A Perspective
On Service Delivery
The Institute of Management Services is the primary body in the UK concerned with the promotion, practice and development of the range of methodologies and techniques for the improvement of productivity and quality, known collectively as ‘Management Services’. This embraces the disciplines of industrial engineering, work study, organisation and methods, systems analysis, and a wide range of management information and control techniques as illustrated in our Body of Knowledge.

The Institute acts as the qualifying body for the Management Services profession in the UK, focusing developments in practice and knowledge and acting as a forum for information exchange. This in turn enables our members who work under a variety of job titles across the whole of the UK economy, to make a more effective contribution to the well-being of their own organisation and to the nation’s economy as a whole.

In addition to creating and upholding professional standards for the practice of management services through the adoption of a code of ethics and the provision of a system of qualifying examinations, the Institute of Management Services collaborates with national and international professional bodies in similar fields.

The Institute is a member of, or represented on, a number of other bodies including the World Confederation of Productivity Science, the European Federation of Productivity Services, and the European Institute of Industrial Engineers.

Institute of Management Services
Brooke House
24 Dam Street
Lichfield
Staffs WS13 6AA
Telephone: +44 (0)1543 266909
Fax: +44 (0)1543 257848
Email: admin@ims-stowe.fsnet.co.uk
IMS website: www.ims-productivity.com

Notice to Advertisers
It is a condition of acceptance of advertisement orders that the publishers, Deeson Group Ltd, does not guarantee the insertion of a particular advertisement on a specified date, or at all, although every effort will be made to meet the wishes of advertisers; further the company does not accept liability for any loss or damage caused by any error or inaccuracy in the printing or non-appearance of any advertisement, or if we decide to edit or delete any objectionable wording, or reject any advertisement. Although every advertisement is carefully checked, occasionally mistakes do occur. We therefore ask advertisers to assist us by checking their advertisements carefully and advise us by the deadline given should an error occur. We regret that we cannot accept responsibility for more than ONE INCORRECT insertion and that no republication or discount will be granted in the case of typographical or minor changes that do not affect the value of the advertisement.

We also want your news and points of view about what appears in this journal. Something you disagree with? Tell us about it.

If you want to try your hand at writing a feature for Management Services, please submit an abstract (around 200 words) explaining what your feature is about, with intended word count. (Features should be between 1500 and 2000 words, although exceptions can be made.) Send your abstract to Melanie Armstrong, Editor, Management Services, Ewell House, Graveney Road, Faversham, Kent, ME13 8UP or email editorial@msjournal.org.uk

We also want your news and points of view about what appears in this journal. Something you disagree with? Tell us about it.
In this issue of Management Services…

Cover Story

In this edition, Dr John McManus explores the factors which determine the success or failure of Information Systems Service Delivery Organisations (ISSDOs)

Institute News 4

Staff Suggestion Schemes 6
A report from the Ideas UK annual conference awards ceremony. By Anthony Denatale and Dr John Lucey

A Perspective On Service Delivery 8
Dr John McManus examines the factors which can lead to success or failure

Impact Of Performance Management Reviews 12
Evidence from an energy supplier. By Dr Veronica Martinez and Dr Mike Kennerley

A Successful Leader Or Psychopathic Individual? 22
Holly Andrews and Paul Furniss discuss psychopaths in the workplace

Process Mapping 26
John Heap presents a Case Study Poster from the National Productivity Centre in the UK

Innovative Solutions For Business Performance 28
Dr John Man discusses critical elements in successful projects

Business Process Reengineering 38
Part one of a retrospective look by Dr John Chamberlin explores research into two public sector/local government organisations

Faults, Failures And Availability 44
In self-service technology. By Michal Girman, Peter Keusch, and Peter Kmec
It is my pleasure to once again update you on what is happening in our Institute. In October we held a well-attended AGM at the George Hotel in Lichfield. The discussion was full and meaningful with a frank exchange of views by all present.

At the Council meeting following the AGM, the Strategic Review Group presented their findings and proposals for moving the IMS forward over the next few years. In total five streams for action were identified and individual members of Council were charged with moving these proposals forward. These strategies included expanding the provision of Institute courses and qualifications overseas, greater involvement in the area of customer service, and upgrading and enhancing our website and the Journal. I am also pleased to inform you that our membership continues to grow. Our reserves are still very healthy but the economic climate does not allow us to obtain meaningful returns on our investments at present. However, it is pleasing to report that returns have improved slightly over the past six months. As an Institute we are financially very sound and our future prospects are excellent.

Our Institute may be financially sound but many businesses are having a very rough time in the present economic climate – customers are fewer, business rates are crippling and the banks are reluctant to lend money. The Government has indicated it does not wish to see a return to the gigantic salaries being paid in banking but only recently I read that banks are once again recruiting and paying large salaries. Like me, you may consider this completely unacceptable, especially as it was only a year ago that the country was bailing out the banks. As an Institute, we would always advocate the concept of productivity and business growth and clearly such growth must be associated with financial rewards for those who bring it about. Having said this, what we saw in banking prior to 2008 was growth without any real foundations or structure to support it when things started to go wrong.

**Slow recovery**

Recent statistics indicate that the UK economy has contracted for a record sixth quarter, clearly indicating that the UK is lagging behind other leading countries in its recovery from the recent economic crisis. The Office of National Statistics indicates that output has fallen by 5.9% since early 2008. This indicates that the UK economy, which suffered badly in the 2008 banking crisis and is now debt-laden, will be very slow to recover in comparison to the USA and other European countries.

It is interesting that all the main UK political parties are all still sitting on the fence, with no real indication of how they will solve the present economic downturn. It would appear they are all coasting to the election, which must be held by June 2010, frightened to upset the electorate by telling us in plain English the steps they will take to address our economic ills, in case they alienate electors. The one thing we need is sound and decisive leadership from within Government and business at this time. We need a return to sound productivity values with added value being the keyword. Our Institute, as a leader in the productivity field, is well placed to assist in resolving the current economic difficulties the country and many businesses are experiencing.

May I take this opportunity to wish you and your families every blessing at Christmas and I sincerely hope that the New Year brings you much happiness and health.

David Blanchflower
Chairman

---

“Our Institute, as a leader in the productivity field, is well placed to assist in resolving the current economic difficulties the country and many businesses are experiencing.”

---

Managing

The Deputy Chairman Dr Andrew Muir and the Scottish Region Chairman Mr Bob Smith attended the Association of Professional Institutes’ (of which the IMS is a founder member) 2009 Annual Deliberation at the Dean Park Hotel, Kirkcaldy on 21 October. The subject matter was ‘Risk Management in Employment Situations’ and the speakers were Mr David Hughes and Ms Susan Lockhart of Simpson and Marwick (Scotland’s leading litigation practice).

David is a partner with the firm and a specialist in employment law. He is based predominantly in the Aberdeen office, where he acts for some of the UK’s largest oil and gas companies. David represents employers and employees in tribunal proceedings throughout the UK. Susan is a solicitor with the firm and practices in all areas of employment law. She advises both employers and
Regional News

North West Region

Forthcoming events
- The 29th Annual General Meeting will be held on 6 January 2010 at 10am to commence at 10.15am. The AGM will be held at the Rigby Arms, 2 Whittle Lane, Hightmoor, Wrightington. For further information please contact Chairman Kevan Kelly on 01257 271066, or Secretary Harry Hogg on 01942 863776. Members wishing to attend should contact Harry Hogg.
- There will be a visit to Bulldog Tools at Ince, near Wigan on 10 February 2010 at 11am. Bulldog Tools are a small company that produces garden and hand tools in the traditional manner. Numbers are limited, so those wishing to attend should contact Harry Hogg.

Visit to Warburtons Bakery
On a sunny day in August a group of members from the North West region and their wives visited the Warburtons Bakery in Bolton. A visiting member from Abu Dhabi accompanied us.
After being introduced to our three guides, we were checked to ensure that we complied with hygiene and safety regulations, and handed protective clothing – hirsute members were supplied with beard nets.
It was explained that the Bolton facility was one of the company’s 14 bakeries throughout the region. There are also 22 depots and distribution centres. The Bolton bakery concentrates on the quantity production of bread loaves, with only a small contribution of confectionery items.
Starting from a small grocery shop in Blackburn Road, Thomas Warburton’s business sold its first loaves in 1870, and since then has grown to be a large successful enterprise, employing a workforce of nearly 5000. Turnover in 2007 registered £14.2 million and the company is still run by the family – three nephews and one niece of the founder.
Our group was split into parties of four before being led into the production area, which was very noisy. Large hoppers fed ingredients into vats where the aggregate was mixed, churned and delivered to the conveyor.
At one stage, our guide stopped the process and handed us a lump of dough. We were allowed to knead, stretch and form it – an interesting tactile experience!
As we proceeded through the vast workshop, we noticed empty areas where machines had been removed, leaving just the foundation bolts projecting – a reminder that even in this highly productive area, machinery has to be replaced by more efficient equipment.
In the baking area, rows of freshly kneaded loaves were fed into the massive oven, where they marched, slowly forward, while the baking process took place. All of this operation was automatic and under carefully controlled conditions. After baking, the bread was sent to be cooled. Because of the variety of breads now offered, such as white, brown, stoneground and so on, a batch system of manufacture has been adopted.
The packaging operation was most interesting. A fast conveyor presented loaves to a fixed station where a plastic wrapper was inflated by a blast of air. This enabled the plastic to be fed over the loaf before an arm descended over the open end, twisted it and sealed it. All of this was done within three or four seconds.
Finally, we arrived at the dispatch department, a huge building, the size of an aircraft hangar. Along one side of the hall was a score or more doors. We were told that at 4am there was pandemonium here; the doors opened and vans reversed up to ramps. All available staff were engaged in loading trays of loaves, the night’s produce, into the vans before they drive off to supply shops, supermarkets and canteens with fresh bread before breakfast.
Before the visit came to an end, Ian Cooper spoke for us all when he thanked Warburtons for its hospitality and thanked our informative guides for making our tour such an impressive one.

Risk

employees in discrimination claims, breach of contract, constructive dismissal, unfair dismissal and redundancy claims.
Both speakers emphasised the importance of having the correct documentation in place, such as contracts of employment policies, and focussed on practical procedures and techniques to adopt in handling disputes between employers and employees. They also highlighted the impact of European legislation on case law and it was interesting to note that the general consensus of the large audience was that whilst we in the UK conform to the letter of the law, other European countries applied their own interpretation.
In concluding the deliberation, David outlined his own five point plan to risk management in employment law, which is: Paperwork; Practice what you preach; Natural Justice; Reasonableness; and Obtain good advice and follow it.

Dr Andrew Muir
Deputy Chairman

North West Region members take a break during their trip to the Warburtons Bakery

The Institute’s Council would like to wish all members a Merry Christmas and Happy New Year.
The IMS has recognised that suggestion schemes can increase staff involvement in the workplace, as well as contributing to increasing productivity. It was for this reason that the IMS decided to sponsor an award for the idea that resulted in the biggest increase in productivity. The award was presented at the ‘Ideas UK’ annual conference awards ceremony which took place on 12 November, in Chester.

Suggestion schemes have been around for a long time and, like many staff involvement initiatives, they have come in and out of vogue. This article has been produced by Ideas UK to provide an overview of suggestion schemes and some of the current trends.

This article discusses staff suggestion schemes and some of the questions and answers gleaned from research with organisations that currently use such schemes, for example Bupa, Diageo and Boots.

There are many badges for schemes, a suggestion scheme (UK) or ideas programme (Europe/USA) is a mechanism for gathering ideas from employees to improve the business. If put together well, it can save the organisation hard money, make its systems and processes better and more cost effective, can make the working environment better and give employees recognition (maybe even reward) for their ideas.

Basic principles
- Schemes need to be carefully designed to match the ethos of the company and the aspirations of the staff.
- Only where money is involved! One ‘unwritten rule’ that has been identified is that whilst you can start a scheme without any financial rewards (and add them later if you want), you cannot start with rewards and then take them away (there is hard evidence that this will kill a scheme). If you do give rewards, the Taxman will let you pay so much tax-free, subject to certain conditions.
- Schemes that have executive sponsorship and a dedicated scheme administrator are usually more successful and sustainable. Some examples are: DODGI department of dam good ideas (Body Shop), GEMS (MoD), AIM all ideas matter (Boots), One Life (Bupa), Eureka (Various).
- It is often a good idea to give the scheme a name so it can be promoted and becomes instantly recognisable to everyone.
- Ideas must be processed promptly because employees lose faith in a scheme that takes months to assess an idea and much longer to implement it.
- Qualified ideas assessors are absolutely crucial to maintain the integrity of the scheme. This is especially true if a proportion of the savings are given to the suggester.
- The scheme must be kept fresh. This can be achieved with imaginative posters to publicise the scheme, as well as asking for ideas on a specific subject/area, such as energy reduction.

Where to go for more information
For details of how to devise and introduce a suggestion scheme, contact www.ideasuk.com. The Association was...
conceived in 1986 as a result of the first BBC ‘Ideas Unlimited’ programme from Pebble Mill, Birmingham. The televised awards for the best scheme and the best idea went to Lucas and British Airways respectively. The United Kingdom Association of Suggestion Schemes (UKASS) was formally launched on 7 May 1987, under the auspices of The Industrial Society (now The Work Foundation), at a Conference held in London.

This year’s awards

The winner of the Productivity Trophy, which was sponsored by the IMS for the 2009 idea that increased productivity the most was Nigel Millington of Magnox North, Oldbury Site. Oldbury power station, located on a 71 hectare site, 15 miles north of Bristol, on the south bank of the River Severn in South Gloucestershire, is an operating twin reactor station. Since 1967, the station has produced electricity around the clock, supplying 435MW of electricity on a typical day – enough to meet the needs of a city one and a half times the size of Bristol. The station has two reactor vessels, each containing 26,400 fuel elements, and draws unlimited supplies of cooling water from the River Severn.

Magnox North is the management and operations contractor responsible for the day-to-day operation of the site under contract to the Nuclear Decommissioning Authority. The primary objective at the site is to continue to generate electricity and maximise income from electricity sales, while maintaining a safe and secure working environment. Work is also underway on the site to ensure a seamless transition from electricity production to decommissioning.

Nigel’s idea was an innovative approach to repairing a turbine isolation and emergency stop valve with the turbine in service.

The previous set-up meant that when the valve needed repairing, they would have to shut down production from a reactor for several days, remove the valve, then re-install. This caused a loss in electricity production. The design of a simple restraining device for the shut off valve during replacement or repair, allowed continuation of service during replacement and prevented the need to shut down the reactor for several days during replacement. The innovation has been implemented and savings, so far, are in the region of £3.5 million.

"The innovation has been implemented and savings, so far, are in the region of £3.5 million"

The very best professional help

We are always keen to help members and any enquirers of the Institute in their quest for knowledge or assistance when it comes to productivity issues. We’d like to draw readers’ attention to the following solutions for help with Performance Rating, which is still an internationally used technique.

New rating films for professional analysts

We have explored the possibility of creating new rating films but found the costs quite prohibitive. We were advised by Scott-Grant Ltd, one of our accredited training providers, that they had recently produced a new and comprehensive series of 12 rating films on DVD and we have fortunately managed to secure access to them. The rating films show examples of real jobs being undertaken in the workplace and the industries include

- manufacturing
- electronics
- engineering
- distribution
- timber
- needle trade
- retail
- manual work
- warehousing
- high volume distribution

All the films are intended to develop the application skills of analysts. They are an invaluable means of professional development for re-calibrating and maintaining the rating accuracy of every professional analyst, to ensure that the high standards of the Institute are maintained.

Performance Rating explained

Scott-Grant have also produced “How do you rate?” – a practical, 35 minute DVD to explain clearly how to use Performance Rating when measuring work. We would encourage every industry to use this film if they want to improve productivity in their workplace. Although the subject matter is very serious, “How do you rate?” delivers its message in a relaxed and entertaining way. Above all it is designed to be informative, practical and memorable.

Within 20 minutes viewers will have the opportunity to assess performance in carrying out a simple task, using the criteria explained in the film.

Please contact Lynette at the Institute head office
Tel 00 44 (0)1543 266909 for more details.
A perspective on service delivery

By Dr John McManus, Senior Research Fellow and Rushmore Professor in Management Sciences, and Michael Howitt, Senior Lecturer and Programme Manager for Work Based Learning, Lincoln Business School, University of Lincoln.
**Introduction**

Information systems service delivery organisations (ISSDOs) are responsible for delivering projects and services to predefined requirements, quality standards, time schedules and budgeted costs. Generally speaking, projects undertaken by ISSDOs are linked to some strategic plan and have specific business benefits that must be achieved.

Many of these ISSDOs are organised on the premise that there will be a continuous flow of projects or services, with substantial utility between them in terms of task management (this is certainly the case for those ISSDOs engaged in software engineering projects). Evidence would suggest that many ISSDOs look to maximise their resource and cost models within the utility envelope. The range of services provided by ISSDOs fluctuates depending on market forces but will typically include the following:

- Provide project management capability to meet client requirements;
- Procure third party services to support project delivery;
- Establish key performance indicators for service delivery;
- Establish quality and service delivery standards;
- Establish communication interfaces.

**ISSDO Service Delivery Models**

Models of service delivery in ISSDOs are generally multi-disciplinary and matrix structured to allow for fluctuations in resource utilisation and development. The model is such that any project scenario can be constructed at short notice and resource teams can be brought in for the duration of the project – drawing the professional skills required from the range of disciplines within the matrix. The features of this model are defined as:

- Project focused;
- Matrix that provides flexibility in working practices;
- Managers who provide support and expertise from across all disciplines;
- A hierarchy that allows delegation at all levels;
- Budget and resource allocation at the lowest level.

This type of ISSDOs model may be found in many public sector organisations within the United Kingdom, where the need for service provision is identified by the commissioning organisation (that is the capital or budget holder). Delivery of the project or service is generally supported by a provider organisation. This model supports the project and its processes from concept to a finished product or service. Refer to Figure 1.

**Support Systems**

A key aspect of the ISSDOs model is the type of support systems used to underpin the activities undertaken and the information that is required by stakeholders within the commissioning and provider organisations. ISSDOs make use of support systems on many levels, for example, to promote consistency across projects and programmes. In theory, project managers can take advantage of a centralised pool of information to make informed business decisions.

The basis for collecting management information across projects is the classic work breakdown structure (WBS) and cost breakdown structure (CBS). Project managers are generally required to submit (weekly) statistics which are compared against projected activities. At an operational level the client has the ability to review their projects and track current status and value of work done. The main advantage of this type of support system is its ability to provide instant views of projects and their status. Another advantage of support systems is in the planning of future project activities and resource allocation.

**Service Provision**

As part of the ISSDOs model, the provider organisation plays an active and agent role in service provision to the commissioning organisation. The major challenge of the service provider is to meet and perhaps exceed the expectations of the client by doing more for less. In particular there is a need to:
“The major challenge of the service provider is to meet and perhaps exceed the expectations of the client by doing more for less”

- Achieve value-for-money;
- Maintain good client relationships;
- Maintain good stakeholder relationships;
- Maintain good ethical standards.

If ISSDOs are to meet these expectations, their activities have to be co-ordinated at a strategic level. Like any organisation competing in a post credit crunch economy, ISSDOs need to be competitive on cost and time schedules. The key drivers forcing competitiveness include:

- Resource utilisation;
- Resource unit costs;
- Asset performance;
- Intellectual assets (methods, processes and tools);
- Adaptability.

To sustain a competitive position many ISSDOs providers need to adopt agile methods of delivery – they also need to review business practices and adopt best international practice and invest in staff development. A review of contemporary business journals provides some evidence that this is not happening.

Project failure is high, especially in Europe and North America. A lack of business continuity and stakeholder engagement are points continuously cited in the press.

Defining Service Measures
Although there are many definitions of service, it is sometimes inappropriate to use generic attributes to describe complex interactions. The entity that is service is comprised of many facets of risk, some that are clearly understood, some that are not. For example, the ways in which technical staff communicate with business personnel or the aesthetic qualities of service delivery. Projects get measured using classic Taylorist methods. Service performance is more about qualitative measures, such as the client feel good factor and reliability of the service encounter.

What to measure is, of course, dependent on the nature of the project and what the commissioning organisation values. In my view, performance measures should include some common attributes. These include:
- The value we put on time related activities;
- Measures should be agile and reflect the here and now;
- Performance should be the voice of process;
- Measures should be the voice of risk.

In defining service measures we should reflect on their ultimate use. Measures may be used as a means of destabilisation and subversion for the power hungry manager not subject to ethical or regularity checks.

Resource Relatedness
Within the model (Figure 1), the term resourcing is frequently used to describe anything that is required to perform and complete a project related activity. The issue, of course, for many project managers is that not all resources (staff) are of equal value. The next problem is that under financial or budget constraints, resource balancing becomes a real issue for many ISSDOs. Matching resources to projects can become an insurmountable task. Our experience in programme management suggests matching the appropriate project manager to a given project will create tensions between the client and the provider – certainly if skill
sets are so critical to productivity and performance.

Again, in our experience, many ISSDOs’ Human Resource (HR) departments’ systems do not allow HR managers to plan and link strategic core competencies to forward business needs. This is clearly a weakness for those involved in strategic resource planning. Figure 2 highlights the theoretical division that exists between project skill requirements and resource relatedness. The area of performance in relation to the baseline gives an indication of the challenge many ISSDOs face.

In the absence of HR strategic resource planning, many programme managers undertake resource profiling on an intuitive basis – hence one reason why many projects go over budget or do not meet their deadlines. For example, a project staffed with uniformly very low rated personnel on all capability and experience factors would require 11 times as much effort to complete the project as would a project team with the highest rating in all the above factors (Boehm, 1981).

Commonsense would dictate that significant benefits can be gained through the application of resource planning to project delivery. Although many ISSDOs have mature project methodologies, there appears to be a general level of inconsistency in their application and use. Aligning client projects to provider organisation competencies rests upon defining the limitations within the ISSDOs’ knowledge and skill base. One practical and useful mechanism of managing any such limitations is the use of strategic programme reviews. This entails reviewing and agreeing options and risks and linking these back to the assets and resources available; eliminating unviable options and developing alternative viable scenarios for the remaining options.

To better understand the viability of these resource scenarios the analysis should yield answers to the following questions:

- What are the relevant units of analysis when it comes to mapping project tasks to individual client requirements?
- What are the complex tasks of these projects?
- What is our asset exposure?
- What is the overlap between projects and project tasks?

In order to understand the competency configuration for future projects a number of questions need to be addressed. These are:

- What is the pattern of critical competencies in each project or group of projects?
- What is the appropriate balance between individual and shared competencies?
- Are there obvious gaps and/or overlaps in the various project group competence configurations? If so, what are the implications?
- How can competencies be created through management of the project task systems?
- How can organised structure, managerial processes be used to shift individual-based competence to group based competence?
- Have we made use of all existing knowledge in each project or project group?

In conclusion, the success or failure of any ISSDO is not only dependent on the actions and interrelationships between the client and provider, but on the performance and productivity of their resource base. If matching client requirements and competencies is so critical, why do ISSDOs fail to deliver time and time again? As discussed, opinion would suggest that failure is linked to the way ISSDOs are structured and the lack of resource planning.

“Culture also influences the productivity and self regulation of project staff. Whilst there may be clear cultural differences between commissioning and provider organisations, there should be no differences in ethical or social behaviour amongst staff”
Impact of performance management: Evidence from an energy supplier

By Dr Veronica Martinez, Centre for Business Performance, Cranfield University, and Dr Mike Kennerley, Leeds University.

Abstract
Organisational researchers and managers alike have long held the view that performance reviews, based on performance measurement systems, have a positive impact on business performance. Nevertheless, there is relatively little research to support this hypothesis. This study sets out to tackle this gap by testing the effect of performance reviews on business performance in a UK energy supplier, using agency theories. Our evidence shows 33 positive effects of performance reviews; 12 of them are identified as the most cited by our interviewees. Seven factors that moderate the firm's results are identified; the 'local leadership' on performance reviews, which is a contribution to knowledge from this research, stood out as one of the most powerful factors that moderate performance reviews. Two negative effects of performance reviews are highlighted by this research. Finally, this research discusses the implications to the body of knowledge and practice.

Introduction
Competitive pressures in the global business environment are forcing organisations to re-engineer in order to become more competitive in the marketplace. Toward that end, organisations are placing strong emphasis on performance management systems (Frigo and Krumwiede, 1999). Evidence suggests that 44% of organisations worldwide use performance measurement systems as a mechanism to review organisational performance (Marr et al, 2004; Rigby, 2001; Silk, 1998; Franco et al, 2004; Kaplan and Norton, 1992). While interesting, little research suggests that performance reviews benefit organisational performance. Our research examines two research questions. Firstly, what are the effects of performance reviews on business performance? Secondly, what factors moderate the effect of performance reviews?

The rest of the article is organised as follows: It starts discussing the body of literature on the agency theory and performance reviews; thus, it introduces the research methods used in this research. It continues with a discussion of the research findings and conclusions. Finally, the paper concludes with some implications for practice and knowledge. This exploratory research sheds some light on the explanation of the effects and factors that moderate performance reviews; however as a part of this research project, more case studies will be carried out to increase the generalisation of these findings.

The agency theory and performance reviews
The agency model of the firm suggests that the principal invests in a production process under the control of an agent. The agent is privately informed as to the firm's capital productivity. The agent can report to the principal on the productivity realisation and can divert some of the principal's investment from production to personal (non-pecuniary) consumption (Baiman, 1990).

Firms invest in performance reviews' to monitor and control the agents' opportunism and behaviour (Eisenhardt, 1989). Performance reviews put in action and bring the firm's performance measurement systems to life, such as balanced scorecards, performance prisms, budgeting systems and accounting systems. A critical decision for the principal is to design the firm's performance management review.

The principal has two basic options to control the firm's outcomes. The first option, and most widely used, is the principal invests in performance reviews, including a performance measurement system.
Such investments reveal the agent’s behaviour to the principal. The second option is to contract on the outcome-based contract which motivates behaviour by co-alignment of the agent’s preferences with those of the principals, eg, link performance measurement systems to agent’s compensations. The problem with this second option is that outcomes would be subject to factors such as government policies, economic climate, competitors’ actions, etc, (Eisenhardt, 1989). Baiman (1990) reports that by increasing ‘the performance reviews and agents’ rents’, the principal is able to reduce the production distortions by a greater amount than just using performance reviews, although in practice, the benefits of this correlation are in discussion.

Research by Kumar (1989) and Suh and Kim (1989) shows a correlation between a firm’s productivity and performance reviews (Baiman, 1990), ie, the principal will invest more in performance reviews when the agent communicates low productivity and outcomes. The more money is spent on reviewing the agent’s action, the more accurate the performance reviews are. On the contrary, when the agent reports high productivity, the principal will invest less in the firm’s performance reviews, therefore the reviews are less accurate. Some practitioners add that principals increase the investment on performance reviews when the firm’s capital investments are limited and/or when the firm’s objectives become more ambitious.

Performance measurement systems and quality management literature show some effects of performance review on the way business operates. Ismail and Trotman’s experimental research (Ismail and Trotman, 1995) shows a positive correlation between the number of performance reviews, the number of plausible hypotheses and generation of ideas. Their quasi-experimental analysis on Singaporean firms shows that when firms increase the number of performance reviews, the firm’s performance increases. They found that during the performance review, the quality of discussions and the employees’ participation are two factors that moderate the effects of the performance reviews.

The study of Trotman (1985) on Australian firms shows that performance reviews increase the accuracy of judgements and decrease the variance of individual judgements; as a result, the firm’s level of systematic bias is minimised.

Marien’s research (1992) suggests that the main benefits of a performance review happen during the discussion time, when the strengths, goals, improvements and actions are identified and negotiated. His research highlights that performance reviews make agents feel in control of their own performance.

Different theories suggest that performance reviews improve the firms’ management control and firms’ performance, although more research should address the nature of the benefits on the way firms operate.

Methods

The social constructionism approach, based on an in-depth case study, is regarded as appropriate for our research inquiry (Voss et al, 2002; Burrel and Morgan, 1979; Yin, 1994). In particular, we argue that a better understanding of the effects of performance reviews on the way organisations operate should be developed.
This approach, based on case studies, drives us to the fundamental point where the phenomenon takes place in real time (Easterby-Smith et al., 1999). It provides access to different types of performance reviews at different organisational levels, firms’ reports and action plans.

**Methodological process**

Our methodological process consisted of five steps:

1. **Point of departure** – We selected relevant lines of enquiries and developed our research question based on literature and empirical exploratory research.
2. **Research protocol** – We established key decisions to drive our research, i.e., definition of interviewees and performance reviews at different organisational levels.
3. **Data collection** – We developed a structure questionnaire consisting of two broad areas, i.e., understanding of (a) review processes and associated performance measurement tools, and (b) effect of performance reviews on managerial and operational levels. We interviewed the energy supplier’s chief operating officer (COO), 12 executive managers, eight business units’ managers and 15 employees. Interviews lasted from two to four hours and were conducted over the period of eight months during 2004 and 2005. We used multiple data collection tools to increase the reliability, construct and internal validity of our research (Voss et al., 2002; Easterby-Smith, 1999).
4. **Data analysis** – We developed standard data collection tables to compare the data gathered from different informants and sources of information (Miles and Huberman, 1984). We analysed a total of:
   - At the executive level, 12 strategy maps, 12 scorecards, three quarterly reports, firms’ ambitions, corporate objectives, regulators’ objectives, survey employee satisfactions.
   - At the operational objective, eight strategy maps, 16 scorecards, 15 coaching for performance reports.
5. **Data interpretation** – Using different techniques such as cognitive maps, high level of the analytic hierarchy process, decomposition and categorisation techniques arrived at the findings and conclusions discussed in the following sections (Saaty, 1983; Pidd, 2001; Miles and Huberman, 1984).

**The energy company**

The energy company, which will be referred to as ‘Energy’, is one of the largest companies in the UK. Energy is a strategic business unit of a large multinational enterprise with a turnover greater than £3.6 billion (€5.22 billion). The British unit was established in late 1998 by a merger of several energy suppliers. Energy generates around 7% of the UK’s electricity and employs 11,300 people. Its distribution network supplies over a quarter of the UK population within an area of 665 km².

Energy is focused on building a long term strategy by taking a balanced approach. It has balanced the commercial approach (profit generation), customers, community and environment approach. Energy’s profit is re-invested in the future to provide reliable, efficient and safe service; hence it has increased its operating profits by 69%.

It has five ‘ambitions’, each
of which relate to one or more of its key stakeholders – customers, employees, shareholders or communities in which Energy does business.

Energy has five business units, in which three of them supply and repair the energy to current customers, one connects new customers to the network and the last one is focused on the monitoring of the current infrastructure.

To establish the necessary focus and attain the common enterprise goals, it was important for all employees to understand the company strategy and instil their role in the overall effort for success. It was crucial to use a reliable system for assessing the overall performance and employee development.

Before the merger, previous experience of a unit member used the balanced scorecard. It showed initial benefits, particularly coordination, understanding and communication of the business strategy; consequently the balanced scorecard appealed to the top management as the most appropriate tool to be used at Energy.

**Energy and performance management systems**

Currently, Energy uses the balanced scorecard at the executive level, business unit level, team and individual level. Each level has standardised processes, tools and practices to design, implement and review their scorecards. The strategy map at the executive level captures the firm’s ambitions, corporate objectives, and government (regulators) objectives; it is the reference point for the development of strategy maps at lower levels.

Energy has five main performance reviews based on the scorecard (Table 1), which are used to manage the firm’s performance.

**Findings**

Our research question asks: what are the effects of performance reviews on business performance? Our evidence shows 33 positive effects of performance reviews on business performance (Table 2). Based on those, 12 effects were identified as the most cited by our interviewees (Table 3) and two main negative effects.

**Effects of performance management reviews on Energy**

Energy has five performance reviews, ie, strategy meeting, quarterly meeting, regional meeting, team briefings and coaching for performance. Each performance review has specific objectives, a different frequency of the review and a different review panel (Table 1). Our analysis shows that each performance review creates different effects on the way Energy performs, and each effect affects different areas of the business (Table 2).

**Strategy meeting**

The strategy meeting is a key component of Energy’s performance reviews; it provides formality to the overall performance review process. It reflects the commitment of the top leadership of the company. It affects the management leadership by focusing directors’ and managers’ attention on the firm’s strategic objectives set by the corporation, government (through regulators) and shareholders. This review is the engine which empowers a culture of continuous improvement. It creates and diffuses a new set of organisational behaviours and it strengthens positive values of the firm.

**Quarterly meeting**

The quarterly meeting aims to review the performance of the regional (business) units. This review increases the competition between regional units. Our evidence suggests that regional managers are driven by this friendly competition to perform better than other regions, generate innovative practices and become a reference unit within the firm. Quarterly meetings have become a negotiation place where managers and directors discuss resources for new projects. Discussions on a business unit’s performance increase senior managers’ support for implementing new

<table>
<thead>
<tr>
<th>Reviews</th>
<th>Objective</th>
<th>Frequency</th>
<th>Review Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy meeting</strong></td>
<td>To review the annual performance of the company. To realign its strategy map with the company's ambitions, parent-objectives and regulatory objectives. Then, it is deployed to other levels to re-align their strategy maps and scorecards.</td>
<td>Once a year</td>
<td>COO, senior managers and performance review team*</td>
</tr>
<tr>
<td><strong>Quarterly meeting</strong></td>
<td>To review the performance of regional units and action plans to meet targets. To feedback current problems and needs from the field.</td>
<td>Three a year</td>
<td>Board of directors and regional manager</td>
</tr>
<tr>
<td><strong>Regional meeting</strong></td>
<td>To discuss performance of internal business unit and functional units, set up actions and prepare joint projects between functions for hitting targets.</td>
<td>Once a month</td>
<td>Regional manager and functional managers</td>
</tr>
<tr>
<td><strong>Team briefings</strong></td>
<td>To motivate people's understanding about the business performance, share best practices and congratulate teams on target achievement.</td>
<td>Twice a month</td>
<td>Functional managers and teams</td>
</tr>
<tr>
<td><strong>Coaching for performance</strong></td>
<td>This is a one-to-one meeting, which aligns individual objectives with company objectives.</td>
<td>Once a year</td>
<td>Direct manager and employee</td>
</tr>
</tbody>
</table>

*It is diffused to Energy employees.

---

**Table 1: Energy’s Performance Management Reviews**
projects and action plans. The quarterly meetings enhance the achievement targets and objectives of each business unit. A senior manager said ‘what gets measured, gets managed and what gets continuously managed, gets achieved’.

**Regional meeting**
Regional meetings benefit the organisation by forcing managers and employees to meet and discuss performance, and prioritise the most urgent operations which require improvements. They enhance the analytical thinking of managers to generate action plans; as a result, the collaboration and cooperation among functions have increased. Consequently, there is an increment of integrated solutions in the energy service. Before, each functional manager tended to maximise his local performance, therefore some functions over performed and some under performed, but the customer’s service was not the final objective of each function. Whereas now, all the functions have an integrated objective, hence the customer complaints have decreased from 2003 to 2004 by 42% (over an average of five business units). This regional review creates the mind set of continuous improvement.

**Team briefings**
Team briefings focus employees’ attention on what is important to the company. The discussion of five local and five corporate measures improve employees’ understanding of how their operations affect the organisation; therefore, employees have a wider context of their operations.

Employees’ motivation increases when they take part in discussions about the design and implementation of new projects; as a result, the consensus and acceptance of new projects are easy and fast. It makes employees more satisfied and it is reflected in the improvement of productivity. Moreover, when employees are involved in new projects and action plans, they are less likely to get opposition from union members.

These performance briefings enhance the employees’ understanding of their local operations and increase the vertical and horizontal communication; as a result, problem solving is more effective. Energy’s experience shows that team briefings increase the productivity of the teams and regions.

**Coaching for performance**
Coaching for performance is a face-to-face review between a direct manager and an employee. It traduces the business strategy to employees’ operations; it clarifies the contribution of individual employees to the business. This review increases the accountability of employees and better aligns the current employees’ skills with their operations. It improves the definition of new training. Thus, it ensures that employees have the right skills to perform their operations.

**The most cited effects of performance reviews**
Our analysis highlights 12 most cited effects of performance reviews by our interviewees. Table 3 shows these effects and their context. They are:

(a) From coaching for performance review, the effects are: improve staff accountability and improve employee performance.
(b) From team briefings: increase employee satisfaction, encourage operational improvement and focus people’s attention on what is important to the company.
(c) From regional reviews: improve collaboration between functions, improve analytical thinking to generate and select action plans, improve employee understanding of the business and force people to meet and discuss performance.
(d) From quarterly reviews: encourage friendly competition between business units, increase directors’ support to implement new projects and action plans and support the achievement of key strategic objectives.

It is important to mention that there is no correlation between the most cited effects and the most important effects (or the ones with major impact on the organisation). For instance, the cultural change, which focuses on continuous improvement and a positive attitude to failure, has a considerably high impact on the business, but it was not highly cited by the interviewees. Interestingly, the...
Performance in the performance review
addition to the time invested
senior and middle managers, in
time from one to four hours per month
performance review for instance the performance index
or composite measures are not ideal measures to be discussed
at team briefings and coaching
that the preparation of these reports take 1.5 days per month, this
is average time invested from senior and middle managers, in addition to the time invested
in the performance review

**Negative effects of performance reviews**
Our research shows two main negative effects of performance reviews. The first negative effect is the 'bureaucracy on the preparation of reports' for the strategy, quarterly and regional meetings. Managers argue that the preparation of these reports take 1.5 days per month, this is average time invested from senior and middle managers, in addition to the time invested in the performance review

**Factors that mediate the effect of performance reviews**
Our second research question asks: what are the factors that influence performance reviews? Our analysis shows seven factors that influence the effect of performance reviews on Energy's performance.

(a) Local leadership, particularly on regional reviews, team briefings and coaching for performance, have a strong influence on Energy results. It relies on the motivation and leading skills of local managers to encourage employees to improve local performance, hit performance targets, create efficient ways to maximise customers’ supply and create a pleasant work environment. Our research shows that there is a positive correlation between functional managers who have a dynamic and creative leadership, with the function/teams’ over performance and achievement of improvements.

(b) Underpinning content of the reviews. At team and employee level, the content of performance reviews is an essential factor to get the message across the company. Our analysis of a survey of people understanding the message from team briefings shows that short reviews with less than 15 key measures are more effective than long meetings with many

Table 2: Effects of Performance Management Reviews

<table>
<thead>
<tr>
<th>Performance Reviews</th>
<th>Performance Reviews’ Effects</th>
<th>Level of Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy meeting</td>
<td>(1) Focus managers’ attention on key objectives set by shareholders and regulators</td>
<td>Executive and regional</td>
</tr>
<tr>
<td></td>
<td>(2) Empower a culture of continuous improvement</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>(3) Create a new set of firms behaviours, eg, positive attitude to failure and practices sharing</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>(4) Strengthen the firm’s values, eg, integrity, social responsibility and excellent performance.</td>
<td>All</td>
</tr>
<tr>
<td>Quarterly meeting</td>
<td>(5) Support the achievement of key strategic objectives</td>
<td>Regional and functional</td>
</tr>
<tr>
<td></td>
<td>(6) Encourage friendly competition between business units</td>
<td>Regional</td>
</tr>
<tr>
<td></td>
<td>(7) Increase directors’ support [investment] to implement new operational changes and action plans</td>
<td>Executive and functional</td>
</tr>
<tr>
<td></td>
<td>(8) Track the achievement of the regional units’ strategies</td>
<td>Regional and functional</td>
</tr>
<tr>
<td></td>
<td>(9) Feed the firm’s strategy</td>
<td>Executive</td>
</tr>
<tr>
<td></td>
<td>(10) Celebrate regional success</td>
<td>Regional, functional and team</td>
</tr>
<tr>
<td>Regional meeting</td>
<td>(11) Forces people to meet and discuss performance</td>
<td>Regional and functional</td>
</tr>
<tr>
<td></td>
<td>(12) Improve analytical thinking to generate and select action plans for areas which are not performing well</td>
<td>Regional and functional</td>
</tr>
<tr>
<td></td>
<td>(13) Improve collaboration between functions</td>
<td>Functional</td>
</tr>
<tr>
<td></td>
<td>(14) Improve teamwork between functions</td>
<td>Functional and team</td>
</tr>
<tr>
<td></td>
<td>(15) Encourage operational improvements</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>(16) Improve process integration</td>
<td>Functional and team</td>
</tr>
<tr>
<td>Team briefings</td>
<td>(17) Forces managers to keep employees in the loop of where the firm is going</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>(18) Focus people’s attention on what is important to the firm</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>(19) Improve employee understanding of operations</td>
<td>Employee</td>
</tr>
<tr>
<td></td>
<td>(20) Improve the consensus of the development of new initiatives</td>
<td>Regional and employee</td>
</tr>
<tr>
<td></td>
<td>(21) Improve employees’ acceptance of new projects</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>(22) Improve productivity</td>
<td>Team</td>
</tr>
<tr>
<td></td>
<td>(23) Increase sense of achievement</td>
<td>Team and functional</td>
</tr>
<tr>
<td></td>
<td>(24) Improve problem solving</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>(25) Improve best practice sharing</td>
<td>Executive</td>
</tr>
<tr>
<td></td>
<td>(26) Improve communication of business performance</td>
<td>Employee and team</td>
</tr>
<tr>
<td></td>
<td>(27) Feeds the business strategy</td>
<td>Team and employee</td>
</tr>
<tr>
<td></td>
<td>(28) Increase employees’ understanding that their actions affect the business</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>(29) Improve motivation of employees by taking part in the decisions of new projects or action plans</td>
<td>All</td>
</tr>
<tr>
<td>Coaching for performance</td>
<td>(30) Improve staff accountability</td>
<td>Employee and team</td>
</tr>
<tr>
<td></td>
<td>(31) Traduce business strategy to employees’ jobs</td>
<td>Employee</td>
</tr>
<tr>
<td></td>
<td>(32) Improve employees’ capabilities to better perform their operations-effectiveness of employee’s operations</td>
<td>Employee and team</td>
</tr>
<tr>
<td></td>
<td>(33) Improve employee performance</td>
<td>All</td>
</tr>
</tbody>
</table>
“Different theories suggest that performance reviews improve the firms’ management control and firms’ performance, although more research should address the nature of the benefits on the way firms operate.”

<table>
<thead>
<tr>
<th>Effects of performance reviews</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Focus people’s attention on what is important to the company</td>
<td>Point people towards key objectives and ambitions of the firm</td>
<td>Interview: ‘Team briefings and regional meetings have as an objective to discuss five top and five local objectives. These tell us how we locally contribute to the achievement of top level objectives.’</td>
</tr>
<tr>
<td>2. Improve analytical thinking to generate and select action plans</td>
<td>Generate and assess new ideas to improve performance</td>
<td>Interview: ‘In the past, employees were used to maximise their local objectives; whereas now, they assess their proposed plans in a wider spectrum. They think in the overall effect of the proposed plans on other functions.’</td>
</tr>
<tr>
<td>3. Improve communication</td>
<td>Deploy business performance</td>
<td>Interview: ‘At the regional level, PR creates a habit that forces managers and employees to expend time together, discuss performance and draw action plans; as a result, we have hit more targets and communicate better with councils.’</td>
</tr>
<tr>
<td>4. Increase directors’ support to implement new action plans</td>
<td>PR increases the chances of making directors buy-in to our ideas for new projects</td>
<td>Interview: ‘Last year, we increased a third of our capital expenditure for new projects.’</td>
</tr>
<tr>
<td>5. Improve employees’ understanding of the business</td>
<td>Clear understanding of the business and operations</td>
<td>Interview: ‘At team level, employees understand the key company measures, link them to their operations; hence they know how their individual contributions affect the overall business.’</td>
</tr>
<tr>
<td>6. Encourage friendly competition between business units</td>
<td>Competition between business units is a motivational effect of PR</td>
<td>Interview: ‘Last year, one of Energy’s business units obtained a national service award, now the other two business units are working towards the same objective.’</td>
</tr>
<tr>
<td>7. Improve collaboration between functions</td>
<td>Competition at business unit level encourages internal cooperation at functional levels</td>
<td>Interview: ‘Performance management is the glue of the functional units.’</td>
</tr>
<tr>
<td>8. Support the achievement of key strategic objectives</td>
<td>Continuous reviews support the performance improvement on strategic activities</td>
<td>Interview: ‘Now, everybody can express in a common language and contribute with our suggestions.’</td>
</tr>
<tr>
<td>9. Improve employees’ satisfaction</td>
<td>Employees’ participation in performance discussions and selection of new projects make them happy about what they do</td>
<td>Interview: ‘In 2003, the employee survey showed 55% of employee satisfaction. In 2004, it increased to 61.1%. PR has contributed to make people feel part of the company - their point of view and suggestions are taken into account.’</td>
</tr>
<tr>
<td>10. Improve staff accountability</td>
<td>PR makes employee’s responsibility clear</td>
<td>Interview: ‘PR increases staff accountability. It makes it difficult to miss responsibilities. At team level, it is a motivating factor.’</td>
</tr>
<tr>
<td>11. Encourage operational improvements</td>
<td>Optimisation of operations to facilitate the process integration</td>
<td>Interview: ‘Operational improvements concern everybody. ’ ‘Improvements equal to successes.’ ‘As a result of operational improvements, we decreased the customers supply minutes lost by 10-15%.’</td>
</tr>
<tr>
<td>12. Improve employee performance</td>
<td>Points out the necessary employee’s capabilities to better perform their operations</td>
<td>Interview: ‘PR has seen how employees are hitting and over passing the targets set; some of the teams have even stretched their targets.’</td>
</tr>
</tbody>
</table>
measures. The content of short reviews facilitates the translation of measures into actions (improvements, action plans, and new ways to perform) and lead to better quality of performance discussions.

(c) Corporate principles and values, ie, transparency of communication and positive attitude to failure, provide a comfortable environment for employees to express their opinions; ie, talk about failures and successes and share information. Our research shows that this approach leads them to achieve better performance and reduce employee turnover.

(d) Top leadership commitment on performance reviews brings formality and commitment to the performance reviews and to business. Our analysis shows that the involvement of a review panel (executive, senior and regional managers) in the performance reviews increases the importance of the reviews, increases the responsiveness of performance and employees’ accountability.

(e) Accuracy of measurements moderates the reliability, clarity, trust and honesty to performance discussions. Our analysis shows that in the past employees lost a lot of time and energy arguing about the source of the performance measures. The improvement of accuracy of measurements improves the objectivity of discussions, reduces review time and reduces the politics around the data.

(f) Involvement of employees in the solution of operational problems increases the employees’ motivation, participation and ownership, speeds up the solution of problems, and gets richer solutions to problems.

(g) Treat employees with respect and invite them to take part in adult discussion about business performance. The increase of these two factors empowers employees to contribute more. This improves their performance, makes them proud of what they do, increases employees’ cooperation, and increases employees’ satisfaction.

Conclusions

The agency theory of the firm suggests that organisations such as Energy implement performance reviews to control their agents’ performance, firm’s productivity and profitability (Eisenhardt, 1989). Nevertheless, our research suggests that organisations could obtain additional benefits from performance reviews on ‘the internal way organisations perform’, which underpin the firm’s productivity, profitability and reputation. We called them ‘internal effects’ or ‘internal benefits’.

Our evidence shows 33 internal effects of performance reviews on business performance (Table 2), 12 were identified as the most cited by our interviewees (Table 3). Those internal effects are moderated by factors that the firm creates. Our research highlights seven factors that moderate the firm’s results. The ‘local leadership’ on performance reviews is one of the most powerful factors that moderates the business results.

“Organisations which implement performance reviews at executive or senior manager level are potentially missing two thirds of the total benefits of performance reviews”
Previous literature on performance review shows some positive effects of performance reviews, particularly on decision making, management control, accuracy of judgements and productivity. Nevertheless, most of them assess the positive effects at an organisational level, eg, the most common is executive or management level. This research explicitly shows the positive effects of different performance reviews at different organisational levels. Our analysis shows that each performance review creates different effects on the way the firm performs, and each effect affects different areas of the firm (Table 2). For instance, regional meetings have a direct effect on functions and teams. Team briefings and coaching for performance directly affect employees and feedback teams.

Two negative effects of performance reviews are highlighted by this research, ie, bureaucracy in the preparation of reports and reviews, and the complexity of measures. The identification of these effects encouraged Energy to proactively learn from experiences, improve them and keep the employees’ interest in the reviews. Our research extends the knowledge on the effect of performance reviews by providing a better understanding of the positive and negative effects of these on business performance. It also points out the factors that influence the effect of performance reviews. More research should be carried out in other organisations.

Implications for practitioners
(a) Organisations that are planning to implement performance reviews should consider deployment at operational levels, ie, teams and employees’ levels, to liberate the full potential of their reviews. Organisations which implement performance reviews at executive or senior manager level are potentially missing two thirds of the total benefits of performance reviews.
(b) Organisations which identify and understand the factors that positively affect performance reviews have more opportunities to maximise organisational results.

Implications for knowledge – things that are known now and were not known before this research
(a) This research contributes to the body of knowledge with seven new factors that moderate the effect of performance reviews.

Where the ‘local leadership’ and ‘underpinning content of reviews’ are the factors that drive most effects and have the major impact on performance reviews.
(b) This research also contributes by better explaining the effects associated with different performance reviews, ie, 33 effects of performance reviews were identified within five performance reviews.
(c) This research shows that performance reviews have a direct effect on internal performance of a firm.

Acknowledgement
The authors would like to acknowledge the support of the EPSRC under grant number [GR/528846], which supported this research.

References
Franco, M, Bourne, M, and Neely, A, (2004), Understanding
Silk, S, (1998), Automating the balanced scorecard, Management Accounting, 79(11) : 38-44.

“Our research extends the knowledge on the effect of performance reviews by providing a better understanding of the positive and negative effects of these on business performance”
A successful leader or a psychopathic individual?

By Holly Andrews and Paul Furniss (Edited by Carl Evans).

There are numerous studies that have focused on the qualities and attributes of an effective organisational leader, and these identified characteristics, such as charisma, confidence, persuasiveness and courage. What if these qualities, however, were a mere façade, underpinned by a more sinister side? The result might be far from an effective leader, but instead reveal... a psychopath!

What is psychopathy?
Psychopathy is a disorder of the personality. Traits of psychopathy are noted to include superficial charm, grandiosity, deceitfulness, a lack of remorse, lack of empathy, a failure to take responsibility, impulsivity, lack of goals, poor behavioural controls and antisocial behaviour (Hare, 1991). Cleckley (1976) described psychopathy as ‘the mask of sanity’, which implies that rather than displaying signs of a psychological disorder, psychopaths appear normal and can even seem to possess desirable human characteristics, which means that psychopaths can operate successfully within organisations.

Babiak (2000) identified eight psychopathic individuals working within organisations during the course of his consultancy work. These individuals all had successful careers, despite having scores approaching, at or above the cut-off score for psychopathy on the Hare Psychopathy Checklist – Revised (PCL-R; Hare, 1991). In addition, Board and Fritzon (2005) found higher levels of some psychopathic traits in British Chief Executives than in some incarcerated offenders and psychiatric patients. This suggests that the traits of psychopathy certainly do not hinder a business career, indeed they may actually help the psychopath to rise to the top of an organisation.

Psychopaths are therefore attracted to fast-paced, transitional organisations that can offer high potential for rewards, a stimulating environment and cover for their dubious actions. Here, psychopaths manipulate the organisation in order to gain rewards, in return, however, for performing very little work (Babiak and Hare, 2006).

The psychopathic process
Babiak (2007) proposed the psychopathic process model, which outlines the way psychopaths operate in a business setting. It was suggested that psychopaths ‘infiltrate’ an organisation by presenting themselves as the ideal employee. They then utilise the induction period to assess the usefulness of colleagues and begin forming relationships with those who may be of use to them. This can include those who hold formal power such as managers, CEOs, those individuals with access to...
resources, those who hold informal power (e.g., people on the ‘office grapevine’, PAs), and those with specialist skills that the psychopath can utilise.

The psychopath will then spend the majority of their time manipulating the people that they have built relationships with. Through this manipulation they will utilise others to complete their work without actually working themselves, spread positive disinformation about themselves, negative disinformation about potential rivals and create conflict in order to maintain their cover. The purpose of all this subterfuge is to appear as the ideal employee and potential leader, without actually putting in any effort.

At times the psychopath may encounter opposition from individuals who ‘see through’ the façade. Moreover, psychopaths will discard individuals once their utility is spent and these people may also come to oppose the psychopath. The psychopath will consequently use the manipulation network that has been created in order to neutralise these individuals, for example, by using their communication networks to damage the reputation of the detractor. The final stage of the psychopath’s strategy will be the ascension through the organisation to a position of greater power, authority and reward. The process will then begin again with new players.

Accepted organisational behaviour – the counter-argument to psychopathy
The typically accepted model of democratic capitalism accepts, promotes and reveres a successful business career. The prestige, financial reward, personal pride and satisfaction that can be derived from its attainment are universally known. It is therefore not surprising that those traits identified by Hare, Babiak et al, are those that managers and executives meet on most days within a competitive work environment – and perceive it as the norm.

Moreover, it can be argued that a psychopath’s ascension through the organisation to a position of greater power, authority and reward is a significant part of the drive within us all, to not only survive, but to provide prosperity to all our dependants. Consequently, the compulsion for career progression and promotion engenders a culture of competitive management, to a greater or lesser degree, within most organisations.

As a result, an individual that undertakes, or is associated with, activities that lead to organisational success and/or increased corporate wealth, will be recognised as an asset to the organisation, not a psychopath. Furthermore, the skills associated with success, such as internal networking and identifying champions for support, are generally

“Psychopaths are therefore attracted to fast-paced, transitional organisations that can offer high potential for rewards, a stimulating environment and cover for their dubious actions”
accepted by executives as essential tools – not psychopathic behaviour.

For most people, there will have been many instances in their working lives where clashes between individuals have occurred, and where the cited psychopathic behaviour could be observed. The characters engaging in this way might be deemed by colleagues as devious, untrustworthy, ‘back-stabbers’ or highly competitive – but are generally acknowledged as being ambitious individuals, rather than dangerous psychopaths.

In addition, a significant proportion of workers will potentially exhibit such behaviour on occasions, as the culture of drive for success promotes such personal behaviour within the workplace. It can therefore be found that psychopathic traits can be observed to a greater or lesser degree when promotion opportunities arise – individuals that are usually encountered as placid and supportive, may suddenly display what might be described as psychopathic behaviour, in order to draw positive attention to themselves, source inside information and seek promotional allies.

While it is suggested that psychopaths have no commitment to the organisation, in modern business, the lack of corporate loyalty has probably become the norm for most employees. When an individual reaches the top, unless tied in by personal or financial incentives, they will proceed to seek further progression elsewhere. They will be pushed further and further, from organisation to larger organisation, in order to pursue success and the financial rewards it brings. Moreover, the contemporary business practices of outsourcing and use of agency or temporary staff does little to promote loyalty at most organisational levels.

**Conclusion**

The arguments for and against psychopathic behaviour have been presented. Perhaps, in conclusion, the process of psychopathy is not particularly different from the political influence tactics adopted by a great many employees in order to get ahead in the organisation. So why should an executive be worried about hiring a psychopath?

Psychopaths only present the façade of being an ideal employee and leader. When actually required to perform in a leadership position, it is likely that the very characteristics that led them toward the position will result in their ultimate derailment (Hogan & Kaiser, 2005). The possession of greater power may actually feed the psychopath’s grandiose sense of self-esteem, leading them to take little heed of criticism and commit the business into risky or unwise ventures. It is also highly unlikely that a psychopath would be interested in nurturing future talent or creating a harmonious team, resulting in a failure in succession planning and the loss of talented employees. A psychopath’s actions serve only to benefit the psychopath, and if these conflict with the interests of the company, the psychopath is not likely to be concerned – whatever the ultimate outcome for the organisation.

**References**


*Editor’s note: This article is not typical of the journal’s content. The editor welcomes any comments from members and would like to hear from anyone who has experienced this style of management. Please email ast-editor@msjournal.org.uk or write to Management Services, Ewell House, Graveney Road, Faversham, Kent ME13 8UP.*

“The final stage of the psychopath’s strategy will be the ascension through the organisation to a position of greater power, authority and reward”
Remove the obstacles that are holding your business back

We can help you identify and address the obstacles

**Experienced productivity specialists**
Use some of our people to undertake a productivity improvement project for you on a project or contract basis - on an hourly or daily rate - for as long as required - as individuals or project teams.

**The MOST™ technique**
Creating structured time standards with a highly effective work measurement technique.

**Training courses**

**IMS Certificate course in 4 separate one-week modules**
1. Productivity Foundation
2. Productivity Analyst (choose Time Study, MOST™ or PADS)
3. Improving methods and processes
4. Developing a Lean environment

A tremendous foundation for new analysts, for team leaders, supervisors or managers.

Ask us for more details about this professional qualification, all our other courses, our open course dates or in-company training.

Scott-Grant Limited
Portland Tower, Portland Street, Manchester M1 3LD
Tel 0044 (0) 161 234 2121 Fax 0044 (0) 161 234 2125
productivity@scott-grant.co.uk
Offices also in Motherwell and Hertfordshire
Process Mapping:
A Case Study Poster.

Management Services is presenting a number of these posters (though the content has been re-presented to make it more readable on A4 pages) as examples of both successful productivity projects and as examples of how to distil the essence of a project into a brief format with high impact. This first poster in the series is based on a project which used process mapping as a means of identifying waste and identifying the ‘cost of poor quality’.

John Heap
Director, National Productivity Centre

Improving factory performance using a lean approach – role of process mapping.

Adam Przybylski, Monika Stanczyk, Mark Settersfield. Poland and UK

Objective
Uncover areas of waste and quantify the cost of poor quality in a seafood processor, in order to identify and justify opportunities for process improvement.

Abstract
Many seafood companies develop their business organically with process steps, inspection stages, delays, transport operations, etc, being added as the business grows. However, the sector is being increasingly pressured to improve performance – and a lean six sigma approach was adopted to review and suggest process improvements.

This project involved the process mapping of a large seafood processing factory. Two areas were selected for detailed mapping, including the factory floor and packaging lines. This project used the process maps to capture detailed data around existing flows and performance rates. A software tool, Smartdraw, was used to capture the process flows and a production analysis tool was used to determine existing ex-factory unit costs. (Produce-Plus).

An analysis of the downtime issues and uptime potential in each area was made. A failure mode and effect analysis approach was adopted to identify real root cause and prioritise these for future projects. A roll through yield analysis was also undertaken to reveal the underlying impact revealed by the initial study. The software tool and process maps have then been used to scope the potential gains in key areas. The estimated gains through becoming lean are a significant six figure sum. The first project programme being used to make gains has a target of £100,000 within six months.

Conclusions
The cost of poor quality extends beyond the cost of identifying and re-working defective product. The resulting inefficiencies have a detrimental effect on product unit cost, which is clearly linked to a key critical customer requirement (CTQ) to pay the price that fits with their expectations. By focussing on the issues that truly matter to the customer, staff resources will be more effectively utilised in reducing costs, improving efficiencies, and reducing the likelihood of defective products reaching the customer.
Case Study

Key factors

Measure: Labour Utilisation

<table>
<thead>
<tr>
<th>Purpose</th>
<th>To reduce the cost of labour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relates to</td>
<td>Cost</td>
</tr>
<tr>
<td>Target</td>
<td>100% Labour Utilisation</td>
</tr>
<tr>
<td>Formula</td>
<td>Standard Labour Hours Recovered / Standard Labour Hours</td>
</tr>
<tr>
<td>Frequency</td>
<td>Every Shift</td>
</tr>
<tr>
<td>Who measure?</td>
<td>Red hat, supervisor</td>
</tr>
<tr>
<td>Source of data</td>
<td>Labour Time Sheet, Production Record</td>
</tr>
<tr>
<td>Who acts on the data?</td>
<td>Team Leader, Shift Manager</td>
</tr>
<tr>
<td>What do they do?</td>
<td>Adjust running rates and/or labour complement accordingly</td>
</tr>
<tr>
<td>Notes and comments</td>
<td>An indicator of labour efficiency associated with machine and hand lines</td>
</tr>
</tbody>
</table>

DMAIC methodology (Define, Measure, Analyse, Implement, Control)

Mapping to uncover waste

Software to produce accurate maps and product unit cost
Innovative Solutions for Business Performance:

Critical Elements in Successful Projects.

Abstract
The article offers a guide to project teams who are seeking to find ways to increase productivity in the organisation or quality of products and services. The writer suggests that any effort to develop solutions should be motivated by the urgency to increase the process capability of the business performance. A different language is presented for improving business performance. Instead of identifying problems, the writer suggests finding the reasons that improve current performance and capabilities. The elements required in a project are designed to build on current capabilities.

Preamble
The writer seeks to persuade project sponsors and champions in organisations to use a template for assessing team efforts in developing and launching solutions that impact on the business and strategic goals. The writer advocates an evidence-based approach that offers confidence in the solutions; overcomes resistance to change and delivers ‘fail-safe’ proposals enabling a seamless handover from the team to the process owners.

In particular, the writer intends to facilitate the completion of innovative projects in the Grimsby Institute for Further and Higher Education (GIFHE). Included in the article are applications for the students and teams in GIFHE. The writer was invited to work with GIFHE to enable the applications of evidence based methods and tools in the institute.

Introduction
Organisations often assemble teams to work for specific purposes. Team based investigations produce outcomes that are likely to be considered more thoroughly compared to individual based outcomes. The literature on the effectiveness of teams suggests significant advantages that enable management to forward decisions that are able to account for risk.

The article offers a number of elements that teams should deal with in order to render proposals capable of winning acceptance and persuading the sponsors of projects. The paper looks at projects commissioned to produce changes that impact on the business performance processes which, in turn, impact on the organisational goals and key performance indicators.

1. Inspiration
The writer draws inspiration from the work of Walter Shewhart, Edwards Deming, Joseph Juran, Armand Feignbaum and Kaoru Ishikawa.

a) Verification and measurements
According to Shewhart (1939) every sentence, in order to have a definite scientific meaning, must be practically or
at least theoretically verifiable as either true or false upon the basis of experimental measurements, either practically or theoretically obtainable by carrying out a definite and previously specified operation in the future. The meaning of such a sentence is the method of its verification. The writer identifies elements in a project that call upon the need for verification and experimental measurements.

b) Alignment

Feigenbaum (1951) suggests that meaningful growth is a way of bringing the entire organisation focused together. The projects that are identified are aligned to the wider business performance of the organisation. Strategic business plans identify the competitive analysis of the business, highlighting the stakeholder value and urgency for embarking on projects.

c) Team arrangements

Ishikawa’s (1985) exemplification of quality circles reinforces the efficacy of team arrangements for delivering outcomes that impact on customer requirements. A major propellant for change is the teamwork at different levels of the organisation to study and consider the process capabilities and performance to deliver the expected outcomes.

d) Quality leadership

Finally, Juran (1964) believed that people held sincere beliefs that are related to quality but that are not based on fact. These myths can be an obstacle to constructive efforts to achieve quality leadership. It is important to avoid any atmosphere of blame. The emphasis should be on what to do differently and on the methods for making the needed changes.

2. Project team levels

Project teams are found at various levels in the organisation. Generally, teams may be distinguished by the focus and purpose.

a) A Management Team (MT) comprises individuals who are focused on cross-functional or interdepartmental performance levels. MTs are suitably led by a head of department or director. The expected outcomes are concerned with developing and testing solutions that reduce the gap between a key business goal and current performance level (CPL).

Case 1:
The business case identifies specific constraints within the core process that affects the CPL of the core activity. For example:
• Time to deliver a service or product that impacts on sales and cashflow would constitute a business performance activity.
• Reducing warranty claims or increasing take rates or hit rates are other examples.
• Relevant examples in the seafood industry may include increasing seafood processing production, increasing current capabilities in meeting quality standards and customer requirements.

b) Operational Teams (OT) focus on eliminating the bottlenecks in the functional processes. The team members drill down into sub processes and strive to uncover root causes that prevent processes from meeting the capability requirements required for ‘right first time performance’. OTs are usually led by functional leaders and comprise members who see the benefits of increasing the value added level of the process. The outcomes may reveal ‘quick hits’ that maximise available resources or significant changes that re-engineer the process in question.

Case 2:
Relevant examples in the seafood industry may include:
• Improving food packing processes;
The z (Sigma) score corresponds to a point in a normal distribution. A z-score will describe how much a point deviates from a mean or specific point.

- Storage-life capabilities;
- Time to market processes;
- and
- Yield maximisation efforts.

c) Kaizen (Continuous Improvement) Teams may also comprise employees engaged in specific sub processes. The efforts are focused on eliminating waste, simplifying tasks, preventing defects and errors and generally concerned with process control and reliability. The team leaders are usually supervisors or work cell leaders who align the efforts of work teams towards meeting the work performance standards designed for the work place.

Element One: Alignment

1. Strategic direction

A strategic purpose is critical for MTs and OTs. The need for engaging the right expertise, motivation and urgency in a project is determined by a visible purpose that shows the impact on the organisation’s business strategy and competitiveness. Where senior managers state specific project areas, instead of elaborating on a compelling strategic purpose, the onus is on the latter to provide the evidence and metrics that justify the need for the projects. OTs are likely to appreciate the effort more than MTs.

MTs are likely to be more motivated if they develop specific project proposals on their own and present their findings in a project charter. In the long run, teams are likely to realise a sense of ownership when they systematically use the right methods to sieve through the experiences and data to arrive at a project goal.

Case 3:
The strategic direction is specific, measured, attainable, realistic and timely (SMART). For example:
- To increase the export of fish and fish products from the current 5% of total exports to 15% by 2012, may define a strategic purpose for the fish and fish processing industry. The strategic purpose could be focused to identify the specific market that shows the highest growth potential, as well as the type of fish exported.
- Where a strategic goal is identified, then the next step is to define the current performance level. Using the earlier example, a trend analysis or line plot illustrates the actual export of fish and fish products over a specific time period.
- Assuming that quarterly information is obtained, we may chart the standard deviation of the current fish exports. In addition, if the target is to increase the exports by 15%, then a current capability analysis would then identify the Z (Sigma) score of the CPL.

2. GAPS

GAPS is an acronym for:
- Goal – referring to the focused strategic goal stated in SMART terms;
- Assessment – referring to the current methods used to measure the current performance levels;
- Performance – referring to the CPL of each of the assessment methods identified in the strategic purpose; and
- Standards – referring to the specific targets that need to be achieved for each of the CPL identified.

Summary

The GAPS analysis provides MTs and OTs with valuable information that enables them to know the specific measurements that are considered as critical. The indicators in the analysis define the expected results that teams need to attain in their efforts to complete successful projects.

Element Two: Business Performance Capability

3. Core process mapping and throughput analysis

The strategic goal and the CPL identify the gap that currently exists in the business performance. Taking the often used term Y=f (Xs), the CPL is referred to as the Y (a dependent deliverable) and the Xs refers to the core activities that are linked in some way to deliver the Y.

a) Technology

The mapping of the core activities is an effective means of visualising the current technology and methods used to deliver the outcome defined in the Y. The teams refer to existing Standard Operating Procedures (SOP), work manuals and certified work flows to arrange the mix or functions and resources. The flows and links are drawn to show the internal customers and suppliers.

b) Constraint

The core activities refer to the major functions that are currently configured to best deliver the CPL. The core process analysis is executed to identify the X or Xs that are constraints to the delivery of Y and thus contributing to the GAPS. The rate of goal achievement is limited by at least one constraint process (Cox and Goldratt, 1986).

A guide to mapping the core process is by using the SIPOC (Supply, Input, Process, Output and Customer). The SIPOC offers a useful means to categorise the various functions. It is vital that only the mainstream activities are mapped. Enabling functions, such as human resource support, quality assurance and facilities maintenance, are excluded. Enabling functions are considered as supporting the core activities.

While many core activities...
are sequential, there are also reciprocal activities with frequent loops and rebounds between the core activities:

- Manufacturing technologies are largely sequential.
- Service technologies are likely to show reciprocal linkages as in a hospital, financial institution or education centre.

4. Critical to Quality Indicators

The main stream activities are designed to deliver a service, product or output to the next process. Critical to Quality (CtQ) indicators are the expected performance standards that should be delivered to the receiving activity based on the internal process requirements.

Case 4:
- A laboratory investigation requires that the incoming specimens are complete and correct. Such a CtQ will be an indicator in the activity where specimens are prepared. In this case, the CtQ is vital to the process flow and can also be referred to as Critical to Process (CtP).
- The performance requirements of enabling functions to support laboratory investigation are also listed as critical to quality factors (CtQ) – required to ensure the productivity and efficiency of the core activities.
  a) A CtQ indicator may specify timeliness and accuracy in the delivery of the product or service to the next step. In such a case, the CtQ is also referred to as Critical to Business or CtB.
  b) Finally a CtQ may directly affect the final outcome Y. The customer who receives the Y determines the ability of the core activity to generate business and affects the competitiveness of the organisation. In such a case the CtQ is also referred to as Critical to Business or CtB.

Why CtQs?
The CtQ indicators within each core activity enable business performance management.
- Firstly, each CtQ is a data collection point and the performance of the indicator is tracked by statistical process control methods.
- Secondly, the expected standard required of the indicator is identified to enable the capability of the CtQ to be assessed.
  Where the CtQ measures a variable such as time, dimension, weight, etc, the data gathered is analysed by determining the Z score, defect/defective rate and Cpk (Process Capability ratio).
  - In the case where the CtQ measures discrete values, such as the number of errors in a lot or batch, a discrete capability analysis helps identify the Z score and defect/defective rate.
- Thirdly, a CtQ is an opportunity for defect or non-conformance to occur.
- The identification of a constraint activity in the core process is calculated by the number of CtQs in the activity, the frequency of failure of the CtQ indicator and the capacity or workload of the activity.
  - The metric, defects/defectives/million opportunities (DPMO) is determined from these inputs.
- Fourth, the performance of each CtQ in a process step helps define the ‘right first time performance’ of the step. It is from tracking the performance of the CtQs that the ‘right first time’ performance capability is determined, also referred to as the ‘first run yield’ (FRY).
- Fifth, the performance capabilities of the CtQs define the performance level of the core activity step. The constraint in the process is defined as the activity step that has the lowest throughput and capability. The constraint activity is seen as affecting the capability of the Y.
- Finally, the performance of the CtQs in each activity determines the process throughput. The ‘rolled throughput yield’ (RTY) is determined when the throughput of all the steps in the core activities are multiplied together.

Significance of CtQs
- a) The teams select a constraint activity/ies in the core process as a project. The selected constraint is investigated thoroughly by mapping the tasks in detail by using process maps. Just as the constraint was
identified in the core process, the performance capability of the CtQs determines the bottlenecks in the selected activity.

It follows that the improvement to the selected activity (project) is determined by improving the performance capability of the CtQs (bottlenecks) in the activity. As the bottlenecks are removed, the constraint in the core process is lifted. Eventually, the gap between the CPL and goal of the Y is reduced.

b) The project is all about finding innovative solutions for the CtQs that have the lowest performance capability and significantly affect the performance of the process. MTs seek out the CtQs that, when improved, impact on the core process. OTs seek the CtQs that, when improved, impact on the functional process. The CtQs are treated as main effects (ME) for root cause analysis and subsequent hypothesis testing and experimentation. The main effect is carefully broken down to identify the possible root causes that are contributing to the current performance of the CtQ – the bottleneck in the constraint activity.

c) The team screens through the possible root causes for each main effect to identify the possible main root causes. Thereafter, the team’s primary motivation is on finding innovative solutions for the main root causes. Only innovative solutions are rigorously sought. In the end, solutions that are found to be statistically capable of eliminating the main root causes of the main effect are selected. The project team hands over capable solutions that eliminate the bottlenecks in the constraint activity to the process owners. Control plans are developed to define the new performance standard of the improved CtQs and the methods of tracking and controlling the CtQ performance.

d) The project results are presented in terms of how much improvement is realised in the capability of the main effect. The team offers solutions that were found to be statistically capable and carry the highest confidence level. Based on these results, the team identifies the likely financial benefits when the solutions are formally launched in the actual process. The findings of the pilot implementation are shared to obtain a ‘buy in’ from management and process owners.

Summary
Projects are about improving the performance capabilities of a constraint activity. Business activities and workplaces are founded on a series of steps with the right mix of resources, people, technology and methods, to achieve specific outcomes. The steps are designed to deliver specific standards of performance. When the standards of performance or CtQs in the process are achieved, the final outcome in terms of productivity and quality are delivered to the final customer.

Projects seek out the constraints in the process and ‘drill down’ to locate bottlenecks. It is the team that deliberates on viable solutions for overcoming the main root causes that cause the bottlenecks. Herein is the essence of a project.

Applications in GIFHE
- Strategic goal: Reduce the emissions that impact on the environment in seafood production.
- CPL: Energy usage in seafood production.

Element Three: Business Excellence

7. Critical Customer Requirements
The performance capability of the activities (Xs) in the process delivers the current performance level that is called the Y. The CtQ indicators within each activity identify the performance standards that are expected. CtQ indicators are the means to achieve the value of the outcome Y. Value is defined as the expected standard of the Y required by the customer.

The critical customer requirements (CCR) for the Y determine the CtQ indicators in the Xs. Customer driven business processes bring together the right resources, people, technology and methods. The business unit identifies the critical customer requirements by gathering information from market research, listening to the voice of the customer and through competitor analysis. The information is used to define specific CCRs. The CCRs are measured indicators.

Case 6:
- An insurance firm is expected to process medical claims. Policy holders expect the medical claim applications to be approved and paid as fast as possible. The insurance industry benchmark suggests that medical claim applications are approved and paid within 48 hours referred to as Y. The firm uses the indicator and measures the current...
The CCR becomes critical when it is perceived as a value for the deliverable Y. In this case, the Y is the number of life policies issued within a quarter.

The insurance firm identifies the gap between the expected requirement and the current ability to complete payments of medical claims. The current capability is measured by using statistical process control methods.

The mean turnaround time for claims is visualised and analysed against the target turnaround time. A Z score and Cpk ratio is identified for each indicator that affects the value that customers expect.

Organisations exist to meet the requirements of customers. Whatever type of operation, organisations obtain revenue, cashflow and cover operational costs from the payments received from customers. Customers pay for the value of the product or service received. The expectation of value applies to government services and non-profit organisations as well. The continued sustenance and growth of the organisation’s operations is dependent on its relevance and ability to deliver what customers expect.

8. Kano (1984) identifies three types of requirements:
   a) Basic needs – which help the company to get into the market;  
   b) Performance needs – which help the company to sustain the business performance in the market; and  
   c) Excitement needs (delighters) – which enable the company to excel in business performance.

Element Four: Project Selection
9. Stakeholder consensus
Eliminating the constraints in the process alleviates the strain on resources and people. The initial projects focus on CCRs that enable organisations to become capable in meeting the basic needs. With the gradual reduction in the GAPS, the business unit creates the platform for developing processes that are able to focus on excitement needs.

a) Over time OTs and MTs move from ‘improvement type’ to ‘invent type’ projects. A well orchestrated business performance management plan should enable existing processes to be in control for delivering basic and expected needs. Team maturity and the business steadfast commitment to productivity and quality in services and products offers the prospect of focusing on excitement needs. The intention is to deliver a product or service that yet does not exist.

10. The CCRs are crucial indicators for a project
The urgency level assigned to the constraint activity is determined by the impact the activity has on the CCR. Where a gap is present between the current capability and the expected capability of a CCR, the activity in the process that offers the best chance for reducing the gap is selected. An effective means for identifying the relationship between CCRs and other internal business requirements, including the core activities, is the House of Quality matrix, also known as the Quality Function Deployment. A simple XY matrix will also achieve the same result.

a) The effort to gather the experiences of stakeholders and obtain their preferences for identifying the constraint activity is an exercise in collaboration.
to reach a consensus. The CCRs are an effective means for providing the group with a common focus. Depending on the current capability of the CCRs, the decision on the constraint is validated by the need to improve the capability of as many CCRs that are not up to the mark.

Summary
The rigor of analysis that is undertaken is an exercise in business risk management for selecting a project. The approach offers the best chance for attaining the desired goal as qualified by the customers. The decision that is experientially derived is supported by the intelligence gathered from data analysis based on the capability of CtQs.

Element Five: Root Cause Analysis
11. Developing hypothesis causing the capability of the main effect
a) Teams deliberate and generate all the possible reasons that explain the occurrence of the main effect. Recall, the main effect is a CtQ that causes a constraint in the process. The ME is expressed as the current process capability ratio (Cpk, Z score). The team seeks out all possible causes that explain the current capability of the main effect. The listing of causes is most productive when the current capability definition is stated as a process capability ratio instead of a negative outcome.
b) The search, listing and arrangement of causes are a crucial stage of any project. The causes are specific statements of observations rather than judgements.

Case 7:
- ‘Poor skills’ communicates a judgement.
- ‘Performing the same task more than once’ is an observation.
- ‘Lack of supervision’ is another judgement.
- ‘Calculation errors are found at the loan approval stage’ is an observation.

Each cause is systematically ‘drilled down’ to find more causes. The ‘root’ cause is found when the team reaches the final cause that can be identified from experience. It makes good sense to seek the inputs from anyone who is working on the CtQ and others who have a stake in the new solutions expected from the project.
c) The root cause is the final reason that the team is able to identify listing the possible reasons (first level) from a brainstorming exercise.

i. The initial list of causes is organised in an Affinity diagram.
ii. The first level causes are arranged in a Fault Tree Analysis (FTA).
iii. The team members ‘drill down’ from this level to identify more causes. At least three levels are attempted.

Summary
The systematic approach enables MTs to prioritise root causes for validation. Each root cause is a possible hypothesis affecting the performance capability of the ME. The

Minimum 3 levels of Causes.
First level is from Affinity diagram (Brainstorming)

For Causes with more than three levels, start from the back to find the Cause – Failure – Effect

First: Brainstorm freely. (Do not start with FTA)
Second: Affinity diagram
Third: Arrange First level causes in FTA
validation of root causes involves statistical testing of hypothesis to confirm the possible main root causes.

**Application in GIFHE**
- Bottleneck activity: Packing
- Main Effect (CtQ indicator with lowest performance capability): Labelling machine performance – first time pass rate 95 to 85% (Z=0.5)

**Element Six: Experimentation**

12. Developing hypothesis to improve the capability of the main effect

a) The primary reason for teams to engage in a project is to release creative ways for improving the capability of the main effect. The possible solutions are treated as hypotheses, so that teams may search for the best approach to implement innovative solutions. The essence of an effective project is the ability of the team to generate innovative solutions.

Defoe (2003), President of Juran Institute, suggests that current products and business may have little relevance under conditions to tomorrow. He maintains that change must be timely and meet future customer needs.

b) The methods and tools that are used to validate solutions are relevant when the proposed ideas are tested and statistical confidence is obtained from trials. It is only prudent that teams develop a number of alternatives and experiment the possibilities. Why?
- Firstly, the team maximises the innovative capabilities of the members;
- Secondly, the intended owners of the improved process need to be assured of the efficacy of the new solutions;
- Finally, the project’s success depends on making breakthroughs, which means, developing improved solutions that add value to the process.

c) Innovative solutions are new to the organisation. It is an invention of the team. The solutions eliminate non-value added tasks and work, maximise available resources, generate benefits (win-win) for all the stakeholders, are integrated and complement existing systems, offer hard and soft savings and are extensive in their applications to other processes.

d) The teams devote more than 60% of the project duration to finding, testing and confirming innovative solutions that impact on the main effects in a constraint activity. To be able to offer solutions that win the support of process owners and convince the management, the selected solutions need to be optimised.

e) Solution Optimisation refers to the performance standard expected, control limits and capability requirements such as expected Cpk and Z score levels. When solutions overcome the main root causes, the improvement on the main effect is visible. Since main effects are CtQs, the expected optimum performance level of the CtQ is identified as a result of the successful completion of the trials.

**Summary**

The expected results from the changes implemented and the financial impact are identified and presented to management. MTs and OTs reflect on the project charter and confidently offer the full impact of the solutions based on the baseline that was defined at the start of the project. Project champions and sponsors lend effective support to the teams in order to persuade management and process owners. They underwrite the expected benefits of the project.

**Application in GIFHE**

Aim: Reduce the time taken to Process Seafood

**Element Seven: Responsible ‘Handover’**

13. Comprehensive control plans

MTs and OTs offer a viable control plan that enables process owners and employees affected by the changes in the process to make a transition to the new performance requirements. The ‘handover’ of optimised CtQs includes familiarising individuals and work teams with the new methods, qualifying them in the required competencies and coaching.

a) At the point of transfer, the team shows the correct applications of the new solutions complete with mistake-proofing devices.
The primary concern is the acceptance of the new solutions and the ability of the solutions to eliminate the bottlenecks and eventually relieve the constraint in the core process. Control plans not only provide the requirements for sustaining the standards expected of the CTQs but also the actions to be taken when performance shows that it is falling out of the required standards, such as reaction plans and control measures.

b) When process owners and employees affected by the changes are familiar and ready to take on the improved process, the ‘handover’ is complete. Depending on the control plans, the team audits the performance of the improved process periodically. The improved process is monitored with statistical process controls. More important, the actual performance of the process or Y is tracked using Cpk, and Z scores. MTs and OTs release all controls to the process owners and employees performing the task only after the full benefits expected are compared at the end of the chosen baseline period.

Conclusion
The paper offers practical advice to project teams who seek to produce innovative changes to processes. The seven elements are critical to the delivery of successful projects that are capable of overcoming resistance to change and sustaining the benefits promised by validated and optimised solutions.

References
Cox, J, Goldratt, E M, (1986), The goal: a process of ongoing improvement, North River Press, New York, USA.
Davies, W, (2009), Project: Life cycle assessment: A green productivity tool applied to UK seafood industry, GIFHE.
Davies, W, and Dillon, M, (2009), Life cycle assessment: A green productivity tool applied to UK Seafood Industry, Project Poster, GIFHE.
Feigenbaum, A V, (1951), Quality Control: principles, practice and administration, McGraw-Hill, New York, USA.
Periaswamy, S, (2009), Project: Can we increase the profitability of seafood companies by applying six sigma strategies to packing operations, GIFHE.

The paper offers practical advice to project teams who seek to produce innovative changes to processes. The seven elements are critical to the delivery of successful projects that are capable of overcoming resistance to change and sustaining the benefits promised by validated and optimised solutions.

References
Cox, J, Goldratt, E M, (1986), The goal: a process of ongoing improvement, North River Press, New York, USA.
Davies, W, (2009), Project: Life cycle assessment: A green productivity tool applied to UK seafood industry, GIFHE.
Davies, W, and Dillon, M, (2009), Life cycle assessment: A green productivity tool applied to UK Seafood Industry, Project Poster, GIFHE.
Feigenbaum, A V, (1951), Quality Control: principles, practice and administration, McGraw-Hill, New York, USA.
Periaswamy, S, (2009), Project: Can we increase the profitability of seafood companies by applying six sigma strategies to packing operations, GIFHE.

The primary concern is the acceptance of the new solutions and the ability of the solutions to eliminate the bottlenecks and eventually relieve the constraint in the core process.

Control plans not only provide the requirements for sustaining the standards expected of the CTQs but also the actions to be taken when performance shows that it is falling out of the required standards, such as reaction plans and control measures.

b) When process owners and employees affected by the changes are familiar and ready to take on the improved process, the ‘handover’ is complete. Depending on the control plans, the team audits the performance of the improved process periodically. The improved process is monitored with statistical process controls. More important, the actual performance of the process or Y is tracked using Cpk, and Z scores. MTs and OTs release all controls to the process owners and employees performing the task only after the full benefits expected are compared at the end of the chosen baseline period.

Conclusion
The paper offers practical advice to project teams who seek to produce innovative changes to processes. The seven elements are critical to the delivery of successful projects that are capable of overcoming resistance to change and sustaining the benefits promised by validated and optimised solutions.

References
Cox, J, Goldratt, E M, (1986), The goal: a process of ongoing improvement, North River Press, New York, USA.
Davies, W, (2009), Project: Life cycle assessment: A green productivity tool applied to UK seafood industry, GIFHE.
Davies, W, and Dillon, M, (2009), Life cycle assessment: A green productivity tool applied to UK Seafood Industry, Project Poster, GIFHE.
Feigenbaum, A V, (1951), Quality Control: principles, practice and administration, McGraw-Hill, New York, USA.
Periaswamy, S, (2009), Project: Can we increase the profitability of seafood companies by applying six sigma strategies to packing operations, GIFHE.
Over 50 years helping Organisations Worldwide to increase productivity and enhance their Competitive Advantage through Continuous Improvement.

To discuss how we can help you and for a free Productivity Health Check Tel: 01384 234234 or visit www.chinal.co.uk.

For our latest training course details Tel: 0115 922 5735 or visit www.harrymitchell.co.uk

Chinal Management Services Limited
Kings Charles House, Castle Hill
Dudley, West Midlands DY1 4PS

Harry Mitchell College
215 University Boulevard
Beeston, Nottingham NG9 2GL

Merry Christmas and a Happy New Year from all at Chinal Management Services Limited
Abstract

This paper cites recent research into two public sector/local government organisations (LGOs), as they attempted to implement change through Business Process Reengineering (BPR). The unfortunate but not entirely unpredictable outcomes of the research were that these organisations were not ‘ready’ for change of such a ‘radical’ nature as BPR, that senior managers did not really understand the concept or its implications, and that cultural inertia, resistance to change and lack of effective leadership at senior levels were all contributory factors.

A key issue is the nature of the way people in leadership positions in these organisations actually ‘think’, and how this ‘thinking’ needs to fundamentally change before the organisations themselves are likely to benefit from radical improvements. Gershon’s Review has been in the headlines this year (April, 2009) and the requirement for such change is as present as it was when his report was first issued five years ago.

Introduction

Recent research into the potential implementation of Business Process Reengineering (BPR) in two local government organisations (LGOs) within the UK (Chamberlin, 2008), suggests that these organisations were not ‘ready’ (Hammer and Stanton, 1995) for change of such a ‘radical’ nature as BPR, or even the move towards becoming more process- (or system-) based organisations.

The study commenced by reviewing the literature surrounding reengineering – or BPR, as it had become more widely known – including, as appropriate, other approaches to quality and change management. Focusing also on critical ‘success’ and ‘failure’ factors (CSF & CFF; Al-Mashari and Zairi, 1999), two key issues emerged that were relevant to BPR’s potential for success in such organisations; the concepts of ‘Organizational Readiness’ (Hammer and Stanton, 1995), and that of ‘degrees’ of BPR, or ‘Project Radicalness’ (Kettinger et al, 1997).

A qualitative research approach was adopted using two case studies (Hartley, 1994), with 28, semi-structured, in-depth interviews held with 29 participants from the two co-operating LGOs.
The change is unlikely to occur while thinking is influenced by notions of hierarchy

‘Purposive sampling’ (Saunders, et al, 2000) was employed with participants selected from those organisations’ BPR training cohorts and those involved more directly at junior, middle and senior management levels. Access was also granted to meetings and organisational documentation. Impact analysis was undertaken with group and individual interviews.

The outcome of the study, and its reasons, were not entirely unexpected:
- Inadequate understanding of the concept of BPR itself;
- Lack of effective leadership at senior level(s);
- Cultural inertia;
- Resistance to change.

Understanding

The research discovered no real evidence that anyone, at any level, amongst those espousing the virtues and intended application of BPR, in either organisation, had made any real attempt to understand – ie, fully understand – what this might mean. It is contended that any organisation – but more especially any large organisation so mired in cultural drag as had been acknowledged in those two LGOs – that was beginning to consider embarking upon an approach to change that by its own definition was to be ‘radical’, should in the first instance seek to fully understand what that might mean.

Whilst the right language was used in documentation, presentations and other communications to staff, the resultant ‘understanding’ itself was at the very least inconsistent, and in reality was quite inadequate.

This was a senior management leadership responsibility, yet degrees of understanding and commitment at this level also were, at best, inconsistent.

My own experience, also of a UK corporate organisation that reduced from c.250,000 employees to around half that, over the first half of the 1990s, at the same time making a serious shift towards becoming a process-based organisation (Harvey, 1995: 29/31), was that its middle and senior level managers had to change, in both the way they behaved, and the way they thought. Evidence at the time (Chamberlin, 1998) suggested that it happened in that order – behavioural change brought about more rapid attitudinal change (thinking).

As a further consequence of the above study, the actual application of BPR was at least muted, if not in fact ineffective. For example, whilst in one LGO there had been a lengthy exercise of consultant-aided reengineering of processes to bring the customer-facing (or front-office) aspects of their Highways service into that LGO’s new contact centre, the ‘solution’ had been decided beforehand, being largely driven by the e-Government agenda and the fashion for such call-centres. There was also reasonable evidence that this might not have been the best (or even the only) solution, and little evidence that alternatives had been considered.

This paper will suggest that the way managers ‘think’ is a key issue, and that if such organisations are to make a better fist of more radical change at (at least) process level – if not corporate level – then it is their ‘thinking’ that will have to change, and change significantly.

Seddon (2007) called this problem ‘a thinking thing’, and again, in his most recent book, emphasises this with: ‘Ohno knew that what matters is how we conceptualise problems; thinking is the key.’ (Seddon, 2008a: 68)

Without this change of ‘thinking’, managers are unlikely to change what they do in their organisations. According to Seddon, the problem these managers have is that what they are being asked to do is just as it was for Taiichi Ohno* – the ideas they are being asked to embrace are ‘counter-intuitive’ (ibid: 71).

(*NB see also Womack, J P, Jones, D T, and Roos, D, (1990), The Machine that Changed the World: The Story of Lean Production, New York, Rawson Associates)

He says that unless they ‘do it’, they won’t ‘get it’, and illustrates this point with a number of case studies (Seddon, 2005) where evidence is given from clients who all confirm that they had to ‘do it’, before they ‘got it’. Once they do – ie, ‘get it’ – they (in this case) become espoused to the systems thinking principles that Seddon’s company, Vanguard Consulting, are assisting them towards, and are unlikely to revert to previous ‘command and control’ types of thinking.

Interacting

Paper et al (2001) say that top management has to: ‘live the new paradigm by being active participants in the change process. Top management endorsement is not enough. They have to interact with teams and management to let their people know that change is a priority and that they understand what is being done at the process level to make change happen.’

This ‘interacting with teams’, in other words, means they have to do it, to understand it. They continue: ‘The biggest obstacle to execution was within the middle management ranks. Members of middle management were too used to being experts in a specific area.’…”Behavioral change is the
“Where this is leading, though, is that for managers to be encouraged to change the way they ‘think’, first they may have to be ‘encouraged’ to change the way they behave.”

Figure 1: Model I Theory-in-Use. Source: Argyris, 2002: 213, Fig 1

Figure 2: Attitudinal vs Behavioural Change. © Chamberlin, J E, (1998)

most difficult type of change. It takes time and patience. Execution of a major change program therefore requires a lot of time to reap desired benefits.’ ... ‘If managerial attitude remains that of “command and control” and/or their behavior does not change, transformation will most likely fail.’

This aligns with what Argyris (2002: 212) found: ‘that beliefs or espoused theories vary widely’, whereas, ‘theories-in-use do not.’ When Paper et al (ibid) say that: ‘Top management has to live the new paradigm by being active participants in the change process,’ they similarly imply that top management has to ‘do it’, in order to ‘get it’, and this requires what Argyris called ‘double-loop learning’; a break away from reasoning that ‘maintains the status quo [and] inhibits genuine learning.’

Being ‘experts in a specific area’ requires maintenance of those ‘theories-in-use’, giving rise to what Argyris calls ‘defensive reasoning’: ‘Individuals keep their premises and inferences tacit, lest they lose control’ (ibid). He called this his ‘Model I Theory-in-Use’, as shown in Figure 1, above

In a study of the public sector in the US, Gulledge and Sommer (2002) stress the problem this point creates with: ‘process management does not work very well when overlaid on a hierarchical command and control management structure,’ and they cite Champy (1996) in that: ‘the shift to process management requires a restructuring (ie, a reengineering) of management,’ all of which continues to emphasise the need for attitudinal and behavioural changes within the senior echelons of the public sector – those ‘established hierarchies’.

Intervention

This raises the question whether ‘attitudinal’ or ‘behavioural’ change is possible without some other intervention? Blanchard (1989) posits that ‘attitude’ is simply ‘emotionally-charged knowledge’, and suggests that when people are given new ‘knowledge’ regarding, for example, a proposed organisational change, they will take an emotional stance, for or against that knowledge; they will be either for it (positive attitude), or against it (negative attitude). If they are for the change, then a ‘knowledge-attitude-behaviour’ (KAB) approach to that change could well be successful; eg, following

This was a senior management leadership responsibility, yet degrees of understanding and commitment at this level also were, at best, inconsistent.

explanation of what Hammer and Champy (2001: 154) called their ‘case for action’ and ‘vision statement’, staff can see the need for the change and understand the future position, so their behaviour moves towards the new pattern of requirements.

However, if the emotional stance is against the proposed change, the KAB model is less likely to be successful – as a negative attitude is likely to produce resistance – and an alternative ‘KBA’ (knowledge-behaviour-attitude) will be required: despite adequate and reasonable (from management’s perspective) explanation, staff deny the need for and/or resist the proposed change. In this case, management make clear that the change of ‘behaviour’ is required, confident that staff will more readily see the need once the new situation has been experienced.

Both of these are illustrated (Figure 2), with the ‘blended’ version shown also:

This could imply some sort of coercive (Dunphy and Stace, 1993) approach to the management of the change, but it is not about forcing people to do things, more about saying ‘I require you to do this,’ so the reasoning becomes clear. It can mean being assertive, but as Seddon (2008a) points out: ‘Some of the best systems thinkers I know are bossy; they are bossy about the right things.’ This does not mean any ill-treatment of employees, merely that you might need to insist they taste the pudding, before deciding they don’t like it. The prize, of course, according to Blanchard, is that once the ‘behaviour’ has changed, the ‘attitude’ is then likely to change also. Anecdotal support for this abounds, as the UK seat-belts, drink-driving and, more recently, smoking in closed public places (eg, pubs) laws attest – notwithstanding, of course, the equally recent but less successful attempt to prohibit mobile phone use whilst driving.

Where this is leading, though, is that for managers to be encouraged to change the way they ‘think’, first they may have to be ‘encouraged’ to change the way they behave. This would require a fundamental shift in that thinking, or a ‘new paradigm’ from ‘top-down’ management to a form of leadership that offers a more supporting style, in line with another Blanchard concept that has been around for many years – that of ‘pyramidal inversion’ (or paradigmal) inversion. Following his organisational behaviour work with Paul Hersey and Dewey Johnson (see also Hersey et al, 2001), Blanchard went on to co-author a series of books based on the initial publication, *The 80/20 Time Manager* (Blanchard and Johnson, 1983), and this pyramidal inversion became a popular – albeit perhaps intuitive – concept. But, as Argyris (ibid) has pointed out, it is not enough simply to ‘espouse’ a theory, one has to ‘use’ it: ‘To the extent that individuals use Model II instead of merely espousing it, they will begin to interrupt organizational defensive routines and create organizational learning processes and systems that encourage double-loop learning in ways that persist.’ (p 214).

Argyris called this, ‘Model II Theory-in-Use’, and it is shown in Figure 3, above:

Whilst not identical, the term ‘governing variables’ has a certain kinship with what reengineering people called ‘business rules’, and what Seddon (2003: 119/120; 2008: 71, 79 & 81) calls ‘system conditions’; those actions that ‘govern’ stages in work processes, regardless of whether or not they aid or inhibit the process. He says that system conditions ‘exist because of the way managers think about the design and management of work,’ and that the ‘ideas’ that give rise to this are ‘flawed’ (ibid).

According to Seddon (2002: 22) this requires an ‘entirely different way of thinking’: ‘For banks, as well as many other organisations, it is the whole system that needs to change if real advances in service and quality are to be made. For this to happen, people need to change the way in which they think. The change is unlikely to occur while thinking is influenced by notions of hierarchy.’
“A key issue is the nature of the way people in leadership positions in these organisations actually ‘think’, and how this ‘thinking’ needs to fundamentally change before the organisations themselves are likely to benefit from radical improvements”

Mind-sets
In Blanchard’s (1989) view, these ‘notions of hierarchy’ are not ‘thrown away’, they are just ‘looked at differently.’ In his model (Figure 4), the left-hand ‘Responsive-Up’ mind-set exhibits Dyess’ view that; ‘Historically, managers hoarded information, controlling its release to bolster their power’ (*Kirby Dyess, vice president and director, Human Resources, Intel; cited in Champy, 1996: 146).

In Blanchard’s alternative form – the ‘Customer’ mind-set – ‘information’ is made available to (if not held by) all employees, in order that they can make appropriate decisions that affect good customer service. Intuitive or not, further examples of this concept – both espousal and ‘use’ – are shown in Figure 5, overleaf.

In Nordstrom’s case (Peters, 1988: 370), this was billed as their ‘Organization Chart’ and called the ‘helping hand facing upwards’, a principle echoed by Patricia Vaz (2002; then BT Retail’s managing director of customer service), with: ‘They work their socks off and often all they need is a helping hand.’ (*How Patricia sees the future*, BT Today, July, p. 4)

Blanchard’s view was that managers had to decide who they ‘worked for, your boss or your people?’, and saw this as a fundamental shift of mind-set, one that is echoed by Fellers (1999: 89) with: ‘Managers who have strong needs for control and power, or who want others to revere their „leadership‟, must be concerned with „who‟ they work for; whether they are right or wrong. Ownership is settling upon us by those on the frontline like the sea upon the shore. In several organizations that have taken the lead in empowerment, the supervisors tell me they now feel as if they work for the employees, compared to the old situation where the employees answered to them. I think this is what Dr Deming had in mind.’

Ownership
Whilst empowerment has been rightly criticised when it is seen as little more than the ‘emperor’s new clothes’ (Argyris, 1998), Osborne and Gaebler (1993: 51) argue that it is an ‘American tradition’ that is as ‘old as the frontier,’ citing as examples self-help organisations, day-care centres, babysitting cooperatives, Little Leagues, Girl and Boy Scout groups, recycling programmes and ‘volunteer organisations of all kinds.’ The mistake, they say, is that ‘when we organize our public business, we forget these lessons,’ citing George

‘Turning the Pyramid Upside Down’?

a) ‘Responsive-Up’ Mind-set

- CEO/Board
- Middle Managers
- FLMs & Customer-Facing Employees/Workers

b) ‘Customer’ Mind-set

- Customer-Facing Employees/Workers & FLMs
- Middle Managers
- SMG/Board/CEO

Figure 4: Turning The Pyramid Upside Down. Source: Chamberlin, J E, (1990), adapted from Blanchard, K H, (1989), The :01The Minute Manager – Live!, Audio cassette series, CareerTrack Publication, Tape 1/Side 2
Latimer, former Mayor of St Paul, Minnesota: ‘The older I get, the more convinced I am that to really work, programs have to be owned by the people they’re serving. That isn’t just rhetoric, it’s real. There’s got to be ownership’ (ibid: 49).

In the middle of the previous decade, Tom Peters, evangelising on a very similar theme, cited Bob Swiggett, CEO of the Stamford (CT) Kollmorgen company: ‘The leader’s role is to create a vision… not to kick somebody in the backside. The role of the leader is the servant’s role. It’s supporting his people, running interference for them, coming out with an atmosphere of trust, and understanding, and love. You want your people to feel they have complete control over their destiny at every level. Tyranny is not tolerated here. People who want to manage in the traditional sense are cast off by their peers like dandruff… We preach trust and the golden rule.’


As Argyris (1998: 99) said, all you get if ‘workers have little control over their destinies’ is ‘contractual compliance’, whereas if ‘management wants employees to take more responsibility for their own destiny, it must encourage the development of internal commitment’ (ibid: 100). This need for a complete reversal of perspective was also emphasised by Tom Peters (1985), who said: ‘What we require in my opinion is nothing less than a 180º shift.’

Seddon (2002: 31) reinforced this ‘180º shift’ further (albeit with a health warning), with: ‘On ‘customer service’ seminars, managers are encouraged to think of their organisation as an upside-down triangle. Instead of being a hierarchy (like a pyramid), it is shown to be supporting all those people who spend their time with customers. They see the logic of this and say that it’s a good idea, but too few realise just what action must be taken and which practices must be abolished. At the very least it means that managers must not demand that their staff are always doing things for them, after all, the staff are there to serve the customer.’

Seddon claims that these notions of hierarchy and service are ‘incompatible’, and that the ‘re-education of management begins with the destruction of hierarchical thinking’ (ibid). This ‘re-education’ is what Champy (1996) referred to as the ‘reengineering [of] management’, and agreeing, said that the ‘real challenge to changing dramatically how companies operate is with managers, both in how they work and how they think’ (p xii).

Part two and a full list of references will appear in the next issue of the journal.
Faults, failures and availability in self-service technology

By Michal Girman, Peter Keusch, and Peter Kmec, Department of Electrical Engineering, Mechatronics and Industrial Engineering, Technical University of Košice, Slovakia.

"According to the experience of the maintenance operator, very few failures are reported by the users and most failures are discovered by the operator himself"

Introduction
Self service technology (SST) has entered many areas of the service industry, due to advances in technology and an effort to increase the efficiency of service delivery. In SST most often no human-to-human interaction takes place, so there is no possibility for immediate service recovery or the failure may not be evident at the moment of encounter: indeed, many dissatisfying SST incidents are due to technology or process failures (Meuter et al, 2000). Published research has evaluated self-service technology mostly from the customer’s perspective. As the core assets of SST are physical, their ongoing maintenance will play a key role in ensuring customer satisfaction and effectiveness of service. Taking the service provider’s lens, this article examines what can be done to make self-service technology work as expected.

To estimate the availability of SST (proportion of time when the service is free of faults) we apply a formula developed for the evaluation of standby equipment performance in maintenance (Moubray, 1997). Suppose, there is a system that provides self-service to users which is inspected by service operators on a regular basis with a period T. The faults, whose rate of occurrence is denoted as λ (ie, number of faults per unit time such as year), are repaired at the inspection and the time to repair is negligible with respect to the inspection period.

Fault rate (λ), maintenance inspection period (T), number of service encounters in a given period (N), number of service encounters resulting in a failure in the given period (Nf), and unavailability (a’), provided that faults occur at random, are related as a’ = Nf/N = (λT)/2, thus availability is 1-a’.

Generally, λ is a matter of system design and T is a matter of maintenance policy. If it is not possible to reduce the fault rate, the only way to increase the availability is to shorten the inspection intervals. If the service provider plans to start a systematic maintenance programme, the formula can be used as a first estimate of availability, using the experience of operations – or maintenance staff – thus eliminating the need for surveys. Alternatively, the formula can be used to estimate lost revenues due to service failures, provided that N, T, and λ are known.
Case study: Vending machines

This case study is from a traditional self-service setting. A vending machine operator, which provides a nation-wide service, operates 15 vending machines for drinks on the university campus. Because the company does not record data on faults and failures, their estimates were provided through an interview with the maintenance operator of the machines. The machines are inspected weekly. A weekly inspection consists of the following activities: refill of the machine; check of the coin handling mechanism; check of the moving mechanical parts, such as cup dispenser and sliding tray; check of the amount of dispensed water; and removal/refill of coins in the coin holder. Detected faults are corrected immediately.

The mass of the substance dispensed into the mixture, such as coffee or tea, is checked every six months. Faults were divided into two categories, based on the resulting severity of service failure: major faults, which prevent the provision of service; and minor faults that result in lower quality of service. Major faults are either caused by the users (incorrect or defective coins, rubbish, or other objects inserted into the coin receiver) or are technical – such as a blocked cup dispenser and defective sliding tray. There is a single prevalent minor fault – water scale deposit in the tubing, which causes a smaller than required amount of water in the mixture.

In this case study we consider a machine located on the ground floor of the main campus building. The machine’s type is Omnimatic Aurora, its rate of major faults is approximately one per ten years, and its rate of minor faults is approximately ten per year. The usage rate estimated by the maintenance operator is approximately 250-350 servings per week. Assuming 40 weeks per year, five work days (ignoring holidays and weekends), and random occurrence of faults, the rate of major faults is $\lambda = 5 \times 10^{-4}$ per day, the rate of minor faults is $\lambda = 5 \times 10^{-2}$ per day, and the inspection interval is $T = 5$ days.

Applying the availability formula, the availability of service devoid of major faults is 99.9% and the availability of service devoid of minor faults is 87.5%. At the average of 300 servings per week (during the semester), there are approximately 0.36 service encounters per week with a major service failure and 37.5 service encounters per week with a minor service failure. Because it is likely that many customers may return to be served several times per week, the number of unique customers is possibly lower than 300 per week. Therefore, any numbers regarding service availability and negative service encounters should be taken more seriously when returning customers are considered.

According to the experience of the maintenance operator, very few failures are reported by the users and most failures are discovered by the operator himself during the periodic checks. Some users may feel annoyed by the lower quality of service yet they do not report the failure (perhaps it may be too much of a bother for them or the phone call costs money they are not willing to pay). This case study highlights the importance of periodic checks: as long as the complaint rate is low, the service provider must rely on periodic checks to assure the expected quality of service.

“As users practically never report faults, minor faults are not corrected once they occur”
Case study: Payphones

The payphones are operated in the centre of the city of approximately 250,000 inhabitants. The phones are of two types, coin operated (IPM Trilogy, n=13) and card operated (Marconi Sapphire, n=15), and are typically located in pairs – one coin and one card operated, next to each other. As in the previous case study, no written records are available on faults and the number of users can be estimated from the number of impulses and revenues generated by the machines. The maintenance operator was interviewed to obtain the necessary information on faults and the maintenance procedures.

The machines are inspected automatically: each machine is dialled once in 24 hours during the night. Such inspection can detect faults, such as clogged coin handling mechanism, a defective receiver and, in the case of card-operated boxes, a faulty card reader. These faults make it impossible to call from the phone and we classify such faults as major faults. Most major faults are due to users, especially for the coin-operated phones (approximately 90% of faults are caused by rubbish and wrong coins), the rest of the faults are technical in nature. Some faults, although very infrequent ones, cause an error during the automatic check itself (software bug, low batteries and faulty capacitors), when it is not possible to check the state of the machine. Faults could occur at any time during the day and they are typically detected during the night. Maintenance operators repair the faults next morning.

Minor faults are defined as faults which do not prevent calling from the phone but cause problems when making the connection. There are two typical minor faults: first, the box accepts coins of only one denomination and, second, several attempts to insert the coin must be made until one is accepted by the machine (i.e., the coin repeatedly falls through into the coin return dispenser). Even though we classify such cases as minor faults, in some cases they would result in major failures if a user, for example a traveller from abroad, gives up after the first unsuccessful attempt to drop a coin.

The minor faults are not detected automatically. The previous maintenance policy of a one monthly check by a maintenance operator has been abandoned. When the coin dispenser is full and coins are taken out, no other maintenance is provided. As users practically never report faults, minor faults are not corrected once they occur.

The data needed to estimate the availability devoid of major faults are summarised in Table 1.

With an automatic fault checking period of one day, the resulting estimated availability devoid of major faults is 93.2% for coin operated and 99.7% for card operated machines. The corresponding number of major failures per machine is approximately 50 per year for coin operated machines and two per year for card operated machines. Card operated machines are more reliable, yet they are less used, probably because the card must be purchased for the price of approximately 30 one-minute calls. For comparison, availability devoid of major faults in Australia was between 93 and 95% in the 2004 to 2007 period (Australian Communications and Media Authority, 2008), although that report does not indicate whether the phones are card or coin operated.

In this case study, the availability with respect to minor faults cannot be estimated as there is no periodic inspection for such faults. The SST of payphones is in decline due to the expanding mobile phone technology. However, the requirement of universal accessibility to payphones mandates the operator to

<table>
<thead>
<tr>
<th></th>
<th>Coin operated</th>
<th>Card operated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of machines</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>Fault rate</td>
<td>50 per year 1)</td>
<td>2 per year</td>
</tr>
<tr>
<td>Usage rate</td>
<td>700-800 per month</td>
<td>300-400 per month</td>
</tr>
</tbody>
</table>

Table 1: Fault and usage rates per payphone machine as estimated by the maintenance operator

1) Fault rates may vary among individual machines in the approximate range of 10 to 300 per year.
keep a certain number of payphones depending on the population of the settlement (Telecommunications Office of the Slovak Republic, 2007). On a national scale, operation of payphones produces loss to the operator (Jarošová, 2007). Abandoning the periodic maintenance by human operators may be cost effective but results in minor faults eroding the quality of service. We suggest that periodic human maintenance would be necessary at least at payphones which are profitable for the service provider. The service provider should stratify the locations of payphones according to profitability and develop a maintenance schedule.

Conclusions
If users do not complain or a timely response to complaints is not possible, faults do not get corrected and may lead, depending on the usage rate, to more failures. SST providers should not count on failure reports by users and be proactive because it is better to correct faults before they lead to failures.

A low complaining rate can be expected, especially for minor failures, which could remain unnoticed or simply ignored by the service provider, as found in the payphone case study in this paper. Yet minor failures could strike in two ways. First, minor failures may discourage first-time users who are not quite ready to use SST and seek flawless performance. Second, for returning users, it is reasonable to expect that even minor failures experienced repeatedly may undermine their trust in the service provider.

The service industry will retain its high-touch character even when SST is used. The human touch will take place behind the scenes to make sure that technology is working as expected. Data on faults and failures should be analysed in SST, as it is common in manufacturing, where a plant maintenance module is included in the company’s information system.

References

“The service industry will retain its high-touch character even when SST is used. The human touch will take place behind the scenes to make sure that technology is working as expected”
With the advent of life membership we are attracting new members. There are still people who are engaged in management services who are not members and we would like them to join the Institute.

We can use our ‘direct entry’ route to fast track this and information is available from Brooke House.

We very much hope that our existing members will make potential members aware of this option.

- Actively promoting the IMS in your place of work
- Encourage colleagues at work as well as professional and social contacts to join the Institute
- Refer potential new members to the Journal as an example of what the IMS is about
- Remind potential members of the benefits of IMS membership, eg education system, regional structure, recognised professional qualification
- Up to the minute information via the IMS Journal and website professional support
- Undertaking contract/consultancy work

What Next?
Contact the IMS for an application form
W: www.ims-productivity.com
E: admin@ims-stowe.fsnet.co.uk
T: 01543 266909
See address opposite

Incentive
A Prize Draw at regional level will be established and all current members who recruit new members will be entered. The prize draw will take place later this year.