



Measuring Business Excellence

Delivering sustained performance through a structured business process approach to management

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Delivering sustained performance through a structured business process approach to management

David Mackay, Umit Bititci, Catherine Maguire and Aylin Ates

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Summary

Purpose – This paper aims to demonstrate the performance benefits of adopting a business process perspective to managing a business and, through grounded research, propose a revised business process architecture which builds upon recent advances in business process thinking.

Design/methodology/approach – A brief review of business process terminology and architecture is presented. A set of perspectives is developed which is used to structure summary field notes from grounded research conducted in a UK manufacturing plant of a Fortune 500 corporation. A management system model of the case study company is proposed, which in turn is used to modify the existing business process architecture.

Findings – Business management processes are modelled and analysed as observed in the field and compared to recent models of “Manage Processes”. It is discovered that Manage Processes have an architecture which is core to their ability to sustain competitive advantage. It is also shown that adopting a business process architecture perspective when direction-setting and controlling the business can deliver superior business performance and sustained delivery of value.

Research limitations/implications – The model is developed from grounded research in one organisation only and therefore requires further testing by means of further case studies (although steps are taken to ensure the initial validity of the model). Also, the model is still relatively high level and further case studies should be used to create more detailed practice models for the processes.

Practical implications – The model developed is sufficiently generic to be tested with other organisations, and with the addition of further case studies a useful maturity model workbook could be created. This could aid practitioners in the analysis and improvement of the performance management process from a business process architecture perspective.

Originality/value – This is the first analysis of recent “Manage Process” models from an in-depth, grounded approach and a new “Manage Process” architecture is proposed.

Keywords Business performance, Process management, Corporate strategy

Paper type Case study

Introduction

Much has been written about the advent of global competitive factors such as advances in telecommunications technology and low-cost logistics capabilities transforming the manner by which companies do business. The impact on organisations, as suggested by Ridderstralle and Nordstrom (2004), is that they can no longer expect anything other than a temporary monopoly in any market they choose to pursue. Indeed, it is insufficient for businesses to focus efforts solely on developing great products and services in order to deliver competitive advantage. Rather, they must also direct sufficient resources towards sustaining competitive advantage in order to stay ahead of, or at the very least keep pace with, customer expectations and competitors.

The researcher's recent experience working with approximately 50 manufacturing companies in the UK is that there are few businesses who understand how to address the matter of sustaining competitive advantage. Indeed, many businesses are placing a huge

emphasis on improving reasonably efficient operations through their own versions of the Toyota Production Systems or Six Sigma methodology as an attempt to address a perceived threat from the low-cost economies. Correspondingly, it has not been the researcher's experience to find any organisation which has successfully translated these efforts into a sustained competitive advantage from a UK base.

This is not to downplay the importance of running an efficient organisation, as it is undoubtedly a key element of business success. However, it is suggested that companies should be challenging themselves to develop an organisation which addresses the more holistic proposition of enabling, creating and sustaining competitive advantage in their chosen markets.

This paper describes a value-focussed approach to managing business performance which can equip companies to deal with all three elements of the competitiveness challenge. This is achieved by introducing several key concepts from existing literature on the matter of business process architecture. An in-depth case study on a UK-based manufacturer that has consistently delivered outstanding business results is then presented. Grounded research is used to develop a management system model for the company, which in turn is used to propose changes to the existing "Manage Processes" architecture. An agenda for further research, theoretical and practical, is also proposed.

In brief, this paper suggests and justifies an approach to understanding and developing a structured "Manage Processes" architecture which, through focussing on sustaining competitive advantage and the value creation process, will allow organisations not only to survive, but to thrive in the uncertain and volatile global marketplace.

What is a business process?

Before considering the proposed business process architecture, it is important to be clear as to what is meant by a "business process". A review of the literature presents many specific definitions according to the particular interests and ontologies of the authors. However, the generic nature of the discussions in this paper requires a high-level definition of business processes.

Hickman (1993) describes a business process as "A logical series of dependent activities which use the resources of the organisation to create, or result in, an observable or measurable outcome, such as a product or service", whilst Hammer and Champy (1993) refer to a "collection of activities that takes one or more kinds of input and creates an output that is of value to the customer".

According to Davenport and Short (1990), "a business process is a set of logically related tasks performed to achieve a defined business outcome. Business processes have customers – i.e. defined business outcomes and there are recipients of the outcomes. Customers may be either internal or external to the firm. Also, business processes cross organisational boundaries; that is, they normally occur across or between organisational sub-units. Processes are generally independent of formal organisational structure". Davenport (1993) later adds that the process "implies a strong emphasis on how work is done in within an organisation".

Lin *et al.* (2002) define a business process as "a series of activities, often involving several organisational units and operated by actors (humans or machines) that are aiming to create value for customers".

To recognise the types of customer presented to an organisation in addition to the transformational nature of a process, a modified version of Lin *et al.*'s (2002) definition of a business process is adopted for this paper. That is: a business process is series of activities, often involving several organisational units and operated by actors (humans or machines) that are aiming to create value for customers (internal or external) by converting inputs (material or conceptual) into an output.

It is important to note that this definition implies that a business process will have measures of efficacy and efficiency, where efficacy relates to how well the process meets customer

requirements and efficiency relates to the effort required to convert input to output. These characteristics are critical to understanding how the investigation and development of business process architecture can aid business performance.

With the characteristics of a business process defined, we can consider how business processes are classified within an organisation.

Business process architecture

According to the CIMOSA standard (AMICE, 1989), business processes may be classified into Operate, Support and Manage Processes. This approach is built upon by the work of Childe *et al.* (1994), which develops a generic architecture for business processes as depicted in Figure 1.

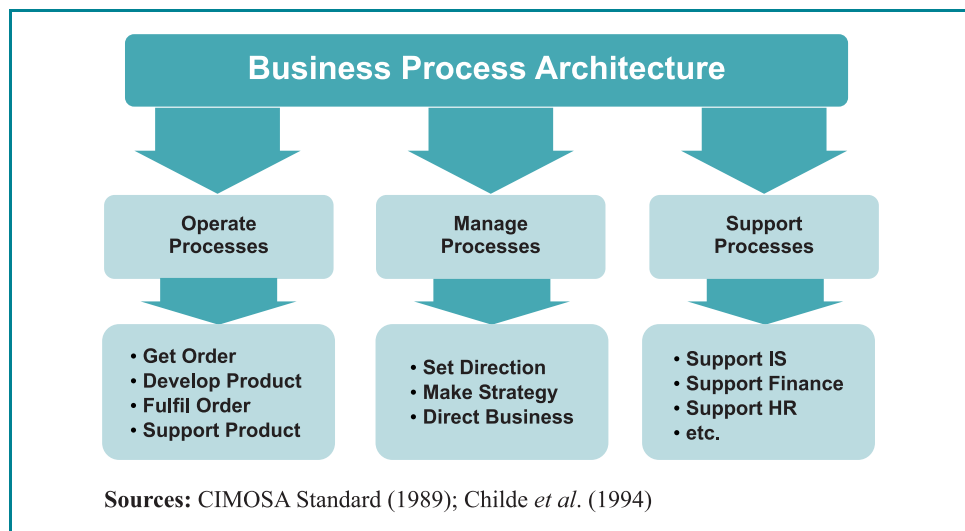
The primary importance of the business process architecture is how it directs the user to focus on value creation. As Goldratt famously espoused, the goal of any business is to make money and therefore all elements of its existence should be directed towards doing so effectively and efficiently.

When viewing the business from a process perspective as illustrated in Figure 1, it is the Operate Processes that create value for the external customer. In other words, the Operate Processes deliver a product or service that is of value to the customer for which they are willing to pay a price. If the customer selects this product or service instead of the comparable alternatives available to them, then it can be said that the “Operate” processes create competitive advantage.

Support processes exist to provide resource (either material or intellectual) in support of the value creation process for external customers. Whilst they do not directly create the product or service as the operate processes do, the support processes are required to deliver outputs which provide conditions in which the operate processes can function effectively and efficiently. In other words, they exist to enable competitive advantage and value creation by delivering value to the internal customer that is the Operate Processes.

Manage Processes exist to direct and control the business. Bititci *et al.* (2002) state that “it is the Manage Processes that sustain competitive advantage by recognising and responding to changes in their internal and external environment either through maintaining and developing a winning formula or through identifying and changing a winning formula”. Again, the Manage Processes do not directly create value for the external customer, but rather identify where most value can be created in the future and direct the business to

Figure 1 Business process architecture (AMICE, 1989; Childe *et al.*, 1994)



ensure that adequate and appropriate Operate and Support processes are ongoing. Thus Manage Processes are critical to the development and sustenance of external value creation and competitive advantage and the Manage Processes can be said to deliver value to the Operate Processes.

Why is this important to business performance management?

As suggested by McCallum and Bititci (2004), a common message emerging from the works of various researchers is that performance measurement/management should be less functionally focused and more focused on the value creation processes that create competitive advantage. In other words, rather than reducing the money-making machine of the business down to component parts and measuring the performance of each, a more holistic view should be adopted which instead concentrates on how the overall value creating system performs as the different elements interact.

Given the previous definitions of Operate, Support and Manage Processes, considering the organisation from a business process perspective when assessing and managing business performance should allow the practitioner to focus better on value creation as the critical business deliverable.

However, such a top-level definition of business processes and architecture is of limited use to a business practitioner wishing to observe/assess and improve any of the individual business processes within an organisation. There has been much written about the Operate Processes and well established models and tools exist for improving their efficacy and efficiency. The Support and Manage Processes are not as widely researched and documented though. For the purposes of this paper, the architecture of the Manage Processes is focussed on in order to develop an understanding of how these processes can be observed, modelled and improved.

Manage Process business architecture: an initial model

The development of a Manage Processes architecture builds on ideas proposed by Bititci *et al.* (1999). Evolved from systems thinking literature, this work demonstrates the importance of business management processes in directing and controlling an organisation. In particular, the impact of Manage Processes on the ability of a business to deliver results in response to external opportunities and threats is demonstrated.

An initial Manage Process architecture is proposed by McCallum and Bititci (2004) using primarily Beer's (1979, 1981, 1985) viable systems model (Figure 2) to create a proposition as to the nature and purpose of the individual manage processes. This initial model is illustrated in Figure 3.

The definitions of the individual Manage Processes that emerged are summarised in Table I. The Manage Processes are said to conform to a process life cycle model as they continuously set goals, implement actions and review outcomes on account of operating in an uncertain environment where future reality could be changing continuously.

These initial definitions are useful but the authors recognise that they present a Manage Process model which is deduced from literature and from limited empirical data. The remainder of this paper, through analysis of an in-depth case study, attempts to critically analyse the proposed structure.

Process perspectives

Researchers and practitioners in the field of business process modelling take the view that to build a complete model of a business process, it needs to be studied and modelled from a number of perspectives (Mingers and Brocklesby, 1997). In other words, when defining a process, various perspectives should be adopted to ensure that the practitioner gives due consideration to all aspects of the process's operation and impact.

Figure 2

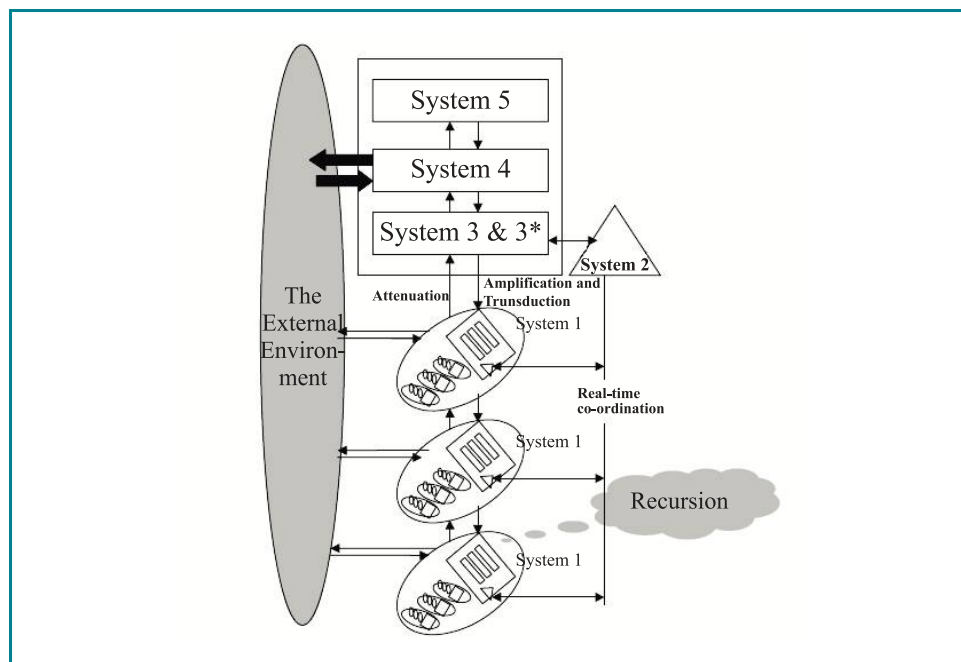
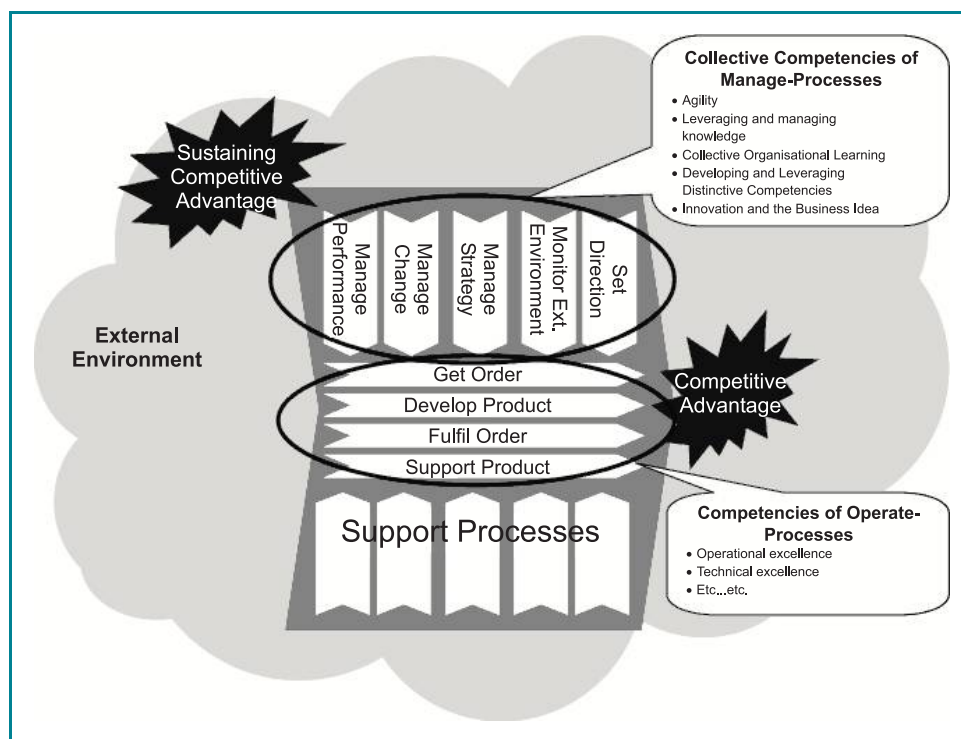


Figure 3



The consequences for the researcher conducting a case study concerning business processes is that a suitably comprehensive and appropriate set of perspectives must be considered when reporting findings. The aim of this paper is not to debate the relative merits of the various approaches to defining business processes as suggested by the literature,

Table I Manage processes definitions

Set direction	A process that identifies the future environment (specific future reality) in which the organisation can achieve its aims
Monitor (scan) the external environment	A process by which the organisation monitors changes and developments in its operating environment and assesses the significance of these external changes and developments with respect to its own objectives and operations
Manage strategy	A process that sets goals, the actions required to achieve the goals and forecasts of the consequences of those actions
Manage change	A process that manages change within the organisation. New directions and new strategies define what the new order should be – the future reality – however, the transition from the current order to the future order needs to be achieved efficiently and effectively
Manage performance	A process that monitors and co-ordinates the performance of the operate processes with respect to the goals, actions and transitions defined

but rather to adopt a generic set of perspectives to allow the researcher to describe adequately the processes observed in practice.

Therefore, Table II shows “aggregate” perspectives used to define the “Manage Processes” in the case study. These four perspectives are used to categorise the summary comments from the case study and indeed proved a useful tool in structuring observations.

These aggregate perspectives were derived from the consideration of a number of authors’ commentaries on process perspectives. Table III shows the original references used to derive the summary definitions.

Case study company: FMCG plc

The FMCG plc case study provides a longitudinal assessment of the application of the “Manage” business processes. FMCG plc is an established *Fortune* 500 multi-national fast-moving consumer goods supplier. With a worldwide operation of over 100,000 people, FMCG plc produces in excess of 300 brands in a diverse range of sectors. Long admired in business circles for its marketing prowess, pioneering management techniques and organisational performance, FMCG plc also has an enviable business performance track record with double-digit year-on-year growth in terms of turnover and profit in 29 of the last 30 years.

This case study describes the system of management applied in a business unit in FMCG plc’s product supply division manufacturing “beauty care” consumer goods. Employing approximately 500 people, this particular business unit was regarded as a high performing unit within the FMCG plc corporation. During the four-year period of

Table II Perspective definitions

<i>Perspective</i>	<i>Description</i>
Function	Any activity which contributes directly to the execution of the purpose of the process
Infrastructure	Any physical or virtual non-human resource deployed in the execution of the purpose of the process
People and organisation	Any provision made to the human resource elements of the organisation in pursuit of the execution of the process
Culture and behaviour	Any behavioural changes required for or affected by the execution of the process

Table III Origins of perspectives

	<i>Functional</i>	<i>Infrastructure</i>	<i>People and organisation</i>	<i>Culture and behaviour</i>
Bal (1998)	Functional Decisional	Informational Resource	Organisational Resource	Decisional Behavioural
AMICE (1989)	Function	Information	Resource Organisation	
Roberts (2004)	Routines	Architecture	People	Culture
Scozzi <i>et al.</i> (2005)	Sequence of tasks Decisions Creative	Communication and information flow	Strategic and political	Decisions Strategic and political Creative
Caldwell and Platts (2005)	Structured	Structured	Structured	Soft

observation, after all internal expenditure and a proportional contribution to corporate overheads were dispersed, the business unit returned a 27 per cent profit on sales. This was whilst the business grew by volume in double digits every year to a turnover of over £400m by the end of the fourth year observed. Furthermore, the business grew in complexity, acquiring two competitors during the period and increased the number of product variants in the factory by 25 per cent to approximately 4,000 (shipping to over 80 countries).

It is worth noting that the observed FMCG plc business unit has “external partners” who are still within the corporate structure. These external partners effectively operate as customers to the business unit but they are a separate grouping to both the end consumers and external market stakeholders (such as competitors, suppliers, government). Examples of the “external organisation” include corporate management (e.g. board of directors) and central support services (e.g. central purchasing).

Table IV maps observations and practices from FMCG plc against the Manage Processes proposed by McCallum and Bititci (2004) (Figure 3) and the process perspectives defined in Table II. The contents of Table IV have been derived from a grounded approach (Glaser and Strauss, 1967) with some of the authors spending four years working in technical and department management roles in the organisation. Clearly there is an element of opportunity in the selection and documentation of this case study. To ensure the objectivity of the case study, data are triangulated from direct observation, content analysis of documents and interviews with staff. Furthermore, the observations and arguments that follow have been shared with a number of staff from FMCG plc to confirm completeness and accuracy.

It is also worth noting that Table IV is purely descriptive, in that the authors seek only to accurately record the events that were observed. Given the grounded nature of the research, the authors based in the company participated in the activities and processes but did not seek to test any hypotheses or unduly influence proceedings (i.e. this was not action research.) Recognising the complex nature of the observed manufacturing environment, the case study initially presents, in Table IV, the summary field notes according to the set of process perspectives previously described.

In brief, business performance at FMCG plc is managed by a clear, systematic approach. Every three years, a “compelling business need” (CBN) is created in collaboration with business partners and customers. The CBN is equivalent to a vision statement for the future statement of the plant articulated through a memorable statement. For example, “First, fast and built to last” was a CBN statement used to articulate a three year future vision for the plant of a 50 per cent reduction in NPI lead time (First to market), a 50 per cent reduction in inventory (Fast to the customer) and a 50 per cent reduction in operating cost (Built to last – a profitable, sustainable operation). This CBN then directs all work within the factory – if a

Table IV Summary field notes regarding Manage Processes from FMCG plc

	Function	Infrastructure	People and organisation	Culture and behaviour
Set direction	<p>Every three years create and publish a "compelling business need" which outlines the key performance goals for the factory for the following three years</p> <p>"Compelling business need" is translated into a three-year road map of operational targets relating to the six elements of their scorecard – productivity, quality, cost, delivery, safety, morale</p> <p>The CBN is established as a contract with the external business owners viewing them as the ultimate customers of the plant</p>	<p>The plant ERP system is designed to provide all necessary performance information required to understand future requirements/CBN targets</p> <p>Clear, strong reporting lines and information sharing exists with external customers feeding into the direction setting exercise</p>	<p>Direction setting is lead by the head of the factory, the plant manager and all senior management (plant lead team – PLT) are actively involved</p> <p>The PLT are required to create a joint vision for the future by feeding in all relevant departmental considerations</p> <p>The PLT involve all of their direct reports in creating a vision from the bottom up</p> <p>The business is divided into 11 operational pillars – cross-functional teams which are geared towards supporting the delivery of the CBN</p> <p>Strategy deployment led by plant lead team and involves all site managers</p> <p>Training available to staff in both goal setting and deployment to employees</p> <p>Staff involved in developing the actions/plans to achieve targets</p>	<p>All the plant has an ability to contribute to the setting of the CBN and this is widely acknowledged and encouraged</p> <p>Once the CBN is set, unanimous support for CBN is expected</p> <p>All work is expected to relate to delivery of CBN</p> <p>Widely communicated/posted around the factory – on stationery, desktops, etc.</p>
Manage strategy	<p>CBN translated into annual key deliverables for the plant</p> <p>Plant goals translated into departmental goals considering both relevance and ability to contribute</p> <p>Departmental goals translated into deliverables for teams and individuals</p> <p>Team and individual goals deployed during annual reviews and monthly meetings</p>	<p>Plans published and communicated on boards situated in common areas of the factory</p> <p>Procedures and documentation templates provided to ensure standardisation/ comprehensiveness of process</p> <p>IT systems in place to manage the data/progress on-going</p> <p>Annual off-site strategy deployment event held to communicate (down to department and team level) plant goals</p>	<p>Plan/do/check/act relative to achievement of plant goals is the norm within teams</p> <p>Acceptance of plant deployment procedure widespread</p>	
Scan the environment	<p>Monthly monitoring of customer performance data (quality defects)</p> <p>Daily contact with suppliers and customers – 24-hour response</p> <p>Monitor legislative requirements and ensure plant compliance</p> <p>Direct connection to external customers within FMCG plc</p> <p>Communication also occurs with local competitors for salary survey and collectively beneficial issues (e.g. lobbying local government policy)</p>	<p>Systems support analysis and monitoring of customer performance</p> <p>Systems support analysis and monitoring of supplier performance</p> <p>Funding/resource available for compliance with legislative requirements – allocated at plant level</p>	<p>Strongly resourced – specific allocation made to monitor all aspects of external</p> <p>Strong indirect resourcing – responsibilities given to all managers to understand external impact on own area</p> <p>Training extensively available on all aspects of external monitoring systems</p> <p>Training and audits in all legislative requirements</p>	<p>A customer-centric attitude is encouraged in all staff – quick response to external requirements is the norm</p> <p>Informal hierarchy of importance given to changes detected in external environment – safety, quality, cost, delivery</p> <p>Organisation willing to flex on overtime to meet changing external demands</p> <p>Open to visits and communications from internal and external customers – regular occurrence and acceptance of practice</p> <p>All staff encouraged to monitor external performance and report defects detected through everyday life</p> <p>Acceptance of a number of company policies enhanced by high level of data from outside world (e.g. absenteeism levels)</p>

(Continued)

Table IV

	Function	Infrastructure	People and organisation	Culture and behaviour
Manage performance	<p>Site performance tightly monitored and checked against strategic targets (as defined by the CBN)</p> <p>Departments and teams held accountable for their own specific contribution to the CBN goals as deployed through the strategy – typically on a monthly basis for departments and weekly basis for teams</p> <p>Individuals are required to deliver personal targets for systems they own as well as elements of the team performance (to which they belong)</p> <p>Management by exception is the accepted practice – when an area deviates from its performance targets it will receive increased management focus</p>	<p>Plant balanced scorecard has been interpreted into a scorecard reflecting productivity, quality, cost, delivery, safety and morale measures. This is widely available and viewable to all in the plant</p> <p>ERP and engineering systems are all geared towards feeding individual, team, department and ultimately plant scorecards</p> <p>The business is organised into matrix managed “pillar” teams. Eleven such teams exist to address topical rather than functional means of delivering the CBN. (e.g. autonomous maintenance pillar has CBN targets but involves engineering, finance, production, planning, etc.)</p> <p>Global resources are made available to the plant for performance management – best practice FMCG plc is shared on the intranet to allow solutions to issues to be rapidly applied</p>	<p>Very clear directives given about the standards which much be adhered to in performance management – clear training, standard documentation, standard procedures which apply to all staff from plant manager down</p> <p>Time allocated to staff in order to fulfil standard procedures</p> <p>Daily, weekly and monthly meeting structure clearly set-up, ownership for all processes clearly defined</p> <p>Training available in performance management</p>	<p>Defects not tolerated – all issues big and small captured in action plans</p> <p>People understand and expect ownership of performance areas – take the process seriously</p> <p>Response to issues is to try and systemise performance can result in overreaction</p> <p>360-degree feedback encouraged to provide bottom up performance management as well as top down approach</p>
Manage change	<p>Large-scale new product introduction (NPI) clearly managed as part of collaboration with external business customers</p> <p>Large scale technical projects (e.g. introduce new process technology) conducted in collaboration with external engineering resource</p> <p>Small scale product adjustments (e.g. new packaging supplier) run at plant level with internal business customers</p> <p>Small scale technical improvements (e.g. modifications to packaging line) conducted under control of local departments</p> <p>All change activities derived from CBN – the effects of change roll up to deliver the business performance laid out in set direction</p>	<p>Very clear infrastructure, tools and budget allocated to all major projects – NPI and process</p> <p>Clear change procedures available and enforced for local changes</p> <p>Expert checklists available and added to on-going for all change activities</p> <p>Systems available to feed back into plant performance reporting system</p> <p>Funding can be freed up for unplanned changes if cost-justifiable payback by IRR and NPV criteria</p>	<p>Specific engineering resource located in plant to carry out technical projects and liaise with central engineering</p> <p>Specific NPI resource located in plant to project manage NPIs and liaise with external partners</p> <p>Part of all management responsibility is to control product adjustments and small scale technical improvements for their area</p> <p>Change activities are deployed through annual review target (typically measured by kaizen's delivered rather than cash saving)</p> <p>Focussed improvement (equivalent of Kaizen Blitz) teams can be formed ad hoc to assist areas in need of quick/difficult changes</p>	<p>Change is an accepted part of the workforce's mentality – it is expected</p> <p>Encouraging a zero-defect mentality in the full workforce is part of the published business strategy</p> <p>Pockets of individuals will be proactive and seek to implement change without being told to do so – others require pushing</p> <p>Change agents tend to be rewarded through enhanced performance-related pay</p>

proposed activity does not contribute to delivery of the CBN, then it does not gain management authorisation.

The CBN is translated into a glide path mapping out the required progress against key business deliverables during each of the three years. This glide path shows the required progression of results against the key performance indicators (KPIs) for each of the years. The glide path is then disseminated to the organisation through site-wide events and is turned into reality through annual departmental and cross-functional business process improvement team strategies (described as “pillar” teams as per a concept adapted from TQM methodology). The department and pillar team strategies match top-down set targets with bottom-up derived opportunities. These in turn translate into module, team and individual staff performance targets and action plans which are managed on a daily, weekly and/or monthly basis as appropriate.

The operate processes are organised and managed in departments to deliver existing products in response to customer demands. They are expected to conform to performance standards compliant with FMCG plc’s CBN targets. New products and improvement projects (continuous and discontinuous) are change managed into the operate processes once necessary support inputs have been delivered (finance, IT, HR, R&D, etc.) and the approval has been given against the CBN from the responsible manager.

Furthermore, responses to opportunities and threats presented by the environment external to the business unit are quickly passed to the management team. They are then considered against immediate operational concerns and longer-term strategic concerns by the management team in the context of the direction set by the CBN. If action is deemed appropriate, then the direction returned by the management team is then change managed into the relevant business area.

Case study discussion

Throughout the four years working with FMCG plc, the researcher was posted in a number of different departments and functions and experienced managing an ongoing operation in addition to project managing a number of large-scale improvement projects.

From the researcher’s experience of working with many manufacturing organisations in recent years, FMCG can be said to deliver strong business results for a volume manufacturer operating in the UK – the plant surviving and returning a double-digit profit in the face of losses from major competitors.

The operation was directed with a strong focus and clarity of purpose encapsulated in the CBN. This in turn created a “customer-centric” approach throughout the organisation. With such a focus on creating/adding value, the CBN could be said to act as a magnet to the iron filing components of the organisation – aligning them or moving them as one in pursuit of the overall business objectives. The infrastructure and people and organisation deployments were all geared towards delivering the CBN (to the point where approval for funding above £1,000 requires a statement indicating contribution to the CBN in addition to the financial payback justification). It is observed that such clear direction setting created an accepting culture where behaviours align to the delivery of the overall business goals.

In terms of an impact of the running of the business, the researcher consistently observed:

- appropriate agility in responding to environmental requirements and consistent decision making;
- clear data requirements from groups and individuals resulting in infrastructure and staffing allocated appropriately;
- clear role definitions with responsibilities for actions rarely being in dispute despite the cross-functional nature of much of the work;
- effective decision making from management, deploying efforts efficiently to areas where they were most needed in order to deliver the CBN targets;

- a high level of awareness in all members of the organisation as to the current business reality and future expectations/ requirements;
- appropriate devolvement of power – supervisory level of management contribute effectively to the delivery of long term plans through the day-to-day running of the organisation;
- consistency of approach between sites resulting in efficient and effective collaboration and associated improvements in performance and sharing of resources; and
- change management exercises being clearly linked to delivery of the CBN and receiving high levels of buy-in from all levels of the organisation.

It was observed that the systematic approach to management did not translate into a loss of contextual response within the teams and modules. The factory had seven production “modules” consisting of one to three production lines delivering product families. Each of these modules “followed the Manage Processes” in that activities were directed by the CBN through the strategy, change, performance management and external scanning processes. However, what that translated to in terms of practices and enactments varied greatly between modules. For example, one high-speed module dealing in homogenous products invested heavily in automated equipment for improvements as the volume factor meant that this was how the module could make the greatest contribution to the CBN targets. However, a low speed, high-variety sister module eschewed automation expenditure in favour of investment in workstation design for operators – again because it was perceived that this would return the greatest value versus the CBN targets.

Relating this observation to the characteristics of a business process, the “Set Direction” process can be seen to define the required value-focused output and as such establish efficacy requirements whilst it is the appropriate contextual application of an “at the coal face” process (in this case “Change Management”) which delivers the efficiency of the set of activities. This shows that to deliver sustained competitive advantage, putting in place Manage Processes which offer clear direction is insufficient – they must be paired with skilled situational execution within the organisation. Equally, excellence of execution in on-the-ground management processes is unlikely to deliver sustained competitive advantage unless accompanied by clear business direction.

There were many benefits to the approach adopted by FMCG plc but equally it was not without difficulties. It was observed that there was a limited diversity of approach in management thinking; rarely, if ever, was the validity of the CBN called into question. And given the complexity of business and rate of change of the environment in which the business was operating, the appropriateness of a three-year planning horizon might have been an unnecessary self-imposed constraint.

A further problem for FMCG plc was that the clarity of approach and associated strong culture was not appealing to all and attracting and retaining talent into the management team proved an issue. Indeed, it became a matter of policy that staff would not be recruited above an entry-level manager role as it was deemed that they would be unable to fit in and accept the culture. In turn, this “home-growing” of business leaders reinforced both the positive and negative aspects of the homogeneity of senior management approach.

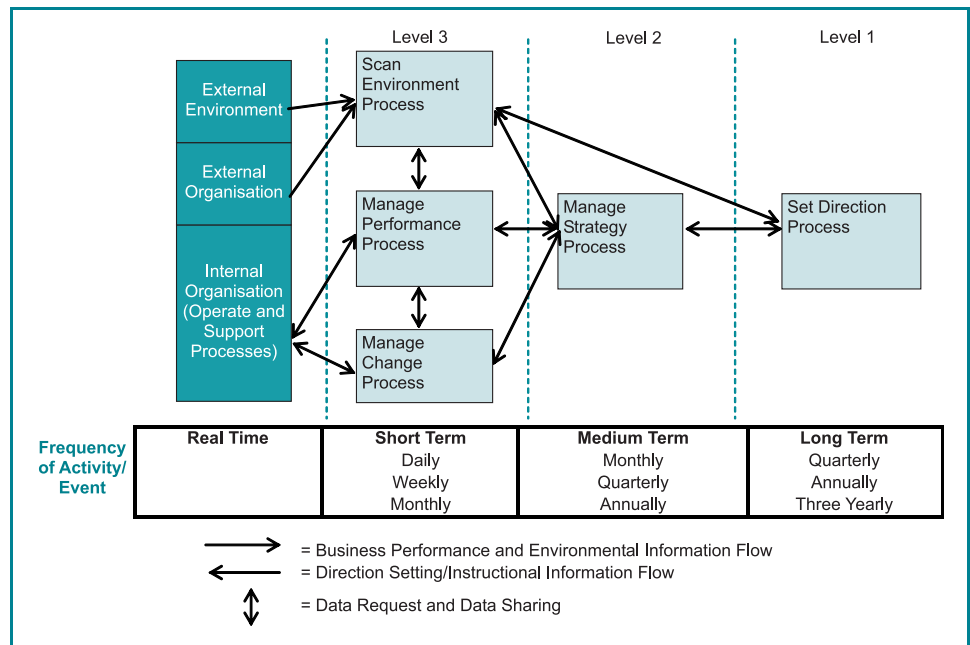
On the whole, FMCG plc was observed to consistently deliver excellent business results from a complex operation through applying a systematic management approach. We can now compare this approach, as presented in Table IV, to the original manage processes proposition by means of a model.

Manage processes hierarchy at FMCG plc

Davenport and Short (1990) observe that where the processes are logically related “a set of processes forms a business system” where the system describes the way in which a business unit or collection of business units carries out its business. Applying this concept to the FMCG plc case study, grouping the processes used to manage the business could be said to be defining the FMCG plc management system. This model is presented in Figure 4



Figure 4 Management systems model for FMCG plc



and should be considered in the context of the advantages and limitations of the methodology applied by the research team.

This model suggests a number of considerations.

- there is a hierarchy to the Manage Processes, nominally represented by levels 1-3;
- in terms of inputs, level 3 Manage Processes are a function of the level 2 process and the level 2 process is a function of the level 1 process (and therefore, level 3 processes are implicitly a function of the level 1 process);
- the input to Manage Processes is information (tacit or explicit);
- whilst the “Set Direction” process accepts information from the level 3 and level 2 processes as inputs, this is not in the form of instruction;
- the current state of the operate and support processes is directed by the “Manage Performance” process and the future state of the operate and support processes is controlled by the “Manage Change” process;
- the Manage Processes deal with both the certain/controllable (internal environment, operate/support processes) and the uncertain/uncontrollable (external environment).

Impact on the manage processes architecture

The observations from FMCG plc suggest that:

- there exists a hierarchy of processes;
- the head of the hierarchy is a direction setting and policy making system (this is not considered a process by Beer but evidence from FMCG plc indicates that it could indeed be a Manage Process);
- all Manage Processes receive and give information as their inputs/outputs;
- the direction setting, strategy making and external monitoring functions are at least one step removed from the interface with the operational processes; and

- the Manage Processes model specifies a process for managing the current state (“Manage Performance”) and creating the future state (“Manage Change”) of the Operate Processes.

Therefore, considering the business process architecture proposed by Childe *et al.* (1994) and modified by McCallum and Bititci (2004), the model presented in Figure 5 is suggested as a revision in light of the findings of the FMCG plc case study. Undoubtedly, elements of the viable system model (Beer, 1979, 1981, 1985), the deductive root of the McCallum and Bititci (2004) model, re-emerge in this proposition. However, the unit of construction for this revised model is a “process”.

As Davenport and Short (1990) stated, “A set of processes forms a business system”. It could therefore be inferred that from the model presented in Figure 5, the Manage Processes can be said to be a system of management. Given the high-level nature of the Manage Processes described in the model, it follows that they themselves may in turn be systems comprising sub-processes not defined in this paper.

It is suggested that understanding and defining these sub-processes is of worth as such research would likely increase the accessibility and applicability of the Manage Processes model to practitioners and organisations.

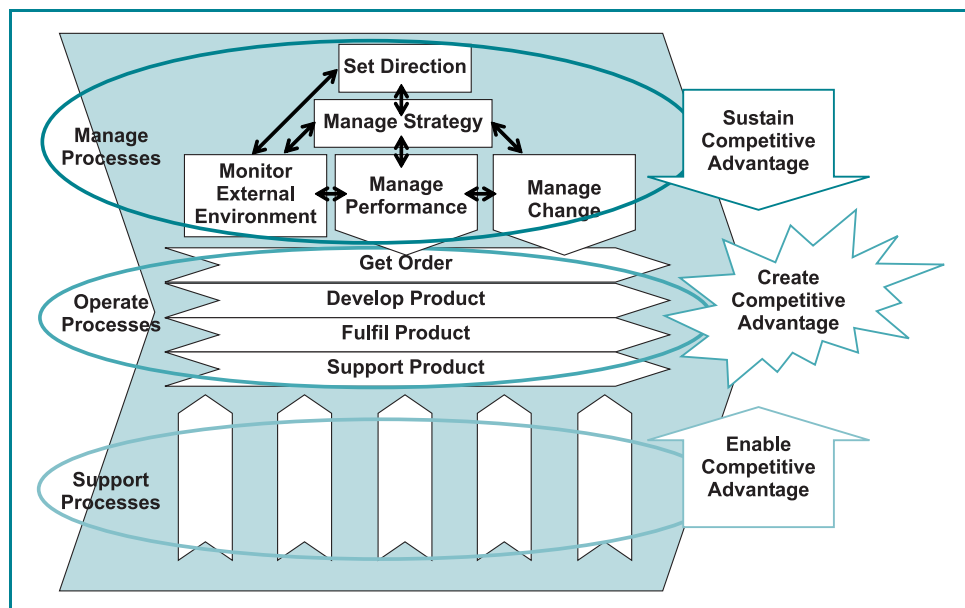
Practical implications

Consider the context of the business results delivered by FMCG plc:

- high levels of uncertainty and competition in the market;
- high level of complexity in the product range (volume, number, product type);
- large organisation (c. 500 direct employees in business unit); and
- major business changes (e.g. acquisitions).

If it is possible to apply this “Manage Process” business architecture successfully in such an environment, with the correct understanding and direction it should be feasible to apply it successfully in equally or less complex/demanding situations. Crucially, it is suggested that adopting the “Manage Process” architecture could provide a means by which companies can sustain competitive advantage. With a clear management focus on sustaining value

Figure 5 Revised business process architecture



creation and providing appropriate, valuable direction to the internal operate processes, an organisation should be able to deliver superior business performance.

As suggested in the previous section however, further development and validation of each of the Manage Processes is required to make this model sufficiently accessible to organisations and practitioners.

Further research opportunities

The management system model is developed from grounded research in one organisation only and therefore requires further testing by means of case study. It would be useful to do so in comparable organisations (in terms of market and scale) as well as contrasting organisations.

Also, the model is still relatively high level and the further case studies should be used to create more detailed models for each of the processes and any associated sub-processes. It is proposed that a combination of both deductive and inductive methods could create and validate a set of best practice models for each of the Manage Processes.

Finally, much is already known about the structure of the “Operate Processes” and the focus in this paper was the development of the “Manage Processes” architecture. Some assertions were made about the nature of and the relationship with the “Support Processes” but these are underdeveloped. It is proposed that there would be value in researching further the “Support Processes” architecture and revising the understanding of the business process meta-system.

Conclusions

Initially this paper defined a business process as a series of activities, often involving several organisational units and operated by actors (humans or machines) that are aiming to create value for customers (internal or external) by converting inputs (material or conceptual) into an output.

It was argued that when this definition of a process was applied to the main elements of the business process architecture that:

- the Operate Processes create competitive advantage by delivering products or services of value to external customers;
- the Manage Processes sustain competitive advantage by providing valuable and appropriate direction to the Operate Processes (internal customer); and
- the Support Processes enable competitive advantage by creating an environment in which the Operate Processes can exist – this is achieved through supplying valuable indirect expertise and resources to the Operate Processes (internal customer).

By means of an in-depth case study, a revised model of the Manage Process architecture was suggested. From the case study output, it was also observed that:

- there is a hierarchy to Manage Processes which is critical to their interaction and therefore their ability to sustain competitive advantage; and
- applying the Manage Processes system of management model correctly can deliver excellent business performance.

It is recognised that there is a need for further research to:

- develop a detailed understanding of each Manage Process;
- develop Manage Processes process and maturity models to aid analyse and application;
- develop an understanding of Support Processes; and
- define the meta-structure for the business process architecture (incorporating Manage and Support Processes developments).

This further research could greatly increase the applicability and accessibility of the Manage Processes to organisations.

As customer expectations and levels of competition grow, it appears that developing an ability to apply all elements of the business process architecture effectively and efficiently could prove vital for tomorrow's organisations.

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