

1. Kaplan and Norton's system in a Ministry of Works

a. Description of the system

i. The system described via the case of the Ministry of Works in Bahrain

One of the most popular formats for strategic management is Kaplan and Norton's (2008¹) strategic system which includes the popular idea of a balanced scorecard. A case, concerning the Ministry of Works in Bahrain, that can be considered as exemplary, as it was included in the 2009 Balanced Scorecard Hall of Fame (Marr and Creelman, 2011²), is used to illustrate the approach (see box below).

Box 1: a world class case: MoW

*According to Dr David Norton, co-creator of the Balanced Scorecard "The Ministry of Works is a world-class application: the organisation is committed to investing in the future of itself and the country by building on the best management techniques they can find. Their programme is as good as anything we have seen." (Marr and Creelman, 2011). The jury stated the following: "Beyond the actual breakthrough performance results of the Ministry of Works, the judges were most impressed by the Ministry's measurement of employees' strategic awareness, the consolidation and standardisation of measures, and its ability to link strategy with operations."*³



Source: Ministry website⁴

¹ The Execution Premium: Linking Strategy to Operations for Competitive Advantage. HBR Press.

² Creating and implementing a Balanced Scorecard: The case of the Ministry of Works -Bahrain. Management case study. The advanced performance institute. Retrieved from http://www.ap-institute.com/media/4304/creating_and_implementing_a_balanced_scorecard_bahrain.pdf on 19/3/2017

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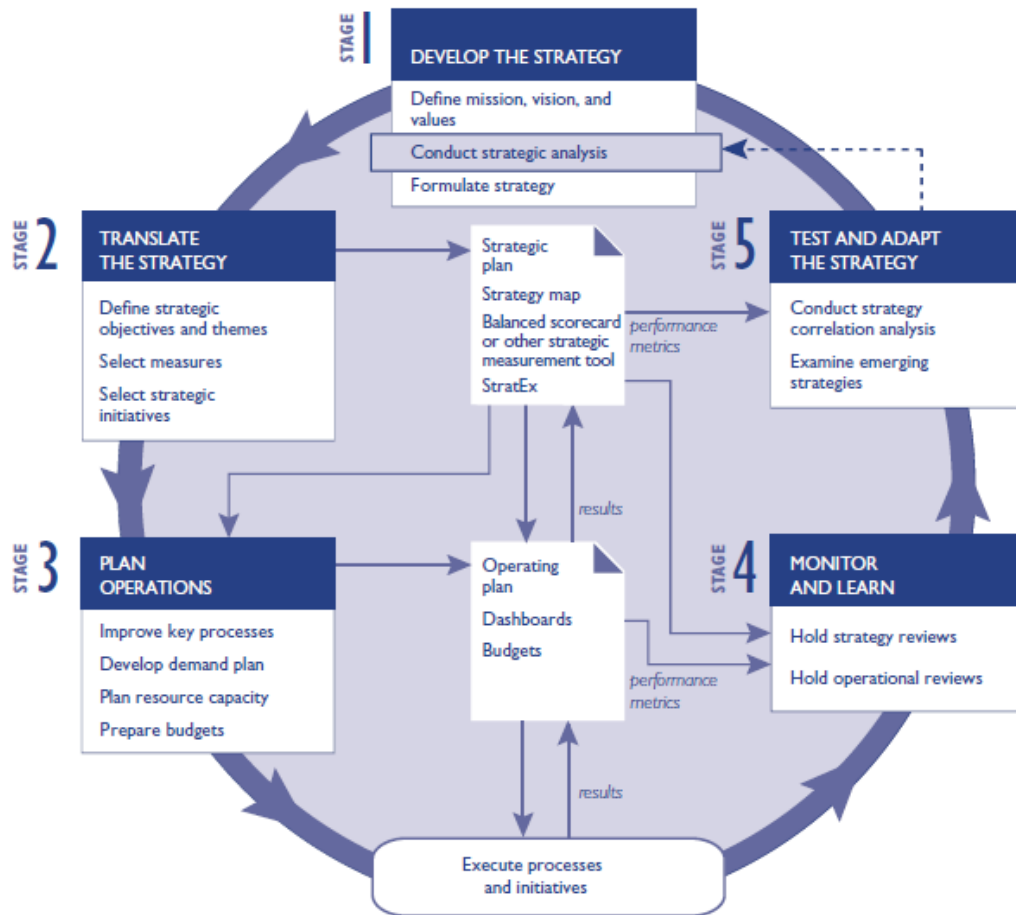
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[https://www.works.gov.bh/English/WhoWeAre/ministryawards/Pages/Global%20Award%20for%20Record%20Achievement%20By%20Ministry%20of%20Works\(2009\).aspx](https://www.works.gov.bh/English/WhoWeAre/ministryawards/Pages/Global%20Award%20for%20Record%20Achievement%20By%20Ministry%20of%20Works(2009).aspx) retrieved 19/3/2017

This system consists of a number of stages.

Figure 1: stages in the strategic management system of Kaplan and Norton



Source: adapted from Kaplan and Norton (2008)

The first is to develop the strategy. This concerns deciding what “business” an organization is in and why. The answers to these questions are given in a mission (why the organisation exists, what it offers to customers and clients e.g. we want to discover, develop and market innovative products to prevent and cure diseases...), vision (mid to long term, 3 – 10 year stretch goals with a market focus - a distinct value proposition- and clear deadline e.g. to be a top quartile specialist within 5 years) and values statement (prescribing attitudes, behavior, character as well as forbidden conduct e.g. we respect the individual).

Box 2: Mission, vision, values at MoW

In the case of Bahrain⁵ this is:

- Mission: 'provide public works services to enhance the quality of life'
- Vision: to be 'a leading organization providing quality services'

⁵Retrieved from <https://www.works.gov.bh/English/WhoWeAre/Pages/mission-and-vision.aspx> on 19.3.2017

- *A Leading, Professional And Socially Responsible Organization: The Ministry of Works is a lean professional, socially responsible organization, certified for the quality of its services. Its core competencies are policy management, sectoral planning, project management and monitoring, control and evaluation of service delivery by the private sector.*
- *A Leading Customer-focused Organization: The Ministry is a leading organization in promoting public interest, equity and reach of services, transparency, sustainability and conservation of the environment.*
- *A Key Contributor To The Development Of The Kingdom Of Bahrain The Ministry is a key contributor to the development of the Kingdom of Bahrain through master planning, rationalization of the use of valuable resources, management of advanced technology data network, spatial databases, MIS, on-line nation-wide utility coordination, services provision, and promotion of the engineering profession*
- *The Structure Is Flat, Fully Networked On-Line, Internally And With Stakeholders: The structure of MOW is flat, fully networked on-line, internally and with stakeholders, agile with flexible and empowered work teams and task forces, and with all transactions performed on the network.*
- *A High Quality Performance And Knowledge Management Culture: The ministry espouses a culture of high quality performance and knowledge management supported by efficient, highly integrated and coordinated processes geared towards achieving optimal outcomes. All layers of management are continuously seeking improvements on all processes, systems procedures, practices, services and cost effectiveness.*

Values⁶:

- *Excellence:*
 - *Consistent quality achievement*
 - *State of the art*
 - *Best value for money*
 - *Being friendly to the environment*
 - *Distinctive work*
 - *Creativity and innovation*
 - *Exceeding expectations*
- *Ethics & Integrity*
 - *Being honest and impartial*
 - *Being fair and just*
 - *Best value for money*
 - *Upholding public interest*
- *Professionalism*
 - *Commitment and reliability*
 - *Good Business conduct*
 - *Problem solver*
 - *Work in own area of competency*
 - *Acknowledge work of others*
- *Team Spirit*
 - *Working together in harmony*
 - *Mutual support and respect*
 - *Synergy*

These elements are the background for managers conducting a strategic analysis which typically consists of the external (via political, economic, social, technological, environmental and legal factors) and internal environment (resources and capabilities that give a competitive advantage). Next this is summed up in a SWOT matrix (e.g. looking at which opportunities can be captured with strengths,...) which then reveals a set of issues.

Box 3: challenges and opportunities at MoW

⁶ Retrieved from <https://www.works.gov.bh/English/WhoWeAre/Pages/Values.aspx> on 19.3.2017

In the case of Bahrain, no information is provided about a specific SWOT analysis. However, the following challenges and opportunities are listed⁷:

Challenges and Opportunities

- Unprecedented and growing demand on infrastructure and public works projects.
- A general awareness and crave for high quality projects.
- Bloom in private sector's developments and construction capabilities.
- Economic surge.
- Scarcity of land and importance of playing a key role in planning.
- A professional obligation and a social responsibility to lead the organization to high standards.

In addition (Marr and Creelman, 2011, p. 4), the following is stated by Raja Al Zayani, Chief of the Strategic Planning and Quality Management (SPQM) Section: ““We held Open Space/Knowledge Café style sessions with over 200 key staff where we explored and discussed how our present strategies,..., aligned to the Bahrain National Vision and what we needed to do to strengthen the alignment. The sessions in many ways validated our existing work as we discovered that our strategies already embodied a high degree of alignment with the national goals...Our senior management increasingly sees the core competency of the Ministry to be centered on engendering private sector involvement and partnership, project management, integration, coordination and value engineering... “

The strategic thrusts of the Ministry (whose works range from small projects and services, such as road safety works and repairs to the sewage network, through to large, complex strategic projects such as the building of ports, hospitals, bridges, major highways, sanitary networks and pumping stations) are therefore built around those competencies that are required to engender private sector involvement and partnership and the handling of large complex projects of strategic impact. The competencies for actual implementation and delivery of services are increasingly provided by the private sector.

Finally, the strategy itself is formulated. Kaplan and Norton (2008) refer to a whole range of possibilities some focusing on leveraging existing positions or capabilities, others on searching for new positions (including operational improvement philosophies such as TQM, alongside strategic approaches such as Michael Porter's positioning, core competences, resource based views, blue ocean, value based management, disruptive innovation etc. as well as methods designed to minimise risk such as COSO) and state that “Our work is agnostic with respect to these various strategic approaches, operational improvement methods, and risk management tools. We have seen various companies use them effectively to formulate their strategies” (p.54). Ultimately, the strategy must cover what customers or markets will be targeted, what the value proposition is that distinguishes

⁷Retrieved from <https://www.works.gov.bh/English/ourstrategy/Pages/Strategy-Road-Map.aspx> on 19/3/2017

the organization, what key processes give the advantage, what human capabilities are required to excel at them and what technology and organizational enablers are needed.

Box 4: four strategic themes at MoW

In the Bahrain case we find the following (Marr and Creelman, 2011):

"In essence the MoW's strategies are described through four themes:

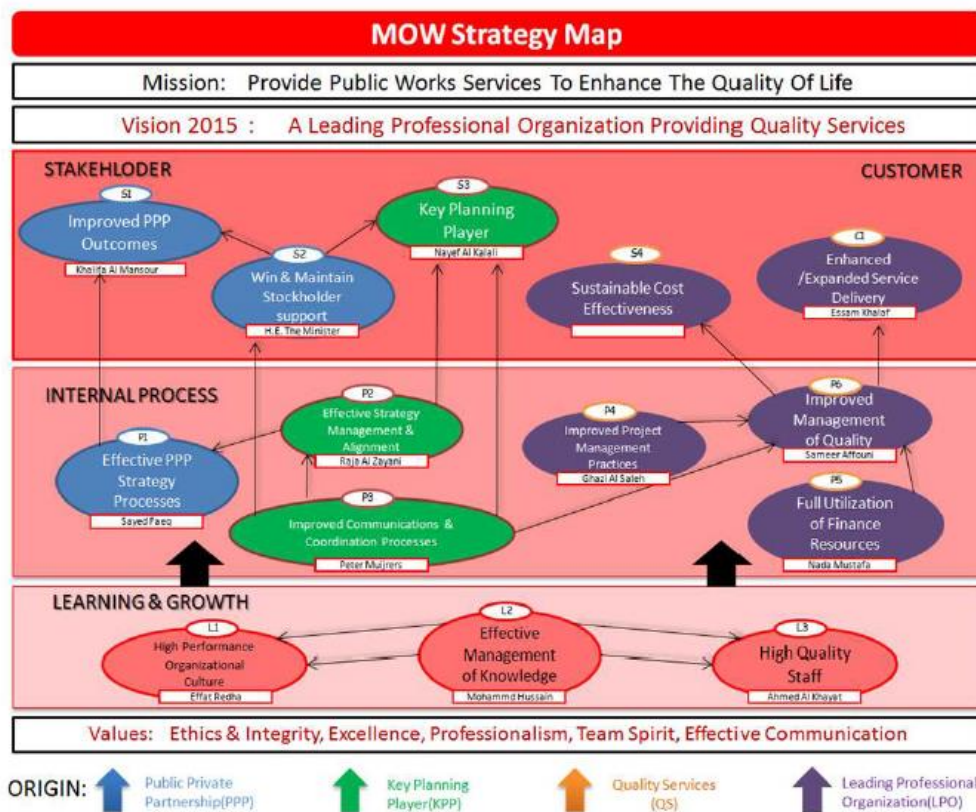
- 1. Public-private partnership: The best harnessing of private sector forces and public private partnership.*
- 2. A key planning player: Ensuring effective collaboration and coordination among Government agencies in order to fully contribute towards effective national strategic and structural planning. This includes ensuring effective policy planning/making and regulatory enforcement.*
- 3. Sustainable quality services: Ensuring the better management of services, projects and quality in order to deliver more and better services that are competitive, fair, customer focused, sustainable and cost effective.*
- 4. A leading professional organization: Being able to attract and retain professionals and high quality competencies, and ensuring a high performance staff and organization."*

The second stage is to translate the strategy into objectives and measures. A key tool for this is the strategy map (see box and figures below). Typically, an overall corporate map is linked to maps for operating and functional (staff / support) units. It is recommend to structure the map according to three to five strategic themes (vertically across the map) to which a senior executive is assigned. This should enable lower unit managers to tailor the theme to their local priorities and conditions and still retain a conceptual link to the higher level, as well as allow to better manage themes with different time horizons. Typically, lower and higher level maps are linked to each other via a cascading process (lower levels responding to the higher level, going back and forth until agreement is reached). In addition, cascading tends to be done up until the level of individual employees.

Box 5: process for constructing a strategy map at MoW

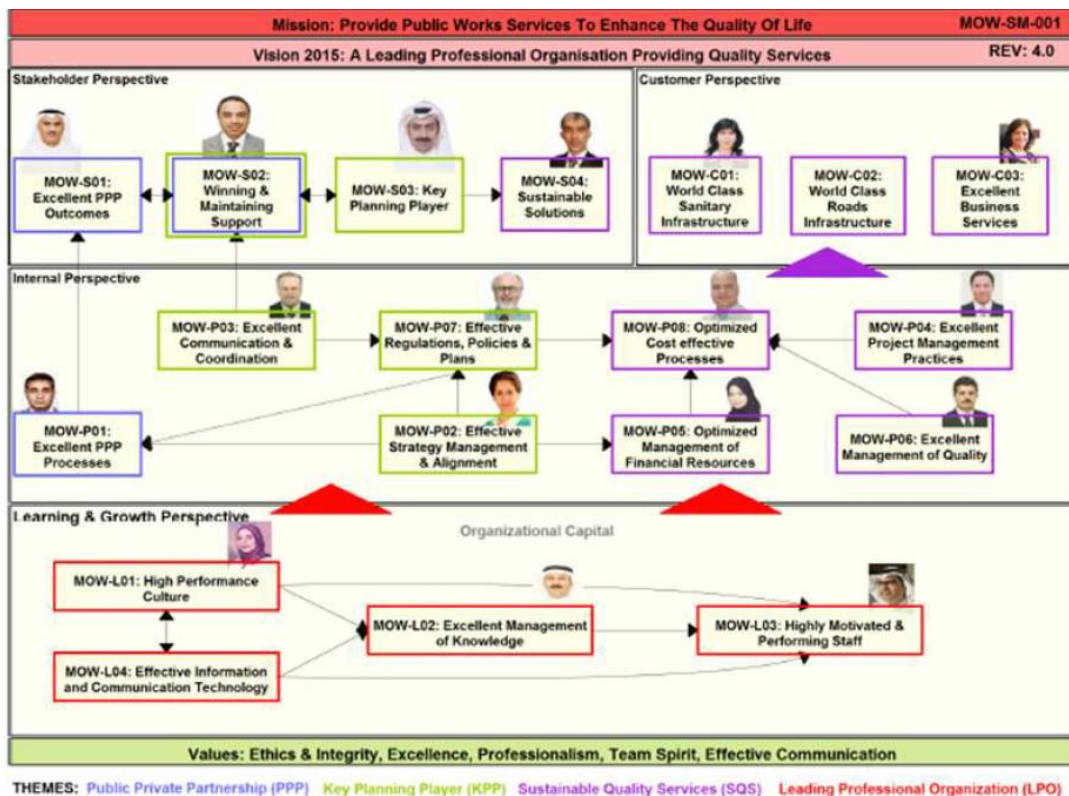
In the Bahrain case maps were constructed in this way. "cross-functional teams of managers were organized into four teams that would build sections of the Strategy Map according to the strategic themes ('theme teams',...). A workshop was then held to integrate the themes within a draft Strategy Map. Following further refinements the corporate level map was approved." (Marr and Creelman, 2011)

Figure 2: MoW corporate strategy map



Source: Marr and Creelman, 2011

Figure 3: MoW 2010 updated corporate map



Source: Marr and Creelman, 2011

Figure 4: example of a cascaded map -MoW road sector map

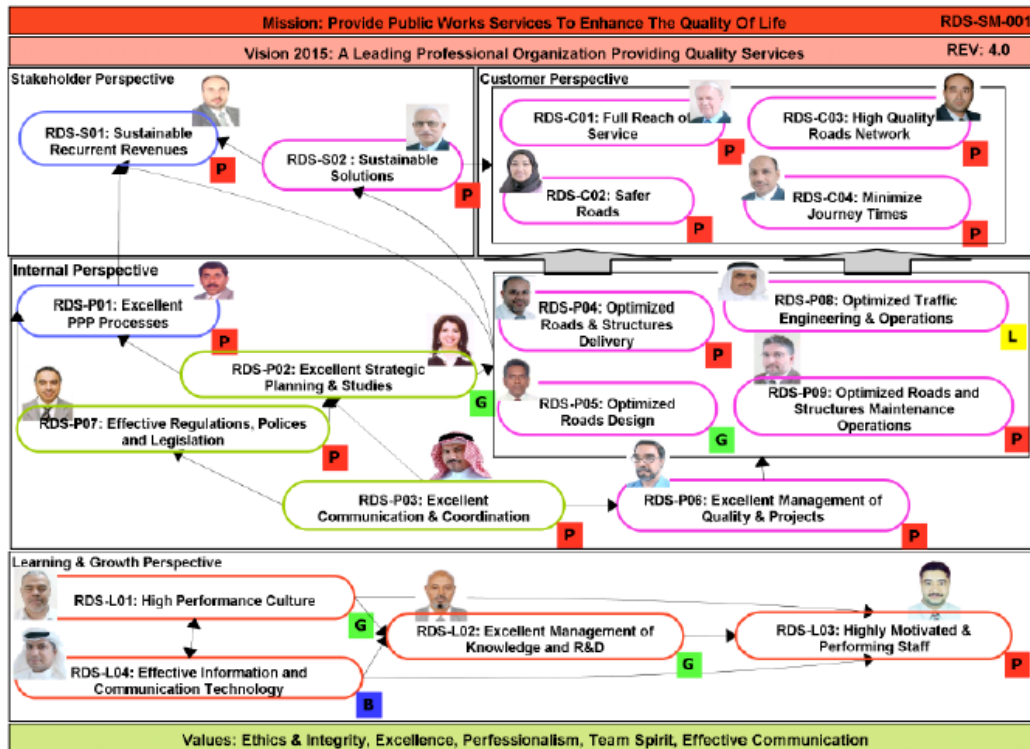
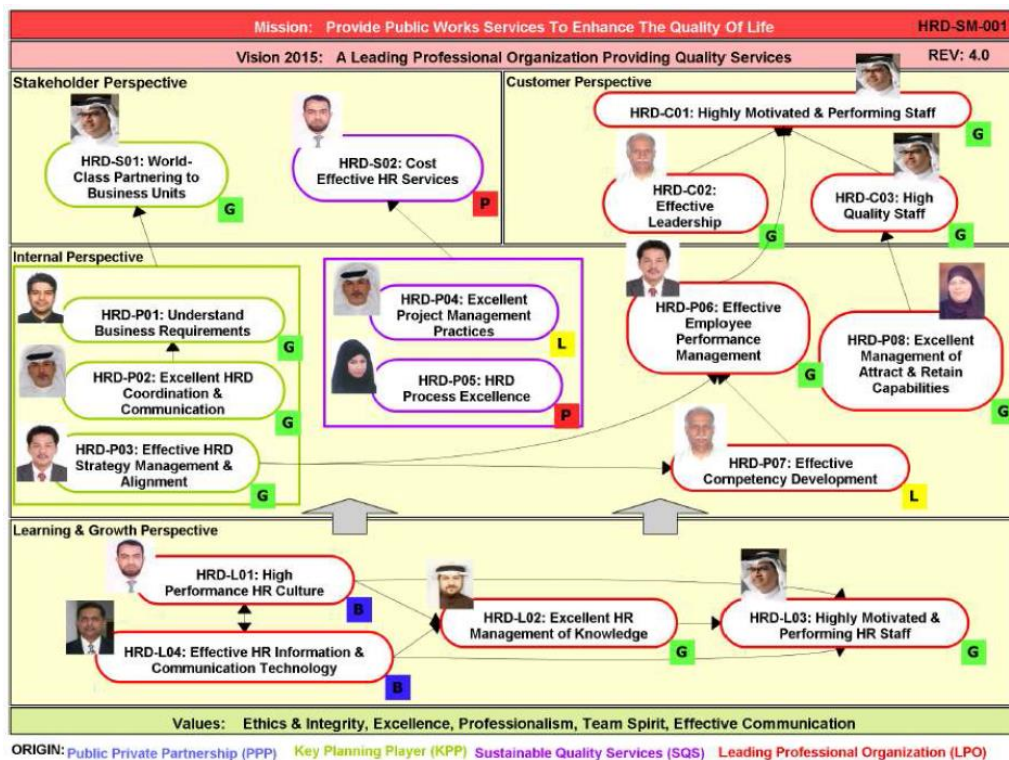


Figure 5: Road Sector Strategy Map

Source: Marr and Creelman, 2011

Figure 5: example of cascaded support unit map- MoW HR directorate map



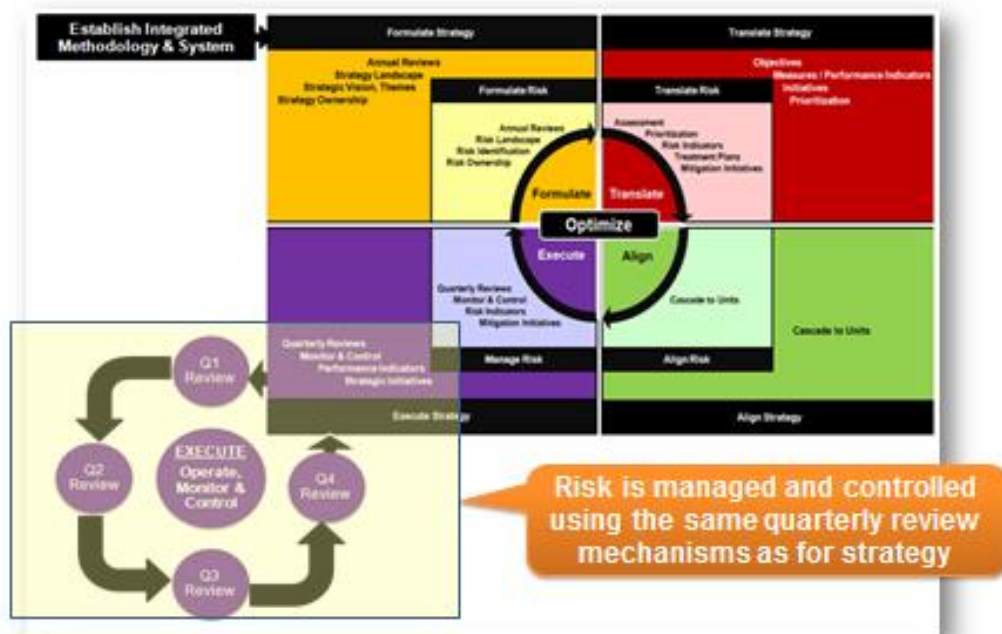
Source: Marr and Creelman, 2011

In later developments, Kaplan (2009)⁸ also integrates strategic risk management into the management system by identifying for each strategic objective on the strategy map the primary risk events that could prevent the objective from being achieved. For each risk event, early warning indicators need to be formulated. Of course, rather than wait for these indicators to signal an adverse condition, management should be proactive, focusing on those events with a high probability of occurring and high impact (referred to as level 2 strategic risks. Also those events with a very low probability but high impact are of interest (referred to as level 1 global enterprise risks). Scenario planning is seen as a useful tool for identifying and discussing level 1 risks. Its aim is to discuss how robust an organization is towards future disruption. The box below describes the system at the MoW.

Box 6: risk management at MoW

Marr and Creelman (2011) also report: "Since mid 2009, the MoW has been focusing heavily on integrating risk management with strategy and assessing, reporting and improving both through the Balanced Scorecard....risk management is only integrated at the corporate level. For each objective a risk Heat Map has been created with the likelihood of risk being rated from very low to very high on a vertical axis and the negative consequences to the MoW if risk should happen from very low to very high on a horizontal axis. A risk title is provided for each objective and a risk description. The scorecard initiatives that will mitigate these risks are also listed. Once a quarter a risk assessment for each objective is conducted where the focus is on those risks that are red on the Heat Map."

Risk Management & Control

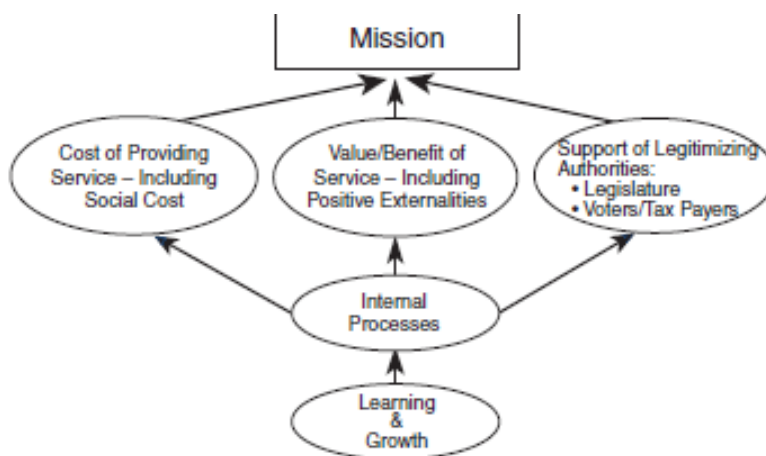


Source: Mow⁹

Once the maps are ready, they are linked to a scorecard of metrics with targets, which, due to the various perspectives on the map, is referred to as “balanced”.

One of the key differences for the public sector considered early on by Kaplan (1999¹⁰) was that instead of the financial perspective at the top and the customer perspective immediately below, the top perspective would be the mission (overarching objective) of the organization and immediately below, a perspective that would contain three themes: cost of service (incl. social cost), value/benefit of service (incl. positive externalities) and support of legitimizing authorities (legislature who acts as financial “donor”, tax payers). Value / benefit requires a view on who benefits (e.g. citizens at large in the case of regulatory or enforcement agencies). It is also recognized that it may be hard to provide a financial value but at least outcomes or outputs should then provide a proxy.

Figure 6: Scorecard for public sector



Source: Kaplan 1999

Marr (2009)¹¹ proposes a value creation map (with an average time horizon of 12 months) where the financial and customer perspective are replaced by one perspectives referred to as “output stakeholder value proposition/output deliverables” (answering why an organization exists, what its roles and deliverables are, what value in terms of outcomes it delivers). This allows to choose whichever stakeholders are relevant to the organization and to relate output/outcomes to these stakeholders. In essence, this is the same as what was proposed by Kaplan (1999). In addition, internal processes are referred to as core activities (the vital few things the organization has to excel in). Finally, the learning and growth perspective becomes “enabling elements” (relating to financial, physical and intangible resources).

⁹ Retrieved from <https://www.works.gov.bh/English/ourstrategy/Pages/Strategy-Optimization.aspx> 20/3/2017

¹⁰ “The balanced scorecard for public-sector organisations” in Balanced Scorecard Report

¹¹ Managing and delivering performance: how government, public sector and not-for-profit organisations can measure and manage what really matters. Oxford: Elsevier.

Moore (2003) proposes to create a public value scorecard based on his ideas presented above. For him, the public value part can be made more concrete in several ways:

- Using a logic model (with mission as end)
- Broad mission and more narrow goals reflecting a contributing logic e.g. 1000 immunisations contribute to universal eradication of certain diseases)
- Linking short term to long term objectives
- Deconstruct the large objective into more specific ones (e.g. health is made up of good eye sight, few sick days, etc...)

As to measures that monitor the strength of their relationship with financial supporters, and public legitimators and authorizers as well as those that record their impact on the world, Moore (2003) proposes:

- sources of revenue, split into type of relationships:
 - charitable donors
 - members or regular contributors
 - government financial supporters
 - paying customers
- share in endowment income, income generated from investments through effective cash management, etc., other material contributions such as time and material
- flow of authorizations or political legitimation (“licenses to operate” or “vouching for the organization with other players”)
- performance objectives for "accounts", ordered in terms of their size and strategic importance to the organization

Operational capacity could be measured as follows:

- Organisational output
- Efficiency: cost (overhead/direct) versus quantity/quality of output
- Financial integrity (fraud, waste, abuse)w
- Morale and capacities of staff, volunteers
- Morale and capacities (leverage) of partners
- Learning and innovation (improve efficiency of what it does, adapt what it does to novel conditions, invent new things to do, change mission and strategy):
 - Derives from those doing the work encountering a new problem, attempting to solve it, work out the implications of the solution, after which, if relevant, it needs to be spread in the organisation...
 - ...or from deliberately initiated experiments, often supported by innovation funds

Another adaptation of the scorecard idea was proposed by Talbot (2011). He builds on the ideas presented above regarding three types of interest and maps these against five perspectives. The resulting table displays the kinds of tensions that need to be balanced by public sector organisations.

Table 1: balancing tensions in public sector organisations

	<i>Self-interest</i>	<i>Public interest</i>	<i>Procedural interest</i>
<i>Trust and legitimacy focus</i>	Respect for individual rights, complaints and restitution, and confidentiality	Respect for democratic and consultative decisions	Respect for democratic and consultative processes
<i>Resources focus</i>	Are purchased in economic and competitive ways	Are purchased in socially useful ways (for example fair trade, fair wages, locally etc.)	Are purchased in fair, transparent and honest ways
<i>Processes focus</i>	Are flexible and responsive to individual wants and efficient	Are equitable, responsive to democratic control and are effective	Are formalized, fair, transparent and honest
<i>Services focus</i>	Are delivered in flexible, cost-effective and efficient ways with choice for individuals	Are delivered in socially equitable and effective ways	Are decided in democratic and participative ways
<i>Social results focus</i>	Are delivered in cost-effective ways which enhance individuals' lifestyles	Are delivered in equitable ways which enhance social justice	Are decided in democratic and participative ways

Source: Talbot, 2011

The final step in stage 2 is to identify strategic initiatives (discretionary projects of finite duration e.g. developing a customer loyalty programme) designed to close multiple performance gaps (as they can be linked to more than one objective typically across perspectives). Initiatives within the same theme form a portfolio under the responsibility of the senior executive assigned to the theme. Resources come from a specific strategic budget (stratex) separate from operating and capital expenditure budgets.

Box 7: balanced scorecard and initiatives at MoW

In the Bahrain case, Marr and Creelman (2011) state:

"Supporting the Strategy Map is a scorecard of measures, targets and initiatives. Again, as part of the Balanced Scorecard design and implementation process, teams of senior staff and managers were assigned to the creation of measures, targets and initiatives. For confidentiality reasons, specific targets are not described here. However, targets have been set for each objective to both the short term (one year) and long term (six years in advance). In many cases these targets represent a significant stretch.

As an example of measures and initiatives consider 'highly motivated and performing staff,' a Learning & Growth objective. Metrics include 'staff development' and MoW retention capability'. Initiatives include 'create a prestigious leadership programme to develop leaders in the public sector,' and 'improve the quality and availability of training.'

As a further example consider 'excellent management of quality', an objective within the internal process perspective. Metrics include 'risk severity index' and 'corrective/preventative actions closed on time'. Initiatives include 'Implement Total Quality Management' and 'Establish Quality Management- achieve certification – e.g., ISO 9001.'

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Perspective Objectives Measures Initiatives

Customer Perspective

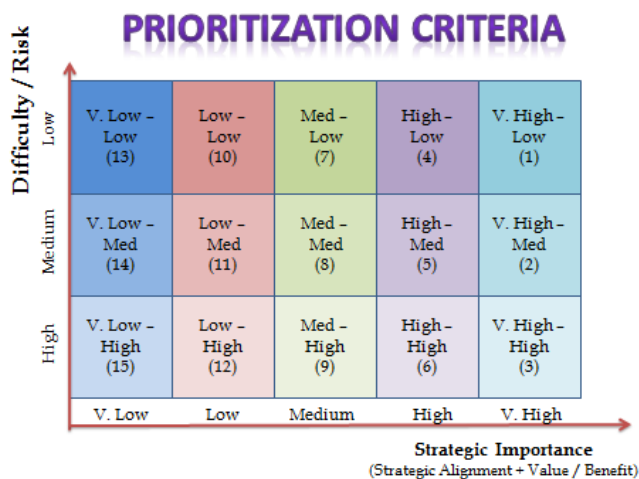
Minimize Journey Times

Journey times on 10 key road corridors

Provide sufficient capacity of road corridors between main entry points

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Initiative Name		Initiative ID	
Initiative Description			
Supported Objective ID	Driving Theme		
Supported Objective ID	Theme Owner		
Supported Objective ID	Proposed Initiative Owner		
Strategic Importance		Difficulty	
Alignment		Risk/Complexity/Readiness	
Payoffs/Benefits		Cost/Complexity	
Strategic Dependencies	D1	D2	D3
Initiative ID	D4	D5	
Major Milestones	FY2007	FY2008	FY2009
	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
Resource Requirements	FY2007	FY2008	FY2009
People			
\$			
Other			

Stage three entails planning operations. This basically relates to maintaining an improving ongoing operations. Process improvement projects (which are not strategic initiatives) are defined. Those that would also contribute to objectives on the strategy map are prioritized as their short term gains will also affect longer term performance. In order to be able to do this, strategic process objectives on the map need to be decomposed into critical success factors and metrics that employees can focus on in their daily activities. Next, a sales plan is drawn up that allows to deconstruct the sales target into the expected quantity, mix and nature of orders, production runs and transactions. Then the required resources can be defined (incl. in terms of personnel). This then determines the operational budget and the capital expenditure budget (for maintenance or expansions). Finally, discretionary spending not driven directly by sales is decided.

In the Bahrain case, no explicit mention is made of this step.

Stage four consists of monitoring and learning. Operational reviews meet frequently (daily, weekly) to review operating dashboards and to solve short term issues. People attending come from a single department, function or process (e.g. a sales meeting, a finance meeting). Strategy review meetings are attended by the CEO and other executives either on a monthly basis for 2 to three hours when they are based in the same location, or quarterly for a day when dispersed. They are devoted to a deep dive into one or two strategic themes (not the entire map). These meetings take strategy as a given.

Stage five consists of testing and adapting the strategy. Here strategy can be questioned. It typically occurs annually and off-site (although it may also be triggered at any time by a major disruption or opportunity). It focuses on reconsidering the map and new strategic options that have emerged since the last meeting. Changing the map triggers the entire cycle again.

To support the strategic management systems Kaplan and Norton (2005¹²) promote installing an “office of strategic management”, typically with 6-8 full time staff. This is supposed to perform the following functions:

- Create and oversee the strategic management system: help senior management to create the BSC, select performance targets and identify strategic initiatives (organisational improvement projects);
- Institutionalise the use of the BSC across the organisation, making sure that all units support the common strategy (and each other in the case of support units);
- Communicate the strategy e.g. through newsletters, CEO speeches etc.; coordinate with HR to ensure that skills necessary to the new strategic management system are acquired by staff;
- Review the strategy: organise and lead the reporting and review meetings, ensure that changes to the strategy are implemented in the corporate BSC and throughout the organisation;
- Refine the strategy: screen new strategic ideas coming from staff and stakeholders and convey promising ones to senior management;

¹² “The office of strategic management” in Harvard Business Review, October

- Manage strategic initiatives that cross unit lines and report progress to senior management;
- Consult with key strategy support functions:
 - Planning and budgeting: ensure that budgets reflect those established during the strategic planning process (e.g. strategic initiatives, reallocations of resources to new priorities);
 - HR: ensure HR manages employee incentives, competency development and annual reviews consistent to with strategic objectives;
 - Knowledge management: ensure that best practices and ideas critical to the strategy are shared throughout the organisation.

Concerning HR, Kaplan and Norton (2003¹³) proposed the concept of “strategic job families”. This concept builds on identification of the set of competences that were identified to be key in performing each of the critical business processes (in the internal process perspective). These competences are put in the learning and growth perspective of the strategy map. Strategic job families are then those categories of jobs in which these competences can have the biggest impact on the critical processes. For each of these job families, HR then has to create competency profiles (in terms of knowledge, skills and values) and then assess the employees in these jobs. According to Kaplan and Norton (2003), only 5% of the staff in an organization is crucial to strategy and hence must be specifically targeted with human capital development programmes. However, this does not imply that other employees do not require development. Indeed, as strategy should also be everyone’s job, this involves key values and priorities to be integrated in every employee’s objectives and actions.

Box 8: Office of strategic management at MoW

In the Bahrain case Marr and Creelman (2011) state: “OSM has eight people with a wide range of skills covering areas such as strategic planning, the Balanced Scorecard, Total Quality Management/quality assurance, risk management and Activity Based Management...SPQM (Strategic Planning and Quality Management Section) facilitates a series of business review and report progress meetings.... Note that the SPQM is expected to facilitate strategy management - not own it....day to day ownership for strategy, especially its execution, had to lie with the business. The cited theme teams are key to this ownership. These teams maintain responsibility for scorecard implementation. Each team is led by a 'Theme Team Owner'... At the corporate level these 'owners' are drawn from the senior team and key professionals within MoW.... Members of the executive team have ownership of corporate level objectives (and so must work closely with the Theme Team owners)... There are also owners for each objective at sector and directorate levels.

Theme Team business plans are updated annually and feed into the annual strategy review, which is then cascaded to the business units.

Each quarter the Strategy Map and Balanced Scorecard is reviewed, which includes detailed analysis and reporting of progress, with a goal of assessing the effectiveness of implementation of the strategy and launching any corrective actions when progress is not at the required level.

The review process begins with Internal Sector Business Reviews (ISBRs). The purpose of ISBRs, which are chaired by an Assistant Undersecretary, is to clarify and sharpen the performance focus and messages that will be delivered at the following quarterly Sector Business Reviews (SBRs) and Corporate reviews.

The SBR and Corporate Reviews are chaired by His Excellency the Minister. Starting with SBR’s for the three sectors (roads, sanitary and construction), an SBR review is then held for corporate support units, services (including HR and IT) and finance units. These reviews serve as a prelude to, and inform the corporate review. Within SBR and Corporate review meetings, all

¹³ “Strategic job families” in Balanced Scorecard Report, November-December

objective owners present to HE the Minister. This raises the importance of all objectives and heightens personal responsibility and accountability at the objective owner level.

In reporting scorecard performance...clearly separate and distinguish between the reporting of objectives and of initiatives. For reporting of performance to strategic objectives,...used four as opposed to the conventional three colour-coded 'traffic lights': Red (poor performance), yellow (less than targeted performance), green (good or targeted performance) and blue (breakthrough performance).... Reporting is by 'exception', that is only for objectives that are not 'green'. For initiative reporting the MoW uses only three status colours, Red (in trouble), Amber (issues but manageable) and Green (OK Ahead , where the meaning of these colours is very different from the objective status colours. Reporting by exception is also the norm for initiative status. ... The MoW defines objective performance status reporting as a backward looking indicator that is based on historical data only, whereas Initiative reporting is in essence the 'management of expectations', and as such is a form of 'forward' reporting..."

Concluding the MoW case, it sees itself (see figure below) as having a high degree of maturity, reaching the stage of strategic agility.



Source: MoW¹⁴

ii. Origin, evolution and empirical evidence for the system

Kaplan (2010), as one of the originators, together with Norton, of the Balanced Scorecard and the management system that was developed around it, writes on the conceptual foundations of the scorecard and how it evolved in stages, a first one being that of the BSC as a tool for performance measurement. He claims that "David Norton and I introduced the Balanced Scorecard to provide a missing component and bridge among these various apparently conflicting literatures that had been developed in complete isolation from each other." (p. 17)

For this first stage, Kaplan (2010) refers to the following roots in the period 1950-1980:

- General Electric's taking on board of non-financial measures;
- Herb Simon's efforts to identify the purpose of accounting information, included answering the question "am I doing well or badly" with a "scorecard", next to attention directing (what

¹⁴ Retrieved from <https://www.works.gov.bh/English/ourstrategy/Pages/Strategy-Maturity.aspx> on 20/3/2017

problems should I look into?) and problem solving (Of the several ways to do the job, which is best?);

- Peter Drucker's original intention for management by objectives, to have managers understand at all levels how they are contributing to higher level objectives, which had however turned into a bureaucratic exercise of local, tactical and operational goal setting; managed by HR, rarely informed by business strategies and objectives;
- Robert Anthony's work on distinguishing strategic planning/control (concerning the causal relation between a desired outcome and a course of action) from management control (concerning the allocation and use of resources) and operational/task control (ensuring specific tasks are carried out).

In addition, the Japanese management movement (in terms of quality and just-in-time) is cited as an influence, arising in 1975-1990. However, this is limited to stressing that some viewed a narrow focus on short term financial performance as a reason why Western companies lost ground relative to the Japanese. Early responses were attempts to value financially an organisations intangible assets and place them on the balance sheet. However, these were deemed less useful (because these assets affect financial outcome indirectly, via cause and effect chains with several stages as well as their value depending on organizational context and strategy, while also requiring to be combined with tangible ones) that just integrating non-financial indicators into accounting and control systems, with some even advocating not looking at financial info anymore at all (as quality, reduced cycle time and responsiveness were assumed to lead to better financial performance automatically). The latter point was deemed not correct by Kaplan (2010), based on studies that showed that even companies that received the Baldrige Award for quality excellence could run into trouble financially. In addition, several cases showed that frontline staff could benefit from financial info when combined with metrics on customers, quality and employees (both on income and costs). Senior management could however benefit from seeing something else than financial info.

Furthermore, better application of insights deriving from principal-agent theory are stated to have had some influence. In the early days, the idea was to link incentives fully to shareholder value. However, Kaplan (2010) claims that research showed that managers cannot optimize longer term shareholder value, by optimizing period by period reported stock prices. This is because much of what determines shareholder value is not immediately revealed and taken into account by investors (e.g. upgrading skills of employees).

Stakeholder theory was a final influence. Some people suggested that meeting expectations of a variety of stakeholders (e.g. shareholders, customer, communities, suppliers, employees) should be guiding an organisation. However, Kaplan (2010) argues for a different path where strategy is selected first and the relation with stakeholders afterwards, as needed by the strategy: indeed, strategy is stated to be about choice, hence one cannot meet expectations of everyone all the time. Hence, in a BSC, employees are present in the learning and growth perspective, not in their own right, but as a function of the strategy. The same goes for suppliers and communities in the process perspective.

By 1992, it became clear that just having a list of metric with a structure was not enough, as this was unlikely to capture the most important drivers of success. Also, the BSC was not supposed to be a mere benchmarking instrument as what matters for the strategy of one company may be very

different for another one. The next stage therefore was that, at the core of the BSC, in the customer perspective, there should be a “value proposition” (a unique combination of price, quality, availability, ease and speed of purchase, functionality, relationship, service), which differentiates the organization, hence being truly strategic. Process and learning and growth objectives serve this value proposition. Metrics to measure these objectives come next.

A next stage, as of 2000, was to generate strategy maps. This derived from the insight that objectives are causally linked. In addition, it became clear that the learning and growth perspective was a weak link. Hence, during 2002-3 the concepts of strategic human capital readiness and strategic job families and their links with information and organizational capital were developed.

At the same time, it became clear that the Balanced Scorecard as originally devised was a “diagnostic” control system for reporting and monitoring. By making it part of a broader strategic management system, it could become an “interactive” control system. This use information to set agendas, which demands frequent attention from managers at all levels. The information needs to be interpreted and discussed in face to face meetings. Overall, it is meant to challenge and debate assumptions and action plans. It also became clear that the leadership style was very important in terms of how the BSC was put to use. Together, these insights led to the concept of the “strategy focused organization”, described in the second book by Kaplan and Norton, via 5 principles:

- Mobilise change via executive leadership;
- Translate the strategy (into maps);
- Align the organization to strategy;
- Motivate employees to make strategy their everyday job;
- Govern to make strategy a continual process.

A third book expanded on principle 2 strategy maps, a fourth on principle 3 and how to align business units and corporate levels. A final book focused on principle 5 of the SFO, linking strategy to execution. It claims to integrate quality management, time-driven activity based costing for capacity planning and strategy feed-back.

Overall, Kaplan (2010) claims to now have integrated all activities for strategy development, planning, alignment, operational planning, operational control and strategy control in one comprehensive, closed loop management system requiring simultaneous coordination among all units. This then triggers the need for installing a new function: the Office of Strategic Management.

In terms of future development for the BSC, Kaplan (2010) sees three opportunities:

- The roots of failure of their system can usually be traced to leadership. In many case the BSC is put in place not for strategy execution but for tactical reasons such as reinforcing a quality management system, putting incentives in place, change reporting,... A path forward is seen in measuring leadership (e.g. styles) in implementation and use of the system to figure out what aspect really matter;
- The integration of enterprise risk management into the system;
- Basing analysis of causal linkages in the strategy map on statistical and systems dynamics modelling.

Lawrie and Cobbold (2002)¹⁵ also discuss the development history of the BSC. They refer to the 1st generation scorecard as the one appearing in the original 1992 article in HBR which just had four perspectives, all linked to each other, framed in attitudinal terms (how should we appear to shareholders and customer). The second generation introduced strategic objectives and linked these to metrics. In addition, the causal linkage concept was introduced, evolving from linkages between measures to linkages between objectives (strategy maps). Objectives as short sentences also became elaborated into more extensive objective descriptions. This 2nd generation represent mainstream thinking on BSC design.

Challenges with this 2nd generation were:

- Practical problems with measure selection and target setting;
- Problems with arranging rational “cascades” of objectives and measures;
- Forgetting to ensure there is a shared vision among the senior team before asking members to come up with actions and intermediate results;
- Having a small group of key personnel supported by consultants conduct analysis and select objectives on behalf of the management team (rather than a collective approach), generating lack of support from those who have to execute;
- Strategic objectives not selected based on a priori assumptions of causal linkages, but linked ex post.

A third generation BSC is therefore required, according to Lawrie and Cobbold (2002), based on two changes:

- Starting from a destination statement (see table below) concerning what the organization is trying to achieve (how much relative to a specific time):
 - this makes the selection of objectives and hypothesizing linkages between them easier while also acting as a reference point for target setting, creating consistency among linked objectives by ensuring that one does not limit another (see example below). Before, such a statement typically was formulated at the end of the creation of a strategy map to make objectives more concrete;
 - it enables management to directly participate in identifying objectives by answering “so what will we do to reach our destination?”, reflecting the need of forming consensus among a management team, as informed by thinking on leadership;
 - it also supports strategic alignment, without requiring the formulation of common objectives in different scorecards for different units. This is deemed important as common objectives distract attention of those evaluating from the remaining objectives, partly because the evaluator knows more about the common objectives. However, what is really needed is knowledge about the local context and the issues that led to selecting an objective, which is necessary to make data on those objectives useful. The article states a destination statement helps deliver this knowledge;
- A linkage model without four perspectives, focusing purely on linking activities with outcomes of these (see figure below).

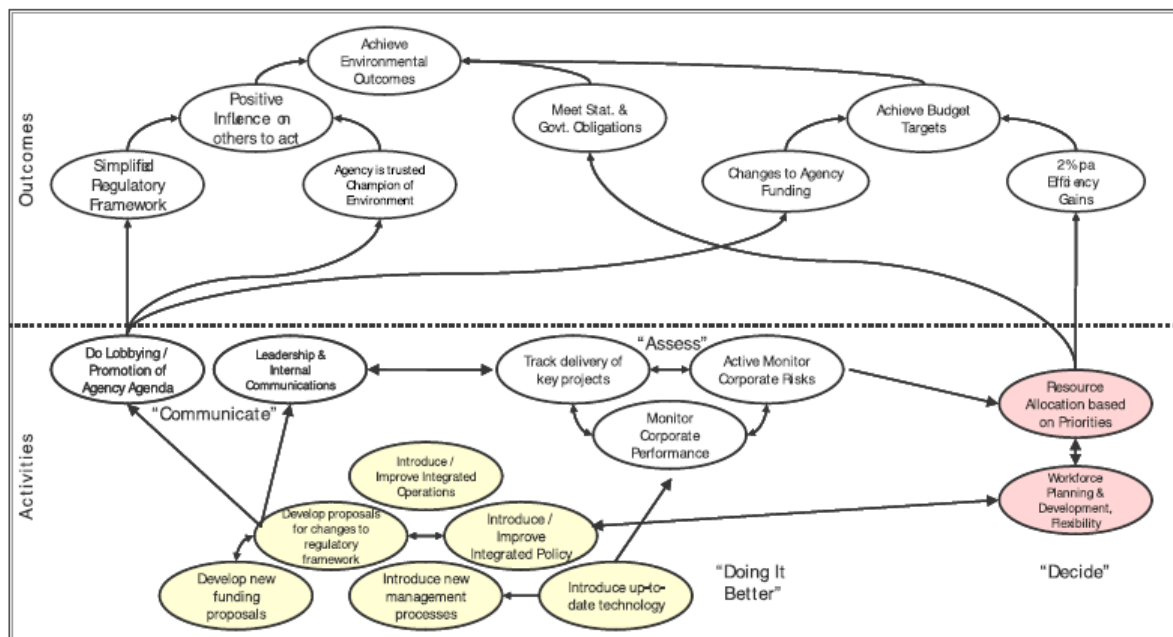
¹⁵ Development of the 3rd generation balanced scorecard. Working paper 2GC Active Management.

Table 2: destination statement example

<p>Stakeholder Expectations and Financial Resources</p> <ul style="list-style-type: none"> S&F1 - SPG has grown its total income (external and internal) to £300M * (NIL NIL) S&F2 - 70% of SPG income comes from direct and indirect Government funding (£210M - £235M now) * (NIL NIL) S&F3 - 30% of SPG income is derived from commercial revenue of which £30M is non-explosive related and £60M is explosive related (£90M-£16M now) * (FIVE SEVEN) S&F4 - SPG has achieved a level of profit on total revenue that is at least x% * (TWO NIL) S&F5 - SPG has created a capital investment plan to ensure it can achieve its growth & profit targets (NIL NIL) S&F6 - SPG has met its return on capital employed (ROCE) targets of x% * (ONE NIL) 	<p>External Relationships</p> <ul style="list-style-type: none"> ER1 - SPG has benefited from its benchmarking relationships with the DDC, Trading Funds, government agencies and other organisations in that business improvement can be linked directly to these alliances/ liaisons (NIL NIL) ER2 - SPG has identified its key markets and is the first choice provider within them (NIL NIL) ER3 - Customers / consumers use SPG because they perceive we meet their needs (ONE NIL) ER4 - SPG meets customer / consumer needs as promised (NIL NIL) ER5 - SPG has win / win fixed relationships with key suppliers (FOUR SEVEN)
<p>Organisation and Culture</p> <ul style="list-style-type: none"> O&C1 - We have outsourced non-core activities appropriately (FOUR THREE) O&C2 - SPG has aligned and delegated authority and responsibility across the organisation to the lowest appropriate level (ONE NIL) O&C3 - SPG has developed a training philosophy that is embraced by staff and generates both functional and professional qualifications in support of business (NIL NIL) O&C4 - SPG has an employment policy and package that attracts and retains the right quality staff (NIL NIL) O&C5 - SPG has a flat management structure with no more than 4 layers (team, function/shed, site/function, HO/function) and no more than 5 basic grades (worker, team leader, Junior, middle, and senior manager) (NINE SIX) O&C6 - SPG has achieved a balanced & structured workforce with a ratio of direct to indirect manpower that compares favourably with national commercial standards (ONE TWO) 	<p>Processes and Capabilities</p> <ul style="list-style-type: none"> P&C1 - SPG has a single integrated management and planning system that meets all of the needs of the business and exploits the latest technology (THREE FOUR) P&C2 - SPG has access to coherent business information across the organisation that can be measured and used to cost accurately existing activity and new work. This allows the business to charge appropriate rates according to the level of activity (FOUR THREE) P&C3 - SPG has a benchmarking strategy to conduct continuous internal and external benchmarking of peers and the monitoring of competitors in order to deliver continuous improvement and the achievement of its objectives (NIL NIL) P&C7 - SPG has a tracking capability that identifies stock condition and location continuously from receipt through to the consumer as part of an integrated supply chain (EIGHT EIGHT) P&C8 - SPG is responsible for all defence distribution across the entire supply chain from industry to the operational consumers (THREE SIX) P&C9 - All commodities are stored and secured in the most appropriate storage environment including CHE (NIL NIL)

Source: Lawrie and Cobbold (2002)

Figure 7: action-outcome linkages model



Source: Lawrie and Cobbold (2002)

The authors still note challenges for the use of scorecards:

- how management behavior can be influenced by performance measurement to better facilitate intervention: theories of strategic control are claimed to be separate from theories relating to performance management;
- how performance reporting can be reconciled with performance management: at the organisational level, complete coverage (incl. operations, finance, HR? markets, health and safety,...) is often desired, which conflicts with relevance at the local level and diminish ownership;
- what are the characteristics of organisations that are conducive to successful implementation of performance management.

Creelman (2016)¹⁶, a supporter of the Kaplan and Norton system, also reflects on how it is evolving. Firstly, he states that until now, most strategy maps were not maps at all but merely used to collocate a bunch of metrics. It was mostly a tool for communication and alignment (via cascading maps and scorecards). This fell short of the initial ambition that it would support testing presumed causal linkages between elements of the map. Today, he states that advanced analytical capabilities should enable testing relations within KPIs and other data to build robust, accurate models that also enable to predict. In this way, it would become the centerpiece of strategic analysis. At the same time, he states that the focus of KPI's will shift to the financial and customer perspectives and will be much less on the enablers (internal process and learning and growth). Defining the perfect enablers has proven to be elusive. It is better to focus on analysing the relation between whatever data may be relevant and at hand with the financial and customer outcomes.

Second, he also recognizes that in the digital age, the emphasis should be less on big strategic initiatives and more on rapid interventions that capture opportunities uncovered through ongoing and externally focused strategy analysis and learning. Hence, also the classic quarterly review will give way to more immediate analysis, reporting and action.

Third, he states that the use of the classic architecture as a tool for alignment via cascading has proven to be time consuming and highly complex, leaving lower level teams struggling to find the perfect links upward and exhausted at the end of the effort. In today's fast moving environments, by the time a suite of scorecards has been created and cascaded, they are often outdated. But the time, complexity and effort needed to build them, makes making quick alterations near impossible. The cascading process becomes as dysfunctional as the budgeting process. Alignment will continue but much more bottom-up. Teams will use higher level maps and scorecards as guides and identify their own goals, KPIs and interventions, making adjustments as they see fit. Top down enforcement will be a thing of the past. "A general weakness of the scorecard system has been that it has often been used as a top down command and control system and so heavily resisted..."

Several interesting general criticisms are noted in a literature by Madsen and Stenheim (2015)¹⁷, three of which concern the substance of the tool. First, there are problems with the assumed causal linkages between measures. However, this criticism can be seen as relating to an older version of the BSC (e.g. in the 1996 book of Kaplan and Norton), where this was emphasized. Afterwards, however, the BSC is stated to be positioned more as a tool for strategy execution. A second criticism concerns

¹⁶ "What next for the Balanced Scorecard". Blogpost retrieved from <https://www.linkedin.com/pulse/what-next-balanced-scorecard-james-creelman> on 1/3/2017.

¹⁷ "The Balanced Scorecard: a review of five research areas" in American Journal of Management vol 15-2.

the possible hindering of creativity, innovation and organizational learning, due to the strong focus on organizational control. A third criticism concerns the view of the strategy process as being rational and top down. Other criticisms are less about the substance of the BSC. For example, it is stated that the BSC literature, including the books by Kaplan and Norton, tends to appeal to manager's emotions rather than logic, hence being closer to how management guru's write rather than academics. In addition, it is viewed as an enduring fashion as well as 'old wine in new bottles' (e.g. the old French concept of "tableau de bord" which arose in the 1930's).

Madsen and Stenheim (2015) , state that one of the challenges in reviewing evidence on the BSC is that it is challenging to define what it really is. They provide a distinction between the pre-2000 concept, which focused on the BSC as a dashboard, and the post-2000 concept, which focused more on the role of the BSC in strategy focused organisations and refer to Lawrie and Cobbold's generations and how they correspond with the types identified by other authors.

Most interestingly, Madsen and Stenheim (2015) provide an overview of the empirical research on the performance effects of using the BSC. They state that it has proved difficult to document a strong relationship between, BSC use and performance. But this may be due to differences in how the concept is interpreted, understood and hence implemented. Most of the cited studies rely on perception surveys of people who have implemented or are using the BSC. This obviously carries quite a strong risk of bias (especially given the high stakes usually involved, where a BSC project is most likely under pressure to be seen as a success). In addition, surveys across different organization most likely capture very different types of BSC implementations.

Two notable exceptions, being quasi-experimental designs not using perception measures, exist which are discussed below.

Davis and Albright (2003)¹⁸ focus on a bank in the US that followed the model set out in the 1996 book by Kaplan and Norton closely, including a strategy map with causal linkages and individual employee level BSC's, linked to incentives. The outcome measure is a branch's rating on a composite measure of nine key financial performance measures. The period is two years. 4 BSC branches (where the BSC was implemented as of July 1999) are compared to 5 non-BSC ones. The study reports a positive effect on the outcome over the entire two year period for the 4 BSC branches when compared to the non-BSC ones. However, the study does not concern equivalent groups. This means the noted difference in performance can be due to other reasons than the introduction of a BSC. Looking at the evolution of the outcome measure over time can be informative. The two groups start in June 1999 with the same score. For the non-BSC group, there is then a small gradual improvement between June and December, relative to the BSC group, which stays pretty stable. However, in December, there is a sudden increase for the BSC group and at the same time a sudden decrease for the non-BSC group, creating a performance gap in favour of the BSC group, that again narrows somewhat at the start of 2000. As of March 2000, the two groups evolve in nearly identical ways until June 2001 (when measurement ends) keeping the gap that was created at the turn of the year, pretty constant. The study does not give any explanation why the better result of the BSC group (and the deterioration of the non-BSC group) should be generated in this specific time period and why afterwards there are no relative changes to be seen. There is a discussion about how balance

¹⁸ "An investigation of the effect of BSC implementation on financial performance" in Management accounting research 15

sheet measures such as loan volume (part of the composite index) are calculated at the end of the year as an average balance for the whole preceding year (hence, including the period before BSC implementation) while as of January, only the balance due to January is reflected. Indeed, at the turn of the next year (2000-2001) a discontinuity is noted but this time, the two groups jump in the same way, without increasing a gap between them. Nevertheless, because the generation of the performance gap coincides with the turn of the year, it is quite plausible that there is an issue with the composite index that is used as an outcome measure and that the gap created at the end of 1999 does not actually reflect a real effect of the BSC.

Another similar study was conducted by Neely (2008)¹⁹ this time on a UK wholesaler of electrical components. It is a superior study as it used info from 56 matched pairs of branches, rather than 9 where no attempt was made to make the equivalent. The matching was made possible due to the acquisition of one wholesaler by another, where one had started with BSC implementation (they were mid-way in rolling out at the time of the acquisition in the 3rd quarter of 2000), but the other had not. The business itself is very homogenous, with the same products being sold to the same range of customers. Variation among branches is therefore deemed to result mostly from geographical location and the associated level of economic activity and labour market conditions. Hence, by matching on location, a decent measure of equivalence is supposed to be achieved. The outcome measures are normalized sales and gross profits over the period of January 2000 to November 2001. In addition, the study had access to the number of non-financial balanced scorecard points earned by each branch (for every target that was in the green, points could be earned ranging from 4 tot 67). Once again, the process as suggested by Kaplan and Norton was followed quite closely for the BSC branches.

The study shows that there is no difference in evolution between the BSC and non-BSC branches. Also, the analysis was conducted separately for those branches that were in the top half in terms of scores on their BSC (above the mean 24,22 points) and those in the lower half. The results showed that for high scoring BSC users there is only rarely a difference with non-BSC matches while low scoring BSC users it is more frequent that they perform worse than their non-BSC matches.

b. Reflections

When comparing the system to Bryson (2011)'s approach, the strategic issue based approach to strategy formulation is embodied in Kaplan and Norton (2008) when they state that "Strategic analysis results in a set of strategic issues that must be addressed" (p. 53). However, very little attention is devoted to how this is supposed to work exactly. Rather, they refer to a whole range of approaches that may be suitable to identify such issues.

MORE REFLECTIONS TO BE ADDED AFTER DISCUSSION

¹⁹ "Does The Balanced Scorecard Work: An Empirical Investigation", Research Paper Series - The Cranfield forum for the latest thinking in management research, vol. RP 1/08.