

Construct I.T.

For Business

enabling process change



SPICE FM

*A step by step organisational development framework
for facilities management*

*SPICE FM**

Panel of Experts

Peter Wearmouth (Chair)	NHS Estates
Marjan Sarshar (Project Manager)	University of Salford
Ron Stone (Champion)	NHS Estates
Robert Jackson (DETR Project Manager)	Davis Langdon
Keith Alexander	Centre for Facilities Management
Dilanthi Amaratunga	University of Salford
David Baldry	University of Salford
Stephen Brown	North Tees & Hartlepool NHS Trust
Roger Dyson	WS Atkins
Paul Featherstone	Manchester Community Healthcare Trust
John Flannery	Bolton Hospital NHS Trust
Richard Haigh	University of Salford
Keith Hamblett	BT Property
Martin Jarrett	CITEX
Peter Jessamine	Continuum Consultancy
Weng Lee	EC Harris
Margaret Nelson	University of Salford
Nigel Palmer	Bolton Hospital NHS Estates
Eric Stokes	University of Salford
Adrian Yates	Central Manchester Healthcare NHS Trust

Bridgewater Building
University of Salford
Salford M7 9NU
United Kingdom
Tel: +44 (0)161 295 5317
Fax: +44 (0)161 295 5011
E-Mail: spicefm@sun.scpm.salford.ac.uk
Web: <http://www.scpm.salford.ac.uk/spicefm>

* SPICE FM was a research project funded by the EPSRC (Engineering and Physical Sciences Research Council) and the DETR (Department of Environment Transport and the Regions) in the UK.

Foreword

On behalf of the Secretary of State for Health my business is developing policy and improving performance of buildings and services within the NHS, the largest estate portfolio under Government responsibility in Europe.

This brings together professionals and specialists from many disciplines operating within a change management system as the healthcare estate adjusts to the modernisation agenda. In simple terms, this entails management of a complex system of numerous inter-related actions, which needs a common understanding, a method of control and a monitoring system to ensure the outputs are delivered in a cost effective and timely manner.

A key on-going requirement is to find, develop and test management tools to assist our professional staff in meeting these objectives. Working with the SPICE and SPICE FM teams has generated a confidence that an NHS Trust, or any business, can make overall improvements using the step-by-step principle to organisational maturity.

Problems in the past were often addressed in isolation by adopting a procedure that finished when a conclusion was reached. In contrast, SPICE adopts process thinking, which is continuous, developing constant improvement and links with other accepted systems such as critical success factors, the balanced scorecard and the EFQM model.

In my opinion SPICE and SPICE FM are powerful tools if used energetically and by a committed organisation.

The feedback we have received from the test bed trusts has been very positive and I would commend the system to all estates and facilities managers for consideration in continuously assessing and improving their service provision.



Peter Wearmouth
Acting Chief Executive
NHS Estates



Table of Contents

The aims of this booklet	1
Executive summary	2
Introduction	3
Use of the Balanced Score Card in FM	4
Process Thinking in FM	8
Creating a Continuous Improvement Infrastructure	20
Real Life Examples	23
Relationship with EFQM Model	38
Summary	40
Appendix A – Extract from the SPICE FM Process Maturity Questionnaire	41
Glossary	43
References and Bibliography	44

The Aims of this Booklet

The SPICE FM research project was aimed at developing a step-by-step organisational development framework for Facilities Management (FM) organisations.

This booklet provides an overview of the framework devised by the SPICE FM project. This framework integrates a strategic management tool with a model organisations can use to evaluate and improve their processes. Together, these elements can assist FM organisations to focus on strategy and continuously improve on service delivery.

Who should read this?

This booklet has been written specifically for directors and managers with responsibility for facilities management in the public and private sectors.

What can SPICE achieve?

The SPICE FM framework can help FM organisations to: -

- increase their awareness of the need for strategy
- focus on improving core FM processes
- improve their ability to implement a strategic vision

Executive Summary

SPICE FM is a step-by-step organisational development framework for Facilities Management (FM) providers, including in-house departments and external contractors. It allows FM organisations to continuously review and improve their business performance.

Around 90% of organisations that develop a strategy fail to implement it effectively. For most organisations, translating strategic directions into on-the-ground operational terms and communicating them to employees has proved exceedingly challenging. Creating an on-going strategic focus is a continuous process that requires appropriate tools and techniques.

The SPICE FM research project was designed to address this challenge. The research resulted in the approach shown in figure 1. It has two core components that can be used individually or together to enhance FM performance: -

- The Balanced Scorecard is a strategic management tool that can help FM providers understand their role in meeting the needs of the core business. The Scorecard combines financial measures with operational issues and customer and

staff issues. All of these are vital to growth and long-term competitiveness.

- SPICE FM is a step-by-step process evaluation tool that helps FM providers evaluate and continuously improve their service delivery at an operational level.
- The strategic management and process evaluation tools can be used together, so that improving service delivery is aligned with the strategic objectives of the core business. The FM provider is thus able to develop its capabilities while assisting the core business to implement its vision.

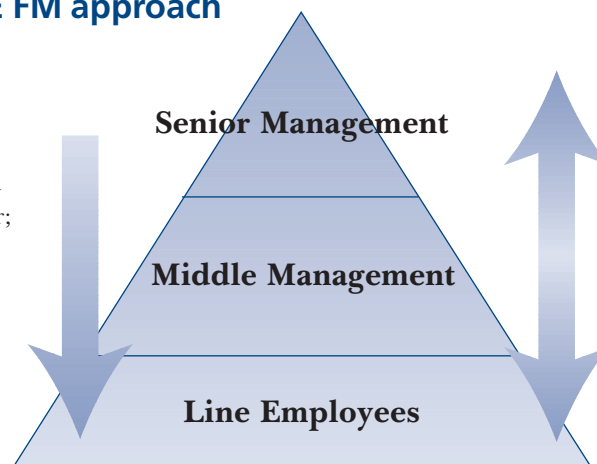
This booklet describes these three approaches to improving FM performance. It includes real-life case studies that illustrate how the framework has been used by several hospitals and a large retail chain.

However, this booklet does not contain sufficient information to actually implement SPICE FM within your organisation. If you would like to implement the framework, please contact the project team at the University of Salford (www.scpm.salford.ac.uk/spicefm), which can put you in contact with relevant organisations.

Figure 1: The SPICE FM approach

Top Down

The 'Balanced Scorecard' identifies an organisation's business objectives based on four perspectives; Customer; Internal Process; Financial; and Learning and Growth



Middle Out

The Process Maturity Model improves the capability of the management processes that support the implementation of an organisation's business strategy.

Introduction

Despite large investments and considerable achievements, the field of Facilities Management (FM) remains under-researched. The drive towards best practice is supported by an inadequate knowledge base, with few well-established methods and techniques (Nutt, 1999). FM professionals recognise the need for strategic focus, and that improvements in operational processes can improve business performance. However, FM organisations lack clear guidelines to direct their improvement efforts and to benchmark their performance against other organisations.

SPICE FM is a learning framework for FM organisations. Kaplan and Norton (1996) list three essential ingredients for an effective learning process within organisations:

- 1 - *A shared strategic framework* that communicates strategy and allows participants to see how their activities contribute to the achievement of the strategy.
- 2 - *A feedback process* that collects performance data about the strategy and allows any assumptions or hypotheses to be tested.
- 3 - *A team problem solving process* that can adapt the strategy to emerging conditions and issues.

The SPICE FM framework combines the Balanced Scorecard with the SPICE maturity framework to meet these three objectives.

The SPICE maturity framework draws a distinction between organisations that have 'mature' or well-established processes, and those where the processes are 'immature'.

Characteristics of immature organisations include difficulties in meeting expectations on service delivery time, cost and quality.

They also have difficulty in managing people and introducing new technologies.

Organisations with greater maturity are characterised by improved capability on delivering service to cost, timescale, and quality.

Mature organisations align technology and people management with efforts to improve processes.

SPICE FM aligns this process maturity framework with the strategic management system of the Balanced Scorecard. It creates an environment where improvement priorities for FM providers are directly linked to strategic business directions.

Use of Balanced Scorecard in FM

The FM Sector

Facilities Management (FM) is a large emerging business sector. The FM budget of a typical organisation often accounts for 30-40% of its running costs, coming second only to payroll. The latest surveys estimate the provision of FM services to be worth £5.9 billion, up by 90% since 1995 (Facilities Management Solutions, 2001). Alexander (1996) states that *“Facilities are an organisation’s second largest expense and can account for as much as 15% of turnover”* and *“they are also the largest item on the balance sheet, typically over 25% of all fixed assets”*.

According to the latest report from Market and Business Development, sales turnover in the FM sector totals £75.5 billion, representing a 5% increase. The report also argues that the market has the potential to expand three fold. However, according to FBA (Professionals in Facilities Management), poor understanding of FM at the highest level is costing British business £7 billion a year (1999). A survey of FM operations among top companies in the banking and financial services, legal, technology and communications sectors has identified that over 90% operate considerably below best practice (BIFM, 1999).

FM is generally viewed as a support function for an organisation’s core business. Many managers and directors therefore believe that its role should be mainly operational.

However, due to the financial significance of FM, and its direct impact on customer and employee satisfaction, these views are changing. Many now believe that FM should play a major role in achieving and implementing an organisation’s overall business strategy.

Strategic Importance of Facilities Management

The need to draw attention to FM as a factor in overall business strategy has been a major issue in recent years. In particular, there has been a need to raise awareness at senior management level (Then, 1999).

The FM role within organisations should be built on an aspiration to continuously add value. This is achieved by providing appropriate and innovative ‘facilities solutions’ to business challenges through the skilful manipulation of all business resources. In other words, the FM role should achieve the optimum balance between people, physical assets and technology.

It is therefore increasingly necessary to demonstrate the performance links between the FM role and the core business.

Relationship between Facilities Management, Facilities Management strategy and the core business

A lack of strategic integration between FM and the core organisation could result in contradictory objectives and goals.

The message is that management must acknowledge that facilities are a business resource. FM has to establish its strategic role by demonstrating its relevance to the overall business process.

However, practitioners and academics are still struggling to establish meaningful FM measures, how to measure them and how to draw relationships with the core business.

Some organisations have begun to touch on non-financial or ‘soft’ issues as well as traditional accounting variables, suggesting that these measures have assumed a place on their agendas. However, this does not seem to have permeated most FM organisations.

Attempting to introduce a performance management system that links FM measures to strategy has been a major task for FM organisations. In this context, SPICE FM uses the Balanced Scorecard (Kaplan and Norton, 1996) approach to link measures to strategy, thus emphasising the strategic importance of FM and exploring its contribution to the core business.

The Balanced Scorecard

It is often argued that performance measures should be derived from strategy: that is, they should reinforce the importance of certain strategic objectives (Skinner, 1989). A strategic management system should address this and create an organisation that:

- Is healthy, balanced, efficient and effective;
- Provides service to its customers as well as its employees; and
- Puts value on results

The Balanced Scorecard presents such a model for strategic performance measurement.

The Scorecard measures performance and develops strategies by analysing results across a range of activities. It also attempts to overcome the deficiencies of existing measurement systems.

It translates the organisation's vision into a set of performance indicators covering the following four perspectives:

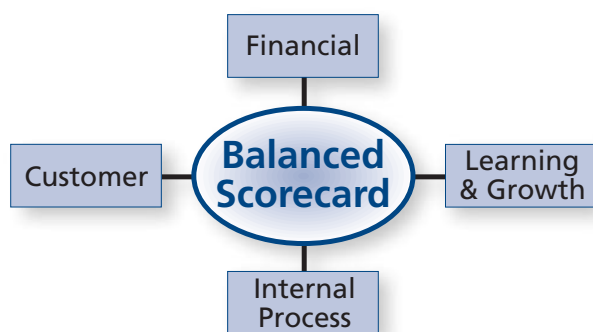
- Customer: how must we look to our customers?
- Internal processes: what internal processes must we excel at?

- Financial: how will we look to the shareholders?
- Innovation: how can the organisation learn and improve?

This rounded assessment provides management with a “balanced” view of the business.

Through the Scorecard, the organisation monitors both its current performance (in terms of finances, customer satisfaction, and business process results) and its efforts to improve processes, motivate and educate employees, and enhance information systems. The Scorecard still includes hard financial indicators, but it balances these with other, so-called “soft” measures, such as customer satisfaction and organisational learning. In viewing an organisation from four different perspectives (Figure 2), the Balanced Scorecard links the short-term operational control of the business to the long-term vision and strategy (Kaplan and Norton, 1996).

Figure 2: The Balanced Scorecard



Skandia

“We have achieved a great deal through the use of Balanced Scorecard. Marrying our IT system to the Scorecard produced the perfect tool for strategic business management on all levels of the organisation. It guides Skandia on the corporate level, subsidiary level, and the individual contributor level. By enabling everyone in the organisation to see the overall picture and realise they can have an influence, the Scorecard is helping to make Skandia a great company”.

Four strategic perspectives

The Balanced Scorecard allows managers to look at the business from the four perspectives.

A brief overview of the four perspectives is given below:

Customer perspective

This captures the ability of the organisation to provide quality goods and services, and to deliver overall customer satisfaction. It places importance on the organisation's ability to achieve its vision, and how it wants to be seen by its customers. This perspective guides the internal processes and development efforts of the company. It is at the heart of the scorecard: if the company fails to deliver the right products and services to satisfy customer needs in the short and long term, then the business will not generate revenue and will eventually wither and die.

Internal processes perspective

This is about identifying and measuring the processes that organisations must excel at to achieve their financial and customer strategic goals. To meet their own objectives and customers' expectations, organisations must first identify these key business processes, then monitor them to ensure satisfactory outcomes. These key internal processes enable the business unit to deliver customers' value propositions and satisfy shareholder expectations of financial returns.

This perspective reveals a fundamental differences between the traditional approach to performance measurement, and the Balanced Scorecard. While traditional approaches attempt to monitor and improve existing business processes, the Scorecard identifies entirely new processes at which the organisation must excel to meet customer and financial objectives.

Financial perspective

Financial performance measures define the long-term objectives of the business unit. While most businesses emphasise profitability, other financial objectives are also possible. Financial performance measures indicate whether the organisation's strategy and implementation are contributing to bottom-line improvement. A well-designed financial control system can actually enhance an organisation's management system.

Learning and growth perspective

The predominant element in this perspective is whether organisations can continue to improve and create future value for their stakeholders. This, in turn, identifies the infrastructure the organisation must build to create long-term growth and improvement. This perspective examines the ability of employees, the quality of information systems, and the effects of organisational alignment in meeting an organisation's goals. Once organisations have established their strategic objectives, they need to identify the performance measures needed to promote continuous organisational, divisional and group learning and growth.

Siemens

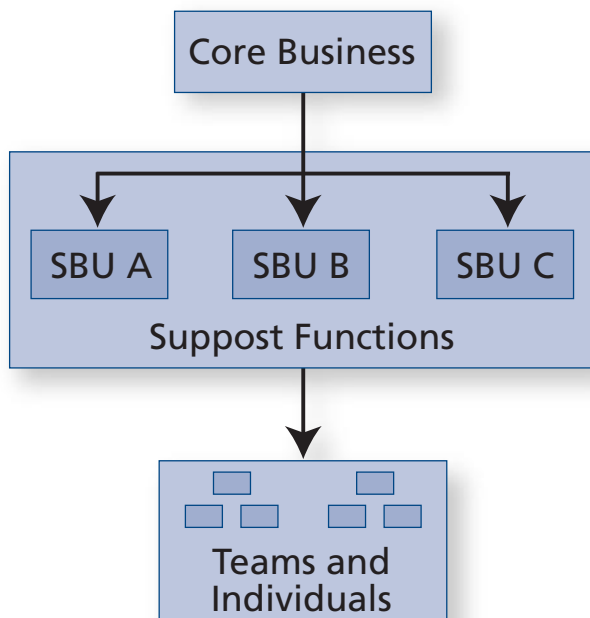
"We've always had strategies, but through Balanced Scorecard we bring them to life. Every business unit scorecard and uses it to focus attention on designated critical success factors. Moreover, each employee knows his or her contribution to the strategy, enforcing alignment and accountability throughout the organisation. It's the way we manage our business."

The hierarchical nature of the Balanced Scorecard

The Balanced Scorecard helps organisations map the long-term requirements of the business's overall strategy with that of departments (such as FM), teams and individuals. Through this process, departmental performance remains focused on the organisation's overall objectives. Also, the goals of teams and individuals can be linked to overall objectives; thereby building capabilities that will enable longer-term strategic goals to be achieved. Figure 3 illustrates these relationships.

As shown above, in the ideal world, every person in the organisation, from the boardroom to the back room, would understand the overall strategy and how individual goals support the 'big picture'. The Balanced Scorecard permits such a top-to-bottom alignment.

Figure 3: Top-to-bottom alignment of strategy



The challenge: Implementing the strategy

Several hundred global businesses have now adopted the Scorecard approach, although committed advocates have differing interpretations on how to deploy and use it. One objective that is shared by all organisations is having the ability to implement business strategy quickly. However, up to 70% of organisations fail to fully implement their Balanced Scorecard.

For most FM organisations, developing a strategy is only the first step. The key issue is achieving a strategically focused organisation, which is continually evolving and responding to new customer and market demands.

The introduction to this booklet suggested three characteristics for a learning organisation, namely: Strategic focus; a feedback loop; and a team problem solving culture. While the Balanced Scorecard provides the strategic focus, further tools and techniques are required to create the feedback loop and the team problem solving cultures.

FM organisations need the necessary infrastructure to communicate strategic direction to operational managers and employees. They must receive feedback on the impact of strategy on day-to-day operational issues, and launch appropriate improvement initiatives. Strategy must translate into the day-to-day actions of employees.

The SPICE FM assessment process helps provide a feedback loop as well as a team problem solving culture. It therefore creates the infrastructure to link day-to-day operational activities to FM strategy.

Applying the SPICE FM concept is no guarantee of formulating a successful strategy, nor of assessing FM process capability or aligning strategy within FM organisations. But the great strength of the concept lies in the very process of deploying it, which is an effective way of expressing the organisation's strategy and vision in tangible terms and to gather support for it throughout the organisation.

Process Thinking in FM

Introduction

Despite considerable achievements in recent years, FM remains a fairly new business sector. Traditionally, FM has lacked specific management tools that meet its needs, and has borrowed methods and tools from manufacturing industries.

This section introduces the SPICE FM process maturity model, a methodology for increasing FM organisations' ability to identify and improve key business processes. The model is a step-by-step approach to continuous improvement that aims to secure long-term competitive advantage.

- A method for measuring the maturity of current business processes;
- A five level framework for achieving step-by-step improvements.

Definition of a process

There are many definitions of a process. Table 1 gives two examples. The two definitions emphasise different aspects of a process.

Table 1: Process Definition

Source	Definition
The Concise Oxford Dictionary	Course of action, proceeding, esp. series of operations in manufacturing, printing, photography, etc.
SEI CMM® (Capability Maturity Model)	A process is a sequence of steps performed for a given purpose. More simply stated, process is what you do. The process integrates people, tools and procedures together.

Characteristics of a process

A process has several essential features, which Ould (1995) lists as follows:

- A process involves activity. People or equipment do things.
- A process also generally involves more than one person or piece of equipment. A process is therefore about groups, and concerns collaborative activity.
- A process has a goal. It is intended to achieve something and to produce results.

These features have implications. (i) Since a process must be shared among groups, it needs to be defined. (ii) The definition and knowledge of the process must be passed to those who perform it. Hence there is a requirement for process learning. The knowledge of the process should drive and align the behaviour and activities of those who perform it. (iii) The process leads to process results. This is shown in Figure 4.

Figure 4: Aspects of a process



Process Thinking

Due to changes in the market place and customers' increasing expectations, task orientated or functional thinking has become outdated. Many management thinkers believe that organisational infrastructure and capabilities are far more decisive in securing competitive advantage than isolated moments of strategic brilliance. After all, it is far easier for a competitor to copy a strategic decision than to duplicate mature and effective business processes. The EFQM (European Foundation for Quality Management) model, which many European businesses embrace, emphasises the importance of process thinking in driving businesses forward.

Many of the early advocates of process thinking, such as Michael Hammer and James Champy, argued for radical changes to business processes in the form of Business Process Re-engineering (BPR), in the early nineties. BPR is a large scale, high-risk approach. Despite some early successes, the majority of the organisations failed to implement BPR. Furthermore, BPR resulted in serious business failures for some organisations (Davenport, 1992).

Businesses have subsequently shifted towards an evolutionary approach, in the form of business process improvement. Here, the key questions are how to:

- Make the cultural change to one of continuous improvement; and
- Initiate and implement continuous business process improvement.

Process institutionalisation

A process determines the way we act and react. The activities and tasks we perform to achieve a certain goal form the 'process' for achieving that goal. A disciplined process will result in ordered and consistent patterns of behaviour, whether by individuals or by groups of people. The process defines how we act or react, or it defines the activities needed to fulfil a certain task. We have a process for 'going to work', a process for 'defining service standards', and so on.

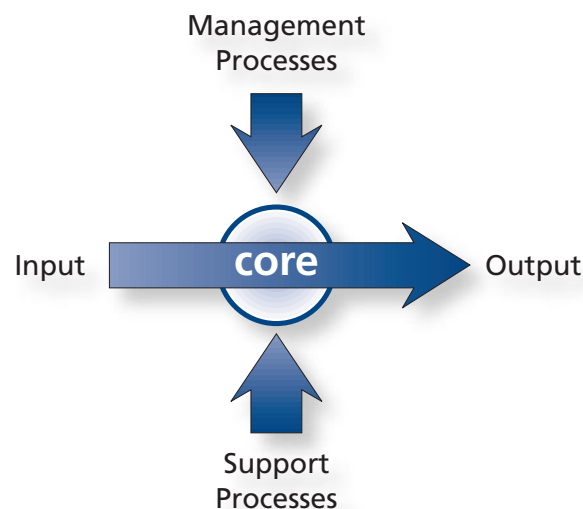
In organisations, processes involve groups and teams of people. To achieve a process discipline shared by the whole organisation, the process needs to be established or 'institutionalised'. Without organisation-wide established processes, every individual would follow his or her own way of performing a task. Attempts to adhere to a common process are likely to be ad-hoc or even chaotic, which could lead to conflict and stress.

On the other hand, in organisations where common processes are institutionalised, staff perform the process painlessly, smoothly and in harmony with each other. The process itself becomes invisible or 'transparent', because it is the natural way of performing business activities.

Core, support and management processes

Business processes can be divided into three broad types: (i) core processes; (ii) support processes; (iii) management processes. Figure 5 illustrates this.

Figure 5: Types of processes



Core processes concentrate on satisfying customers. They directly add value to the product in a way that clients understand. These processes respond to the needs of customers and generate customer satisfaction.

Support processes concentrate on satisfying 'customers' within the organisation. They might add value to the business indirectly, by supporting a core business process, or directly, by providing a suitable environment.

Management processes are concerned with managing the core and support processes.

SPICE FM is primarily concerned with management processes. The underlying philosophy is that if management processes are well performed, they will have an impact on the performance of core processes. SPICE FM does not prescribe how organisations should perform core processes. Instead, it focuses on creating a management infrastructure that allows members of staff to perform core processes successfully.

FM process focus

Most FM organisations focus on the services they provide. In such a business culture, people are naturally inclined to emphasise issues that are tangible, visible or measurable. Many organisations are likely to resist process improvement activities that do not contribute to short-term tangible results. Consequently, FM managers often view process related work as low priority.

In contrast, process-focused organisations consider tangible results in service delivery to be just one aspect of the business picture. For such organisations, how the service is delivered is

equally important. The objective is that process thinking should be accepted and used consistently. The process is seen as a disciplined way of conducting business.

In contrast to functional definitions, a process perspective in FM focuses on the tasks and activities that take place internally in the FM organisation. The emphasis is on how the work is done, rather than the functional responsibilities.

Table 2 shows the characteristics of organisations with process focus, as opposed to those without such a focus.

Table 2: Characteristics of a process focused organisation

	Without process focus	With process focus
Process discipline	The staff and their management in the course of performing their activities improvise processes.	Processes are defined and followed by staff and management; process discipline is the norm.
Organisation	Functions and roles do not necessarily align with the process requirements	Functions and roles are defined in support of the process.
Management	<ul style="list-style-type: none"> ■ Staff performance is measured in terms of the number of hours (irrespective of whether they were productive or not) ■ Managers are usually focused on solving immediate crises (fire fighting) 	<ul style="list-style-type: none"> ■ Staff performance is measured in terms of process performance and results ■ Such measurements are defined and agreed ■ Managers focus on the quality of both process and service delivery
Skills & training	Training is ad hoc and oriented towards personal inclinations	Training is planned and is defined in the support of end to end process
Tools & technology	Tools and technology are acquired as ad hoc point solutions without an overall plan and strategy	Tools and technology are selected in support of the end to end process and the automation of process activities

Process myths and facts

Based on this understanding of processes, Zahran (1998) lists a number of interesting myths that prevail in many organisations. Some of these myths are suited to facilities management organisations and are listed below:



The documentation myth

“We have a set of standard documents that specify the steps of managing facilities. We think we have a process.”

Wrong! A standard document on its own, without being trained and enforced, is no more than “shelfware”. It could do harm rather than good. It gives the false impression to management that there is a process in place. A document is a dead object. It only comes to life when it turns into knowledge in people’s brains and memories. It only becomes effective when such knowledge drives people’s behaviour.



The trust myth

“We already train our staff in the process. We automatically assume that they practise what they have learned. We think we do not have to monitor their activities or put enforcement procedures in place. We trust our staff.”

Wrong! This is “wishful thinking”. An effective process environment is designed to work effectively and endure throughout generations of staff. Without follow up, people tend to revert to their old habitual ways of performing activities.

Why should they change? People can attend many training events but still act as if they had received no training. Without enforcement, you can not guarantee that everyone in the team will follow the process.



The sponsorship myth

“We have a senior management sponsor who believes in the value of the process improvement effort.

We do not have to justify our investment and effort in process improvement.”

Wrong! Unless the business benefits of the process improvement are continuously monitored, measured and made visible, management sponsorship could be lost. The process improvement effort could be stopped at the first business crisis. Business benefits attributed to process discipline should be uncovered and publicised.



The stability myth

“We have the process defined, documented, trained and enforced.

The process is stable, and it should remain effective without any change.”

Wrong! The process will only be effective if it is aligned with the business goals. If the business goals change, the process goals must be realigned. A stable process does not necessarily mean that the process is effective. The process should reflect the latest changes in business, techniques and methods. It should be continuously realigned to reflect any changes in the business goals.

The SPICE FM Process Maturity Model

The SPICE FM process maturity model promotes continuous process improvement based on many small, evolutionary steps. It provides a system for initiating and implementing continuous improvement.

The model divides these evolutionary steps into five maturity levels, which lay the foundations for continuous process improvement.

The maturity levels form a scale for measuring the capability of an FM provider's management processes.

Each level of maturity is defined by a set of key processes. When an organisation is successfully applying each key process, it can stabilise an important part of the service delivery process and achieve the next level of maturity. The five levels also provide guidelines on how to prioritise efforts at process improvement.

Figure 6 illustrates the five stages of the SPICE FM framework. For each level, the model specifies a number of 'key processes'.

By following the steps in the model, an organisation can achieve effective and continuous improvement based on evolutionary steps.

An organisation can only be at one level of the model at any one time. If an organisation is at level 1, but implements some of the key processes of level 3 or 4, it is still considered a level 1 organisation. This is because each level lays successive foundations for the next.

An organisation has little to gain by addressing issues at a higher level if all the key processes at the current level have not been implemented.

To date, the research has focused on defining the characteristics of Levels 1 and 2 of the model.

Stepwise improvements in organisational maturity

The process maturity model lays foundations for continuous process improvement, by establishing controls on service delivery management processes before focusing on technical issues. Starting with ad-hoc processes, the evolutionary 5-stage model guides FM organisations towards developing their process capability (Sarshar et al, 2000).

In the SPICE FM framework, organisations at level 1 have little process focus. Organisations at level 2 have achieved high capability in managing service delivery. Level 3 focuses on knowledge management and sharing best practice across the organisation. In levels 4 and 5, the model introduces statistical controls and measurement.

Level 1 of SPICE FM is the entry to the framework and has no key processes. Organisations at level 1 focus on achieving the seven key processes at level 2. This lays the foundation for the key processes at the next level.

Each key process is defined by a set of critical practices that indicate if the process has been implemented in a way that is effective, repeatable and lasting. Table 3 lists the key processes at level 2 and their "enablers". To determine whether they satisfy these critical practices, organisations can use a process maturity questionnaire. Appendix A contains an extract from the SPICE FM process maturity questionnaire.

The SPICE FM approach is not prescriptive in terms of how activities are performed. Instead, the model focuses on the broader issue of process management. Effective process management encourages and supports innovative approaches to solving day-to-day business problems, rather than constraining organisations to a particular way of working.

Figure 6: The SPICE FM process maturity model

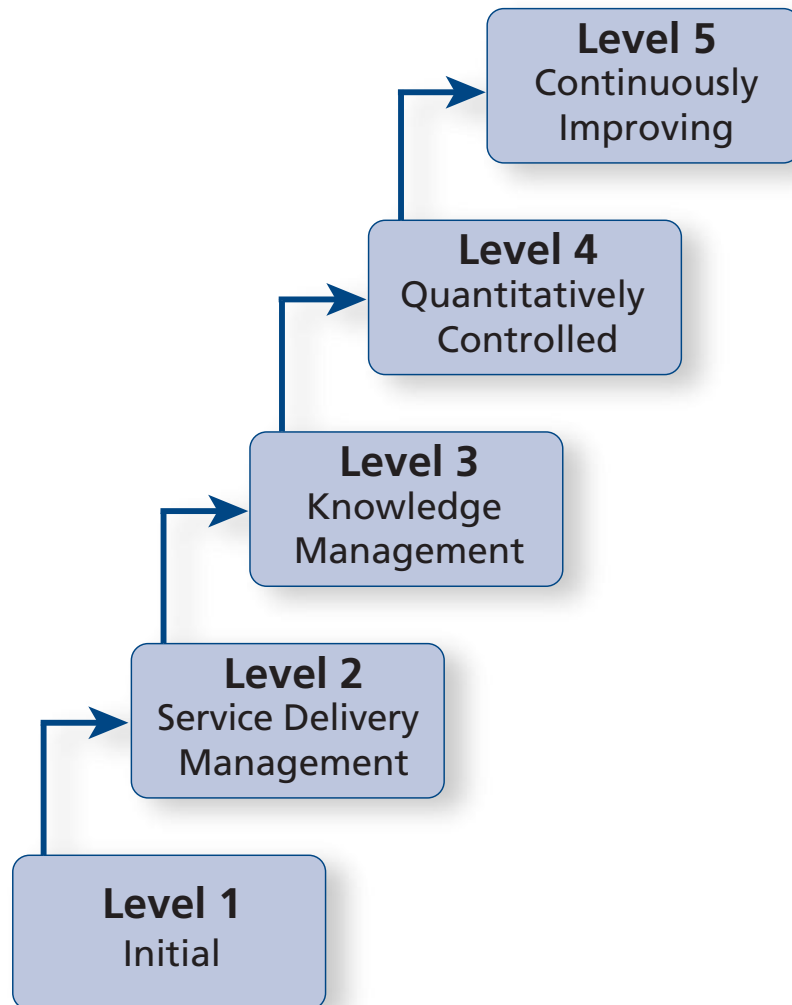


Table 3: Level 2 key processes and their enablers

Level	Key Process Areas	Generic Process Enablers
2 - Service Delivery Management	Service Requirement Management Service Planning Service Performance Monitoring Supplier and Contractor Management Health and Safety Management Risk Management Service Co-ordination	Commitment Ability Activities Evaluation Verification

Level 1 – Initial

Level 1 is the basic entry level to the model, and has no key processes. An FM provider at this level has little focus on process, and service performance is poor. Good practices are local, and are not repeated or ‘institutionalised’ across the organisation. The ineffective capture and co-ordination of service requirements tends to undermine good practices. Organisations make commitments that staff or the supply chain cannot meet, which results in crises.

During a crisis, facilities managers typically abandon planned procedures; instead, individuals do whatever activities it takes to get the job done, with little regard for the effects on other people. Figure 7 represents this focus on results. Time, cost, quality and customer satisfaction may all suffer. For an organisation at level 1, effective service delivery depends entirely on having an exceptional manager and a competent team. When these managers leave, their stabilising influences leave with them. Consequently, the organisation is unable to consistently meet the requirements of the core business.

Level 1 organisations must implement all of the level 2 key processes in order to progress, or ‘mature’, to the second level of the model.

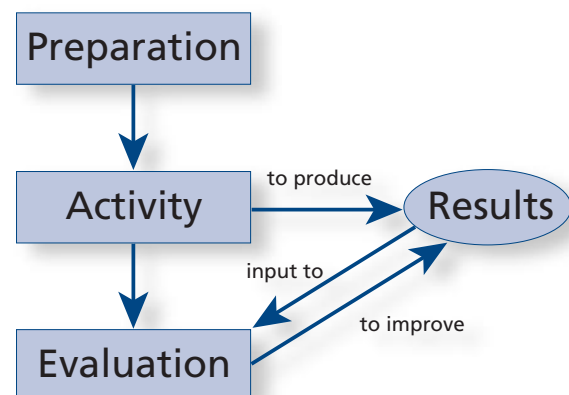
Figure 7: At level 1, individual focus on individual performance



Level 2 – Service Delivery Management

At this level, service performance can be predicted to a certain degree. A level 2 organisation has established policies and procedures for managing and delivering customer requirements. Service performance standards are established, and service delivery is co-ordinated to minimise disruption to the core business. As the service is being delivered, continuous monitoring ensures that performance standards are met.

Figure 8: At level 2, processes are planned and evaluated



At level 2, FM providers have effective processes to directly meet the requirements of the core business. An effective process is one that is practised, enforced, trained, documented, evaluated and able to improve, as shown in Figure 8.

To date, most of the efforts of the SPICE FM project have concentrated on defining and raising confidence at level 2 of the model. The research has identified seven key processes at level 2 which are described below.

Key process 1- Service requirement management

Effective management of service requirements identifies the needs of the organisation and its users. The service delivery team identifies how many tiers of customers it has and how their requirements differ. The team has a clear sense of priority in term of its customers and the service mixes it offers.

Service level agreements and performance standards are developed and continuously reviewed to remain consistent with customer requirements. They are also communicated to all staff involved in service delivery.

Key process 2- Service planning

Service planning establishes realistic schedules of work based on customer requirements. Estimates (e.g., resources, maintenance schedules, budgets, purchasing) are prepared for all work to be performed (e.g., scheduled and reactive maintenance).

Key process 3- Service performance monitoring

Service performance monitoring ensures that services are delivered in a manner that is consistent with the service level agreements and performance standards established with the customer. Feedback is gathered (e.g., from customers and staff) to monitor customer satisfaction levels. Performance measures

(e.g., waiting times, error rates, processing times) are reviewed on a regular basis, with the involvement of staff, and corrective action is taken when service delivery deviates significantly from service plans.

Key process 4- Supplier and contractor management

This key process starts with the selection of suitable suppliers and contractors. Service level agreements and performance standards are established and their performance is continuously reviewed.

Key process 5- Health and safety management

Health and Safety Management ensures that services are delivered in compliance with, or exceed, all mandatory health and safety legislation. Health and safety risks are identified, assessed, and action taken to eliminate or minimise the likelihood of any incidents.

Key process 6- Risk management

Risk management involves identifying and evaluating risks so that action can be taken, either to reduce the likelihood of an event occurring or to limit the consequences should that event occur. Risks are identified in all areas of the business (e.g., to the environment, supply breakdown, property, financial performance). Staff are actively involved in identifying risks and taking steps to prevent risks becoming a reality.

Key process 7- Service co-ordination

Service co-ordination draws on the experience of other service teams, suppliers and customers to meet customer requirements effectively. Co-ordination between these three groups ensures that disruption to the core business is minimised. Representatives with responsibility for co-ordination are appointed, and co-ordination methods are agreed.

Level 3 – Knowledge Management

A level 3 organisation builds on the achievements of level 2. At this level, the organisation has the capability to capture and share knowledge across the organisation, as shown in Figure 9.

So far, the SPICE FM research has had less focus on level 3, which is anticipated to be the subject of future research. The principles of the SPICE model for the construction industry are discussed below.

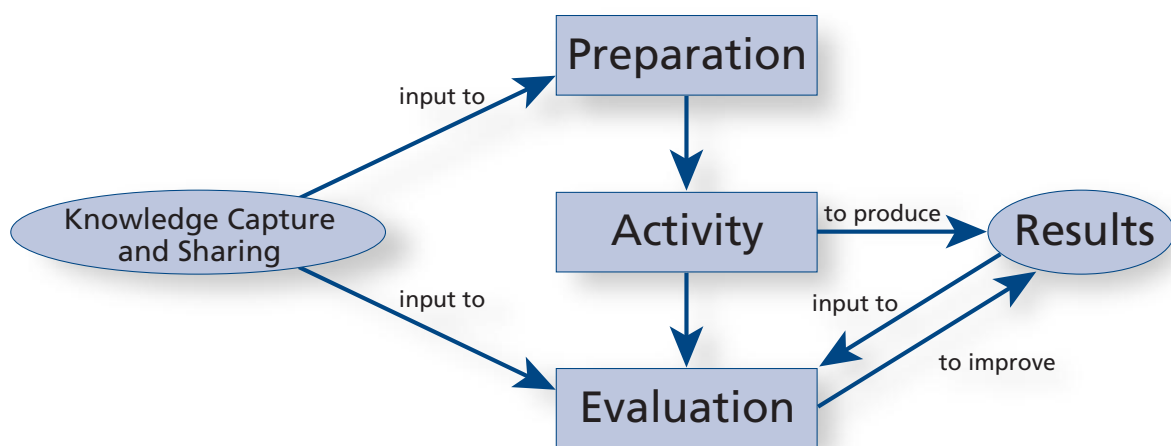
At Level 3, an organisation creates “Process Improvement Teams (PITs)”, which capture and institutionalise best practices. PIT members help create organisation-wide process libraries, which act as process standards. FM departments use these standards to define their unique processes. Employees in any part of the organisation can easily refer to these standard processes.

A well-defined process includes standard descriptions and models for performing the work, and mechanisms to verify that the work has been done correctly (such as peer reviews). It will also incorporate completion criteria, to provide an insight into progress.

Experience from the software industry offers guidelines on what life at a Level 3 organisation feels like. Characteristics of a Level 3 organisation include: (i) pro-active customer management; (ii) an effective defect tracking system, which drives service management; (iii) an organisation-wide focus on “getting it right”.

For managers, working in a level 3 organisation can be summarised as eyes on, hands off. Professionals feel confident in what they produce. They are equipped to do the job, and feel empowered to innovate. There are focused and planned inductions for new starters, with explanations for what, why and how.

Figure 9: At level 3, knowledge is shared throughout the organisation



Level 4 – Quantitatively Improved

So far, the SPICE FM research has had little focus on level 4 and 5. Most of the issues discussed here are subject to further research and development. The principles of the CMM® model are discussed below.

At this level, organisations are capable of setting quality goals for (i) the service, (ii) the process, and (iii) supply chain relationships.

The organisation will have a programme that measures productivity and quality for important process activities related to service delivery. This programme forms an objective basis for measuring the process, customer satisfaction, and harmony across the supply chain.

Organisations gain control of service delivery by narrowing variations in process performance, so that they fall within acceptable boundaries. Meaningful variations can be distinguished from random variations.

Level 5 – Continuously Improving

This level is also subject to further research. The expectation is that at level 5, the entire supply chain is focused on continuous process improvement. Level 5 organisations can identify weaknesses and strengthen processes before any problems emerge, and can do so in a collaborative manner. Data on the effectiveness of the process is used to perform cost benefit analysis on any new technologies and on proposed changes to processes.

This increased level of understanding allows organisations to consider large-scale changes to their processes. Innovations that exploit best practice are identified and adopted throughout the organisation.

Process Enablers

Anecdotal evidence from the research suggests that if managers are asked: “Do you implement level 2 key processes?” they are likely to respond “yes”. On the other hand, current studies indicate otherwise. So how can managers ensure that they are performing the key processes adequately?

The SPICE FM research has identified five process enablers, which are either activities or modes of thinking. These enablers are pre-conditions for implementing the process. They are based on principles established in CMM® (Paulk et al, 1994) and SPICE (Sarshar et al, 2000) that were developed for the software engineering and construction sectors respectively.

Process enablers focus on the results that *can be expected* from a key process. This is a forward-looking approach, which indicates an organisation has process capability *before* a process takes place. Process enablers detail the features a key process must have before it can yield successful results. Ensuring that all the process enablers are in place improves the performance and predictability of key processes.

Process enablers apply across all the key processes.

Commitment

This involves an organisation taking action to ensure that the process is established and is lasting. Typically, this means establishing policies that are shared by the whole organisation. Some processes need sponsors or leaders in the organisation. Commitment ensures that

leadership positions are created and filled, and that the relevant organisational policy statements exist.

Ability

This describes the conditions that must exist before a process can be implemented competently. It normally means having adequate resources, an appropriate organisational structure, and training in place.

Verification

A verification procedure checks that activities are performed in compliance with the agreed process. Adopting such verification checks as a process enabler emphasises the need for independent quality assurance. The focus is on *external* verification of processes.

Evaluation

This involves internal process evaluation and reviews to help control and improve processes. During the early stages of maturity, this will mean efforts by the team to improve existing processes. The focus here is on the project team’s *internal* improvements.

Activities

This describes the activities, roles and procedures necessary to implement processes. They typically involve establishing plans and procedures, performing the work, tracking it, and taking corrective action as necessary.

Creating a Continuous Improvement Infrastructure

So far, this booklet has presented two differing approaches to improving FM performance: one based on strategic management, the other on operational process improvement. Used individually, both offer valuable approaches to organisational change and continuous improvement.

However, the SPICE FM framework uses these techniques together to offer a powerful business development tool.

Why link process improvement to strategy?

Gap between strategy formulation and implementation

Surveys indicate that around 90% of developed strategies fail to be properly executed. Even using the Balanced Scorecard, 70% of strategies are not implemented (Fortune, 1997). This highlights the need for a continuous learning framework that links strategic directions to operational requirements and improvements.

SPICE FM seeks to create such framework, through two mechanisms:

- Level 2 of the model focuses on operational effectiveness of service delivery in relation to strategy.
- The SPICE FM assessment process (discussed later in this handbook) provides teams with a problem-solving infrastructure and a partial feedback loop. It involves top-to-bottom cross sections of organisations discussing the effectiveness of operational processes. The teams jointly reach decisions on future improvements.

Justifying the investment required to improve processes

Evidence from other business sectors suggests that organisations tend to overlook the need to link improvements to business objectives.

Organisations often choose to follow the exact requirements of a particular model or framework (such as CMM® or SPICE).

This approach can result in quality awards and accreditations. However, evidence suggests that if process and quality improvement efforts are not linked to strategic business directions, they may fail to promote business competitiveness and survival.

In SPICE FM, businesses can continuously align business goals and process improvement efforts in order to prioritise effort and justify investment.

Continuous improvement

Figure 10 illustrates the SPICE FM framework's use of the Balanced Scorecard and the SPICE FM Maturity Model to prioritise and monitor the effectiveness of process improvement efforts.

Stage 1: Identify strategic objectives

Initially, the Balanced Scorecard is used to clarify the organisation's business objectives. Different levels within organisations can develop separate scorecards, all linked to the requirements of the core business.

Stage 2: Evaluate current FM management processes

The FM provider evaluates its management processes using the SPICE Process Maturity Model. This evaluation typically highlights deficiencies in the FM provider's process capability.

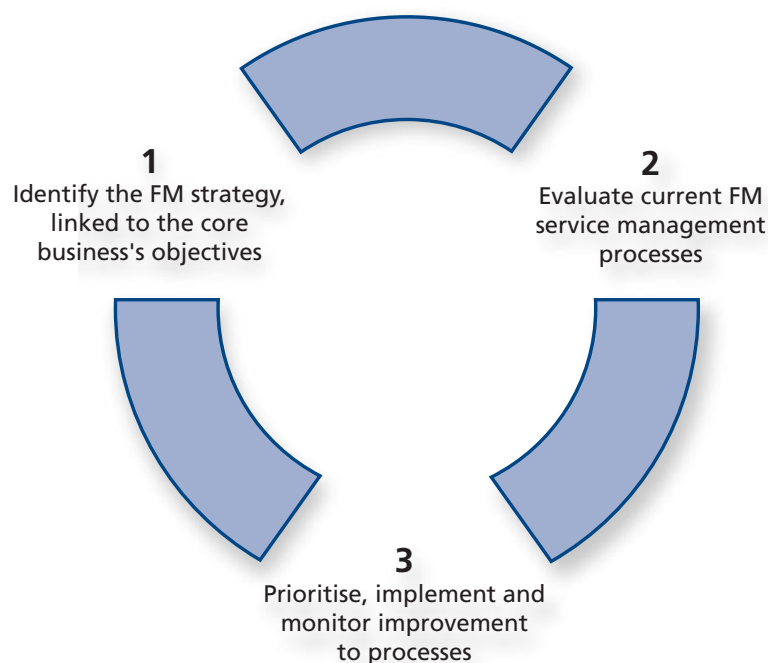
Stage 3: Prioritise, implement and monitor

Stage 3 of the cycle clarifies the relationship between a process improvement initiative and the business's aims and objectives. Process improvement opportunities are prioritised on their contribution to the organisation's critical success factors. Once improvement initiatives are selected, the organisation establishes measures, baselines and targets to monitor their effect. The new measures are then incorporated into a revised scorecard and the continuous improvement cycle starts again.

Developing process capability

By following the stages in the cycle, the FM provider is continually improving in accordance with the needs of the core business. In doing so, the FM provider is developing the capability to implement the core business' long term vision. Furthermore, the importance of FM services to the core business is highlighted, which in turn raises the profile of FM at board level of the core business and enables greater strategic input.

Figure 10: The SPICE FM continuous process improvement cycle



The SPICE FM Assessment Process

The SPICE FM assessment process engages staff from service delivery teams. It obtains feedback from staff and involves them in improvement decisions. Consequently, staff feel valued and have ownership of the subsequent outcomes.

During the case study assessments, the process followed five phases: gaining commitment; developing the Balanced Scorecard; service delivery fact finding; analysing results and feedback; and prioritisation and improvements. These are discussed below.

- *Gaining Commitment* - Initially, the SPICE team briefed senior management and obtained their commitment to perform the SPICE FM assessment.
- *Developing the Balanced Scorecard* - Existing business plans and documentation, in conjunction with senior management interviews, were used to develop a Balanced Scorecard for the department. Objectives and critical success factors that contributed directly to the core business's objectives were developed. In addition, the scorecard identified appropriate measures for each critical success factor.
- *Service delivery fact finding* - Next, members of staff were selected to participate in a process assessment. This focused on senior and middle management, as well as members of staff either responsible for or directly affected by the key processes being assessed.

The fact-finding comprised standard questionnaires, followed by semi-structured interviews and a limited document review. Extracts from the standard questionnaire can be found in appendix A.

- *Analysis of results and feedback* - Based on the questionnaires, interviews and document reviews, the assessment team put together its detailed findings, highlighting process strengths and weaknesses. The findings were also summarised in a matrix of departmental process capability. The results were shared with the participants, who discussed and agreed the findings, then discussed a list of improvement opportunities.
- *Prioritisation and improvements* - Senior management reviewed the findings and improvement opportunities. The improvements were prioritised for action based on their relevance to the objectives and critical success factors detailed in the Balanced Scorecard. Each improvement initiative was subsequently viewed as a project in its own right, with its own resources and timescales. Senior management reviewed progress.

Real Life Examples

A series of case studies of FM providers, including several NHS Trusts and a large high street retailer, has tested the SPICE FM framework extensively. Four of these case studies are examined in this section.

Study 1 – Maintenance department at a NHS Trust

Background

The maintenance department of an NHS Trust in the North West of England had responsibility for repair and maintenance work to the hospital exterior and interior. In addition to repairing faults reported by hospital staff, the department also had a preventative maintenance programme.

Directly employed labour, including plumbers, joiners and electricians, performed most of the work. The majority of staff were highly experienced with extensive on-the-job training and appropriate trade qualifications.

Strategic awareness and performance assessment

The Balanced Scorecard programme provided credible and documented assessment of the estates and facilities service system. According to the process outlined by Kaplan and Norton, the data collection was structured by three main stages:

- The FM department's vision and corresponding objectives;
- Critical success factors in relation to these objectives; and
- Development of performance measures to support the critical success factors.

Critical success factors and corresponding performance measures

Critical success factors and appropriate measures were determined, based on the management responses and bearing the FM department's vision and objectives in mind. It was able to build a Balanced Scorecard by focusing on aspects of the business which created value for customers, and by re-appraising its philosophy as an organisation and incorporating it into the performance measurement system. Some of the critical success factors identified are listed in Table 4.

Table 4: Critical success factors

Customer perspective	FM internal processes
Timeliness	Workplace health and quality
Quality	Capital asset management
Service partnership and co-ordination	Workforce management
	Service performance
Learning and growth	Financial perspective
Service delivery innovation	Financial resource management
Quality development and implementation	CRES (Cash releasing efficiency schemes)
Staff development	Procurement and purchasing strategies
Staff strategic awareness	Asset utilisation strategies

The assessment translated the organisation's vision into a set of objective performance indicators across the above four perspectives of the Balanced Scorecard. The Scorecard also assessed the organisation's efforts to improve processes, motivate and educate employees, enhance information and communication systems, while at the same time providing best value, cost effective and responsive levels of service.

The management agreed that the programme provided a results-oriented approach for evaluating the Trust's estates and FM system. The Balanced Scorecard looked beyond compliance and evaluated performance and operational effectiveness. It gave the department a valuable tool for enabling employees to understand their organisation, and provided useful documentation for developing control measures. This will guide the department towards achieving its goals and vision. This programme will remain flexible and encourage continuous improvement while maintaining a cost effective monitoring system.

Process capability findings

Figure 11 summarises the department's process capability against the SPICE FM model.

At the hub of the department was a helpdesk that staff throughout the hospital used to register faults. The SPICE assessment noted the department's well-defined systems for recording faults and for producing cost and time estimates before work was assigned to appropriate staff. The department also held an extensive asset register to plan preventative maintenance.

Data extracted from the department's information system, in addition to an annual customer satisfaction survey, permitted performance monitoring against established targets.

In addition to these strengths, the assessment also highlighted a number of weaknesses that the department's management recognised as important.

Communication between the department and its customers was poor, with trade staff often failing to keep the customer informed of delays that prevented immediate repairs. Poor communication was leaving customers uncertain, and consequently dissatisfied with the quality of service.

A lack of clearly defined expectations for risk assessments sometimes resulted in work being undertaken without the necessary risk assessments in place. This was in spite of extensive health and safety training. An over-stretched supervisory team, which had primary responsibility for preparing risk assessments, compounded the problem.

Lack of review and evaluation was a weakness across the management processes. Although there was an informal review system, the lack of resources to tackle specific issues prevented action.

Table 5 demonstrates the importance of these process improvement opportunities by aligning them with the strategic perspectives of the department's Balanced Scorecard.

The department's perspective

“The findings were an accurate review of our performance. The fast changing environment that we operate in makes it important for us to look at ways in which we can improve. We don't usually give ourselves the time to reflect, but SPICE FM did provide us with that opportunity.

The assessment process actively involved our staff in the change process, which helped gain their commitment. A working group has been set up to take forward a number of issues raised in the assessment findings. A new information system is being introduced to help us keep the customer better informed. We've also introduced a new system for automatically including risk assessments on the job sheets that we issue to our trade-staff”.

Figure 11: The department's process capability profile

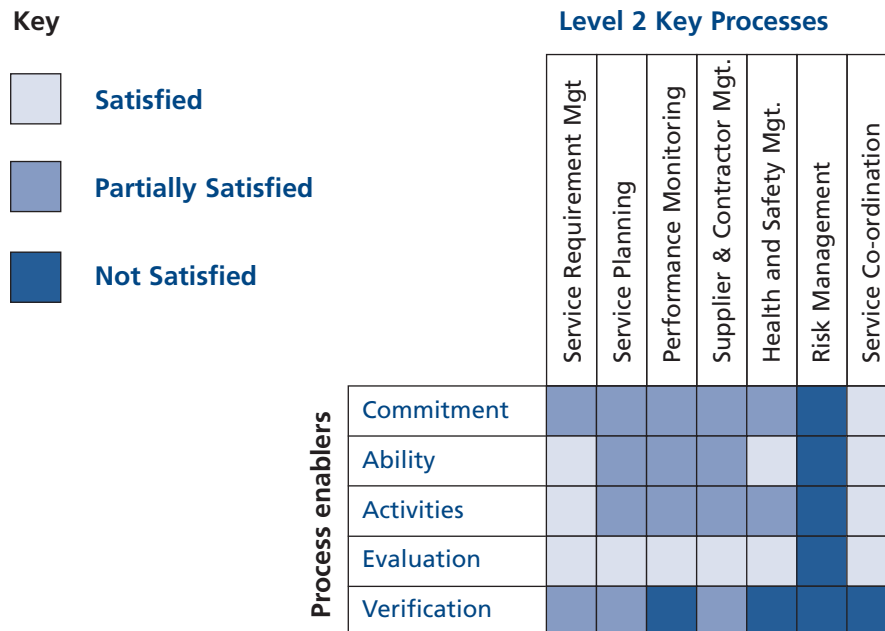


Table 5: Strategically aligned process improvement opportunities

		Critical Success Factor	Related Process Improvement	Measure	2000 Baseline	2001 Target
Balanced Scorecard Perspectives	Customer	Improve Timeliness	Customer Liaison Information System	Telephone calls answered within 5 seconds	95%	99%
		Increase Customer Satisfaction		Emergencies attended the same day	98%	100%
				Jobs completed on first visit	70%	80%
	Internal Process	Improve Workplace Health and Quality	Risk Assessment Training	Risk assessments in place for jobs	-	90%

Study 2 – Sterilisation unit at a NHS Trust

Background

Case study 2 was a unit at an NHS Trust in the North West of England with primary responsibility for the sterilisation of surgical instruments for hospital theatres and wards. The department also received linen and gowns from the on-site hospital laundry for pressing and packing before distribution throughout the hospital.

The department had a highly structured operational process, similar to a production line. It also had a flat organisational structure where management was closely integrated with operational staff. Many of the staff were unskilled.

These issues made the department an important test of SPICE FM's appropriateness to the broad scope of functions present within the FM sector.

Strategic awareness and performance assessment

There are some similarities between this case study and the previous one in the design and implementation of their Balanced Scorecards. In this case, senior managers had traditionally been heavily involved in setting goals for individual divisions and groups. Experience within the department had shown that appropriately set and defined targets contributed both to the motivation of employees and the eventual success of the department. This culture was incorporated into the Balanced Scorecard.

By focusing on the aspects of the business that created value for customers, and by carefully re-appraising the trust's overall philosophy and incorporating this in to their performance measurement system, the organisation was able to build a Balanced Scorecard. It formed an effective means of communicating the strategy of the overall trust through the sub-business unit. Some of the critical success factors identified are listed in Table 6.

Table 6: Critical success factors

Customer	Internal processes
Quality	Workforce management
Service partnership	Service performance
Learning and growth	Financial
Quality development and implementation	Financial resource management
Staff development	CRES (Cash releasing efficiency schemes)

Management believed that the Balanced Scorecard provided a strategic framework and highlighted the most important elements in achieving the goals of the overall trust. Accordingly, critical measurements were incorporated into the Scorecard to achieve the objectives identified above.

The use of the Balanced Scorecard as an aid towards ongoing management control was emphasised. It detailed all the key critical success factors and performance indicators for the sterilising unit as a way of focusing the organisation's activities and measuring its achievements.

The Scorecard proved to be a good tool to link top-level strategic business requirements with day-to-day activities within the department. Applying the SPICE assessment provided an opportunity to identify the process capabilities of the organisation. The assessment examined day-to-day management processes within the organisation and ensured that the critical success factors in the Balanced Scorecard were actually measured and analysed, and that action plans were developed to satisfy the strategic issues it raised.

Process capability findings

Despite the nature of the department's operations, the SPICE FM key processes were appropriate. Due to the high proportion of unskilled staff in the department, semi-structured interviews were used in place of questionnaires. This overcame problems with terminology and highlighted the model's ability to adapt to the differing requirements of individual departments.

Figure 12 summarises the department's process capability against the SPICE FM model. The summary emphasises the maturity of the processes used within the department.

However, despite the department's overall strengths, the exercise did reveal some opportunities for improvement. Most notably, the department lacked clear guidelines or training for developing contingency plans as part of its risk management activities. Despite this, the managerial staff used their experience to ensure a comprehensive contingency plan was in place. This is an example of good staff overcoming shortcomings in the organisational processes.

The department also had insufficient resources and information technology to monitor certain aspects of its service performance. Most notably, measures such as 'instrument down time', 'turnaround time', 'level of re-work' and 'failure rate' were not calculated, even though they were included in the hospital's business plan.

Table 7 summarises these issues and demonstrates their relevance to department's strategic objectives.

The department's perspective

"The Trust recognises the sterilisation unit as an example of best practice; the SPICE FM findings confirm this view.

We were concerned that questionnaires would be unsuitable for the type of staff we employ, but the model appeared flexible enough to overcome this. We were also pleased that the assessment process recognised many of the important cultural issues that are present within an environment such as this.

We are in the process of applying for funding to purchase a new bar-coding system that will help us to monitor certain aspects of our performance, something we currently don't have the capability to do. The SPICE FM model, by linking improvement opportunities to our business objectives, justifies the investment".

Figure 12: The department's process capability profile

Key		Level 2 Key Processes						
		Service Requirement Mgt	Service Planning	Performance Monitoring	Supplier & Contractor Mgt.	Health and Safety Mgt.	Risk Management	Service Co-ordination
Process enablers	Commitment	Partially Satisfied	Partially Satisfied	Partially Satisfied	Satisfied	Partially Satisfied	Not Satisfied	Partially Satisfied
	Ability	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied
	Activities	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied
	Evaluation	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied
	Verification	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied	Partially Satisfied

Table 7: Strategically aligned process improvement opportunities

Areas identified for improvement	Perspective addressed in business plan	Suggested actions
Performance Monitoring	Management of departmental activities to deliver service level agreements and achieve efficiency standards.	Increase resourcing (e.g. introduce information system) so that monitoring activities can be accommodated within the current organisational structure.
		Implement new measures to monitor performance (instrument down time, turnaround time, level of re-work, failure rate).
Risk Management Standards	Meet the requirements of the hospital, particularly the theatres and anaesthetics directorate, in terms of provision of sterile services.	Trust to develop guidelines and standards for the production of contingency plans / risk management. Support with training programme.
	Management of departmental activities to deliver service level agreements and achieve efficiency standards.	

Study 3 – Facilities Directorate at a NHS Trust

Background

The third case study was a facilities directorate at an NHS Trust in the North West of England. The NHS recognised the Trust as a national and international centre of excellence in healthcare and research.

However, as a large and complex organisation, with a turnover in excess of £150m, the Facilities Directorate played an important part in ensuring the Hospital's effectiveness.

At the commencement of the study, the Directorate's senior management were concerned about staff morale. This was due to the impending transfer of many of their services to the private sector under the Private Finance Initiative. Furthermore, management were concerned about the inability of the Directorate to implement its plans and strategic directives at an operational level. Consequently, they were keen to see the results of the study.

Four vital services of the department were chosen to participate in the study: catering; operational estates; domestics; portering.

Strategic awareness and performance assessment

The development of the Balanced Scorecard at the Central Manchester NHS Trust Facilities Directorate attempted to pull together current measures, the Patient Environment Assessment measures and new measures drawn from the NHS plan, into a Balanced Scorecard using its four perspectives.

An essential component of the directorate's strategy was the establishment of facilities performance targets, against which the performance of the facilities can be monitored and measured. The development of a BSC provided a results oriented approach for evaluating the Trust's facilities management system. The BSC looked beyond compliance and evaluates performance and operational effectiveness.

A BSC was developed to act as an effective communication strategy. Table 8 lists some of the critical success factors identified against the BSC's four perspectives.

Table 8: Critical success factors

Customer	Internal processes
Quality	Healthcare in partnership
Service partnership	Operational services
Timeliness	Risk Management
Learning and growth	Financial
Development of Facilities	Value for money
Staff development and training	Achieving the financial recovery plan
Service Delivery Innovation	

Key indicators provide real focus and these can be cascaded to a departmental level, particularly important in a large organisation such as this. Regular reporting of the measures in this format could provide the information necessary to keep the Directorate on track and to take corrective action rather than having to wait until after the event to realise that things have not gone according to the plan.

Based on the above critical success factors, appropriate performance targets were drawn to ensure:

- Improvements in the quality of the operation over time;
- Improvements in statutory compliance, reduction in risk, and achievement of controls assurance standards;
- Changes in the revenue cost of the operational estate over time;
- Improvements in the utilisation of the estate over time; that is, condition appraisal in seeking out underused and surplus estates; and
- Improvement in the quality of the environment for patients.

The facilities directorate has further taken several steps to encourage support for Balanced Scorecard activities by:

- Making a commitment at the senior management level;
- Incorporating the issues identified through the BSC development programme to its business plan;

- Offering training in improvement techniques;
- Establishing a reward and recognition system to foster performance improvements;
- Breaking down organisational barriers; and
- Co-ordinating with the entire trust and responsibilities of other directorates;

Process capability findings

To ensure the process capability finding's accuracy, it was necessary to secure a representative sample of staff to participate in the study. Due to the size of the directorate, the assessment team held workshops with operational staff, thus allowing larger numbers of staff to participate, whilst not requiring an extension to the overall duration of the assessment.

Figure 13 summarises the directorate's process capability against the SPICE FM model.

A key issue revealed by the assessment was the disparity between levels of staff in their awareness of strategic directives and processes. For example, at the centre of the NHS's vision is a National Plan that sets out its future direction and key objectives. Despite its importance, the study revealed that many staff at a supervisory and practitioner level were unaware of the issues raised within the plan and, more importantly, the impact it should have on their day-to-day operations.

A further example of this problem was uncovered under the SPICE FM key process risk management. A recently implemented controls assurance standard was fundamental in managing the trust's risk and was a critical success factor highlighted under the internal process perspective of the BSC. The standard emphasised the role that all staff play in meeting this requirement. Again, the assessment demonstrated that many of the operational staff were unfamiliar with its requirements and their respective responsibilities. This was due to a lack of training or specific systems for involving staff at this level.

In contrast, specific training programmes and guidance for service management staff had led to the development of contingency plans for each of the service streams.

Another issue applicable to all services related to performance monitoring. Although each of the services had monitoring systems in place, such as patient and customer questionnaires there was inconsistency and a lack of integration between systems. Furthermore, monitoring within the Directorate was being driven by a national initiative titled the 'Patient Environment Assessment'. This was a periodic review of the Hospital's environment from a patient perspective carried out approximately every six months. Consequently, short-term efforts were made to monitor and improve in the weeks prior to an assessment. The result was a fire-fighting approach that was failing to address problems arising during the rest of the year.

The directorate's management accepted that improvement in their monitoring systems was vital in order to review their performance against national targets established within the NHS Plan. Furthermore, effective monitoring systems would provide management with an effective tool to supervise the transition of services to the private sector under the Private Finance Initiative.

In addition to generic matters, the assessment highlighted some service specific process issues.

Each of the services had its own capable processes for determining service requirements, planning delivery and managing suppliers. For example, a national patient charter established clear guidelines for menus and choice in the catering service. These broad requirements were further defined in standards for food hygiene, patient feeding, nutritional requirements and purchase specifications. These complex standards had been translated into clear operating systems for use by staff on a day-to-day basis. Furthermore staff attended regular training to ensure they remained aware of important issues.

Staff felt service co-ordination within the facilities directorate had improved since the amalgamation of hotel and estate services. Previously, services such as catering, domestics and portering were managed separately from estates under a 'hotel services' banner. Despite this restructuring, the directorate's co-ordination was still based on informal mechanisms, including face-to-face communication and meetings.

The different service groups lacked clear and enforceable performance standards, resulting in long standing disputes between some of the service delivery teams. Ultimately, these disputes were reducing the quality of service to clinical services and consequently, the patient.

The assessment highlighted a problem specific to domestic services relating to the management of health and safety. A high turnover of operational staff in tandem with an inadequate manager's resource was preventing adequate training provision for domestic staff.

Worryingly, existing verification systems were failing to highlight this specific problem. Consequently, staff were performing their roles without essential training, and therefore, potentially placing themselves, and patients at risk. The directorate's management recognised this as priority for change.

The directorate's management were satisfied that the findings were a true reflection of their existing process capability and are now addressing many of the issues raised. Table 9 demonstrates the relevance of the issues to the department's critical success factors and highlights the subsequent actions.

The department's perspective

"The size of our operations at the Trust makes it difficult for our senior management team to understand the problems faced by our operational staff.

We like the approach that SPICE FM takes in trying to bridge the gap between our strategy and day-to-day operations.

The uncertainty surrounding the upcoming move of many of our services to the private sector has led to problems with our staff's morale. By involving staff in the assessment process, the tool appears to have overcome this.

Following the assessment, we've appointed a member of our staff to take the actions forward. We see this as the start of a continuous change process and hope to use the SPICE FM tool again in the coming months to monitor our progress".

Figure 13: The directorate's process capability profile

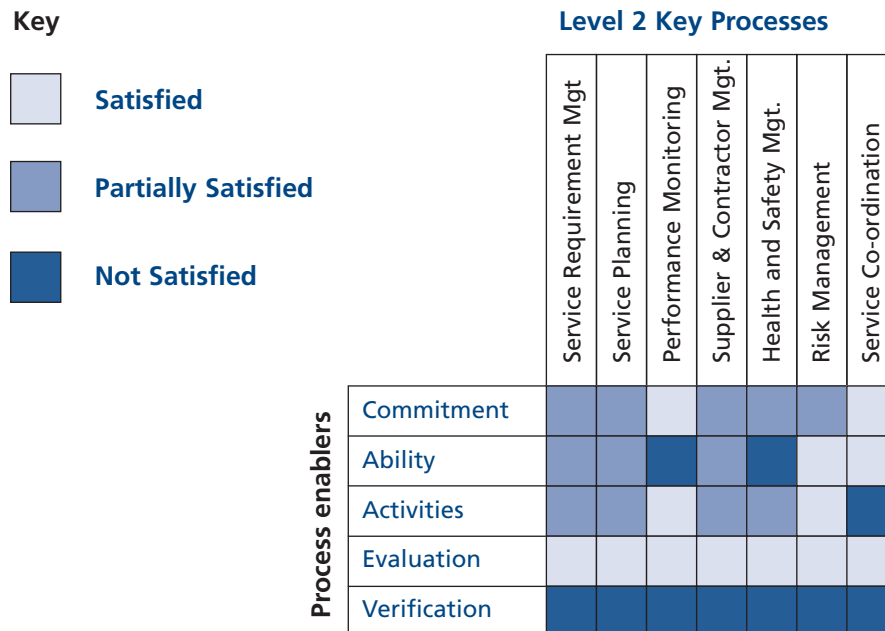


Table 9: Strategically aligned process improvement opportunities

Areas identified for improvement	Critical success factors addressed	Suggested actions
Service performance monitoring	Quality	Develop an integrated facilities questionnaire for distribution to customers.
	Timeliness	Appoint a dedicated resource to undertake monitoring activities and drive through resulting actions
Service co-ordination	Service partnership	Develop service performance standards between different facilities service streams
		Establish a dispute resolution mechanism
Health and safety management	Staff development and training	Develop an induction programme for new domestic staff that addresses health and safety

Study 4 – Property department at a UK retail group

Background

The fourth case study was the property department within a major UK retail group. The group's core business included a collection of chain stores serving the high street and retail parks.

From the group's head office, the property department managed the outsourcing of facilities management services to regional and national contractors.

Strategic awareness and performance assessment

In contrast to the other SPICE FM studies, this department lacked a clear vision and strategic direction. This stemmed from the core business, whose strategy was also poorly defined. Consequently, the property department was unsure how it could best add value to the core business's operations and evolve its service provision accordingly.

Although a documented business plan existed, it was 'shelf ware', the majority of staff unaware of its existence and even fewer of its content. Moreover, the plan was not a live document subject to continuous review, instead laying dormant and becoming irrelevant as the department's needs changed.

Interviews with staff revealed the extent of the problem. It became apparent that the department's management had diverse and sometime conflicting views on the department's direction. Naturally, this uncertainty extended through all levels of staff.

Furthermore, there was no clear justification for an extensive change programme that had been the focus of their attention in recent months. Although a need to improve reporting had been identified within the department, its exact requirements and focus were unclear.

Process capability findings

At the time of the SPICE FM assessment, the department was progressing with a change programme aimed at improving the department's performance. In particular, the changes were attempting to improve reporting mechanisms to senior management.

The change programme represented a potential obstacle for the SPICE FM assessment, due to the inevitable collection of contradictory evidence – a before and after scenario. However, as the assessment progressed it became clear that the department was establishing the type of process infrastructure advocated by the SPICE FM model.

Figure 14 summarises the department's process capability against the SPICE FM model. The matrix highlights the mature nature of its processes following the change programme.

A weakness typical of many organisations is the lack of process review and evaluation. Without this capability, an organisation's processes will become stale and inappropriate to the needs of the business as its requirements inevitably change. Furthermore, innovation within service provision is unlikely without clear commitment and resource from senior management.

It was clear from the SPICE FM assessment that the department had addressed this issue, appointing a dedicated two-person resource to lead a continuous improvement programme. The change managers used documented action plans to identify areas for change and assign responsibilities to key personnel.

Senior management visibility into process performance is another important criteria when considering process capability and is assessed under the SPICE FM process enabler 'verification'. The department was again viewed as strong in this area due to significantly revised reporting structures and systems established under the change programme. In addition to providing information to the department, the reports were providing the core business with an insight into its FM performance.

The department was also strong in many other aspects of its service delivery processes. For example, it had developed individual service level agreements to meet each chain's specific requirements, whilst using a central telephone helpdesk to record all reactive maintenance requirements. This integrated approach replaced a system whereby each chain within the group had its own helpdesk and FM managers. On reflection, this was deemed to be an inefficient use of resources with troughs and peaks in resource requirements difficult to manage.

The change to an integrated helpdesk function was a good example of the pro-active approach being taken within the department to improve service quality and efficiency.

In addition to these and many other strengths, a number of weaknesses were also identified. Customer feedback mechanisms were lacking, as well as any sort of post job review. Consequently, the department had little visibility into the actual performance of contractors.

The department also had no formal risk management system in place, despite having an obvious role in managing the core business's risk. Again, this stemmed from the lack of a clear directive by the core business to carry out this activity. Without senior management's commitment, it is unlikely to be implemented at an operational level.

Case study outcomes

The SPICE FM assessment emphasised the importance of a well-resourced process infrastructure to support and improve processes over time. Although the department still has some weaknesses to address, the necessary infrastructure is in place to identify and correct these issues in the future. Thus it can be said that the department is mature in terms of its process capability.




However, it is also clear from the assessment that the department lacks clear strategic direction. Consequently, it remains unsure whether it is truly meeting the needs of the core business.

In response to these findings, the department's management has decided to commence the development of a balanced scorecard. This will enable it to clarify its objectives, and ensure that its service delivery processes are supporting them.

The department's perspective

“In the past six months we’ve undertaken a large scale change programme within the department. The SPICE FM assessment confirmed that we now have the infrastructure in place to sustain our improvement efforts. That is very re-assuring from a management perspective. More importantly, the assessment also highlighted our failure to align improvements to the core business’s needs. We are now taking steps to address this within the business.”

Figure 14: The department's process capability profile

Key		Level 2 Key Processes						
	Satisfied							
	Partially Satisfied							
	Not Satisfied							
Process enablers	Commitment							
	Ability							
	Activities							
	Evaluation							
	Verification							
		Service Requirement Mgt	Service Planning	Performance Monitoring	Supplier & Contractor Mgt.	Health and Safety Mgt.	Risk Management	Service Co-ordination

Relationship with EFQM Model

SPICE FM has been developed to address the need for process improvement in Facilities Management departments as a means of improving services. At present, there is no methodological mechanism to assess processes and prioritise process improvements.

The European Foundation for Quality Management (EFQM) seeks to recognise the dynamic environment in which all organisations work. It undertook major research to develop the 'EFQM excellence model' which is a non-prescriptive framework that recognises that there are many approaches to achieving sustainable excellence.

Within a similar time frame, the UK government began to step up its drive towards ensuring that the 'new NHS' had quality at its heart (Jackson, 1999). NHS managers and other stakeholders were expected to determine a cohesive way forward for delivering the government's agenda. The government explicitly "commended" the use of the EFQM excellence model (NHS Executive, 1999).

There is therefore a need to explore the relationship between SPICE FM and the EFQM model as a mechanism to improve organisational efficiency. It is a significant question, as the EFQM model has been proposed as the framework to be used within the NHS for self-assessment audits of organisational capability or 'fitness', and to identify areas for improvement.

The fundamental concepts of excellence

The EFQM model is a non-prescriptive framework that recognises there are many approaches to achieving sustainable excellence. The model is based on the premise that customer satisfaction, people (employee) satisfaction and impact on society are achieved thanks to leadership driving policy and strategy, people management, resources and processes. This will lead ultimately to excellence in business results (Shergold and Reed, 1996). The model enables whole organisations, component parts, or individual services within organisation to undertake self-assessment.

In essence, the EFQM model subscribes to Deming's continuous improvement philosophy of "plan-do-check-act". The process is driven by self-assessment, which Porter and Tanner (1996) maintain is not only a means for measuring continuous improvement, but also an excellent opportunity to integrate total quality management into organisations' normal operations.

Benefits of using the SPICE FM framework to achieve the objectives of EFQM model

The EFQM model is now widely used in many organisations. However, there is a surprising lack of literature offering a critical perspective on the EFQM model, considering that there are various approaches to applying the model. These emphasise various advantages including improved measurement and benchmarking.

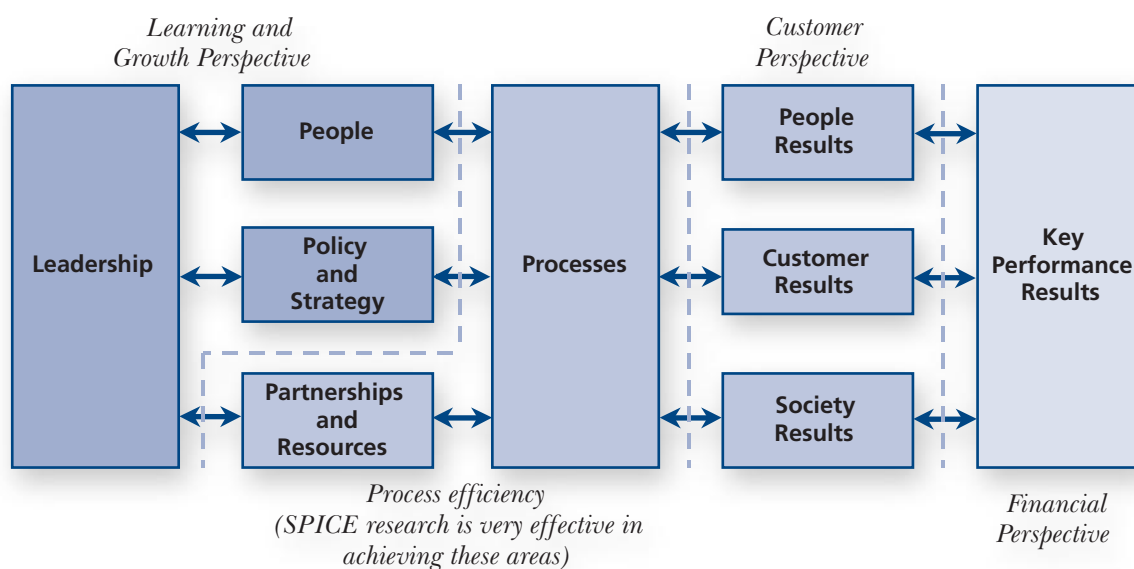
The EFQM model does not formulate strategy, nor does it properly evaluate strategy. Instead, it evaluates the process of forming strategy. The danger in the EQFM's limited involvement in the strategic process is that the model could be seen as simply a strategic tool rather than being intrinsically linked to strategy.

The use of SPICE FM within organisations as an enabler in achieving business excellence can help overcome this deficiency in the EFQM model.

Further, the EFQM model is an audit tool of what is already happening; i.e., it does not indicate best or preferred practice in an organisational context. In contrast, SPICE FM can be translated through the workforce by simple and easily understood approaches, which helps to overcome the complications and bureaucratic aspects of the EFQM model.

Figure 15 summarises how SPICE FM can be used to achieve the business excellence identified by the EFQM model:

Figure 15: The relationship between SPICE FM and the EFQM model



Summary

There is growing recognition of the need to raise the awareness of the contributory role of operational facilities at senior levels of organisations. It is important for facility managers to have an influence on strategic decisions and to demonstrate the contribution that facilities make to the achievement of an organisation's objectives and business targets.

SPICE FM is a step by step organisational development framework that provides organisations with the capability to implement their vision by aligning the continuous improvement of FM services with the needs of the core business. The framework combines a top down strategic approach with a middle out process focus.

SPICE FM has been used in real facilities organisations to provide a unique, sector specific methodology for sustainable process improvement.

Appendix A – Extract from the SPICE FM Process Maturity Questionnaire

This section contains an extract from the SPICE FM process maturity questionnaire, an assessment tool that can be used to examine an organisation against the SPICE FM process maturity model. A cross-section of staff from the organisation completes the questionnaire, providing a balanced review of the organisation's current performance. The responses highlight areas for further investigation through semi-structured interviews and a document review.

The following extract from the questionnaire refers to the level 2 key process 'Service Requirement Management'.

Service Requirement Management - Service requirement management identifies organisational and user needs. Documented service level agreements and performance standards are developed and continuously reviewed to remain consistent with customer requirements. Service level agreements and performance standards are communicated to all staff involved in the delivery of the service.

1. How important do you consider 'service requirement management' to be to your organisation. (Rate 1-5, 1 = not important, 5 = very important)

2. A policy defining standards for managing service requirements is communicated to staff.

Comments:

Strongly Agree	Agree	Disagree	Strongly Disagree

Don't know	Does not apply

3. Procedures for managing service requirements are clearly defined and communicated to staff.

Comments:

--	--	--	--

--	--

4. Service requirements and performance standards are documented and communicated to staff.

Comments:

--	--	--	--

--	--

5. Service level agreements and performance standards are subject to continuous review.

Comments:

--	--	--	--

--	--

6. Adequate resources and training are provided to manage service requirements.

Comments:

--	--	--	--

--	--

7. Staff reviews and measures the effectiveness of the activities for managing service requirements.

Comments:

--	--	--	--

--	--

8. Activities for managing service requirements are subject to QA or other verification.

Comments:

--	--	--	--

--	--

Glossary

Ability	One of five ‘process enablers’. Ability to perform considers whether adequate resourcing, appropriate organisational structure and training are provided to carry out a process.
Activities	One of five ‘process enablers’. Activities to perform considers whether plans and procedures are developed for the process and whether the performance is monitored.
Balanced Scorecard	A strategic management system that measures performance and develops strategies by analysing results across a range of activities.
Commitment	One of five ‘process enablers’. Commitment to perform considers whether the organisation will ensure that the process is established and will endure.
Evaluation	One of five ‘process enablers’. Evaluation considers whether processes are evaluated on a periodic basis.
Key Process Area	Related activities that when performed collectively achieve a set of common goals considered important for establishing process maturity. The key process areas are the principal building blocks that can help to determine the process capability of an organisation. Each maturity level is comprised of key process areas.
Performance Management	The use of performance measurement information to effect positive change in organisational culture, systems and processes.
Performance Measurement	A process of assessing progress towards achieving predetermined goals.
Process	The means by which, procedures, methods, equipment and tools are integrated to produce a desired result.
Process Enabler	Five preconditions that must exist in the project to implement the construction process competently.
Verification	One of five ‘process enablers’. Verifying implementation considers whether compliance with procedures is determined.

References and Bibliography

- Alexander, K. (1996) 'Value Management'. In Alexander, K. (Ed). (1996). Facilities Management - Theory and Practice. New York: E & FN Spon.
- BIFM (1999) 'Survey of Facilities Manager's Responsibilities'. BIFM Members Survey. British Institute of Facilities Management. September.
- Davenport (1992) 'Process Innovation: Re-engineering Work Through Information Technology'. Harvard Business School Press.
- Facilities management solutions (2001) <http://www.fm.net> accessed 29th March 2001
- FBA – Professionals in Facilities Management (1999) 'Micro-scan FM – briefing document'. London. Fortune Magazine, November 1997.
- Jackson, S. (1999) 'Achieving a culture of continuous improvement by adopting the principles of self-assessment and business excellence'. International Journal of Health Care Quality Assurance, Vol.12, No.2, pp. 56-64.
- Kaplan, R.S. & Norton, D.P. (1996) 'The Balanced Score Card'. Massachusetts, Boston, Harvard Business School Press.
- Kaplan, R. & Norton, D. (1996) 'The Balanced Scorecard: Translating strategy into action'. Harvard Business School press, Boston.
- NHS Executive (1999) 'Clinical Governance: In the new NHS'. Health Service Circular 1999/065, 16th March.
- Nutt (1999) 'Linking FM practice and research'. Facilities, Vol. 17 No.1/2, pp111-117.
- Ould (1995) 'Business Processes: Modelling and Analysis for Re-engineering and Improvement'. Wiley.
- Paulk, M., Weber, C., Curtis, B. and Chrissis, M. (1994) 'The Capability Maturity Model: Guidelines for Improving the Software Process'. Addison-Wesley, Massachusetts.
- Porter, L & Tanner, S.J (1996) 'Assessing Business Excellence: A Guide to Self-assessment". Butterworth - Heinman.
- Sarshar, M., Haigh, R., Finnemore, M., Aouad, G., Barrett, D., Baldry, D. and Sexton, M., (2000) 'SPICE: A business process diagnostics tool for construction projects'. Engineering, Construction and Architectural Management, Vol 7, No 3, pp241-250.
- Shergold, K. & Reed, D.M. (1996) 'Striving for excellence: how self-assessment using the business excellence model can result in step improvements in all areas of business activities'. The TQM Magazine, Vol. 8, No.6, pp. 48-52.
- Skinner, W. (1989) 'Manufacturing – missing link in corporate strategy'. Harvard Business Review, May-June, pp.136-145
- Then, D.S. (1999) 'An integrated resource management view of facilities management'. Facilities, Vol.17, No. 12/13, pp.462-469.
- Zahran, S. (1998) 'Software process improvement'. Addison Wesley.

Bridgewater Building
University of Salford
Salford M7 9NU
United Kingdom

Tel: + 44 (0)161 295 5317

Fax: + 44 (0)161 295 5011

E-Mail: spicefm@sun.scpm.salford.ac.uk

Web: <http://www.scpm.salford.ac.uk/spicefm>

Published by Construct IT Centre of Excellence
Copyright © The University of Salford 2001

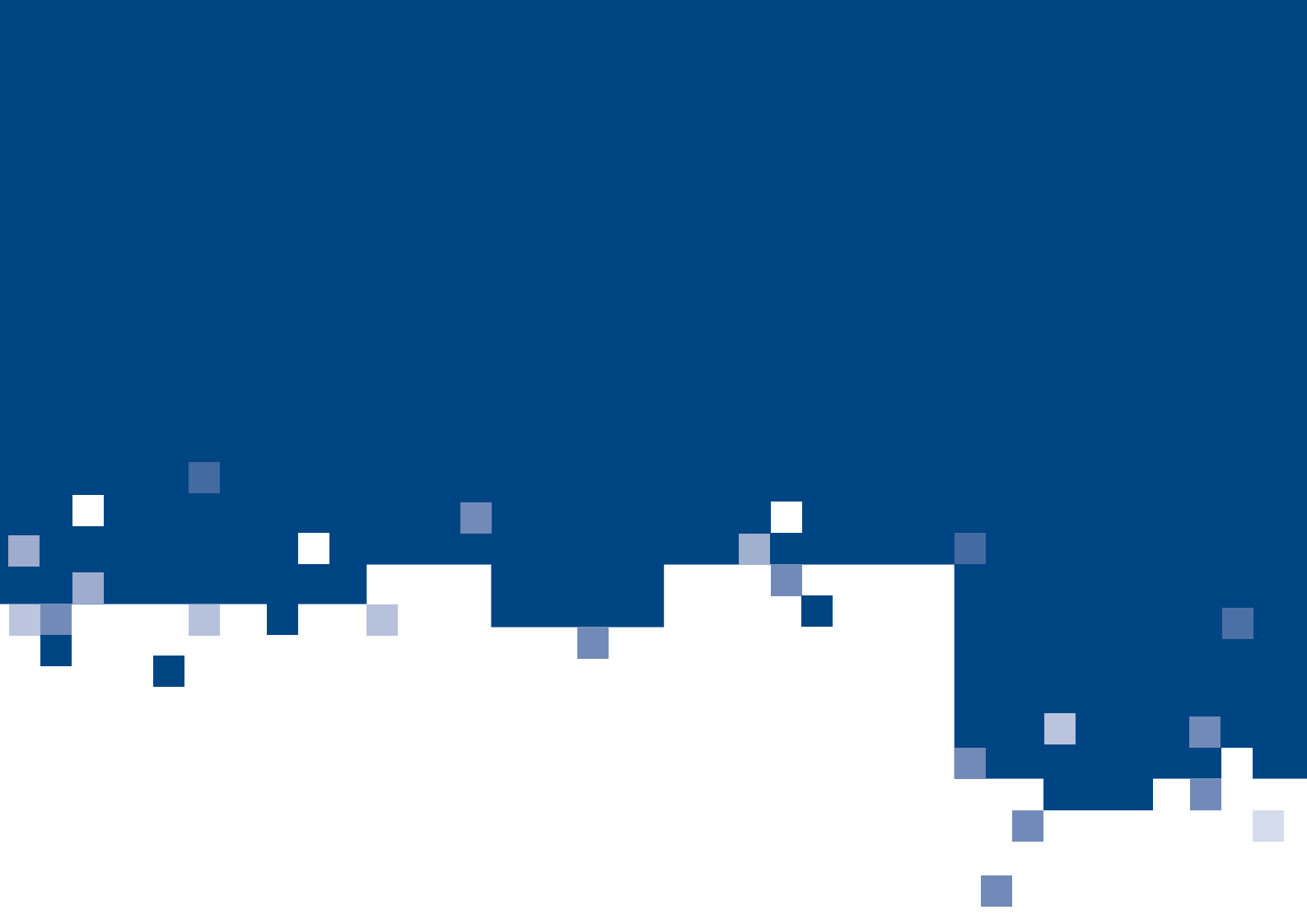
Designed by The Design Team, University of Salford, 0161 295 2630

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without the prior written permission of the copyright holder.

British Library Cataloguing-in-Publication Data

A CIP catalogue record for this book can be obtained from the British Library

ISBN 1-900491-51-6



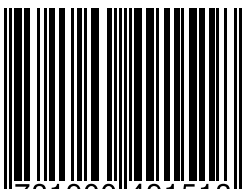
***The Centre of Excellence for Construct IT has been set up to
co-ordinate and promote research in IT in Construction in the UK
to improve competitive performance of the UK construction industry***

The administrative office of the Centre is based at Bridgewater Building,
University of Salford, Salford, M7 9NU, UK.

Organisations who have expertise in their use of IT are invited to approach the Centre.

Please contact the administrators if you wish to become a member.

ISBN 1-900491-51-6



9 781900 491518

£ 30.00