Contents



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# Best Practices in Productivity

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## 1. How Do Enterprises Manage their Productivity?

Productivity has been defined by the ratio between input resources such as labour, materials, machinery, and output product or services. There are abundant ways to manage and improve productivity either by reducing input while achieving the same level of output, or increasing output using the same level of input. Enterprise Ireland, a government agency responsible for the development and promotion of its domestic business, has identified several ways to improve the productivity for SMEs.

***Benchmarking for best practices*** helps companies objectively identify and prioritise areas for improvement within a business, as well as giving a simple way to measure progress over time. While quantitative benchmarking looks mainly at the numbers or ratios of an operation, qualitative benchmarking looks at the systems and the processes that deliver the results.

There are several types of commonly used benchmarking base on different aspect of a business process. These include process benchmarking, financial benchmarking, performance benchmarking, product benchmarking, strategic benchmarking, functional benchmarking, and operational benchmarking.

Metric Benchmarking is another approach to making comparisons that involves using more aggregative cost or production information to identify strong and weak performing units. Data envelope analysis (DEA) and regression analysis are the two most common forms of quantitative analysis used in metric benchmarking. DEA estimates the cost level an efficient firm should be able to achieve in a particular market, and regression analysis estimates what the average firm should be able to achieve.

***Supply chain management*** is about managing the physical flow of product and the related flows of information from purchasing through production, distribution and delivery of the finished product to the customer. It spans all movement and storage of raw materials, work-in-process inventory, and finished goods from point of origin to point of consumption. Information technology usage and integration is one of the major areas for SMEs to achieve better productivity.

***Automation*** is mainly used to improve manufacturing performance, reduce operation costs and improve quality. It is an essential tool to enhance productivity and competitiveness for manufacturing industries. Automation is increasingly used in service industry to enhance service quality, achieving consistency in services provided, with less investment in manpower. In a broader sense, automation can be applied to all aspects of business, including back office automation using Information and Communication Technology (ICT), factory floor automation and innovation automation using CAD/CAM; and to link these systems using effective networks.

***eBusiness*** is referring to the formulation of IT strategy that supports the business objectives. The strategy will encompass a broad range of activities from launching of an official website, to online marketing through new media, to implementation of internal information and customer management system.

In May 2010, the new productivity council, National Productivity and Continuing Education Council (NPCEC), headed by DPM Teo Chee Hean has identified 12 key sectors to lead the national productivity drive. These are: construction; electronics; precision engineering; transport engineering; general manufacturing; retail; food and beverage; hotel; health care; info communication; logistics and storage; and administrative and support services. As each sector has its own characteristics, 12 dedicated groups will be formed for each sector to come up with ways to improve productivity. The teams will focus on devising measures specific and relevant to the industry, since productivity measures vary significantly from one industry to another. Thus it will help companies from different

sectors identify their key productivity measurement. And according to the OECD manual, the key objective of productivity measurement include:

- Technology – Embracing technical change, improve the currently known ways of converting resources into output.
- Efficiency – Identifying changes in efficiency, which are conceptually different from technical changes; a movement towards "best practices" or the elimination of inefficiencies to maximise output at a given amount of inputs.
- Real cost saving – A pragmatic way of describing change, recording in isolation for different factors that affect final output in terms of cost.
- Benchmarking – Comparisons of specific production processes to identify inefficiencies relevant to respective processes.

## 2. Recent Development for Productivity Management

In order to improve the organisational productivity, a few business functional units are at the heart of the effort. Top-down strategising helps to align the productivity enhancement to the ultimate goal of business growth. People management is a continuous effort to help employee improve their efficiency by constant investment in training and team building. Proper financial support is also critical to ensure the smooth implementation of the enhancement programme. Moreover, several topics are increasingly associated with productivity management and some recent trends are summarised here:

### 2.1 Information and Communication Technology

It has been proven that investment in computers and software by firms, information and communication technology (ICT) and Internet use by employees, as well as e-commerce activity, are associated with higher value added per worker. A few sectors, such as chemical, food, steel, retail, transport and logistics, have benefited greatly from the ICT evolution. It is essential for the companies that are lagging behind to catch up. ICT is also increasingly associated with process innovation and quality insurance. The countless possible cost-saving and value-adding innovations are 'disembodied' sources of multi-factor productivity (MFP) gains. OECD concluded that 50% of EU productivity growth comes from ICT during 2000-2004, and the investment on computing technology delivers 4-5 times more return than other investment.

Gartner analysts highlighted the top 10 technologies trends that will be strategic for most organisations in 2010.

- **Cloud Computing** is a style of computing that characterises a model in which providers deliver a variety of IT-enabled capabilities to consumers.
- **Advanced Analytics** is referring to optimisation and simulation using analytical tools and models to maximise business process and decision effectiveness by examining alternative outcomes and scenarios, before, during and after process implementation and execution.
- **Client Computing** by using virtualisation technics is bringing new ways of packaging client computing applications and capabilities. As a result, the choice of a particular PC hardware platform, and eventually the OS platform, becomes less critical.

- **IT for Green** encourages workers, particularly among the white-collar staff, to take green initiatives in the workplace. This includes the use of e-documents, reducing travel and teleworking. It also refers to analytic tools that enable organisations to reduce energy consumption and carbon emission. This can greatly enhance an organisation's green credentials.
- **Reshaping the Data Centre** Newly-built data centres often opened with huge areas of white floor space, fully powered and backed by an uninterruptible power supply (UPS), water-and air-cooled and mostly empty. However, cost sensitiveness after the crisis requires the organisations to adopt a pod-based approach to data centre construction and expansion.
- **Social Computing** Organisations are increasingly tolerant towards the usage of social networks by workers, as they recognise the importance of information acquired through these networks. They are also starting to focus on use of social software and social media to increase their presence and exposure to communities.
- **Security – Activity Monitoring** Traditionally, security has focused on putting up a perimeter fence to keep others out, but it has evolved to monitoring activities and identifying patterns that would have been missed before. A variety of complimentary (and sometimes overlapping) monitoring and analysis tools help organisations better detect and investigate suspicious activity – often with real-time alerting or transaction intervention. By understanding the strengths and weaknesses of these tools, organisations can better understand how to use them to defend the organisation and meet audit requirements.
- **Flash Memory** Flash memory is not new, but it is moving up to a new tier in the storage echelon. It is much faster than rotating disk, but was considerably more expensive. However, this differential is shrinking at exponential rate. It will offer a new layer of the storage hierarchy in servers and client computers that has key advantages including space, heat, performance and ruggedness.
- **Virtualisation for Availability** has been on the list of top strategic technologies in previous years. The new elements such as live migration for availability will have longer-term implications. Live migration is the movement of a running virtual machine (VM), while its operating system and other software continue to execute, as if they remained on the original physical server. This takes place by replicating the state of physical memory between the source and destination VMs. The key value proposition is to cut costs, lowering complexity, as well as increasing agility as needs shift. This is achieved by removing expensive high-reliability hardware, with fail-over cluster software and perhaps even fault-tolerant hardware.
- **Mobile Applications** By year-end 2010, 1.2 billion people will carry handsets capable of rich, mobile commerce providing a rich environment for the convergence of mobility and the web. New upgraded devices with better processor power would likely create huge turn upwards in mobile applications.

These technologies impact the organisation's long-term plans, programmes and initiatives. They may be strategic because they have matured to broad market use, or because they enable strategic advantage from early adoption.

However, it is obvious that ICT uptake in firms varies, at the same time impacting the extent it improves performance. A report by the Australian Government's Productivity Commission listed three factors that are particularly important in explaining why firms differ in their intensity of ICT use and in the extent to which they have derived performance gains:

1. The nature and extent of complementary investments in product, process and organisational innovation by individual firms determines the timing and extent of the productivity gains they individually derive.

2. Differences between firms in their ability to attract and retain required management and employee skills could also affect the anticipated net gains from ICT investment.
3. Learning effects, such as developing the ability to identify new ICT applications and to extract more performance gains over time, can influence the magnitude and timing of ICT investments by individual firms.

## 2.2 Project management

Effectiveness and efficiency may be facilitated through the introduction of best practices that are able to optimise the management of organisational resources. Operations and projects are dissimilar with each requiring different management techniques. Hence, in a project environment, companies that have well structured project management methodology could undoubtedly improve productivity. The use of a formalised project management structure can help in: (a) filtering ill-suited project proposals; (b) defining the scope of a selected project; (c) identifying resources needed; (d) ensuring accountability for results and performance; and (e) encouraging the project team to focus on the final benefits to be achieved.

As organisations switch their focus from surviving to demonstrating business value, new projects are launching frequently to drive organisational growth in new areas. A global panel of consultants and senior executives assembled by ESI in November, identified the following trends:

- Agile and Lean processes are overtaking Waterfall
- Reliance on requirements metrics to measure performance will increase
- Project portfolio management solutions will gain popularity among project managers
- Vendor management and programme outsourcing will move front and centre
- Risk management will become a PM's obsession
- PM's are becoming Independent Consultants and PM learning moves out of the classroom
- Social media will become a norm

So as companies continue to look for ways to become more efficient and save money in both the short and long run, the principles and practices of PM will gradually merge with other areas of management and be an integral part of the management system. There will be at least three major models competing in the global marketplace: PMI's OPM3, Japan's P2M, and outgrowths from the UK's OGC PRINCE2 approach. Adaptations of these, as well as new models, will emerge within specific areas of application. Therefore, it is important for SMEs to acquire PM skills along with their business growth and formulate their own PM strategies to facilitate further development.

## 2.3 Outsourcing

Fierce competition in the today's marketplace forces companies to outsource part of their business processes in order to save cost, acquire expertise, building flexible capacities, enhance performances, gain tax benefits, and reduce risks. Ideally, outsourcing enables a firm to relocate its relatively inefficient production processes to external providers with cheaper and perhaps more efficient production capabilities. The firm can then turn its focus to areas where it has a comparative advantage and expand output, or engage in new business activities.

Typically, multinationals are outsourcing their production, customer service (call centres), IT system, accounting procedures, HR management, marketing activities, and even R&D to external partners, while most SMEs with limited resources are hoping to handle all aspects of their business in house. Though physical and psychological barriers still exists for SMEs to engage third party outsourcing service providers, advances in ICT have created a new and profitable model for the provision of high quality outsourced services to the SME market. It has become clear to SMEs that they are able to gain similar benefits from outsourcing as their larger counterparts. More small business owners start to use services of marketing agencies, payroll bureaux, hosted IT providers and remote receptionists to relieve them from those time consuming, non-core activities. Virtual companies are springing up everywhere with one person handling all necessary resources into his/her business and keeps it as lean and flexible as possible. Different level of collaborative works is also common; a case study of retail design and drafting services company presented in later part of this report elaborates this notion.

However, there are also negative voices towards outsourcing related to job loss and reducing quality in terms of user-experience. More specifically, critics pointed out that cost saving from offshoring is achieved by lower worker benefit in developing countries and higher unemployment rate in developed countries rather than real productivity gain.

On the other hand, in the complex business world today, personal effectiveness may also result from outsourcing. The people that get the most done are the people that have mastered outsourcing their time and efforts to others, who are better at doing certain tasks and cost fewer resources. Therefore, an organisational culture of collaborative work, which allocates tasks according to employee's capability, would not only achieve better result but also higher labour productivity.

## 2.4 Creativity and Innovation

Innovation is no stranger to the topic of productivity. It is widely recognised as a key ingredient of productivity success. However, executives often have strong reservations to innovation, as they perceived innovation to be exploring areas where the business does not have specific strengths or will make recommendations that cannibalise existing products or services. Therefore, it is not easy for an organisation to cultivate innovative culture, as it requires constant effort and ability to manage change.

Other than the well-known methods, such as brainstorming, mind mapping, lateral thinking, random simulation, and the six thinking hats, open innovation provides SME a new technique to embark creativity to attain productivity jump. An open innovation principles emphasises the importance of working with smart people inside and outside of a business entity, synergising both internal and external resources or riding on partners to gain exposure or profit from it.

As Singapore turns into a knowledge driven economy, innovation can go a long way in helping companies save costs and time, and to be more productive. In order to encourage companies to adopt design innovation, a new tax incentive scheme was introduced in June 2010. The Design Singapore Council will administer the scheme. A project that is related to industrial design activities, which resulted in a physical product registered with the Intellectual Property Office of Singapore (IPOS), would qualify for the scheme. According to the statement, companies can enjoy a deduction of up to 250% of their total income, capped at S$300,000 for each year of assessment, if they incur the qualifying expenditure on approved industrial and product design projects.

Other than the above mentioned, well-established theories like Just-in-Time inventory management, Kaizen philosophy, Lean manufacturing that originated from the top Japanese corporate, and six sigma,

total quality management solutions, as well as tools like Kanban, TRIZ, STRITS model for problem solving, all provide direct and indirect methodologies for companies to improve their productivity.

## 3. Implementation of Strategies to Improve Productivity

Organisations need to understand that improving productivity requires efforts from all stakeholders. Implementing strategies to improve productivity has to be an organisation-wide initiative, involving employees from all disciplines – from product & service development to production, operations, finance, marketing, human resources and IT. Productivity improvements go hand in hand with organisational development. This involves identifying and solving problems, initiating best practices, responding effectively to change, shortening the learning curve, improving processes and developing employee skills.

### 3.1 Establishing A Productivity Improvement Program

In the past years, many successful, large corporations have implemented productivity improvement programs (PIPs), especially in the face of slipping profits. Many organisations realised that improving productivity was the key to increasing income, and that only through an efficient and effective utilisation of resources could they remain competitive and profitable. This is also in line with the Singapore government's recent budget focus on increasing Singaporean's productivity.

The following productivity improvement program outlines the key elements of programs successfully used by many companies including giants such as Honeywell, General Motors and Ford.

1). **Top management support is important**. Experience reveals that PIPs are likely to fail without top management support. The top management should communicate to everyone in the company, a clear, and comprehensive PIP statement. Sufficient resources, which must be approved by the top management, must also be allocated to make the PIP a success.

2). **A steering committee** to oversee and implement the PIP is vital. To be aligned with the first point, the steering committee should involve top departmental executives, tasked with the responsibilities of goal setting, guidance, advice, and general management. Productivity managers should also be appointed from the organisation's employees, to give them a sense of responsibility for the day-to-day activities of measurement and analysis. The responsibilities of all organisational components must be clear and well established.

3). **Plan Systematically**. The PIP would not be successful without clear and well-established goals and objectives. After setting the goals and objectives of the PIP, there has to be a systematic planning of implementation. This means that problems should be targeted and given priority, reporting and monitoring requirements developed, and feedback channels established.

4). **Open Communications**. More often than not, increasing productivity means changing the way things are currently being done. Resistance to changes can arise, and it is important for the desired changes to be clearly communicated to everyone in the organisation. Communication should be top-down as well as bottom-up. Employees must be told what is going on and how they will benefit. Similarly, top management should also get feedback from employees regarding the difficulty and feasibility of the PIP.

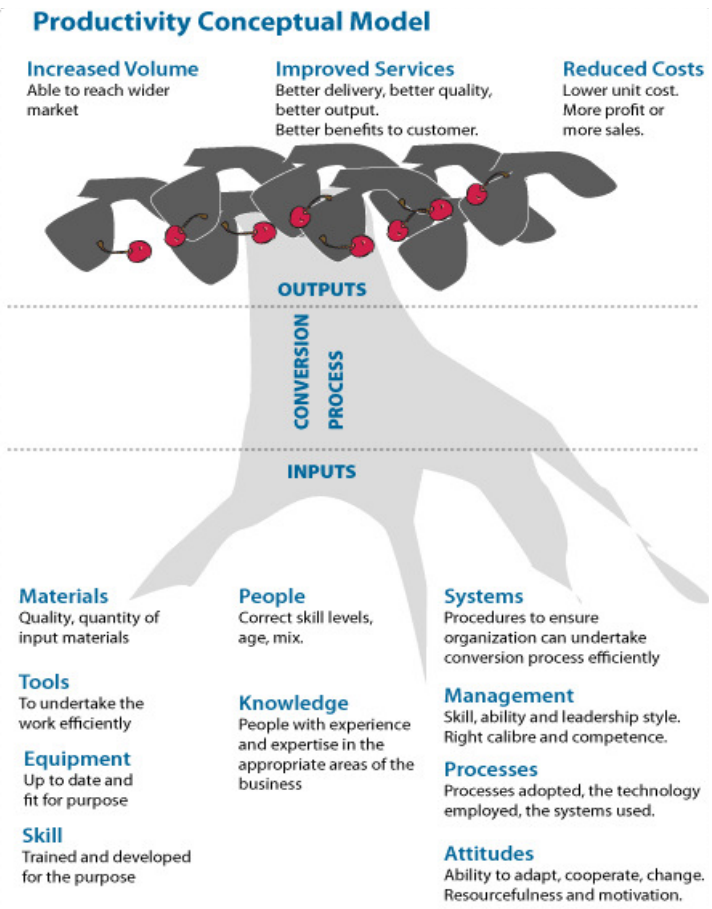
5). **Involve Employees**. Employee engagement encompasses a wide spectrum – including work-life balance, employee motivation, training and job enrichment, employee attitudes to work, incentives and rewards systems, among many others. A strong corporate culture, where employees strongly identify with and is an important part of company life, will ensure that the PIP be implemented more smoothly and with success. However, this sense of belonging and identity is not easy to cultivate. Through basic fairness, respect, appreciation, employee involvement, and equitable incentives, the corporate culture and productivity both can grow.

6). **Measure and Analyse**. Measuring the changes in productivity is crucial in determining if a PIP works. Measuring productivity is complex, and companies need to adopt a framework to measure productivity that is communicated and agreed upon by all in the organisation. Below are some indicators that are commonly used to measure productivity:

- Customer satisfaction
- Revenue/sales per employee
- Sales volume
- Meeting budget
- Cost and balancing

Therefore, companies can achieve a leap of productivity by identifying their productivity gaps, initiating changes for improvement, while constant monitoring productivity indicators, and keep re-innovating the business processes through an effective feedback system.

### 3.2 Common Factors Affecting Productivity




*Source*: Productivity improvement. (2010). Retrieved May 3, 2010, from http://www.accel-team.com/productivity/productivity_01_what.html

With reference to the Productivity Conceptual Model on the left, many factors affect the productivity of an organisation – input materials, tools & systems, equipment, skills, people & attitudes, knowledge, management and processes.

As such, there are many productivity factors an organisation can manage and manipulate in order to improve overall productivity. For instances, how well it utilises new knowledge; are the business processes efficient; are the employees highly motivated and loyal; is the employee-work allocation maximising established goals; what is the overall quality of the company's management; and most importantly, is there a commitment to establish a company-wide productivity improvement programme?

Some of the most direct ways an organisation can improve its productivity are through workforce training & development, internal knowledge transfer and business process management. The best practices section below will focus on some of these areas for productivity improvement.

## 4. Best Practices in Productivity

### 4.1 Workforce Training & Development

Due to rapidly advancing technologies, evolving business and operational processes and practices, it is only through effectively and continuously developing and training employees that corporations can update and acquire the core competencies needed for competitive advantage and flexibility in today's business environment. The most effective training and development programmes today have the following features incorporated:

1. **Positive cost/benefit ratio**: Training and development programmes must reflect a positive return on investment, either in the long term or the short term. Some training and development initiatives may take years to fully achieve their goals. Therefore, companies need to identify these timeframes up front and evaluate the workforce training and development over time.

2. **Supported by key strategies, systems, structures, policies, and practices**: In order for organisations to receive a true return on their learning investments, learning has to be aligned with and supported by key areas, such as planning, budgeting, career development, performance management, rewards and incentives, lines of authority, decision making and so forth.

3. **Maximise employee ability and potential through shared accountability**: Many companies are tapping their employees' potential through self-directed training and development, whereby employees identify their own learning and development needs, create individual learning plans, and to seek learning opportunities.

4. **Learning by doing**: People learn best by doing and applying what they have learnt. Hence, teaching theory, and then expecting employees to apply to work-related situations could be less effective than having them perform "real" tasks and projects in a training environment and on-the-job. Through assignments that closely resemble their own work, employees can adopt their learning pace and curve.

5. **Linked to other people-related programmes and departments**: In many instances, training is now conducted by line managers and supervisors, who also perform evaluations, set performance objectives, and draft compensation and promotion systems for the same employees. This enables the managers to capture a holistic view of their employees' potential for better career development planning as well.

## 4.2 Knowledge Transfer

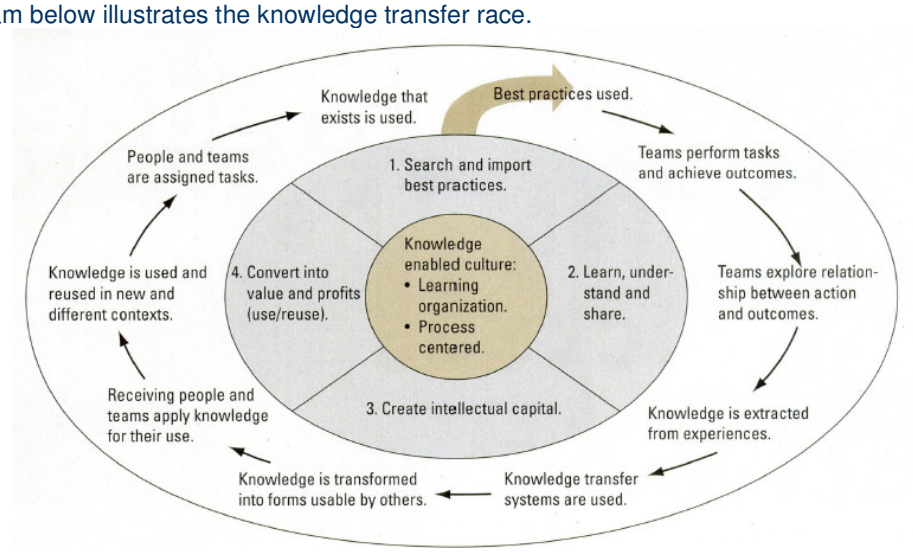
Knowledge transfer involves the discovery, learning, creation and reuse of knowledge. This knowledge is eventually converted into intellectual capital, which can then be in turn converted into higher productivity, value and profits.

Merely understanding the benefits of knowledge transfer is not enough. Organisations have to create a knowledge-enabled culture by employing a system of aligned human resource policies, tactics, processes and practices. This ensures that knowledge can be continuously discovered, created, recorded and reused.

There are 4 phases to an effective knowledge transfer within an organisation:

1. Search for and import best practices
2. Learn, understand and share
3. Create intellectual capital
4. Convert knowledge into higher productivity, value and profits

The diagram below illustrates the knowledge transfer race.




| | Serial transfer | Near transfer | Far transfer | Strategic transfer | Expert transfer |
|---|---|---|---|---|---|
| **Definition** | The knowledge a team gains from doing its task in one setting is transferred to the next time the team does the task in a different setting. | Explicit knowledge a team gains from doing a frequent and repeated task is reused by other teams doing similar work. | Tacit knowledge a team gains from doing a nonroutine task is made available to other teams doing similar work in other parts of the organization. | The collective knowledge of the organization is needed to accomplish a strategic task that occurs infrequently but is critical to the whole organization. | A team facing a technical question beyond the scope of its own knowledge seeks the expertise of others in the organization. |
| **Example** | U.S. Army squadron engages in Iraq battle and uses after action review (AAR) knowledge when engaging in future combat. | A team in a Detroit auto plant figures out how to install brakes in 10 minutes. A team in Dallas uses that knowledge to reduce its time by one minute. | Peers travel to assist a team dealing with a unique oil exploration site. The collaboration provides new approaches. | General Electric (GE) uses knowledge from Allied Signal to develop a Six Sigma system. Two years later Haytheon uses what was learned from GE to design its own Six Sigma system. | Technician e-mails the network asking how to increase the brightness on out-of-date monitors. Seven experts provide answers. |

Source: Nancy M. Dixon, *Common Knowledge: How Companies Thrive by Sharing What They Know,* Harvard Business School Press, 2000, Table 8-1, pp. 144-145.

As knowledge is gained from experiences, employees need to transform this knowledge into usable forms. The figure above gives the definition and examples of five such knowledge transfers.

### 4.3 Business Process Management

Business Process Management (BPM) is a systematic approach to improving a company's business processes. It helps an organisation implement a set of activities that can optimise its processes. BPM can be used to focus an organisation on customers' needs by breaking processes out of the old departmental and managerial patterns. Through the streamlining of processes, BPM also increases efficiency and productivity, therefore decreasing total cost and time spent by the company.

Besides optimising and streamlining processes, BPM also encompasses software tools designed to assist firms in achieving process optimisation. A BPM system used appropriately can provide vital benefits – cost savings, increased efficiency and enhanced customer service, thereby driving up revenue. BPM systems are designed to provide real-time visibility into business functions to achieve a greater return from today's process-intensive industries.

More explicitly, adopting an appropriate and suitable BPM solution can help an organisation reduce the time needed to complete a business process, the number of steps required to perform tasks or the number of errors made in implementing an activity. This may in turn reduce the number of employees needed to complete a job, in so doing, allowing the company to redeploy those employees for additional growth in other areas.

Due to the complexities involved in BPM, implementing a BPM solution can be daunting. However, below are 6 simple best practices to make BPM easier to handle, regardless of how large or small scale a project is:

1. **Used a phased methodology**: this is the most logical method for driving process management activities. Phases can be considered as the segments in a process that logically follow one another. By using a looking at one phase at a time and following through the process, companies can standardise the way changes are implemented. This also makes it easier to systematically analyse the people, processes, and information involved in the BPM initiative. This also provides a clear method for defining goals, deliverables, and measurements.

2. **Develop a process documentation guide**: When managing processes, workflow documentation is crucial to clearly understand the details involved in each and every process. This is because pioneering a BPM project is a tall order – the BPM managers are responsible for outlining the scope of the project, knowing who will handle which pieces of the project, which product lines are impacted, process roles involved, what the process management system procedures are, defining how the exception management process will work, and determining who makes the final decision on any given topic. A process documentation guide is thus necessary to clearly outline and document all details.

3. **Create a decision matrix**: The decision matrix deals directly with the people involved in actively managing the actual processes: those who oversee the process, those who ensure its usage, those who deploy the tools used in the process, and so on. It is the simplest way to track who makes decisions, who thinks they need to be involved in making decisions, and who has the ability to break a tie in the event of disagreements.

4. **Simulate, model, and test**: Through simulation, modelling and testing, a BPM project has a higher chance of success. In a simulation, a process is imitated to see how well the idea will work. Process models lump processes of the same type into a model, to give a picture of how well various processes work together. Finally, testing is used to determine how well the processes and the tools involved in them actually work, providing a view of the reality.

5. **Communicate effectively**: When there is good communication, there is good morale and limited frustrations, especially important for BPM projects as many stakeholders are involved.

6. **Monitor the processes**: Monitoring processes is the only way to track individual processes for optimum performance and return on investment (ROI). Monitoring should be done throughout the project lifecycle.

### 4.4 Putting BPM to Work in the Food & Beverage Industry

In the ever competitive business environment, the food and beverage industry, as with all other industries, is focused on removing costs and improving back-end operations. Another challenge is trying to figure out the right formula for developing new products to meet rapidly shifting consumer trends.

Working with perishable products with low margins, the information that companies use must be accurate, timely and complete. Stringent industrial regulations, health-conscious consumers, and operating profitably further add on to the industry's complexities. Manufacturers of food and beverage products are confronted with a myriad of competitive pressures that require rapid response.

BPM can be leveraged to:

- Gain productivity improvements in distribution centres
- Achieve supply chain efficiencies
- Optimise direct store delivery (DSD) processes
- Optimise inventory management
- Integrate regulatory compliance with operational excellence
- Streamline new product development and introduction

In general, the above can be achieved through real-time visibility and reporting by adopting BPM systems. Through real-time visibility and reporting, companies in the food & beverages industry can become proactive instead of reactive in addressing logistical issues and managing the flow of products and orders. In addition, real-time visibility also allows suppliers to increase cross-docking opportunities where inbound shipments are sent directly to promptly satisfy customer demand. This kind of flexibility is a major productivity advantage, particularly in a large food distribution facility where customers are constantly making and changing demands and orders must be turned around quickly.

With BPM technology, food and drink suppliers can also exchange data in real-time with both vendors and customers so that it can be executed on immediately. This ensures efficiency and productivity improvements throughout the supply chain, resulting in better in-stock positions, increased sales and enhanced customer service.

A focus of many continuous improvement processes can be the measurement, management, and reduction of raw material, work in progress and finished goods inventory. The reduction of these inventories reduces the amount of capital invested in them and frees it for other uses.

## Case Studies

### Case 1: Cheesecake Factory Cooks Up a Rigorous Employee Training Programme

The Cheesecake Factory is a prominent player in the restaurant industry in the United States, with annual revenue of US$1.2 billion and more than 112 restaurants and 27,000 employees nationwide. Workforce training and development initiatives are ubiquitous in the restaurant industry. The Cheesecake Factory invests heavily in workforce training and development, and the results are phenomenal.

All employees in the company benefit from training and development initiatives, with an average of US$2,000 on training per hourly worker each year. Servers get two weeks of on-the-job training. Candidates vying for a managerial position receive 12-week development courses. Even dishwashers are included in training initiatives.

One way the company measures its return on training investment is by monitoring the turn-over rates, which are about 15% below the industry average of 106%. Workforce development programs also contribute to high consumer satisfaction rates, loyalty and repeat visits.

### Case 2: Mall's success secret: Planning and Training for Service Excellence

Barely five months of operation, 313@Somerset shopping mall has already attracted some 15 million visitors - far beyond its 10 million target. The preparations and effort it took to achieve this demonstrate that shopping malls need both 'hardware' and 'software' to continue attracting visitors, as noted by Labour Chief, Mr Lim Swee Say. Everything - from the mall's layout to the position of the concierge desk - was planned with the customer in mind, said Lend Lease's development marketing director Karon Cameron.

By hardware, he was referring to the physical attributes of the malls, while the software refers to customer service. The operator of the mall, Lend Lease Asia, shared the recipe for its success. In February 2009, when the mall was still under construction, its operator signed up to Spring Singapore's Customer- Centric Initiative (CCI). The programme helped companies in the retail, transport, food and beverage, and health-care industries raise their service standards. This included launching the 313 Training Centre, the first of its kind in the local retail industry, which trains retail staff at the mall for free.

The Government has put SGD100 million into the Gems Up movement, which was launched last year to improve service standards. Some 56% of the funds allocated has been disbursed for various training programmes.

### Case 3: The e-solution for C&D Food Co. to Improve Productivity

C&D Foods is a pet food manufacturer with a trading history, which dates back to 1969. They have built their success by a persistent focus on quality throughout their operations. As they enter the twenty first century however, they face new challenges as a result of supplying into one of the most competitive marketplaces in the world, in particular with the introduction of eBusiness technologies to the supply chain within their industry.

A key part of their strategic response to this environment was a substantial eBusiness implementation, covering everything from their back-office administration processes to their manufacturing processes and their distribution and logistics relationships. The specific business requirements laid down were in three distinct areas:

- Implementation of a web-enabled back office system
- Implementation of web-based software tools to improve planning, control and category management processes
- Implementation of a C&D Foods supplier extranet to facilitate production planning collaboration, and supplier performance information

C&D Foods undertook a tender process to select vendors to build the required solution. TASK and SSI were chosen to build and integrate the financial management application and broader Enterprise Resource Planning solution respectively.

The experience of the project to date has encouraged C&D Foods to revise the way they manage their business. They have decided to split the Administration Manager role in two: Cost Accountant and IT Manager. Whilst there is evidence of cost savings and efficiencies as a result of the implementation of the new system, the benefits to date have been mainly in improved administration processes. The next phase will see the extension of ERP system to a wider scope. In a few months time C&D Foods will be able to move from the traditional environment of bulk stock holding to a product-controlled, traceable handling of products. The new system will trace product from the original supplier, through the manufacturing process and to the final customer. C&D Foods will then possess the right platform to remain a world-class competitor in their chosen market.

### Case 4: Outsource2india Retail Design and Drafting Services Where Project Excels

Outsource2india is providing architectural design and drafting, including space planning, interior design, drawing and detailing of retail stores. Their customer is a USD$600 million company that does planning, installation, maintenance and providing of IT and management solutions to stores. They needed a partner who could provide design and drafting solutions to major retail players, some of them large corporations, each with different branding and design guidelines.

The scope of work usually include space planning design, interior design, elevations from plans and photographs, design of signage, store refurbishing drawings, design and detailing of store features. Different clients had different branding, communication, style guidelines and standards, sometimes with varying levels of complexity and amount of detail. Teams needed to be setup, with a one team per client allocation, and had to be trained to understand in detail, what each client needed. Projects had to be turned around in 12 hours to a few days per project to meet installation deadlines.

To achieve such stringent customer requirement, the company exhibited outstanding project management skills and extensive use of feedback systems that derived from an intricate information system. To start with, a project manager was identified, and underwent training at the client's location. He then passed on the skills and knowledge acquired to engineers who would study design guidelines, and deliver high quality drawings to the customer. A system was setup for engineers to receive regular feedback, while the time spent on projects was tracked diligently and entered into an online resource-tracking tool. Weekly and monthly reviews and accurate reporting mechanisms ensured that communication is timely and precise, and that any issues are resolved as soon as possible.

As a result, the team that started with a size of 2 full time engineers, and has since then grown to a size of 8 engineers. The number of projects carried out till date stands at about 275 projects, delivered in time with excellent feedback from the customer and is growing by the day.

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