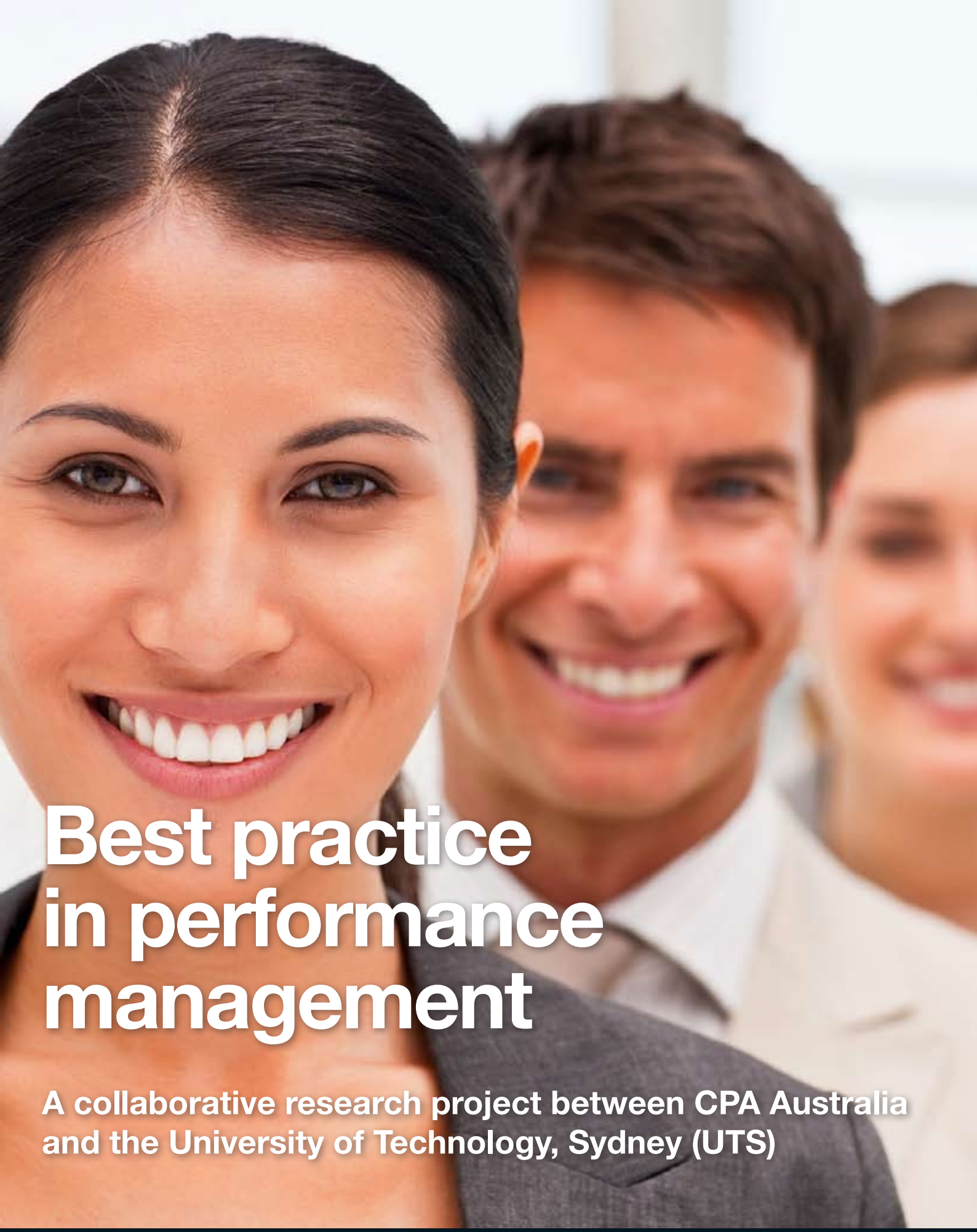

Best practice in performance management

A collaborative research project between CPA Australia and the University of Technology, Sydney (UTS)

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Executive summary

In 2008, a research team from the University of Technology, Sydney (UTS) conducted a survey of 400 medium-to-large organisations in Australia to identify the systems, processes and structures that facilitate high performance. Our findings suggested that on average high performance management systems had the following characteristics:

- Formalised strategic planning processes that outline quantitatively measured goals and detailed plans of action
- Strategy implemented and controlled through a combined use of budgets and performance measurement systems (such as balanced scorecards)
  - Budgets serve primarily as a system to monitor and evaluate deviances from targets, while performance management systems are used more intensively to encourage information sharing, debate and to direct attention towards new opportunities
  - Measurement systems incorporate a broad range of dimensions and measures used for subordinate evaluation, particularly 'leading' measures that provide an indication of future financial performance
  - Greater emphasis on performance-contingent compensation
- Use of structural mechanisms, such as task forces, project committees and cross-functional teams, that cut across traditional hierarchical relationships to encourage information sharing
- Use of policies and procedures that limit the scope of subordinate behaviours in a non-invasive way, such as codes of conduct, and pre-action reviews that subject subordinate activities to review prior to implementation but provide significant autonomy once approved
- Emphasis on human resource procedures and development of shared organisational values, which provide a foundation for decision making
- Organisations that emphasise efficiency as a strategic priority used performance measurement systems as a means of accountability and evaluation, and emphasise bonus compensation determined objectively on the basis of short-term targets
- Organisations that emphasise innovation used budgets and performance measurement systems to evaluate past actions and to develop new strategic directions. To give subordinates significant operational autonomy and structure the firms encouraged information sharing between departments
- Organisations attempting to balance innovation and efficiency had highly formalised strategic planning processes and encouraged subordinate participation and used both budgets and performance management systems intensively
- High performing firms, irrespective of strategic priority, benefited from a focus on human capital and organisational values

Introduction

This report provides information about the accounting systems, management processes and organisational structures that are associated with high performance. In previous studies, performance management systems have typically been analysed in isolation. This research has provided a fairly extensive understanding of the design and use of some of these systems individually. However, there has been little research attempting to ascertain how these systems are used in combination. This represents an important area of research. As organisations face increasingly competitive landscapes, and operations become more complex, so too do the information and management system requirements. While understanding how individual systems operate is important, in practice organisations use multiple systems in combination in order to achieve organisational objectives. Contemporary organisations now use a wide range of mechanisms, such as budgets, balanced scorecards, dashboards, strategic planning systems, compensation systems, methods of coordination and work procedures to realise performance outcomes.

Given the current context of management practice, we sought to provide evidence in relation to two fundamental questions. First: what systems are being used to drive performance? From previous case studies and survey research done by UTS, we have found that while there is an extensive range of systems available to senior management and financial personnel to manage their business, it is often unclear which systems they should be using, or how these systems should be operating together to provide optimal outcomes. This is not that surprising, given that there is very little academic or practitioner literature available to guide practice in this area.

Second: what combinations of systems are most effective to implement a given strategy? There is an extensive body of evidence that reinforces the need for an alignment between strategy and the performance management systems used in order to achieve high performance. As the appropriate combination of systems will depend on the strategy chosen, we examine the choice of management systems and processes across strategic positions. Three common strategic positions were identified: organisations that emphasise operational efficiency (efficiency-maximisers), organisations that emphasise innovation (innovation-leaders), and organisations that try to balance both these priorities (balancers). Results provide evidence on the management systems that should be used when pursuing a particular strategy, and guidance as to where emphasis should be placed if an organisation is attempting to shift its strategic position over time.

Survey method

A sample of 1500 medium-to-large organisations was randomly selected from the CPA Australia member database. To facilitate comparability and validity of results, the analysis was conducted on strategic business units (SBUs) and independent/autonomous firms that had 100 employees or more. Organisations with fewer than 100 employees, and holding firms or corporate headquarters, were discarded from the sample. A total of 400 usable surveys were returned (27 per cent of the initial sample).

The sample

There was a wide coverage of industries in the sample according to the Standard Industrial Classification System (SICS). The largest sectors were manufacturing, finance and services. A breakdown of organisation size is also displayed.

Table 1: Demographic data

Industry classification	
Agriculture, forestry, fishing	10
Mining	18
Construction	26
Manufacturing	151
Transportation, utilities	31
Wholesale	22
Retail	20
Finance, insurance, real estate	41
Services	78
Other[1]	3
Total sample	**400**

Organisation size	
0-250	184
251-500	116
501-1000	54
1001-2500	32
2500+	14
Total sample	**400**

Survey measurement

The survey items employed to measure the use of performance management systems were on scales ranging from 1 to 7. Although specific items were used to try to improve accuracy of measurement of each individual management system, most results can be interpreted as very low use/emphasis (1) to very high use/emphasis (7).

1. Three organisations did not indicate which industry they belonged to.

Performance management systems and practices

The aim of the first analysis was to identify systems and practices that were helping to drive organisational performance. In this analysis we compare the type and use of management systems across two groups: the high performance management systems (HPMS) group and the remainder of our sample[2]. We defined HPMS to mean that the systems and practices used by top management help to achieve desired objectives. Organisations were included in the HPMS group if they indicated that their systems and practices were driving organisation performance to a high extent (a rating of 6 or more out of 7).

We restricted the sample in this analysis to only those firms that were achieving above-average financial performance (a score of more than 4 out of 7 in comparing financial performance with competitors). Firms with low financial performance may not be able to accurately assess the adequacy of their systems, in relation to other factors, in driving performance outcomes, leading to a potential bias in our findings. We were left with an HPMS group of 32 firms, and a comparison sample of 259 firms.

We considered four broad categories of systems and practices used by top management to deliver performance outcomes[3]. These were strategic planning, measurement and compensation, organisational structure and policies, and human resources and organisation values. Each of these categories will be briefly discussed with results presented for the HPMS group in comparison to the rest of the sample.

Strategic planning

In this study we examined the formality of the development of strategic objectives and plans, and the level of subordinate participation in the process. A formal approach emphasises quantitatively measured goals and detailed programs that are closely followed. A more informal approach is to let strategy emerge from experimentation, with strategic goals more loosely defined. Subordinate participation may be used to incorporate information from lower organisational levels, and encourage their commitment to organisational strategy.

Table 2: Strategic planning processes

	Strategic planning		
	Sample	**HPMS**	**Statistical significance**
Formal strategic planning			
Strategic goals specific, detailed and quantified	4.23	4.84	Y
Strategic plans highly detailed, comprehensive outline of strategic actions	4.27	4.87	Y
Strategic plans tightly followed and implemented as outlined	4.26	4.94	Y
Strategy develops through formalised and deliberate processes	4.85	5.47	Y
Overall formality of strategic planning	4.40	5.03	Y
Subordinate involvement in strategic planning	4.40	4.04	N

The results suggest that greater formality in strategic planning is useful in driving organisational performance. Greater formality may provide greater focus, clarity and consensus on strategic objectives, and on the actions required to realise them. Subordinate participation in strategic planning was not significantly different between groups and it may not be important in all firms. Results in the next section suggest, however, that continual (rather than periodic) interaction between management and subordinates may provide performance benefits.

2. Statistical significance of results for T-tests were established at the $p<0.05$ level.
3. These categories were derived from an extensive review of performance management literature, our own observations made in previous research, and from 10 in-depth interviews with senior managers from a range of organisations prior to sending out the survey.

Measurement and compensation

Measurement systems are typically used for two main purposes. The first is decision-making, which refers to the use of information to identify problems and their solutions, and the second is control, which refers to the use of information to influence behaviour within the organisation. Our focus here was primarily on the latter. Two systems that are commonly used for control are budgets and performance measurement systems (PMSs). PMSs are defined as information systems that provide financial and non-financial indicators that measure multiple dimensions of performance, examples being key performance indicators (KPI), dashboards and the balanced scorecard[4]. Budgets may also take a number of forms, including fixed period, activity-based, and rolling forecasts[5].

Table 3: Use of budgets and performance measurement systems

	Budgets			Performance measurement systems		
	Sample	**HPMS**	**Statistical significance**	**Sample**	**HPMS**	**Statistical significance**
Diagnostic use						
Identify critical performance variables	5.62	6.09	Y	5.53	6.15	Y
Set targets for performance variables	5.67	6.25	Y	5.55	6.22	Y
Monitor progress towards performance targets	5.77	6.28	Y	5.59	6.37	Y
Provide information to correct deviations from targets	5.30	5.69	N	5.24	5.93	Y
Review key areas of performance	5.66	6.19	Y	5.65	6.41	Y
Overall diagnostic use	**5.60**	**6.10**	**Y**	**5.48**	**6.21**	**Y**
Interactive use						
Provides an agenda for top management activities	5.43	5.78	N	5.03	6.07	Y
Provides an agenda for subordinate activities	4.83	5.13	N	4.67	5.78	Y
Enables continual debate of underlying data, assumptions and plans	4.81	5.22	N	4.72	5.59	Y
Focuses attention on strategic uncertainties	4.53	5.19	Y	4.26	5.56	Y
Encourages information sharing with subordinates	4.60	5.09	N	4.38	5.67	Y
Overall interactive use	**4.84**	**5.14**	**Y**	**4.61**	**5.73**	**Y**

In this study we were primarily interested in how these systems were being used by top management for control. A framework developed by Robert Simons, a distinguished Harvard University professor and consultant, was applied[6]. Simons considers two styles of using measurement systems: diagnostic and interactive. A diagnostic style of use means that the systems are being used to monitor key performance variables and to correct deviations from preset targets. A diagnostic use provides information about how successful an organisation has been in achieving its intended strategy, and represents a results-based management style where subordinates are held accountable for predetermined targets[7]. Interactive use, however, is concerned with monitoring strategic uncertainties that may invalidate current strategic assumptions, as well as exploring emerging opportunities. Interactive use provides a basis for directing top management and subordinate activities, and a foundation for ongoing discussion and collaboration.

4. See the CPA study conducted by Brown et al (2006) for more information on the design and use of the BSC in Australia.
5. For evidence on the variety of designs and contemporary applications of budgets see the CPA study done by Sivabalan et al (2006).
6. For a more comprehensive treatment see Simons (1995, 2005).
7. The concepts of intended and emergent strategies, and their relation to strategic planning and performance measurement, are discussed in Mintzberg (1994).

Table 3 shows that both budgets and PMSs are beneficial to the implementation of strategies, and that both groups of firms regard them as reasonably important. However, our results suggest that PMSs are being used more intensively and to better effect than budgets in encouraging information sharing and open channels of communication between top management and subordinates, and in directing attention towards emerging opportunities. This is consistent with literature on the balanced scorecard, which is a system predicated on identifying the drivers of future performance, rather than focusing solely on the (financial) outcomes. These findings also suggest that subordinate participation in the generation of strategic ideas and actions is a continual process in high performance management systems which are centred upon formal accounting systems rather than periodic involvement. This provides a possible explanation for the moderate level of participation in strategic planning observed in the previous section.

The types of key performance indicators that are being used to evaluate subordinate performance in the two groups of firms are shown in Table 4. Overall, high performance management systems incorporate a broader range of metrics when evaluating the performance of subordinates. It is particularly important to use leading measures (drivers) of performance and not only measures of outcome.

Table 4: Emphasis placed on key performance indicators for performance evaluation

	Performance dimensions		
KPIs used for performance evaluation	**Sample**	**HPMS**	**Statistical significance**
Short-term financials (e.g. profit, ROI, cash flows, sales growth, cost reductions)	5.34	5.72	N
Customer (e.g. market share, satisfaction, retention)	4.66	5.13	N
Employee (e.g. employee satisfaction, turnover, workforce capabilities and development)	4.06	4.81	Y
Operational processes (e.g. productivity, safety, cycle time)	4.95	5.63	Y
Innovation (e.g. R&D, new product/service success, development cycle time)	3.66	4.50	Y
Quality (e.g. product/service quality, defects, awards)	4.71	5.28	Y
Social responsibility (e.g. environmental compliance, community impact, public image)	3.67	4.41	Y
Overall diversity of KPIs	**4.29**	**4.96**	**Y**

We also investigated methods of compensating subordinates used by the two groups. We considered the importance they placed on performance-based remuneration, and the importance they placed on two methods of determining bonus pay. The first method was to use objective targets or formulas versus subjective and qualitative assessments, and the second was the assessment of short-term performance (one year or less) versus assessment of performance over the long term (three years or more).

Table 5: Methods of subordinate compensation

	Compensation		
	Sample	**HPMS**	**Statistical significance**
Performance-based compensation	4.54	5.35	Y
Objectively determined compensation (versus subjectively determined)	4.60	5.13	N
Compensation based on long-term performance (versus short-term)	2.52	2.34	N

Table 5 shows that there are benefits in having some level of compensation contingent on the achievement of targets. Organisations with HPMSs tend to favour objectively determined, short-term compensation, although this difference is not significant, suggesting that there is no one best method of determining bonus compensation. The method used may be dependent on firm-specific contingencies, such as the particular strategy pursued (see Strategy and performance management, page 12).

Organisation structure and management procedures

The structure of an organisation has important implications for performance. Structure affects the flow of communication, the ability to collaborate across functional departments and the timeliness of responses to unforeseen events. We considered the shape of the organisation's hierarchy (flat versus tall structure), the decentralisation of authority to make major decisions (e.g. development of new products or services, resource allocations and investments), the operational autonomy of subordinates (e.g. the freedom of subordinates to create their own methods of getting work done) and an array of methods of coordinating work between departments and sub-units. The methods of coordination considered ranged from the relatively simple such as planning and standardisation, to the more complex and costly, such as matrix structures and cross-functional teams.

Table 6: Organisation structure and use of coordination mechanisms

	Organisation structure		
	Sample	**HPMS**	**Statistical significance**
Flatness of organisational hierarchy	3.86	3.77	N
Decentralisation of major decision authority	3.83	4.15	N
Operational autonomy of subordinates	5.08	5.34	N
Coordination mechanisms			
Planning of activities	3.95	4.22	N
Standardised programs or procedures	4.18	4.56	N
Liaison personnel (who coordinate the efforts of several sub-units)	2.49	3.66	N
Temporary task forces or committees set up to facilitate collaboration on specific projects	3.21	4.47	Y
Permanent cross-functional teams	2.57	4.00	Y
Matrix structures (multiple and overlapping lines of authority and responsibility)	2.75	3.25	N
Overall use of coordination mechanisms	**3.19**	**4.03**	**Y**

The results indicate that task forces, project committees and cross-functional teams are important components of high performance management systems. These structures facilitate the sharing of information between departments and the cross-fertilisation of ideas. The flatness of an organisation's hierarchy, delegation of authority and operational autonomy are not significantly different between groups, although both groups considered that operational autonomy is an important factor in managing subordinate activities.

Management policies cover a vast array of formal procedures and policies used to specify acceptable work behaviours. From academic literature and discussions with senior managers, two categories emerged as potential means of driving performance. The first were boundary systems, which are the formal policies and statements that management uses to limit the activities of, and risks taken by, subordinates[8]. These are particularly important, given the excessive risk-taking by employees in some firms in recent times[9]. The second category was pre-action reviews. These provide a mechanism for top management to review, guide and restrict subordinate actions and projects before implementation, while providing an avenue for subordinates to propose new ideas and initiatives.

8. These systems are discussed in more detail by Simons (1995).
9. One of the more prominent examples was the financial scandal at National Australia Bank in 2006.

Table 7: Use of management policies and procedures

Policies and Procedures			
	Sample	**HPMS**	**Statistical significance**
Boundary-defining policies and statements			
Use of codes of conduct or similar statements to define appropriate behaviour	5.25	5.97	Y
Use of policies or guidelines that stipulate specific areas for, or limits on, opportunity, search and experimentation	4.22	4.59	N
Active communication of the risks and activities to be avoided by subordinates	4.78	5.16	N
Use of sanctions or punishments to subordinates who engage in risks or activities outside firm policy, irrespective of the outcome	4.51	5.38	Y
Overall use of boundary systems	**4.69**	**5.27**	**Y**
Pre-action reviews			
Frequency of the use of formal pre-action reviews to assess subordinate projects	4.24	4.75	Y
Extent of detail required in reports or plans from subordinates before initiating projects	4.57	5.03	N
Overall use of pre-action reviews	**4.40**	**4.89**	**Y**

The use of boundary systems and pre-action reviews differs between groups. The results indicate that boundary systems are likely to be more effective when sanctions are applied to subordinates who deviate from expected conduct. The HPMS group use pre-action reviews more frequently, but the extent of detail is not significantly different between groups. In the HPMS group, management may subject more activities to review prior to implementation, but they also provide significant autonomy and empowerment to subordinates once those activities have been approved.

Human resources and organisational values

A critical but often overlooked area of performance management is the alignment of individual values to the objectives of the organisation[10]. Values provide the basis for what an individual believes is important[11]. If individual values are similar to those that underpin the fundamental objectives of the organisation, then the individual will be more likely to make decisions and act in accordance with those objectives.

Four aspects of value alignment were analysed. The first was the emphasis on recruitment and selection, particularly the selection of individuals on the basis of values and personal characteristics, rather than solely technical competence. The second was the emphasis placed on socialising subordinates, notably newcomers, using processes such as training sessions, social events and mentoring. Third was the use of formal statements to reinforce the organisation's mission, values and purpose. The fourth was the reliance placed on shared values in aligning subordinate behaviours to organisational objectives.

Table 8: Emphasis placed on organisational values and human resources

	HR and values		
	Sample	**HPMS**	**Statistical significance**
Selection of management personnel	5.45	5.89	Y
Formal socialisation processes	4.12	4.73	Y
Formal statements of values			
Extent to which values, purpose and direction of the strategic business unit (SBU) are codified in formal documents	4.88	5.75	Y
Active communication by management of core values to subordinates	4.84	5.38	N
Use of value statements to create commitment to long-term vision of organisation	4.52	5.47	Y
Use of value statements to motivate and guide subordinates in searching for new opportunities	4.22	4.97	Y
Overall use of value statements	4.61	5.39	Y
Value (cultural) alignment			
Sense of shared values, beliefs and expectations among employees	4.67	5.28	Y
Consensus among employees on SBU objectives and direction	4.63	5.03	N
Commitment of employees to the values and objectives outlined by top management	4.74	5.22	Y
Reliance on shared values and norms to provide direction when faced with uncertainty	4.39	5.03	Y
Overall alignment of cultural values to objectives	4.61	5.14	Y

The results presented in Table 8 indicate that there is an association between an emphasis on human capital and the development of shared values and high organisational performance. It should be noted though that values do not necessarily have to emphasise conformity or agreement on objectives. For example, constantly challenging the status quo may be regarded as beneficial for performance. While specific values are likely to differ between organisations, the results suggest that what does matter is an emphasis on selecting the right people, and generating an ongoing commitment to those values that underpin the organisation's fundamental purpose.

10. Some researchers, such as Peters and Waterman (1986), suggest that culture (which includes values) is actually the most important factor in driving long-term organisational performance.

11. For a detailed analysis of culture and the role of values in managing performance see Schein (2004).

Strategy and performance management

In the second analysis we look at the combination of management systems that drive performance under different strategic priorities. We viewed strategy in terms of the ongoing tensions between efficiency and innovation that all organisations face. The problem facing management is that efficiency and innovation are typically in conflict. For instance, efficiency and short-term financial targets are often achieved through cost control and streamlining the processes involved in the provision of products and services. When this happens, it is less likely that innovative activities that require greater autonomy and more interactively-applied control structures will take place.

While all organisations will face demands to innovate and deliver products and services efficiently, the emphasis placed on these two goals will differ over time. Some organisations will focus on maximising operational efficiency, and undertake periodic innovation or adopt existing innovations within their industry and attempt to provide them more efficiently than competitors. Other organisations will focus on the development of new products and services and methods of production and delivery. Doing this comes at the cost of efficiency, which may be made up through price premiums and first-mover advantages. A third group of organisations will attempt the difficult task of balancing the two competing priorities. We label these three groups 'efficiency-maximisers,' 'innovation-leaders' and 'balancers'[12].

Organisations were each classified into one of these groups on the basis of their strategic priorities. Each group was then divided into a high performance group, and a comparison group. The organisations in the high performance group had achieved strong financial performance (which was used as a proxy for achieving current strategic objectives) and management systems that were driving performance outcomes. The results are shown in Table 9.

12. A fourth group of firms was also identified. These did not have a consistent strategic focus, and hence were removed from this analysis.

Table 9: Comparison of performance management processes by strategy

	Efficiency			Balanced			Innovation		
	Sample	High performance	Statatistical significance	Sample	High performance	Statatistical significance	Sample	High performance	Statatistical significance
Firm count	58	7		139	49		74	38	
Strategic planning									
Planning formality	3.85	4.57	N	5.29	5.92	Y	3.65	5.88	Y
Subordinate involvement	2.90	3.29	N	3.39	4.14	Y	3.24	3.92	Y
Measurement systems									
Budgets									
Diagnostic use	5.28	5.60	N	5.43	6.04	Y	5.29	5.92	Y
Interactive use	4.19	4.83	N	4.59	5.41	Y	4.72	5.56	Y
Performance management system									
Diagnostic use	4.97	6.10	Y	5.32	6.06	Y	5.48	5.87	N
Interactive use	4.31	5.10	N	4.65	5.59	Y	5.10	5.70	Y
KPI Diversity	3.81	4.05	N	4.09	4.82	Y	4.35	4.80	Y
Compensation									
Performance -based pay	4.12	5.57	Y	4.49	5.36	Y	4.16	4.92	Y
Objective determination	4.29	5.43	Y	4.59	5.16	Y	4.39	4.68	N
Long-term (vs short- term)	2.14	2.00	N	2.51	2.45	N	2.70	2.82	N
Organisational structure and policies									
Flatness of hierarchy	4.46	4.44	N	3.85	4.19	N	3.48	3.40	N
Decentralisation	3.36	4.68	N	4.03	4.09	N	3.96	3.95	N
Operational autonomy	4.53	4.71	N	4.95	5.15	N	5.03	5.37	Y
Coordination Mechanisms	3.18	3.26	N	3.51	4.15	Y	3.41	4.23	Y
Boundary statements	4.31	4.82	N	4.64	5.04	Y	4.57	5.20	Y
Pre-action reviews	3.88	4.43	N	4.29	4.98	Y	4.25	4.92	Y
HR and values									
Selection	5.25	6.00	N	5.27	5.78	Y	5.50	5.87	Y
Socialisation	3.34	4.48	Y	4.02	4.69	Y	4.06	4.71	Y
Value statements	3.83	4.75	N	4.40	5.38	Y	4.49	5.27	Y
Value (cultural) alignment	4.00	4.86	Y	4.47	5.08	Y	4.69	5.27	Y

Efficiency maximisers

There appears to be little difference in terms of strategic planning processes between strong performing efficiency-maximisers and the remainder of the sample. In comparison with the other strategic profiles, the planning processes of efficiency maximisers are typically more informal, with fewer participants. This probably reflects the shorter-term orientation of these organisations and their greater focus on current market conditions.

Strong performing efficiency-maximisers receive significant benefit from using performance management systems diagnostically although their measurement diversity is narrower than that of other strategic groups. This suggests that efficiency-focused firms are receiving benefits from systems such as the balanced scorecard although these contain a narrower and more focused selection of performance dimensions (such as operational processes and quality) than those of firms which pursue other strategic priorities. In terms of compensation, benefits are likely to be received from providing rewards based on short-term performance outcomes that are objectively determined, consistent with the strong emphasis on a diagnostic use of measurement systems.

In terms of organisational structure, there are no differences between efficiency-maximiser groups. Organisations pursuing maximum efficiency place less emphasis on boundary-defining policies and statements, pre-action reviews and coordination mechanisms than organisations with different strategies. For efficiency-maximisers, coordination may be achieved through top management direction, standardised operating procedures and target setting, which are less costly to implement. Interestingly, efficiency-maximisers tend to have flatter hierarchies and more decentralisation.

Human resource procedures and organisational values are generally important for efficiency-maximisers, particularly when they are selecting personnel, although generally the values are less important for them than they are for balancers and innovation-leaders.

Balancers

Balancers place the highest emphasis on formal strategic planning processes and subordinate participation. Their plans are likely to facilitate resource allocation, communication of objectives, and coordination between departments which are trying to reconcile innovation, short-term efficiency and profit expectations. Formal measurement systems, consisting of a broad range of metrics, are used extensively in both diagnostic and interactive ways. Using measurement systems to set targets on multiple dimensions of performance, and as a basis for communication and debate, provides a way of focusing on immediate outcomes and stimulating the investigation of new opportunities, in an ongoing process of balancing competing objectives. Performance-based compensation is also important for balancers.

Coordination mechanisms, boundary-defining statements and pre-action reviews are all emphasised by strong performing balancers. Balancers must motivate innovative behaviour without jeopardising short-term efficiencies. Boundary-defining statements limit the area for innovative search, but allow subordinates discretion within it. Pre-action reviews provide a means for management to divert limited resources to the most promising opportunities. Human resource procedures are also highly emphasised by strong performing balancers. Of note is the emphasis on value statements, which may act in conjunction with boundary controls. While boundary controls limit behaviour, value statements encourage actions that are in line with organisational values. Using value statements and boundary controls in tandem allows management to limit the amount of risk to which the organisation is exposed while empowering employees to search for new opportunities within specified parameters.

Innovation leaders

Like balancers, strong performing innovation-leaders place a high emphasis on formal strategic planning. The plans provide a framework of strategic objectives, allowing subordinates to seek out opportunities that are in line with the intentions of the organisation. Although subordinate participation in strategic planning is slightly lower among innovation leaders than it is among balancers, strong performing innovation leaders use budgets and performance management systems interactively more than any of the other strategic profiles do. This is consistent with the claims of Robert Simons who emphasises the importance of interactive processes in encouraging successful opportunity search. Measurement systems are still used diagnostically to ensure that new strategic developments are translated into marketable products or services, while compensation is determined more subjectively, with a longer-term focus, than it is by efficiency-maximisers and balancers.

This is noteworthy because it is sometimes assumed that firms that emphasise innovation and research and development don't make much use of formal information systems. Our findings suggest that for these firms the mode of use is an important factor in determining whether the system will be considered effective or not. When innovation is a primary concern, measurement systems are likely to deliver better outcomes when used to generate open and frequent communication throughout the organisation and when they act as a guide for subordinate activities, than when they act purely as a system of accountability and performance evaluation.

The structure of innovation leaders is similar to that of balancers, although operational autonomy is more important for innovation leaders. Individual autonomy is balanced by a strong emphasis on boundary-defining statements and pre-action reviews. Likewise, coordination mechanisms, such as task forces and teams, are important mechanisms to integrate activities across departments and cross-fertilise ideas. Organisational values and human resources are also of significant importance in achieving strong performance.

Conclusions

This report has examined the systems and processes that drive performance outcomes. The first analysis gave an insight into what constitutes the current best practice in performance management. We emphasise that many of these practices will only be beneficial if used in combination. The results suggest that within the performance management systems of strong performance organisations, strategy is planned formally. Strategic objectives and plans are then implemented through a combined use of budgets and performance measurement systems. The latter are also applied interactively to bring out new ideas and opportunities, allowing subordinates to be continually involved in debate and discussion with top management. For these benefits to be realised, measurement systems need to incorporate a broad range of metrics which are also tied to subordinate evaluation and compensation[13]. The structure of the organisation will also affect the timeliness and realisation of new opportunities. Project task forces and cross-functional teams are likely to aid information transfer across departmental boundaries and hierarchical lines, while pre-action reviews and boundary-setting systems provide mechanisms to direct activities and behaviours towards certain strategic domains. These formal systems are unlikely to produce desired benefits unless there is also an emphasis on selecting the right personnel, and developing a commitment to the values that help define and bind the organisation. Likewise, a strong organisational culture may not provide performance benefits if formal systems are not in place to direct and focus activities.

The second analysis of this report gave an insight into the management practices and systems that deliver high performance under different strategic priorities. Results show that there are differences in the way strategic planning, budgets, performance measurement systems and compensation systems are applied under the three strategic priorities analysed. Efficiency-maximisers place a greater emphasis on the diagnostic use of measurement systems, short-term planning and target-based compensation. Balancers and innovation-leaders place a greater emphasis on formal strategic planning and frequent use of measurement systems for controlling operations. Innovation-leaders, in particular, derive performance benefits from using these systems both diagnostically and interactively. Balancers and innovation-leaders use more complex modes of coordination than those used by firms that focus on efficiency and grant greater autonomy and discretion to subordinates in their activities. This is balanced through the use of boundary systems and pre-action reviews, which provide a means to limit subordinates to activities that are in line with the organisation's mission. All strong performance groups regarded organisational values and human resources as important. This emphasises the importance and potential benefits of these mechanisms for all organisations. The challenge for management is to move beyond such things as value statements which are often just rhetoric with little meaning in the day-to-day activities of employees. Organisations are likely to gain the greatest benefits when organisational values visibly underpin decisions made by management and help to direct the activities of subordinates. This may be particularly effective when individuals are faced with new or unforeseen situations in which standard operating procedures are unable to provide guidance.

We would like to advise that the configurations of management systems and practices outlined in this study are unlikely to represent the ideal arrangement for every firm, or to be the only configurations capable of delivering high performance. The results presented here are based on sample averages, and the specific design and use of performance management systems must be tailored to suite the specific requirements of an individual firm. Despite this, we hope our study will provide a useful guide in thinking about how to improve the functioning of performance management systems in contemporary Australian organisations.

13. This is supported by literature on using the balanced scorecard as part of a performance management system (see for instance Kaplan & Norton, 1996).

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