

Leadership, Strategic Planning and Strategic Management for Higher Education Institutions in Developing Countries*

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Abstract

We argue that it is time to get the strategy back in strategic planning in higher education in developing countries. Strategy is a game plan that describes specific actions which allow an organisation to thrive in a changing environment. Effective leadership is required to develop and implement a strategy. Without implementation strategy is delusion.

We describe several conceptual tools that can be used as necessary preliminary steps for the creation of a Balanced Scorecard BSC performance and strategy management system. We modified the conventional BSC taking into account the non-profit nature of universities and their multiple stakeholders. We found that while BSCs are being developed, the executive TOWS (Threats – Opportunities – Weaknesses - Strengths) tool provided sufficient guidance for management as to essential strategy and risk management.

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1. Introduction

In developing countries², higher education planners, executives and managers are faced with a five major challenges regarding their long-term planning frameworks and institutional strategies:

- First, financial resources to achieve strategic goals are either not transferred to institutions at all, or in an erratic fashion, which makes execution of any long-term planning nearly impossible.
- Secondly, low Faculty salaries make it challenging to recruit and retain existing full-time faculty.
- Thirdly, extremely low gross enrolment rates³ (below 5%) for higher education create strong pressures for accelerated growth of the higher education system.
- Fourthly, pressures from graduates' employers to improve academic quality, and from politicians to create the (usually unattainable) holy grail of the creation of "world class universities".
- Finally, very little guidance or understanding of how to face this dual challenge of improving both the volume, and the quality of the services at the same time a strategised manner.

In this paper, we described in detail how within a long-term national planning framework a university strategy can be developed, implemented and managed that addresses these challenges. As a case study, we described the process we led as Vice-Chancellor at the Papua New Guinea University of Technology.

Without implementation, strategy is merely hallucination. Strategic management systems must then be created in order to implement the strategy and monitor progress towards its declared goals (Butler, Letza, and Neale 1997). Having an engineering project management type of approach to strategy execution will lead to failure, because it does not take motivational aspects and the collective emotions within the organisation sufficiently into account. People need to be involved emotionally, and buy into the collective vision, in particular when times are uncertain and the future is not what it used to be (Rampersad 2001).

First, we discussed why inadequate strategic planning, and "bad strategy" are so common. Then we selected and reviewed some existing strategic management tools. Some of these tools were modified to take into account the non-profit nature of universities, their characteristics as producers of services, their dual mission of research and teaching, or their specific, unique mission.

We showed how to lead the development of a successful strategy and create an appropriate strategy and performance management system. We indicated where there are linkages with strategic planning tools, and how strategic planning objectives fit into the strategic management system. Finally, we discussed the application of these tools in the

2 We will use developing country and low and middle income country interchangeably. For a classification see http://data.worldbank.org/about/country-classifications/country-and-lending-groups#Low_income

3 The Gross Enrolment Rate (GER) in Tertiary Education is the total enrolment in tertiary education, regardless of age, expressed as a percentage of the total population of the five-year age group following on from secondary school leaving.

case of the Papua New Guinea University of Technology.

2. Literature Review and Theoretical Framework

In many developing countries, national governments are forced by multi-lateral development agencies to produce “vision” strategy documents for 2030 or 2050, which are then used to produce mid-term and short-term planning documents. These documents usually contain lists of goals, sometimes with a description of policy instruments, and associated investment costs. Many developing countries have whole Ministries devoted to creating long-term development plans, but this does not necessarily ensure their quality or relevance.

In a development country context, strategic planning means basically long-term development planning. Strategic planning in low-income countries is supposedly aimed at improving the effectiveness of public spending. Since available resources are usually extremely limited, the importance of planning and avoiding wastage is substantial. For higher education, these plans include targets regarding increases in enrolment, but sometimes no firm budgetary commitments to match. Universities are nevertheless invited to align their plans with the government plans.

While the practice of development planning is therefore still active in many developing countries, the scholarly debate on development planning is rather stale (Szirmai 2005). Many of the seminal publication date from the 1950s and 1960s in a policy context of import substitution policies and dependency theories, and are written by some of the founding authors of development economics and Nobel prize winners such as Arthur Lewis, and Jan Tinbergen (Lewis 1966; Tinbergen 1967; Tinbergen 1958).

Nevertheless, for no other sector is long-term planning so relevant as for the education sector. First of all the educational process itself is characterised by long-term cycles. Programs typically last 3 to 4 years, and the whole education process including tertiary education lasts in excess of 15 years. Secondly, the outcomes of the educational process can take a 20 to 30 years to produce, when individuals reach their full career potential.

Even in the early days of development economics, observers of the economic history of states were sceptical of the overly structured approach to development planning for education (Hirschman 1958; Hirschman 1995). While Lewis seemed to believed in detailed manpower planning, Tinbergen himself wrote that: “There is ... no need in long-term education planning for a very detailed distinction to be made between different types of trade, profession or education. ... These plans cannot go into much detail as it is not possible to know exactly, ten to twenty years ahead, what kinds of labour will be required.” (Tinbergen 1958, 128). Tinbergen's experience was based on the successful reconstruction of the higher education system in the Netherlands after World War Two, while Lewis exercise has a more theoretical flavour.

In all long term education planning the main characteristics of the higher education sector in developing countries should be taken into account. First, the sector has minuscule resources at its disposal, which are usually controlled with little or no flexibility by the Ministry of Education or Finance (or both). In many countries, there is no independent Ministry for Higher Education. Secondly, Faculty members and staff may not make a living wage, even for the standards of a low-income country, and will try to survive financially by

taking additional positions, as consultants or teachers at private institutions, or engage in entrepreneurial activities. Long term planning not always takes into account the rigidities, limited capacity and resources of the public sector. It can therefore easily over-estimate the capacity for change within the organisations, and subsequently the degree of commitment of Faculty members and staff.

Strategic planning may be somewhat out of fashion as a scholarly topic, today's strategic management literature is vast and growing quickly. Most of the literature on strategic management however is based on experiences of for-profit organisations. As a consequence, it makes scant reference to long-term development planning.

As Peter Drucker observed, non-profit organisations are not exposed to a market test which determines their disappearance or survival. Management of non-profits must therefore focus more sharply on the mission (Drucker 2006). Moreover, since profit and safe-guarding shareholder interests are not the ultimate aim, business processes are prioritised differently.

All universities have the same dual core mission of combining teaching and research. Most define a third mission, which was traditionally called outreach, social responsibility or community engagement, but nowadays we find valorization, knowledge transfer, innovation or even regional development. The fact that Universities list these activities as part of their third mission, does not necessarily mean they are successful at carrying them out. In fact, most universities are terrible at being incubators, entrepreneurs, or obtaining revenue from their inventions and patents.

Much of the third mission activities is aspirational rather than real. The third mission clearly carries the university beyond its core activities. The third mission usually includes a large number of diverse activities, which are not necessarily related or hard to combine. This situation can lead to a lack of focus and questionable performance and success. We have argued elsewhere that the main social responsibility of the university is its second mission of research and producing of new knowledge, because few other institutions can fulfil this role (Schram 2010).

Let's first examine the traditional management of universities. Like other professional organisations, traditionally universities have been managed by professionals (usually professors), who for a limited period volunteered their time to attend to administrative duties. Many of these professor were volunteers or paid a small allowance, therefore, got away with being negligent in their administrative duties.

In many developing countries, university governance and financing models were copied from the former colonial powers. The regulatory and institutional context for universities in developing countries is extremely diverse, just as it is in Europe (Estermann and Nokkala 2009; Estermann, Nokkala, and Steinel 2011). In general, a significant degree of academic freedom and institutional autonomy are enshrined in the founding Acts of the universities. Academic freedom is usually a condition to be part of university clubs such as the Association of Common Wealth Universities, Magna Carta Universitatum, or various university associations and networks.

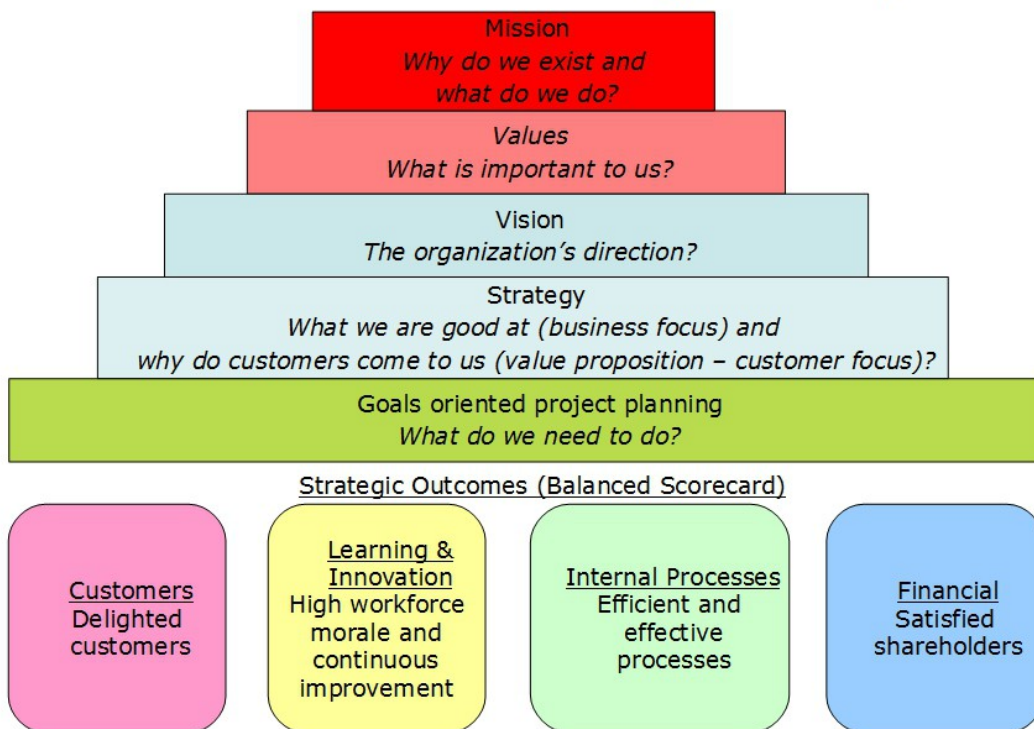
Today, universities everywhere are transforming from cosy community of scholars model, into more complex stakeholder organisations where accountability and transparency are increasingly important (Bleiklie and Kogan 2007). Leaders with sufficient academic credibility and strong executive qualities, and in particular strong communication and management skills, are required for this type of universities. Improving the focus on

strategic goals will divert attention from spurious activities and reduce futile conflicts.

Lately, Richard Rumelt has drawn attention to the tremendous proliferation of “bad strategy” in all types of organisations. Bad strategy ignores the power of choice and focus, trying instead to accommodate a multitude of conflicting demands and interests. In doing so, it provides no guideline at all as how an organisation can thrive in a changing environment. It covers up this failure to guide by embracing the language of broad goals, ambition, vision and values. The key hallmarks of bad strategy are: a failure to face the main challenge, mistaking goals for strategy, bad strategic objectives and fluff or lazy thinking (Rumelt 2014).

Bad strategy is so ubiquitous because it is so much easier to do than the real thing, which involves hard choices. Instead ready made templates can be used, and empty statements about the vision, the mission, the values and the strategies (or rather goals) can be generated. A subtle slide from strategy to planning occurs, because planning is a doable and comfortable exercise, while strategy formulation is not. The conversion of different initiatives into financials, smoothly follow the existing budget (Martin 2013).

Conventional Strategy Template



An example of bad strategy, is provided by Richard Rumelt in his comments on Cornell University's mission statement. It states that Cornell aspires “to be a learning community that seeks to serve society by education the leaders of tomorrow and extending the frontiers of knowledge”. Rumelt's interpretation: “In other words, Cornell University is a university. This is hardly surprising and is certainly not informative. It provides absolutely no guidance to further planning and policy making. It is embarrassing for an intelligent adult to be associated with this sort of bloviating” (Rumelt 2014).

In addition to the perils of “bad strategy”, most universities are structurally incapable of following any competitive strategy at all (Hampson 2014).

Universities are bad at all three general aspects of strategic positioning: customer focus, business focus and alignment. First, customer focus means providing a unique and valuable proposition for customers. Business focus implies decisions on the boundaries of the organisation, or decisions on horizontal and vertical integration, and specific strengths of the organisations. Trade-offs need to be considered, and the all important choice of “what not to do”. Finally, alignment refers to creating “fit” by aligning company activities with one another to support the chosen strategy (Porter 1996).

Universities find it hard to focus on their primary customers, the students. First, because they do not take them quite seriously, and see them as quasi-adults. Secondly, in public universities purchase decisions are not directly made by the students. Often the state subsidises part of the costs, and it is the student's family or private companies who finance the rest.

Secondly, universities can not make up their minds about the boundaries of their business. Identifying a clear business focus is hampered by the more complex nature of universities. Universities have a dual mission of combining teaching with research, with an ill-defined third mission. The balancing of teaching and research, and the ever expanding third mission makes strategic positioning more difficult.

Thirdly, strategic alignment is difficult to obtain, since universities have developed complex dual governance models to insure academic freedom, with one board for academic affairs and one for all other matters. Lately, they have developed from governance models of shared governance based on the “community of scholars” model, to more outcome oriented organisations which need to satisfy multiple stakeholders (Bleiklie and Kogan 2007).

Finally, there is little that binds universities together as organisations. Formal group hierarchy (e.g. Deans, Director, Pro Vice-Chancellor) is not always aligned with the individual professional hierarchy. In the past universities were seen as self-managed communities of scholars, where collegiate decision making dominates. In practice, however, the promise of collegiate decision making did not live up to its promise and private interests of professors dominated. Professors compete individually, ignoring institutional strategies (Allen et al. 2000, 5). As Mark Yudof, paraphrasing Bill Clinton once said: “Being president of the University of California is like being manager of a cemetery: there are many people under you, but no one is listening. I listen to them.”

In short, universities have a hard time formulating and implementing any strategy. Of course, having no explicit strategy is also a strategy, but usually one does not lead to the desired objectives. Universities' dual mission of teaching and research makes it difficult to strike a balance, and the ever expanding third mission lead to a congenital lack of focus. They are reluctant embrace technology which would allow them to compete on costs, hesitant in differentiating their products due to their broad and conservative branding, and incapable of identifying niches, suffering from congenital and constant widening of scope of their activities, and expansion of their ill-defined third mission.

3. The Model and Methodology

Despite the financial and human resource limitations of universities in developing countries, research has shown that university students and Faculty members are not adverse to change, are unsatisfied with the status quo, and willing to transform their institutions (Hayward 2008). The problem is, that often they do not know how.

We reviewed the principal conceptual tools of strategic management, dividing them into four categories: leadership tools, and organisational culture tools, then generic diagnostic tools, and business process tools. The leadership will help establish a strong and coherent leadership team. The organisational culture tools will spot the places where strongest resistance to change will occur. The generic tools will help establish a common and more precise language to talk about strategy. Finally, the business process tools will facilitate driving the strategy through the organisation, and obtaining the necessary support for it.

A- Leadership tools: establishing strong leadership

Any strategy development process must count with the visible commitment of top management or executive team, who must provide the necessary leadership. Ideally a strategy must be developed from the bottom up. Any strategy process must also be seen as learning: the road is just as important as the destination (De Geus 1988).

Leadership is essential concerned with fostering change, and inherently value-based (Owen 2007). A reflection on leadership is therefore a starting point for any strategy formulation. An individual's values should be roughly aligned with the organisation's value, otherwise potential conflicts will materialise and most likely lead to tensions. Leadership can be learned and all people are potential leaders. Leadership is a group process and relies on influencing followers. It can be done from the top, the middle or the bottom of the hierarchy (Allen et al. 2000).

University leaders should develop a strong, credible and consistent personal brand, in order to overcome the inevitable resistance when leading change (Dave Ulrich and Smallwood 2007). The brand must be based on key personal values, which should be evident in the behaviour of the leadership (Drucker 2005).

Tool 1: Personal branding. In the process of self-reflection and mindfulness necessary for the conversion from an academic role into an executive role, we found executive training and coaching can play an essential role (Huseman, Richard C. 2008). It is recommended that first a type of personality test (Briggs-Meyers) is done during a workshop facilitated by a coach (Human Metrics 2014). Expressing the results in terms of animals can be helpful and cut through the complexity (Dowling 2014). We may add to this, a conversation about personal values, integrity, and professional conduct and ethics, since corruption is a major problem in higher education systems (Rumyantseva 2005; Heyneman, Anderson, and Nuraliyeva 2008; The National 2013).

We also recommend a personal branding exercise for all members of the senior management team and a group of possible successors. Afterwards executives should be challenged to write up their promise of value and personal brand statement. Finally, they should be encouraged to communicate their brand on-line through: LinkedIn, Facebook, Twitter and Google+ (Dummies.biz 2014).

B- Organisational culture tools: gauging the capacity for change

Tool 2. The First 90 Days. When anyone takes on a new executive role, a personal plan

must be drawn up for the first 90 days, an approach developed by Daly and Watkins (Daly 2006). They point out that there are five necessary conversations between an executive and his employer and staff about:

1. how to communicate (medium, frequency, style etc.)
2. clarification of roles and responsibilities, expectations etc.
3. compensation package
4. situational analysis: turn-around, alignment or sustaining success?
5. personal development and institutional legacy.

In order to assess whether any situation is turn-around, alignment or sustaining success, we need to make our own personal assessment by interviewing people horizontally and vertically throughout the organisation about what they see as the greatest challenges and opportunities in the coming years.

Tool 3. Complacency analysis. Before implementing any type of plan, it is important to get an idea of the organisational culture quickly, in particular to gauge the willingness of the organisation to implement changes. Culture eats strategy for breakfast, as Peter Drucker famously said, and this may thwart any change initiative.

Universities tended to be static organisations, that bred a complacent culture, and feeling of entitlement among its staff. The following characteristic of a complacent organisation allow us to pinpoint the levers of change and diagnose the disease so that appropriate medicine can be applied. The questions can be put in a short survey showing agreement or disagreement on a scale from 1 to 5 with the following statements (Bardwick 1995; Bardwick 2014):

a. Human resource evaluation

- 1- As system of informal tenure exists
- 2- There is no appraisal system with real impact
- 3- Often promotion take place, that does not reflect merit
- 4- There is a compensation system that does not reflect what people do

b. Suppression of change

- 5- Rewards are given for fine-tuners, punishment for innovators

c. Entrenched bureaucracy

- 6- There is too much emphasis on precedent
- 7- We suffer from having lots of rules
- 8- We have too much paper work
- 9- There is emphasis on accuracy in procedures, not on results.

d. Poor management practices

- 10- Our committees have no real authority
11. There is not a great deal of empowerment or delegation
12. There is a strong formal hierarchy in which differences in power dictate permissible behaviour.

If in any of these dimensions scores indicate strong agreement with the statements, the following corrective actions can be taken: a. introduce effective performance evaluation for all staff, b. change organisational culture by changing processes, and applying the 7S

model (see below) for better alignment c. simplify procedures, encourage solution seeking in small teams, encourage less paper and emails, and more calls and face to face meeting, and finally d. provide management training for executive and managers to eradicate poor management practices.

C- Generic Tools: creating a common language

Tool 4. Executive TOWS. The analysis of Threat Opportunities Weaknesses and Strengths TOWS (usually called SWOT) is often done in an impressionistic manner. It is more productive to perform an “executive TOWS” with an experienced management team, focusing on the environment of the organisation first, and then its internal aspects. The single importance of each element mentioned can be rated on a scale from 1 to 5. Then for each component its relative importance in relation to the other elements can be rated as a percentage adding up to 100%, and the scores can be combined (David 2008). This exercise can be repeated regularly to measure perceived shifts in the environment or internal changes.

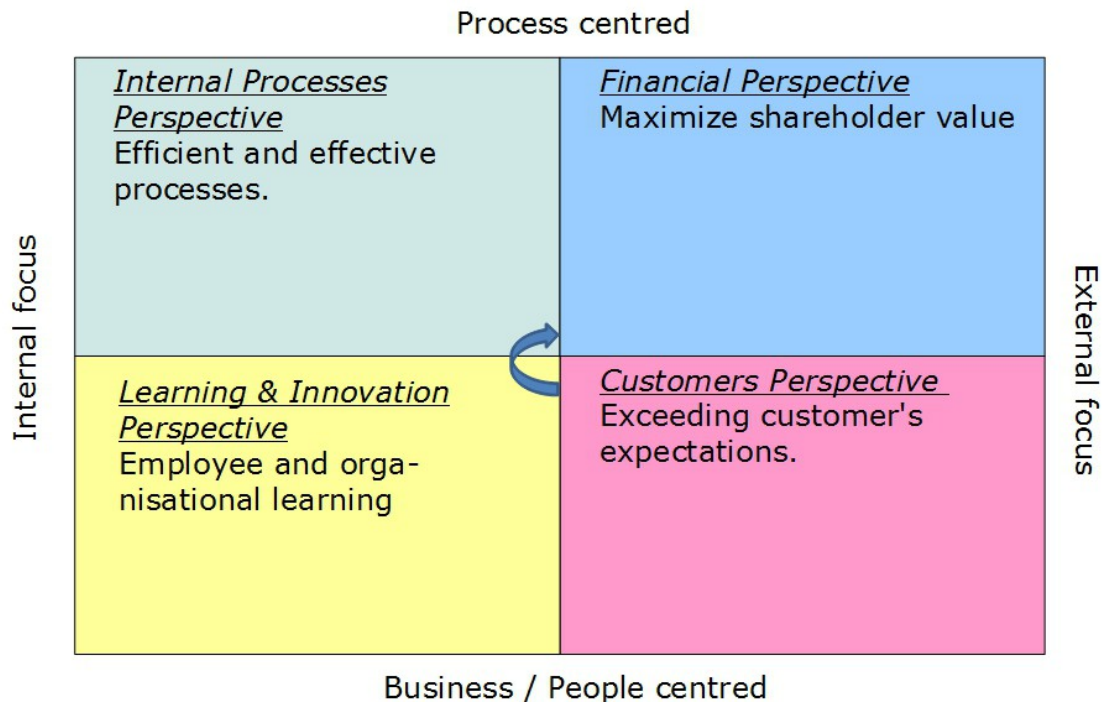
Tool 5. SMART Goals. For any goal oriented planning or strategy exercise it is important that goals or objectives are clearly formulated. Critical Success Factors and Key Performance Indicators must be formulated as SMART goals: specific, measurable, achievable, realistic and time-specific (Rampersad 2001). CSF are lead indicators in BSC terminology, and cause changes in the KPI, which are lag indicators. During workshops it can be useful, for example, to appoint a “SMART police person” to make sure all goals mentioned are made SMART.

D- Business Process Tools: achieving alignment

Tool 6. Balanced Scorecard. The Balanced Scorecard (BSC) is a system to describe and communicate a strategy, and constitute the backbone of a strategy management system. A corporate BSC describes the overall goals, but then different units can formulate their own BSC up to the level of the individual. In this manner, the BSC cascades through the organisation (Kaplan and Norton 1996b; Kaplan and Norton 2007; Kaplan 2010).

A BSC consists of a set of maximum 25 selected key performance indicators and maps indicating assumed cause and effect relationships. The indicators are divided into lead indicators, which drive the change, and lag indicator which measure the outcomes. The selection of the indicators creates a wonderful focus in the organisation, and a shared understanding. The initial cause effect relationships may have to be revised.

Conventional Balanced Scorecard



It is interesting to note, for example, that several of the top 10 universities in the rankings of the universities below 50 years old use BSC to monitor their strategy management. For universities managing the implementation of your strategy seems to add accelerate development. There is however hardly any literature documenting universities' actual experiences with BSCs (D'Uggento, Iaquinta, and Ricci 2008; Cribb and Hogan 2003; Ruben 1999).

Tool 7. Strategy mapping tools. Strategy maps are an extension of the BSC showing the interdependence between results in different perspectives (Kaplan and Norton 1996a). It is included in the BSC when mapping the cause-effect relationships between the selected KPI's.

Tool 8. 7S framework. The McKinsey 7S framework helps ensure that all parts of your organisation work in harmony, and ensure the organisation is positioned to achieve its intended objectives. It distinguished three hard elements of the organisation: strategy, structure and systems & processes. The strategy is a plan allowing the organisation to thrive in a changing environment. The structure is the formal organisation, describing role and who report to whom. The systems are the daily activities and procedures that staff engages in to get their jobs done. These elements can easily be measured and influenced by management.

Then three soft elements of the organisation are distinguished: skills, style and staff. The skills are the actual competences of employees. The style is the style of leadership. The staff are the employees and their general capabilities. In the centre of it all are the values of the organisation. These values determine why the organisation was created and determine its culture and interrelates with all the hard and soft elements ("The McKinsey 7S Framework - Strategy Skills Training from MindTools.com" 2014). The framework can

be used by filling out two matrices of how all the elements interrelate: One for the current situation and one for the desired future situation. The gaps lead to formulation of plans and corrective actions.

Tool 6. Goal oriented planning. We integrated goal oriented planning into the Balance Scorecard tool (see below). Organisations attempt to use their mission statements and core competencies to stay goal oriented wherever possible. Goal orientation planning takes the primary aims of the organisation as starting point. Its budget and portfolio of projects must all be linked to specific goals. All organisations should be goal oriented in some degree, but increasing goal orientation sharpens an organisation's focus, and improve the allocation of investments. An organisation with strong goal orientation will keep focused on what it was originally good at, and what its customers now expect. The advantage of goal oriented planning is that it can be linked to logical framework commonly used in development projects (David Ulrich, Ulrich, and Zenger 1999).

4. Findings and Discussion

Here are our findings regarding the application of aforementioned tools at UNITECH when we took on our role as Vice-Chancellor during the first half of 2012.

Tool 1: Personal branding. We obtained a personality profile of each member of the management by observing their behaviour and interacting with them during weekly management team meetings. The personal branding exercise was postponed until a suitable executive coach could be hired.

Tool 2. The First 90 Days. We conducted a series of interviews vertically with the central university administration, and horizontally with heads of departments asking them about what they saw as the greatest opportunity and the greatest challenge for their department in the coming years. The opportunities mentioned were usually quite specific for each department. Many mentioned the impossibility of recruiting qualified staff as the principal challenge. This turned out not to be the greatest challenge, however, with a series of legacy issues proving to be much harder to work through.

This approach significantly accelerated our institutional learning. We learned that many heads of department can be wrong in their assessment, when previous management did not empower or inform them.

Tool 3. Complacency analysis. We made our own assessment of the organisational culture using the complacency matrix. We found that all indicators showed an organisation resistant to change, apart from bureaucracy indicators.

We learned, however, that his diagnostic gave the wrong impression. The majority of staff was actually quite open to change, but had been thoroughly demotivated and exhausted by the arbitrary and chaotic practices of the previous management.

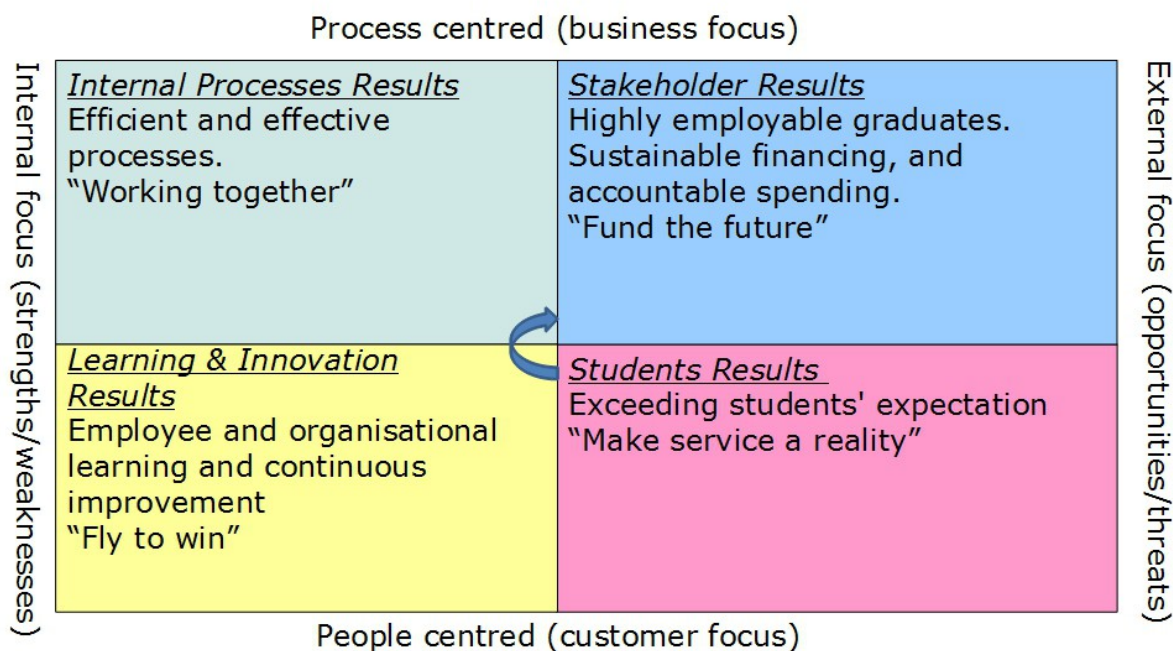
Tool 4. Executive TOWS. The executive TOWS analysis with experienced members of the previous management team was quite productive, although there was more emphasis on weaknesses than a concrete ideas how to address these weaknesses as part of risk management (see appendix 1). There was also agreement that there were many opportunities, but not yet a strategy how to capitalise on these opportunities.

We found that this analysis produced an immediate agenda for the new management team: improving accountability o improve timing of government transfer, improve relations with industry, accelerate hiring process and lobby for salary review, leverage reputation in science and engineering, and empower to produce change on the work floor. We proceeded implementing these measure, and significantly increased the pace of change during the first year, realising an unexpected series of achievements.

The executive TOWS is therefore an essential complement to the BSC. Although the BSC forms the backbone of the strategy management system, it will take 6 months to a year to develop a fully fledged BSC system, and a few years to iron out the inconsistencies and see the results. A regular executive TOWS exercise, however, will generate an immediate prioritisation of actions for executives to carry out.

Tool 5. SMART Goals. Some departments had produced extensive lists of Key Performance Indicators KPI in their annual plans, and we challenged to make all of them SMART. Because no strategic alignment was attempted, it was yet unclear how these KPI are linked through cause and effects, and how achieving these KPI contributes to the overall goals of the University. We instructed departments to make their KPI SMART.

University Balanced Scorecard



Tool 6. Balanced Scorecard. During a workshop with key faculty and staff, we presented the BSC methodology. We presented the template for a university balanced scorecard, and outlined the methodology. We showed how national planning goals can be integrated in the stakeholders results, in order to align the university's goals with those in the national planning exercises of the state as principal funder. We also insisted that results must be achievable and realistically take into account resource limitations.

We replaced the term “perspective” which can lead to confusion, with “results”, which is more specific and is easier to link to the national development plans terminology, and the existing habit of working with many Key Performance Indicators. Each type of result was given a catchy slogan, so that it becomes easier to remember.

In the university balanced scorecard template, “customer perspective” is replaced by “student results”. This makes the starting point the students needs and satisfaction. Furthermore, financial perspective is replaced by wider stakeholder results. The arrow indicates the general direction of the cause-effect relationships. The general template maintains the outside-inside dichotomy, which corresponds with the TOWS analysis.

In particular for state universities in developing countries, the emphasis on exceeding the student's expectations is an important strategic choice. In traditional public universities, for example, the university staff would be protected by bars, allowing the student to address them through a small window during specific hours. We learned that tilting the focus towards the students as direct customers of the services produce by university was productive, diminished internal conflicts, and focused the minds on results and cooperation.

The BSC logic was assimilated quite readily, and the efforts to produce balanced scorecard for a particular department produce interesting results. We also learned that more workshops were required to construct the cause and effect linkages, and produce a series of cascading BSCs linking each department or unit with the overall university BSC.

The process is still ongoing. In the period of 2 semester five one-day off-site workshops will be organised on the universities mission, on goals and objectives, on indicator, on cause effects linkages, and on planning (milestones, targets, action plans). Each workshop will be preceded by a half day workshop of senior management where an executive TOWS will be produced and the material for the full day workshop will be discussed (Ahn 2001).

Tool 7. Strategic mapping. The university rocket served to map the cause effect linkages but here more work still need to be done to map particular result indicators and show their causal linkages. The rocket was an appealing symbol, since the Vice-Chancellor was often quoted for his desire to make the university “fly”.

Tool 8. 7S framework

We did not apply this framework yet, postponing it to after the formulation of a strategy.

Tool 9. Goal oriented planning. We integrated attention to SMART goals into the Balanced Scorecard by renaming perspectives “results”. All KPI specify the measurement units, the source of information, the responsible person for collecting the data, the level, and the target.

5. Summary and Implications

It is important to put strategy back into strategic planning. Instead of the organisation being forced to comply with the country's long-term “strategic” plans, it restores a sense of

ownership and agency into the strategy process. In “strategic planning”, “strategic” merely means long-term. In “strategic management”, “strategic” means a specific game plan to thrive in a changing environment. Both strategic planning and strategic management are necessary for a higher education institution to survive, but these two activities should not be confused.

The modified University Balanced Score Card proved a useful which was readily accepted for strategy formulation and communication. Since developing BSC may take a year or so, and testing it will take another year, an executive TOWS exercise is an essential complement in order to generate a list of priority actions for management. Since the executive TOWS follows the same logic as the proposed University BSC of going from external to internal back to external factors again, the two systems are easy to match. In the coming years, at the Papua New Guinea University of Technology we will fine tune the set of selected KPIs, test the presumed causal linkages, and use the BSCs throughout the organisation to achieve alignment and monitor the execution of the strategy.

The University Rocket



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Appendix 1 Executive TOWS Analysis

UNITECH Executive SWOT Analysis Wednesday 11 July 2012, Melanesian Hotel					
Score:	Opportunities minus threats	1.01			
	Strengths minus weaknesses	-0.57			
A - External Factor Matrix					
		Rating/ Importance	Weight/ Relevance or Impact	Score	Priority Actions
	Threats	-5 = very bad	Total no more than 100%		
1	Problems in dealing with inconsistent and untimely government funding	-4	15%	-0.6	VC office to rebuild trust with government stakeholders
2	Lack of capacity to address Inadequate knowledge and skills incoming students English, Maths, Physics and Chemistry	-5	5%	-0.25	VC office to develop entrance exam, and improve statistics for these courses
3	Difficulty addressing negative attitude of students	-4	2%	-0.08	<i>Foster regular dialogue VC office with representatives</i>
4	Can not deal with increasing student numbers beyond capacity	-4	2%	-0.08	<i>Hold a cap on student numbers the coming 3 years</i>
5	Payment problems due to increasing taxes GST and costs (e.g. utilities, providers)	-4	2%	-0.08	<i>Include likely cost increases in budget</i>
6	Impossibility of dealing with security due to increasing poverty in surrounding settlements.	-5	5%	-0.25	Assure effective security committee and improve passive and active security measures
7	Competition for staff and students in programs from other universities.	-3	2%	-0.06	<i>VC office to be informed about competitor's plans</i>
	Opportunities	5 = very good			
1	Access to more resources from cooperation other universities.	3	2%	0.06	<i>VC office to find funding for activities envisaged in MoU's</i>
2	Access to more resources from cooperation with industry	4	15%	0.6	VC office to establish or streamline relations.
3	More and more stable government funding due to alignment with strategic planning.	4	10%	0.4	<i>VC office and bursar to align UNITECH with government plans.</i>
4	More funding through higher education endowment fund (HEEF)	3	5%	0.15	<i>VC office to support creation of HEEF.</i>
5	Broadband internet and elearning implemented on all campuses.	4	15%	0.6	VC office to achieve results with E-Learning Team
6	Increasing resources through contract teaching.	3	5%	0.15	<i>Dept. Business Studies to set up MBA and short course program</i>
7	More resources from consulting assignments	3	10%	0.3	<i>VC office to reform University Development Corporation.</i>
8	Improving undergraduate programs and quality of teaching through postgraduate programs.	3	5%	0.15	<i>VC office to increase scholarships for postgraduate programs.</i>
Total			100%	1.01	

B- Internal Factor Matrix					
		Rating	Weight	Score	Priority Actions
	Weakness	-5 = very weak			
1	Lack of capacity attracting and retaining quality staff difficult	-5	15%	-0.75	Registrar to improve hiring capacity and speed.
2	Academic leadership and management departments	-4	10%	-0.4	More effort hiring HoD's
3	Weak management in support functions	-4	9%	-0.36	Reorganize university administration.
4	Lack of motivation and commitment of a minority	-3	2%	-0.06	Address issues directly and quickly.
5	Insufficient learning resources and physical infrastructures	-4	5%	-0.2	Show lack through investment plan.
6	No professional staff appraisal	-3	2%	-0.06	Registrar to introduce professional staff appraisal
7	Insufficient student and staff amenities, including counseling	-4	2%	-0.08	VC Office to drive improvement in student and staff amenities.
8	No Management Information Systems (MIS)	-4	5%	-0.2	Implement MIS and coordinate implementation with OHE.
9	Low education level academic staff	-3	2%	-0.06	Rigorously appraise academic staff, and hire qualified staff.
10	Weak governance and confusion over Council's role	-4	5%	-0.2	Accomplish Council reform quickly.
	Strengths	5= very strong			
1	Sufficient land campus	4	2%	0.08	Create umbrella land resource development corporation with IFC.
2	Only engineering & science school with long-standing reputation in country	5	10%	0.5	Sustain reputation through appropriate communication.
3	High student demand	5	5%	0.25	Sustain reputation through appropriate communication.
4	Committees and processes established	3	5%	0.15	VC Office create non-monetary incentives for committee chairpersons.
5	Quality assurance in teaching and learning	4	5%	0.2	Strengthen and wider implementation of quality assurance in teaching.
6	Study centers in whole country	4	2%	0.08	Strengthen role of study centers.
7	Location	4	2%	0.08	Use benefits of location in contacts with industry, council members, etc.
8	Multi-cultural community	3	2%	0.06	Foster understanding and dialogue among different groups.
9	Willingness to embrace change and learn, sense of ownership	4	10%	0.4	Appeal to sense of loyalty and ownership to drive through changes.
Total			100%	-0.57	