TIBCO Customer Research

Report of Findings

18th June 2004

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1 Executive Summary

In April and May of 2004 an independent research study was conducted on behalf of TIBCO (formerly known as Staffware) to gain insight into the benefits that customers are realising from the deployment of Business Process Management (BPM) technologies in their organisations, the processes they are applied to and the management environment that supports the achievement of these benefits.

Specifically the research objectives were to provide data and information including:

- The identification and quantification of business benefits obtained from BPM technologies
- Current and future trends in the deployment of BPM technologies within this organisations

The research was undertaken through telephone based surveys of senior managers of 22 TIBCO customers, as a representative sample of user organisations. These included organisations from the Telecoms, Insurance, Finance and Government Sectors across 10 countries.

The major findings from the research indicate that increasingly customers are taking a more strategic, "process centric" approach to the management of their organisations, linking customer facing and back office operations to form "end to end", core business processes.

BPM technology is increasingly deployed as a key enabler of this strategy and the use of BPM within customer organisations appears to be extending across the enterprise and deepening within existing processes. There is clear evidence that BPM is pivotal to the business improvement plans of many user organisations.

Overall those business benefits realised are greater than expectation in as many as 80% of cases in some areas of performance. Examples of benefits reported across industry sectors include improvements in productivity and customer service quality in excess of 50%.

The results provide a prima facie case for the use of BPM within organisations across a broad range of industry sectors and processes.
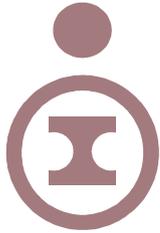
2 Introduction

Does BPM really deliver significant tangible benefits to user organisations? If so what are those benefits and to what extent are these opportunities specific to industries and applications?

Executives will be bombarded with a mixture of messages regarding the respective benefits that BPM can provide organisations, both as a management tool and technical solution. These may come variously from academics, vendors, industry analysts and user organisations. It would be reasonable to expect that potential benefits will vary depending on many factors including the nature of the processes into which it is deployed, the existing state of management and technology practice in the organization and of course the effectiveness of the management of change into the organization.

TIBCO have sought to provide insight in these issues by undertaking a quantitative study based on the most reliable data available, the use of the technology in practice. The study seeks to discern generic trends that cut across sectors and applications, drawing on the views and experiences of a cross section of customers.

2.1 Business Process Management

2.1.1 Definition of BPM

To establish a common understanding of what is meant by BPM, the following definition can be applied.

"BPM is about the reality that business processes are complex, dynamic and intertwined throughout an organization – and, beyond the firewall, to its partners and customers. To effectively automate and manage cross-functional processes requires a new approach and supporting tools that reflect this reality – BPM is that approach. BPM allows processes to be modelled and then dynamically maintained as business requirements are refined or modified, in the light of new information on how users work or changing business needs.

Business Process Management (BPM) is a change management and system implementation methodology to aid the continuous comprehension and management of business processes that interact with people and systems, both within and across organizations.

It is a methodology based on the following assumptions:

• Business processes are ever-changing and developing

• Processes cross-cut each other

• Processes must flow between multiple organizations and interested parties".

[Source: Aberdeen Group]

2.1.2 TIBCO Software

TIBCOe is a leading provider of Workflow and Business Process Management (BPM) technologies. The TIBCO Staffware Process Suite comprises a number of modules designed to address multiple business and Information Technology (IT) requirements including:

- Process Modelling tools to define the process

- A Process Engine that executes the business process as they are defined.

- Monitoring and Measurement tools to allow management of processes as they are executed.

- An Integration Layer that ensures that a wide range of customer legacy applications and Enterprise Application Integration (EAI) technologies can be integrated quickly and easily with the BPM platform.

2.1.3 Perspectives on BPM

Analysts, practitioners and industry commentators have different perspectives regarding those issues that BPM is trying to address, its role within the organisation and consequently the benefits that it can provide to individual businesses. There are those that emphasise the business and operations management aspects, and others that emphasis the role of BPM technology in the systems development and IT development.

In fact BPM technology is designed to serve a number of masters. Strategic and operational managers may require improved control and governance, visibility of "end to end" processes, improved process performance and business agility to enable rapid development and response to market changes. Operational managers may recognise that improved integration of processes and systems within the business, as well as with customers and suppliers, is key to the automation of processes and enablement of improvements in performance.

In meeting the needs of the business, IT managers may be concerned with a different set of issues. They may be concerned with the potential of BPM to overcome the problem of the logic of business process tending to be hard-wired into highly expensive IT systems that constrain process development. BPM can help achieve this by creating a "independent process layer" that is separate from the underlying IT. This enables the rapid execution of improved processes, the implementation of new applications, and the seamless integration of front office applications with back office processing.

2.2 Research Objectives

The aims of undertaking this research were to provide TIBCO with trend data and insights into application of BPM within customer organisations to provide the following information:

- The identification and quantification of business benefits obtained from BPM technologies.

- Current and future trends in the deployment of BPM technologies within these organisations.

2.3 Research Method

The method employed was a telephone-based survey undertaken by Intercai Mondiale, on an independent basis, with respondents treated anonymously.

44 customers were randomly selected from representative segments and invited to participate, and of those 22 were interviewed.

Respondents include organisations across the Insurance, Finance, Telecoms and Government sectors from the UK, Ireland, France, South Africa, Netherlands, Spain, Germany, United States, Norway and Denmark.

Responses were collected between the period of 19th April and 7th May, 2004.

2.4   Respondent Profile

The average number of employees of responding organisations was approximately 11,100. In general, respondents had significant experience of using BPM operationally in their organisations with 59% of respondent organisations having implemented it over 2 years previously.
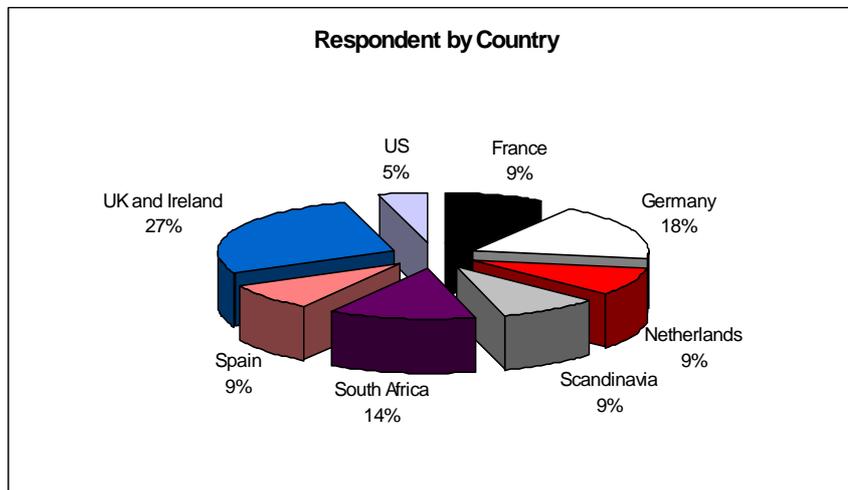
Figure 1: Respondent Profile by Country
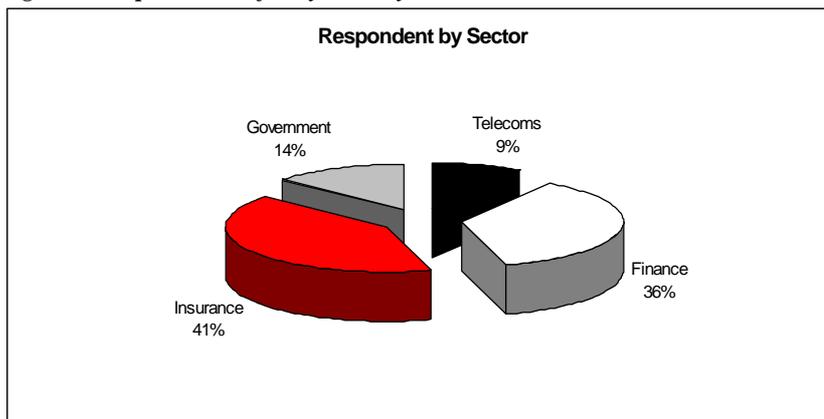

Figure 2: Respondent Profile by Industry Sector

Time BPM Deployed in Organisation

- Do not know — 0%
- 6 months — 18%
- 1 year — 23%
- 2 years — 18%
- More than 2 years — 41%
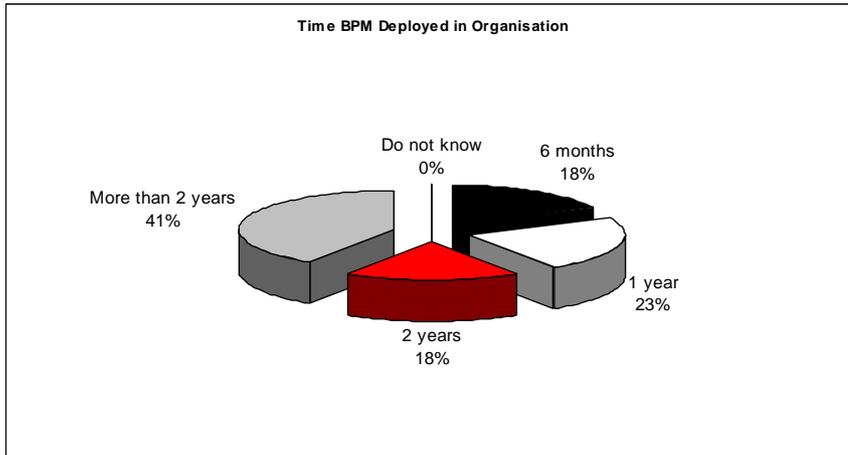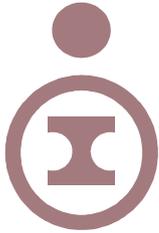
Figure 3: Respondent Profile by Time Since Implementation

3 Findings

3.1 The Extent of Business Process Management Deployment

Extent of BPM Deployment within Organisations
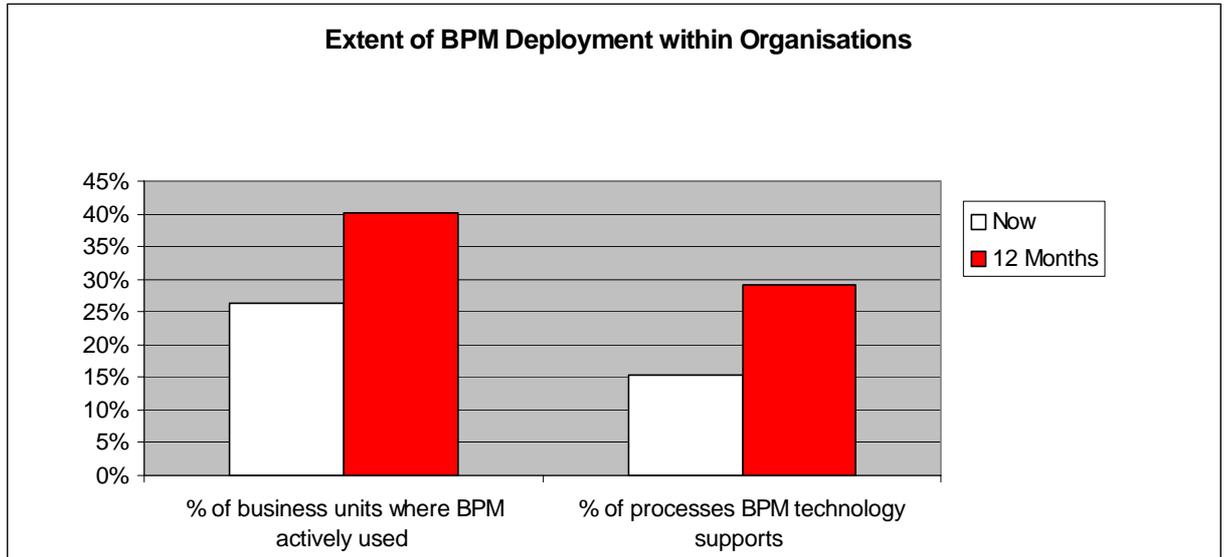
Figure 4: Average Active Deployment of BPM technology within Business Units and Departmental Processes

In general user organisations indicated that BPM technology was deployed within just over 25% of their business units. In this context, business unit was defined as an organisational entity above the functional level whether an operating division, subsidiary or region.

Within the organisations that respondents were responsible for, they were asked to approximate the number of "departmental processes" that they operated, and the number of those that were currently supported by BPM technology. In this case, BPM was applied to 15% of processes.

When asked how this situation was likely to develop in the next 12 months, respondents reported planned extensions of use across business units to include over 40% of them, with an increase in the number of processes the technology was applied to of just below 30%.

In some cases organisations had already deployed the technology across all business units and departmental processes. At the technical level, all respondents indicated that BPM complied with their common technical architecture, facilitating its broader deployment in the enterprise.

3.2 Developments in the Usage of BPM Technology

Development in Numbers of Active Users
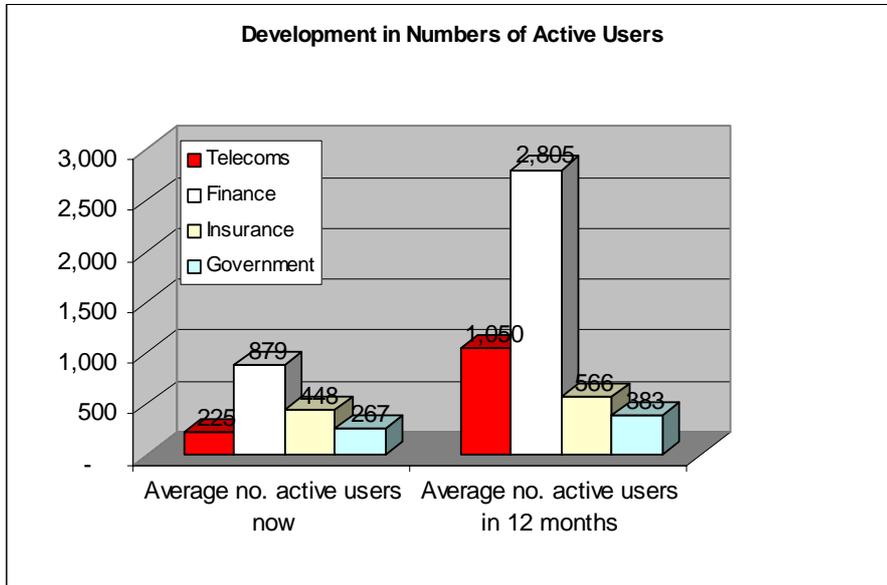
Figure 5: Number of Active User per Organisation by Sector

Number of Active Users	Telecoms	Finance	Insurance	Government	Total
Average no. active users now	225	879	448	267	560
Average no. active users in 12 months	1,050	2,805	566	383	1,399
Growth	**367%**	**219%**	**26%**	**44%**	**150%**

Table 1: Number of Active user per organisation by Sector

When findings regarding the extent of BPM deployment were translated to numbers of users, more interesting trends emerged. In general the use of BPM is set to grow exponentially in the near term across sectors with an average estimated increase of 150% in the number of users. This growth results from the extension of use to new business units and processes, as well as the expansion of use within existing processes.

On average, around 5% of employees are active users of BPM technology. This is estimated to increase to 13% over the next 12 months.

3.3 Management and organisation context

BPM can be, to a greater or less extent, integrated within the broader operational and strategic management models of organisations. In order to understand the trends in management approaches within customer organisations, respondents were asked to rate the strength of their agreement with statements regarding management and organisational characteristics on a scale of 1 to 5, with 5 indicating strong agreement. The question was asked in relation to the current organisation and where the respondent believed it would be in 12 months time.
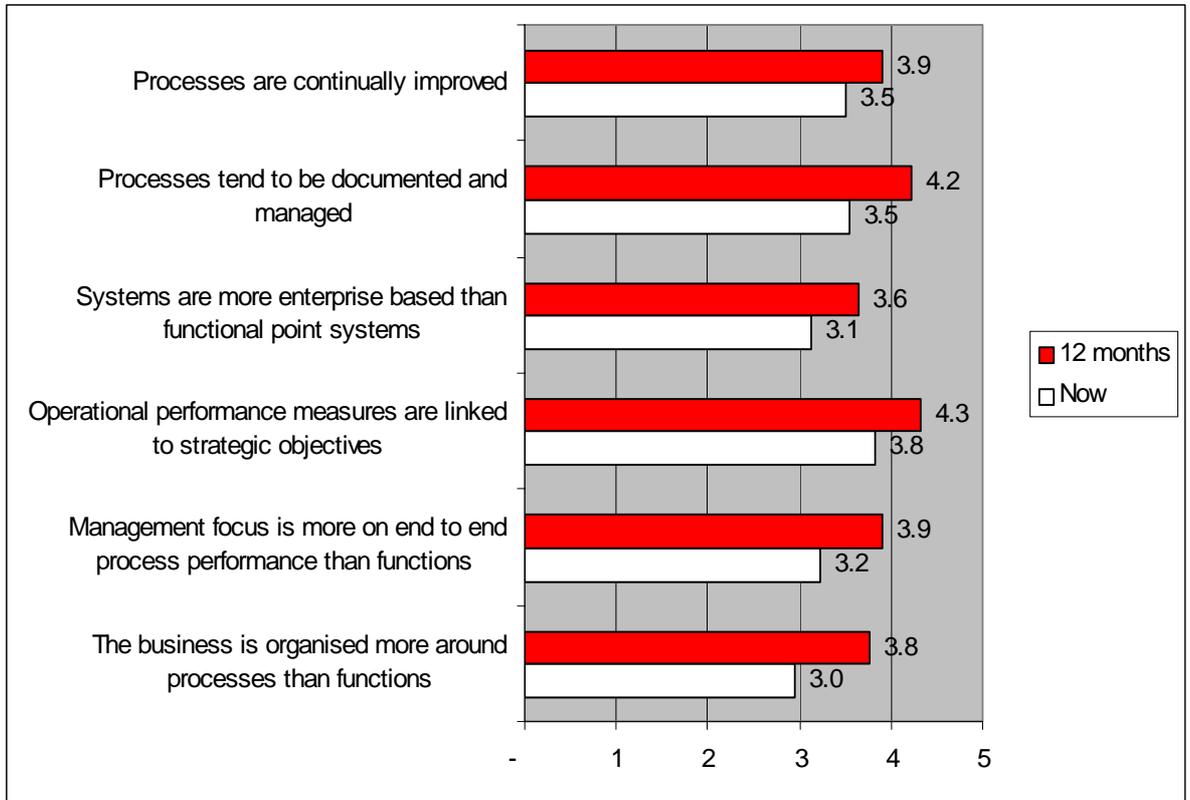
Figure 6: Average Scoring – Respondent Agreement with statements concerning Management and Organisation

The responses indicated that in general, organisations are moving to a more "process centric" management approach, with operations organised and managed more around "end to end" processes than individual functions. This tendency will increase in the next 12 months as user organisations increasingly develop and implement this capability.

Respondents also generally believed that performance measures at the operational level were linked to the strategy of the business. The average rating of the applicability of this characteristic to their organisation was 3.8. It was anticipated that for the respondent group this tendency would increase over the subsequent 12 months with the average rating rising to 4.3.

Comments from some of these customers provide an indication of how the management of their organisations is developing and what BPM contributes to that:

"The management of the business has become more scientific with the introduction of Key Performance Indicators and use of the Balanced Score Card approach. BPM has enabled this innovative approach in terms of the improved organisational performance sought and the supporting information that our management needs". Executive, Insurance.

"The use of BPM has enabled us to harness our legacy departmental systems to support enterprise-wide processes". ICT Manager, Finance company

3.4 Processes supported by BPM

To gain insight into how user organisations applied BPM technology, respondents were asked to list the processes where it was deployed.

General Sector Processes	Number of Users	% Respondents Applying BPM to Process
New business sales/new accounts	12	55%
Account Administration	11	50%
Order Processing	12	55%
Invoicing/Billing	6	27%
Credit Control/Management	5	23%
Collections/Payment processing	9	41%
Customer Service Management	16	73%
Inventory Management	3	14%
Exception Handling	11	50%
Correspondence Handling	15	68%
Contract Administration	8	36%
Product/Service Development	4	18%
Sourcing/Purchasing	1	5%
Supplier Management	2	9%
Production	1	5%
Materials planning	2	9%
Production Planning	1	5%
Fulfilment	7	32%
Logistics planning	3	14%
Other	1	5%
Total	**130**	

Table 2: Percentage of Respondents applying BPM technology to process – General Sector Processes

The responses indicate a number of themes. Firstly, BPM technology is deployed widely across a range of processes within user organisations. The predominant application is to business critical processes that deliver service directly to customers. These include customer care, sales, order processing, correspondence handling and account administration. These also tend to be processes where there is a mixture of manual and automated process, with people and systems interacting heavily.

Financial Sector Specific Processes	Number of Users	% Respondents Applying BPM to Process
Applications Processing	11	65%
Risk Assessment	7	41%
Claims Processing	8	47%

Case Management	9	53%
Funds Transfer	6	35%
Asset Management	2	12%
Tax return processing	3	18%
Other	5	29%
Total	**51**	

Table 3: Percentage of Respondents applying BPM technology to process – Financial Sector Processes

Responses from the Finance and Insurance sectors further highlight the use of BPM in critical, customer operations. These applications also include many processes that link customer facing and back office operations and systems and involve multiple departmental processes. Examples include applications processing, case management, and claims processing.

3.5   Nature of Deployment of BPM within the organisation
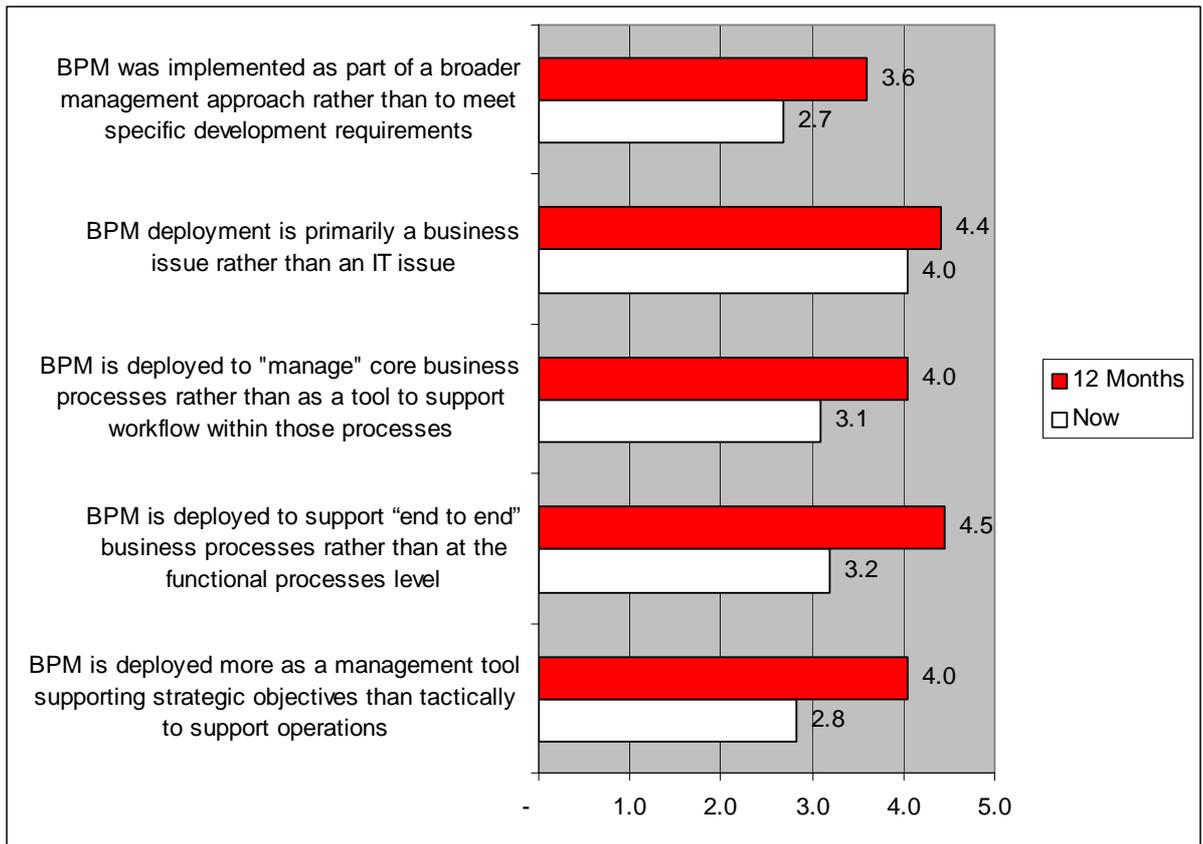
*Figure 7: Average Scoring – Respondent Agreement with statements concerning Nature of Deployment of BPM in their organisation*

TIBCO was interested to understand how BPM technology was being deployed in customer organisations, given the management and organisational context described in 2.3, and how this was likely to evolve over time. Respondents were asked to rank on a scale of 1 to 5 the extent to which

they agreed or disagreed with statements relating to how BPM technology had been deployed in their organisation.

The results strongly suggest that BPM deployment tends to be a business led initiative, with IT issues a secondary concern.

It is clear that whilst respondent already feel that BPM is deployed to manage "end to end" processes, with an average rating of 3.1, this tendency will increase significantly over the next 12 months rising by a factor of 1.3 to 4.5.

Further, organisations will apply BPM in an increasingly strategic role over time with the average response rising from 2.8 to 4 looking forward to the subsequent 12 months.

BPM is viewed increasingly as a tool to support the management of process rather than supporting workflow and is deployed as part of the broader, ongoing approach to the management of the business, not just to meet specific, tactical needs.

3.6   Perceptions of BPM's primary role

In order to determine what user organisations perceived as the "primary" role of BPM technology, they were asked to rank it against three criteria.
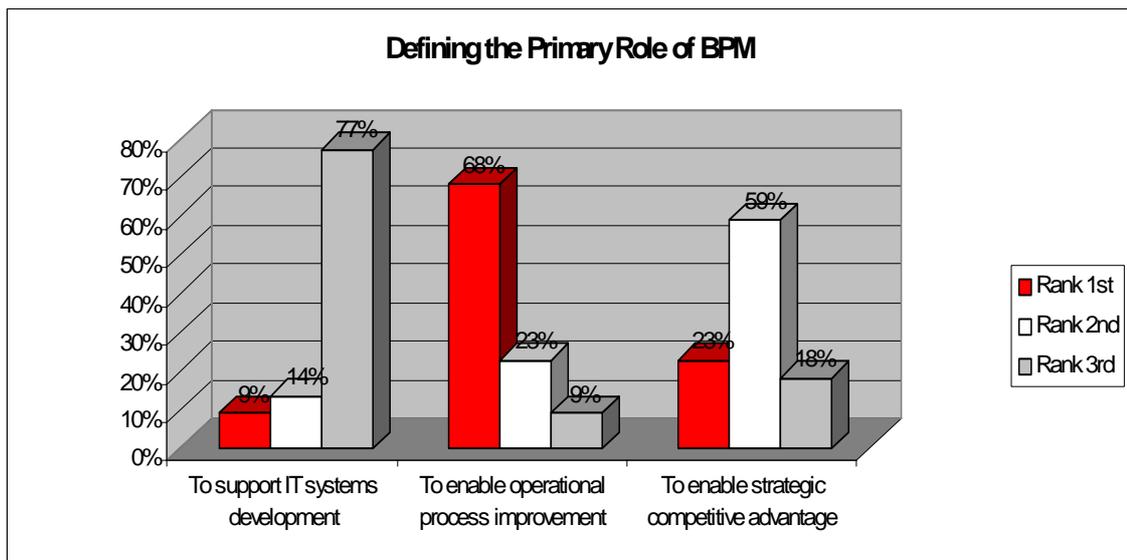
Figure 8: Average Ranking – Respondent Perception of Primary Role of BPM technology

The ranking of the possible roles of BPM, was consistent across sectors.

Foremost BPM technology was viewed as a tool for enabling operational process improvement, and secondly as an enabler for strategic competitive advantage.

Very few respondents viewed its "primary" role as a tool supporting IT systems development although, as indicated in Section 3.8, significant benefits have been experienced by user organisations in reducing IT development times and IT cost of ownership.

3.7   Importance of BPM to objectives

In order to understand the reasons why organisations deploy BPM technology, respondents were asked to rate the importance of BPM to the achievement of a number of objectives, where they applied to their organisation.
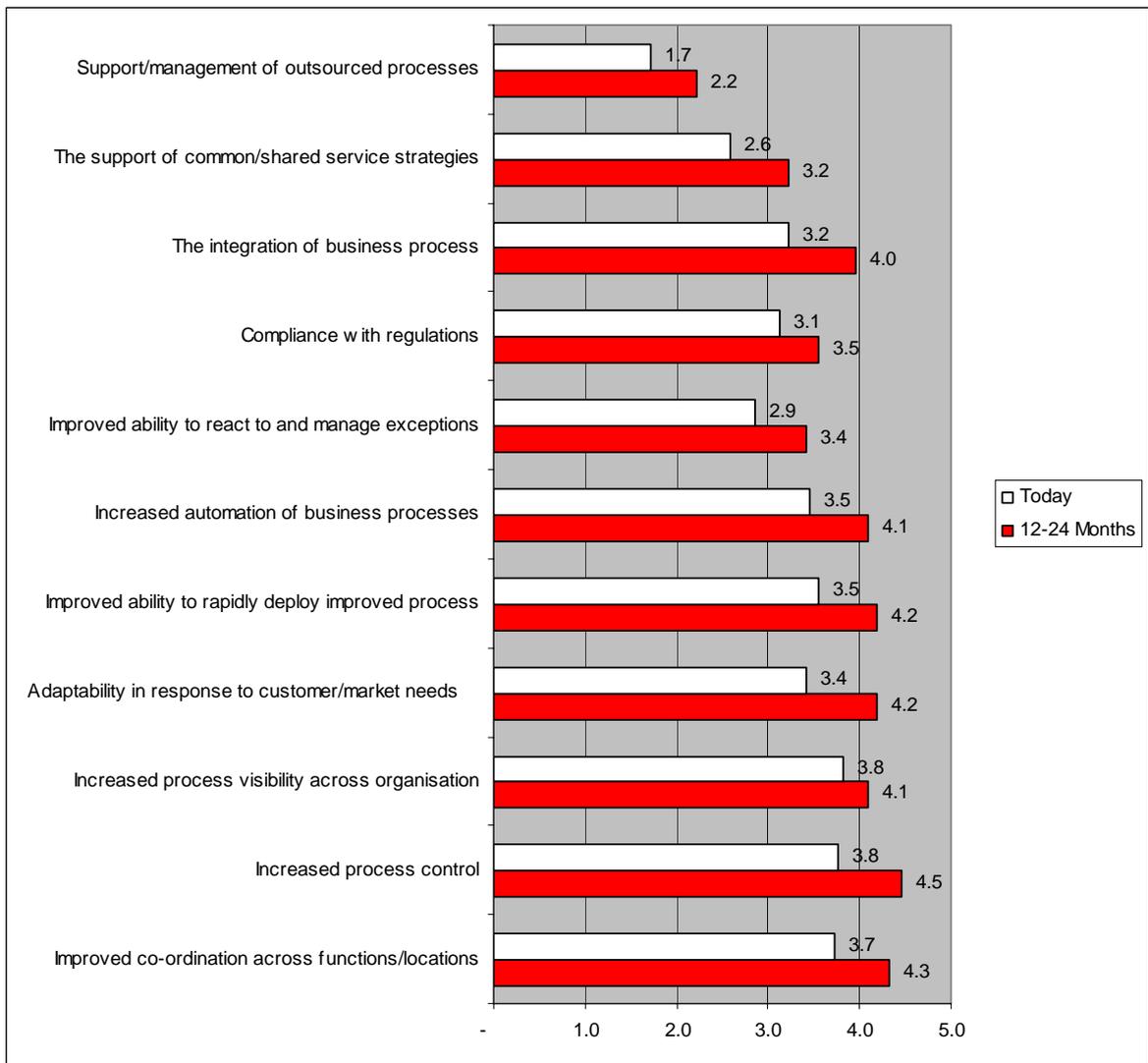
Figure 9: Average Ranking – Importance of BPM to business objectives

In general, responses re-affirmed earlier findings that it was the business management aspects of BPM that were a priority. Increased control and visibility of processes across organisations are the most important objectives that BPM supports. Increased co-ordination across units and locations is another priority.

Process agility will increase in importance over the subsequent 12-24 months, achieved through increased process adaptability and rapid process improvement. The use of BPM to enable the integration and automation of processes will also become increasingly important.

Regulatory compliance will continue to be a secondary driver in BPM initiatives.

Importance of BPM in supporting objectives in 12-24 months - Average of responses by sector	Ranked by Total Score	Telecom	Finance	Insurance	Gov't	Total	Current Score
Improved co-ordination across functions or locations	1	4.5	4.6	4.6	2.7	**4.3**	**3.7**
Increased process control	2	4.5	4.6	4.7	3.3	**4.5**	**3.8**
Increased process visibility throughout the organisation	3	3.5	4.6	3.9	3.7	**4.1**	**3.8**
Improved ability to adapt processes rapidly to respond to customer or market changes	4	4.5	4.6	3.9	3.7	**4.2**	**3.4**
Improved management information	5	4.0	4.6	4.7	2.3	**4.3**	**3.6**
Improved ability to develop and deploy processes improvements rapidly	6	4.5	4.6	3.9	3.7	**4.2**	**3.5**
The increased automation of business processes	7	4.5	3.9	4.4	3.3	**4.1**	**3.5**
Improved ability to react to and manage exceptions	8	4.0	3.8	3.6	1.7	**3.4**	**2.9**
Compliance with regulations	9	4.5	3.0	3.8	3.7	**3.5**	**3.1**
Improved governance and internal controls	10	3.5	3.5	3.8	3.7	**3.6**	**3.2**
The integration of business process	11	2.0	4.4	4.3	3.0	**4.0**	**3.2**
The integration of systems	12	2.5	3.5	3.7	3.0	**3.4**	**3.0**
The support of common/shared service strategies	13	2.0	3.8	3.3	2.3	**3.2**	**2.6**
The support and management of outsourced processes	14	2.5	2.4	2.0	2.3	**2.2**	**1.7**

Table 4: Average ranking of Importance of BPM to Business Objectives in 12-24 months by sector

An analysis of findings by Sector provides some further insight into the drivers in using BPM.

BPM is viewed as more important to process agility improvements in the Finance Sector than in other sectors moving forward as indicated by the high scorings for improved process adaptability and ability to rapidly deploy process improvements, which both carried average scores of 4.6, compared to averages across sectors of 4.2.

Increased process automation was also viewed as an increasingly important objective that BPM supports in the Telecoms and Insurance Sectors, with average scores of 4.5 and 4.4 comparing to an average of 4.1.

The integration of processes was ranked more highly moving forward by Insurance and Finance respondents with results of 4.3 and 4.4, compared to an average of 4.0 across sectors.

Further, whilst support of shared services was not a priority more generally it was ranked as 3.8 by Finance sector respondents moving forward.

3.8 Benefits reported from BPM

In order to quantify the benefits achieved from the deployment of BPM technology in their organisations, respondents were asked whether they had perceived an improvement in specific performance metrics since the date of implementation. Further, where data was available, they were asked to quantify that improvement.
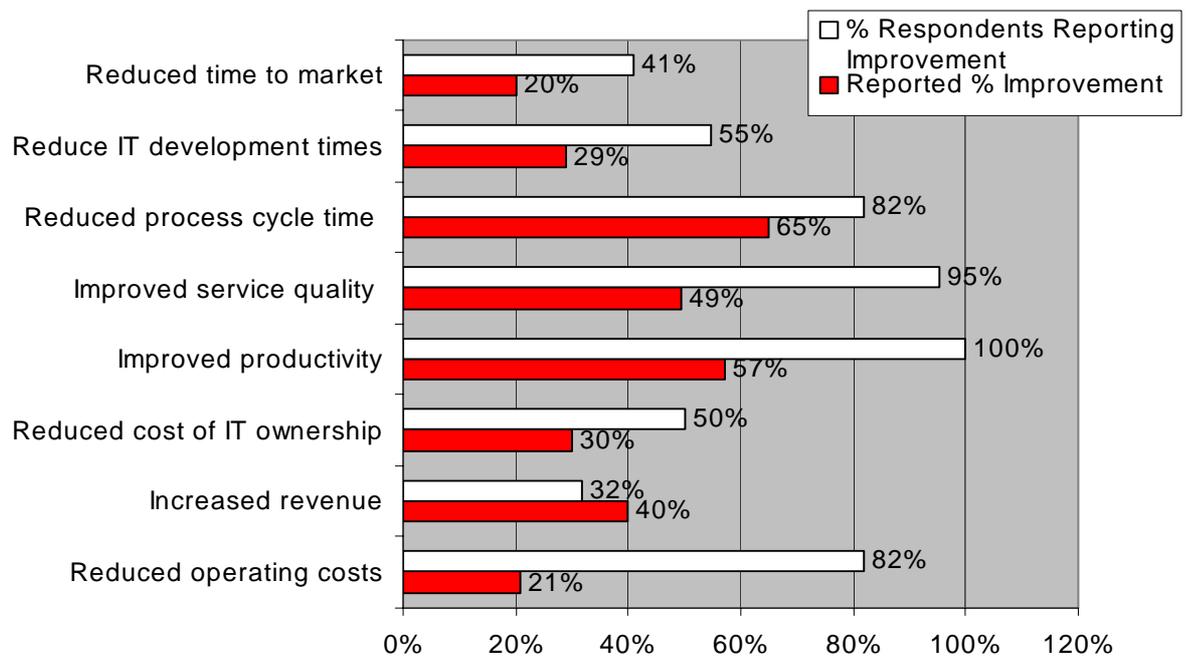

Figure 10: Average Percentage Responses and Reported Improvement

The results were:

- All respondents reported productivity improvements where BPM had been applied. The average quantified productivity improvement was 57%.

- 82% of respondents reported reduced process cycle times, averaging 65% where quantified.

- Improvements in service quality were reported by 95% respondents, with an average reported improvement of 49%.

- Reduced IT costs were also widely reported with average reductions in IT development times and cost of ownership improvements of 29% and 30% respectively

The comments below are indicative of the feedback received from customers in relation to these reported benefits.

"BPM has enabled us to take on an exceptional increase in business of some 30% above normal levels. We have been able to do this with the same number of staff and stay within turnaround times that the regulator monitors. Without BPM we would have been hard pressed organisationally to manage". Strategy Manager, Telecommunications Operator.

"We have become strongly customer focussed and committed to a high level of service for our customers. BPM has played a pivotal role in bringing this initiative to reality". Programme Manager, Government Agency.

	% Respondents Reporting Improvement	% Respondents Quantifying Improvement
Reduced operating costs	82%	45%
Increased revenue	32%	14%
Reduced cost of IT ownership	50%	14%
Working capital improvements	27%	0%
Improved productivity	100%	59%
Improved service quality	95%	45%
Improved product quality	23%	5%
Reduced process cycle time	82%	50%
Increased employee satisfaction	86%	36%
Reduce IT development times	55%	23%
Reduced time to market	41%	9%
Average	**61%**	**27%**

Table 5: Percentage of respondents reporting and quantifying improvement by metric

3.9 Benefits versus Plan

Whilst a level of benefits would be expected from such an investment in technology, respondents were further questioned as to how the benefits realised compared to those expected at the planning stage.

Comparison of benefits realised versus expectation/business case - % respondents	Better than Plan	Per Plan	Worse than Plan
Reduced operating costs	80%	20%	0%
Increased revenue	50%	50%	0%
Reduced cost of IT ownership	82%	18%	0%
Improved productivity	89%	11%	0%
Improved service quality	88%	13%	0%
Reduced process cycle time	71%	24%	6%
Increased employee satisfaction	80%	20%	0%
Reduce IT development times	55%	36%	9%
Reduced time to market	25%	75%	0%
Average	**69%**	**29%**	**2%**

Table 6: Percentage of Respondents rating improvement versus plan

Reported benefits were, in general, significantly better than expectation or plan with an average of 69% of respondents reporting improvements better than expectations or the business case.

BPM exceeded expectation in 80% or more cases in the key areas of improved productivity, improved service quality and reduced cost of IT ownership

A widely reported, and generally unexpected benefit, was increased employee satisfaction. The following statement provides further insight into customer's experiences:

> *"We expected our staff to have a negative reaction to the introduction of BPM, because of the changes and pressures it creates. We were pleasantly surprised when this soon turned into a positive attitude where they now find it indispensable to their work. With BPM, they can work more effectively and they know it enables them to add more value to the organisation". Process Improvement Manager, Finance*

In a smaller number of cases benefits fell short of expectations including expected reductions in IT development times and process cycle times, though the reported improvements here are still significant

4 Conclusions

The study provided valuable insight into the current and future trends in the implementation of BPM technology within customer organisations, the environment in which it is deployed in and the objectives and benefits that customers have achieved.

The following general conclusions can be drawn

1. Increasingly customers are taking a more strategic, "process centric" approach to the management of their organisations, linking customer facing and back office operations to form "end to end", core business processes.

2. BPM technology is increasingly deployed as a key enabler of this strategy, and is instrumental in the adoption of modern management practices, as well as tool to improve business agility and a platform for systems integration and development.

3. The use of BPM within customer organisations appears to be extending across the enterprise and deepening within existing processes.

4. Overall those business benefits realised are greater than expectation in as many as 80% of cases in some areas of performance

5. Significant benefits are widely reported from existing deployments, notably improvements in productivity and customer service quality in excess of 50%.

Against any conventional investment criteria, the tangible and intangible benefits experienced by existing customers from deploying BPM would suggest the basis for a compelling business case to potential users within the Telecoms, Insurance, Finance and Government Sectors.