders is reduced. Pictures of items may even help here. An ABC analysis could be applied with type A stationery which is of high value, type B of medium value and type C of low value. Depending on the type of operation, type A items may only account for 20 per cent of those used yet represent 80 per cent of value. Controls are best applied to these items with minimal controls on type C items.

Applying E.S.I.A.

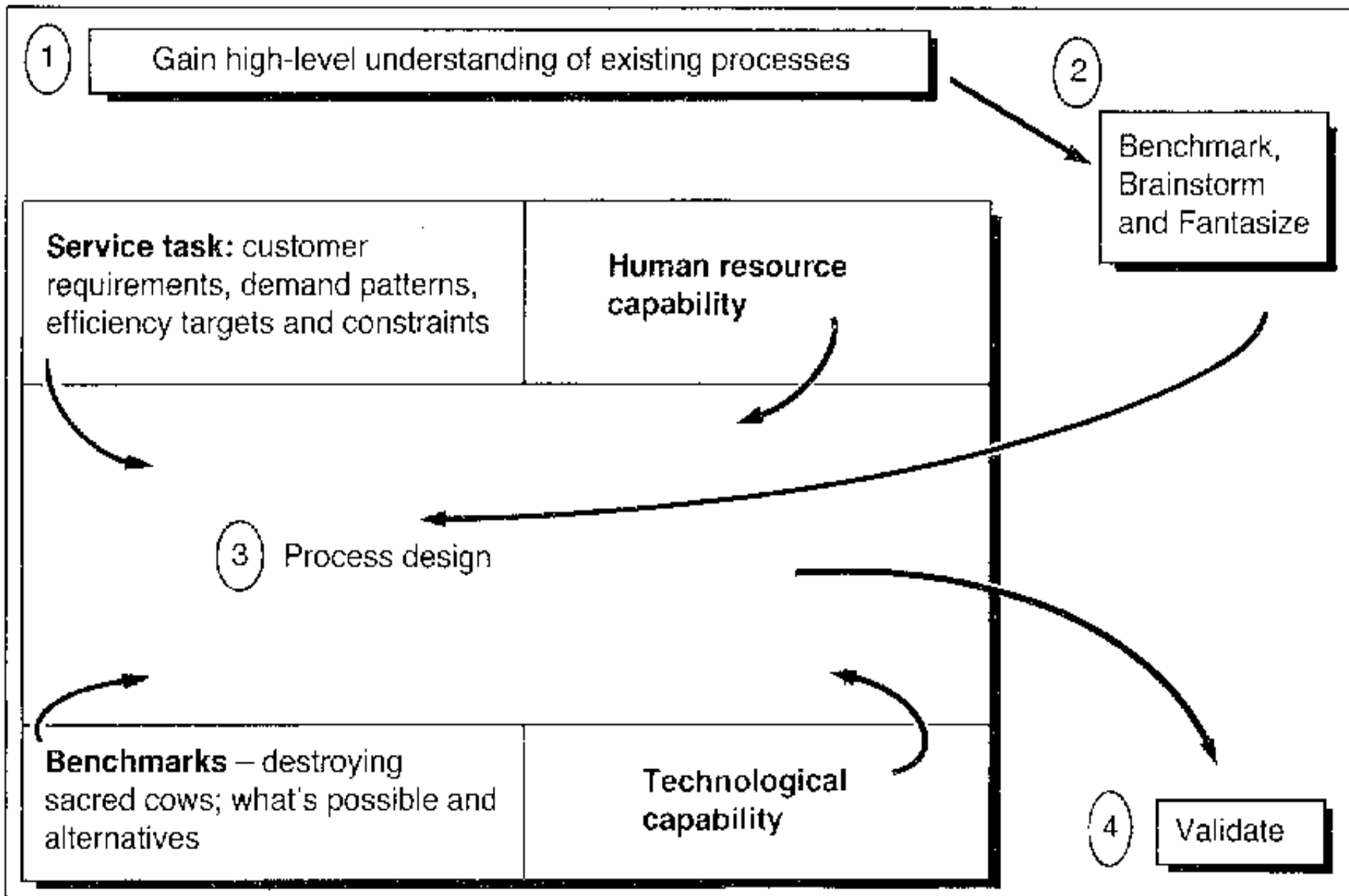
- **Integrate:**
 - For some types of forms, it may be possible to base orders on usage thus the need to consciously reorder stocks is eliminated. This integration is now used by banks to send their customers new cheque books once they have written a certain number of cheques.
- **Automate:**
 - a simple system to capture orders when they are rung in could provide a means of producing pick lists, measuring performance and tracking use by departments. For some stationery items it might even be appropriate to install a simple ordering system which could track orders, usage rates, costs and inventory levels.

Clean sheet approach

- **Essentially the clean-sheet approach requires basic questions to be answered:**
 - **What underlying needs are we trying to satisfy and for whom?, i.e. 'The service task.'**
 - **Why are we trying to satisfy those needs? - does it fit with the organization's strategy?**
 - **Where do those needs need to be serviced? - in the home, the high street and so on.**
 - **When are we required to meet those needs? - within what time scales must we operate?**
 - **How will we deliver the above? - what processes need to be in place, who will operate them and what technological opportunities exist for enhancing the performance of the processes and the people involved?**

Clean sheet approach

- **As it is likely that those tasked with the design of the new process come from the existing organization it is crucial that the team is able to be creative and innovative in its design of processes, people and technology, having gained a complete appreciation of the service task.**
- **Some questions to ask are:**
 - 'How would you set up a competitor?'
 - 'How would the ideal process look?'
 - 'If you had to rebuild the organization from scratch, how would it look?'
- **As a start point we would suggest the framework outlined in the following figure**



Step 1: Gain a high level understanding of the existing processes

- **Here it is not necessary to get into anything like the level of detail required for systematic redesign however it is important to identify the core processes**
- **Usually there will be 6-8 core processes and you may choose to analyse the key stages in each of these before calling a halt to the study**
- **This step will include an analysis of the outcomes which these processes currently deliver**

Step 2: Benchmarking, brainstorming, fantasizing

- **This is the 'fun' stage which is quite important**
- **Benchmarking is useful, as discussed earlier, to highlight alternative ways of working but should not be viewed as the end of the matter**
- **Brainstorming and fantasizing, particularly from the point of view of the customer can be a great way to generate new ideas**
- **These ideas should not be dismissed too quickly and those with the greatest potential could be researched in more depth.**

Step 3: Process design

- **During this stage the 'brainstormed' process ideas are detailed**
- **These ideas may be truly 'clean sheet' in that they have no basis in the existing process design. Designing the process will be highly iterative with process, people and technology considerations being examined a number of times**
- **In translating the ideas into designs it will be important that the 'clean sheet' considers the 'service task' in some detail, human resource capability which will include new ways of working, technological capability and finally benchmarks to ensure people do not revert back to the traditional ways of doing things**
- **These considerations may act as constraints on the process designers as well as highlighting new possibilities and while in the final iterations the design must operate within these constraints it is vital that such constraints are themselves fully examined and where possible removed.**

Step 4: Validate

- **Having designed a new process it is important to validate the design by simulating how it will operate in the real world**
- **This does not mean that every single possible exception should be used to declare the process invalid, indeed such exceptions may be best handled as such with the process dealing with the majority of cases**
- **A process map provides an ideal way of representing the new process and aids its overall construction**
- **The ESIA rule should be applied to this new process to ensure it is optimal in terms of delivering the desired outcomes along the dimensions of effectiveness, efficiency and adaptability**

PROCESS: Mitel Telecom Ltd. Top level business process flowchart		LEVEL: 2	ORIGINATOR Alan Kirkham
ABSTRACT: Defines the key five top level business processes operated by Mitel Telecom Ltd.			OWNER (DEPT) Alan Kirkham
RESPONSIBILITY/APPROVALS (Manager of each Dept. to sign) See Over			
<pre> graph TD PC[Potential Customer] --> SPS[Strategy Planning and Support (EM000279)] PM[Performance Monitoring] --> SPS SPS --> PDP[Product Development Process (EM000193)] PDP --> BSSP[Business Selling Process (EM000312)] PDP --> OFP[Order Fulfilment Process (EM000313)] BSSP -- "New Name Order" --> OFP OFP --> CRDP[Customer Retention and Development Process (EM000314)] OFP --> PM EC[Existing Customer Order] --> OFP CRDP --> OFP CRDP --> RC[Retained Customer] </pre>			MEASURES Audit Corrective Action Defects NPI Time to Market Product Health Overdue Receivables Delivered Product Quality Delivery Performance Sales to Budget Customer Satisfaction Customer Feedback Customer Retention
	DOCUMENT NUMBER	CHANGE LEVEL	PAGE 1 OF 1
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