



Creation of Value through the Transformation Program in Universiti Teknologi Malaysia

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Abstract: The Ministry of Higher Education (MOHE) of Malaysia has launched its transformation initiative, called National Higher Education Strategic Plan (NHESP) that sets the foundation towards attaining merit and sustainability for the higher education system beyond 2020. One of the initiatives is for one Malaysian university to be in the top 50 of world ranking. Universiti Teknologi Malaysia (UTM) has decided to go for this challenge. To achieve this objective, UTM has to set a very clear and tangible target by setting challenging Key Performance Indicators (KPI). This paper summarizes the transformation initiatives that UTM undertook since 2009, the lesson learnt and good practices that other institutions of higher learning could adopt.

Keywords: Value Creation; Transformation; Accelerated; Sustainability

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INTRODUCTION

As a country, Malaysia is undergoing massive and accelerated transformation through national initiatives called Government Transformation Program and Economic Transformation Program (PEMANDU, 2013). Through Vision 2020, Malaysia inspires to be a fully developed nation by the year 2020 (EPU, 2013).

The Malaysian Ninth Plan on 31 March 2006 emphasizes the second phase of the government's effort to achieve Vision 2020. The Ministry of Higher Education (MOHE) of Malaysia has the main role of initiating the mission to raise the capacity for knowledge and innovation, as well as encouraging a first class mind set to the nation. The desired human capital should be knowledgeable, skillful and possess a superior personality.

In relation to these needs, the National Higher Education Strategic Plan (NHESP) was formulated in 2007 with the vision to transform higher education within the context of establishing Malaysia as an international hub of excellence for higher education (MOHE, 2013). This transformation is the foundation towards attaining merit and sustainability for the higher education system beyond 2020.

There are seven thrusts of NHESP that comprises of 33 initiatives, one of which is to aim for one of the Malaysian universities to be in the top 50 of world-renowned universities by 2020. Universiti Teknologi Malaysia (UTM) has decided to take up the challenge in 2009 when a new Vice Chancellor was appointed in UTM.

UTM knew very well that the good intention of the government would not come with huge allocation of resources and funding. Time is also not at UTM side. Harvard, for example, took 300 years and huge resources to become top ranked university in the world. With such constraints, UTM could not afford to adopt a normal conventional change strategy. Rather UTM has to be creative and innovative by employing very unconventional strategy, by capitalizing the current available minimum resources for maximum impact in a very short timeframe.

UTM is also very aware that the transformation journey is not going to be an easy ride. As such, UTM has to have a proper change management methodology to ensure the success of the noble effort. This paper summarizes the transformation journey, the lesson learnt and good practices that other institutions of higher learning could adopt.

LITERATURE REVIEW

Despite the importance of change management in organizations, unfortunately there is a high failure of change management initiatives. For instance, Kotter (1996) reports a failure rate of around 70 percent of all change programmes initiated and Zook and Allen (2001) find that only 88 percent of companies failed to execute their strategies on change. In addition, there is a high failure rate of 85 percent in public sector as well (Donlan, 2006).

There are several reasons contributed for the high failure rate in change management literature. Firstly, there is a fundamental lack of a valid framework of how to implement and manage organisational change (Kotter, 1996). Secondly, there is the lack of a formal strategy execution management process (Russell and Koch, 2009). Based on a survey of 143 organizations, they found that 75 percent of the respondents that were using a formal strategy execution management process were outperforming their peer group. Another reason is that change is often unpredictable. Therefore, change management tends to be reactive, discontinuous, ad hoc

and often triggered by a situation of organizational crisis (De Wit and Meyer, 2005).

CHANGE MANAGEMENT FRAMEWORK

As stated above, one of the primary reasons for the high failure rate in change management initiative is the lack of a valid change management framework. As such, in order to reduce the risk of change management failure, UTM has adopted a framework that is based on a typical chemical process engineering model (Felder and Rousseau, 2005), as shown in Figure 1.

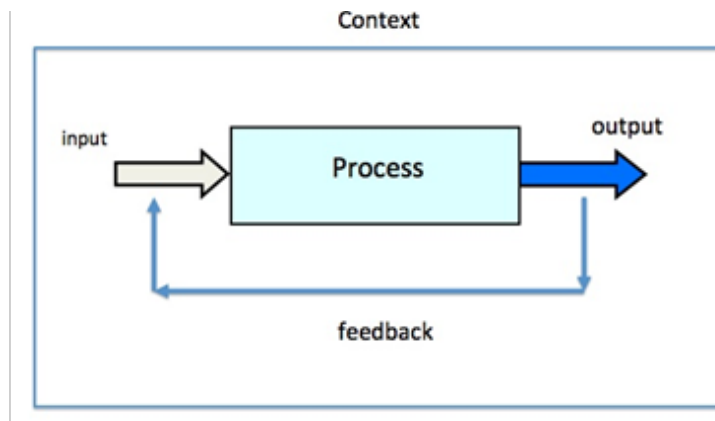


Figure 1: The Change Management Framework employed by UTM

Context

The context of the transformation of UTM is as stipulated by the Malaysian Government's Ninth Plan towards achieving the Vision 2020 and the National Higher Education Strategic Plan (NHESP) by the Ministry of Higher Education (MOHE) of Malaysia. There are seven thrusts of NHESP that comprises of 33 initiatives, one of which is to aim for one of the Malaysian universities to be in the top 50 of world-renowned universities by 2020. The newly appointed Vice Chancellor of Universiti Teknologi Malaysia (UTM) has decided to take up the challenge.

Input

With such a clear context and vision from the government, the new Vice Chancellor organized a series of strategic planning sessions with the senior management team of UTM to craft the input for the transformation of UTM from a local and undergraduate centric to an international and postgraduate focused university. The input for the transformation initiatives basically covers three aspects, namely strategy, structure and culture. To measure the outcomes of these inputs, Balance Score Card methodology and a set of Key Performance Indicators (KPI) are used.

Balance Score Card & Key Performance Indicator (KPI)

Balance Score Card (BSC) links the strategies to UTM's vision and mission. The BSC Strategy Map provides a macro-perspective of UTM future direction viewed from the four perspective: stakeholders, internal process, learning and growth, and financial management. Figure 2 shows the UTM Strategy Map (UTM,

Detail implementation of the BSC is translated into Key Performance Indicators (KPI). KPIs that will match the criteria of the current top 10 universities in the world by the year 2020 has been decided. The key common features of these top ranked universities are the emphasis in the numbers of publication (impact factors and citations), postgraduate and doctorate students, post doctorate fellows, Intellectual Properties, spin-off companies, and amount of research grants and endowment fund. Those KPIs are then staggered from 2008 (status quo) for the next 12 years until the year 2020 (Zaini, 2009).

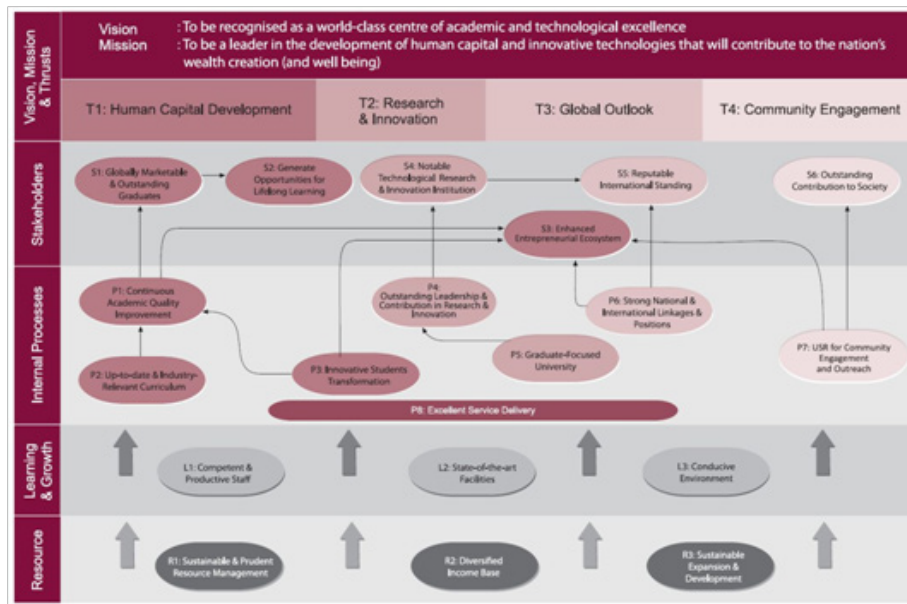


Figure 2: UTM BSC Strategic Map (UTM OCA, 2013)

Besides the tangible KPIs, there are other factors that influence the ranking, such as quality of networking with international partners, quality of student intakes, quality of our graduates and satisfaction of employers that employed our graduates.

Strategy

In order to achieve those KPIs, UTM employs the Blue Ocean Strategy (BOS) methodology to identify critical elements for transformation process. BOS helps in identifying strategic moves that could eliminate and reduce elements in UTM that were taken for granted before but do not add any significant values, as shown in Figure 3 (Zaini, 2012). By eliminating and reducing such elements, UTM has able to release huge amount of resources in terms of manpower, equipment, time and money. At the same time also, UTM has identified strategic moves that could raise and create certain elements that require minimal resources but give huge impact and value creations to UTM.

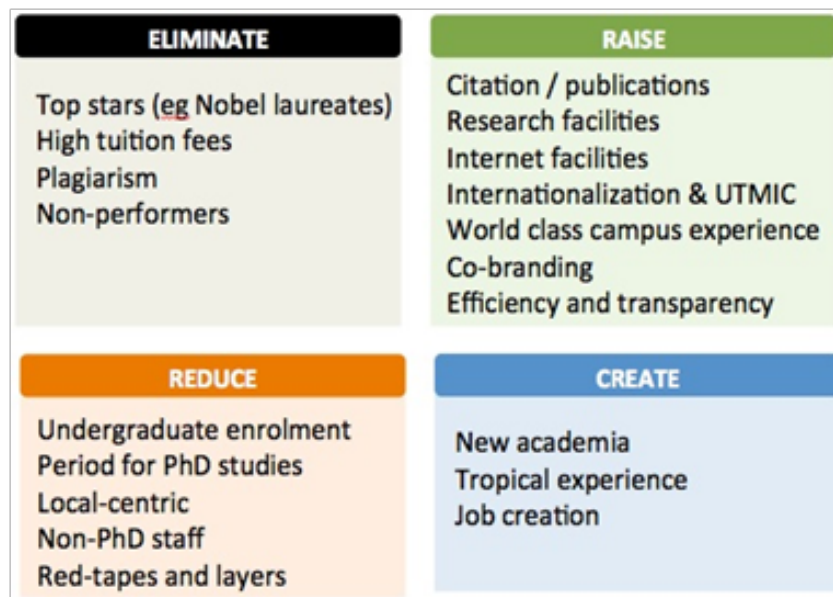


Figure 2: UTM Blue Ocean Strategy (Zaini, 2012)

To increase national and international reputation, networking with top ranked universities such as Harvard, MIT, Cambridge, Imperial College, Stanford, and others were initiated under smart partnership collaboration.

Realizing that government fund is quite limited, UTM has initiated UTM Endowment Fund and unlocking the values of UTM assets and human capital to provide enough funds to cover the expenses of the above initiatives.

Structure

To support the implementation of the above strategy, the administration structure of UTM has been reengineered. One of the main strategic moves is to increase the number of postgraduates from 25% in 2008 to 70% in 2020. Since the number of undergraduate is to be reduced, several faculties and departments were merged hence releasing some resources (academicians, administration staff and finance) that could be redeployed somewhere else. The reduction in the number of academic programs has reduced tremendously the resources and paper works that are required to comply with the national accreditation requirements.

Research Alliances that manages the team research themes in UTM were established under the Office of Deputy Vice Chancellor (Research & Innovation) to strengthen the postgraduate program, research and publication. The ten research themes are transport, water, biotechnology, manufacturing & material, sustainability, energy, nanotechnology, information and communication, construction and knowledge economy.

Academicians are allowed to become full time researchers and to fully supervise postgraduate students. The amount of research fund and graduate assistantships was increased. Monetary incentives were given to academicians who published papers in indexed and high impact journals and whose doctorate students graduated on time. The yearly assessment has been revised to include the number of publications and doctorate students. A publication unit is established to facilitate and guide academicians and postgraduate students on journal writing

and publication skills. The number of post doctorate fellows is increased to strengthen research and publication activities in major research groups that have significant amount of research funding and doctorate students.

Culture

The organization structure and strategy should be supported with the right value and culture of the campus community. A wholesome culture will create an intellectual ecosystem that encourages high performance, integrity, healthy living, creativity and innovation. Consciously, UTM has decided to focus on developing and nurturing three aspects of culture, namely the Culture Knowledge & Learning and Healthy Living.

A fertile knowledge and learning culture in UTM symbolizes our understanding of the concept and appreciation of knowledge. Various activities and programs have been developed to instill the love of knowledge and learning, to encourage thinking, to share academic experience through publication and discourse, to encourage new research areas, to inculcate the reading culture, to encourage creativity, and to implement innovation.

The entire UTM community needs to take care of their health and optimize their strength. With a healthy body and sharper mind, it is thus easy for the staff of UTM to perform various major and challenging assignments in our endeavor to advance the institution and the nation.

3.3 Process

To ensure timely implementation of the strategies, the University has set-up a new unit called UTM Transformation & Risk Management Unit (TRM). The TRM office is the secretariat to conduct more specific planning programs and ongoing monitoring. The Director of TRM is appointed as a member in the University Management Committee reporting on the development of the transformation program on regular basis. The transformation program consists of 40 task forces and 184 projects that were administered under five programs, namely Synergy, Sunrise, Tropicana, Job Creation, and New Academia, as shown in Figure 3.

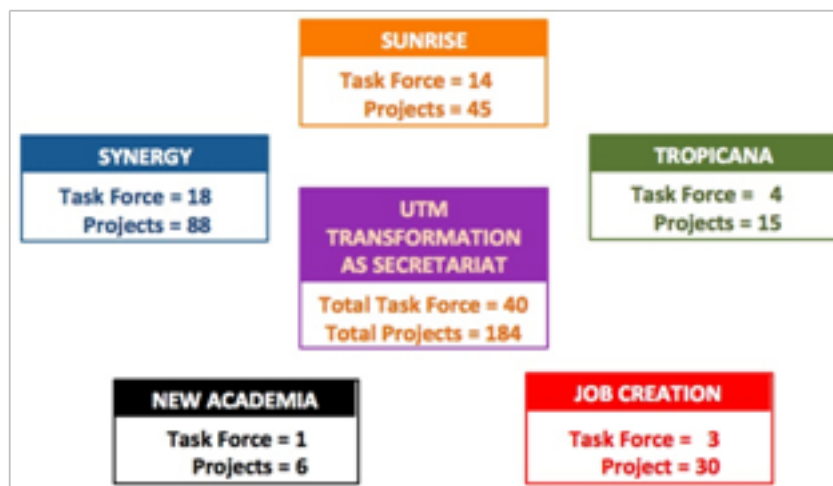


Figure 3: The Five Programs for UTM Transformation (Zaini, 2012)

The transformation projects are executed through project team whose members are representatives of various units in UTM to ensure multidisciplinary approach and enhancement of effective communication. To ensure high commitment of project team members, their contribution in the projects are included in the annual assessment exercises.

The TRM has employed a methodology to ensure smooth implementation of the various programs and projects, called VACCINE (Value Creation Acceleration through Creativity and Innovation Experience) (Ahmad, 2010), as shown in Figure 4. VACCINE is about facilitating organization to harvest the enormous but largely untapped human capital inside the organization to create exceptional values. VACCINE focuses on the middle managers that have been identified as the future leaders to leverage massive cultural changes towards the creation of Innovation Culture in the organization. VACCINE starts with the harvesting of “pains” in the organization that are then blended with the vision of the Vice Chancellor to come up with transformation projects.

During the Assess Phase, the project teams need to conduct a thorough analysis on the project and to propose the need statement and resource requirement. Once the project is approved by the University Management Committee, the project will be implemented in three stages, namely piloting (Stage 1), consolidation (Stage 2) and enterprise-wide implementation (Stage 3). The preparation of project report is during the Final Phase.

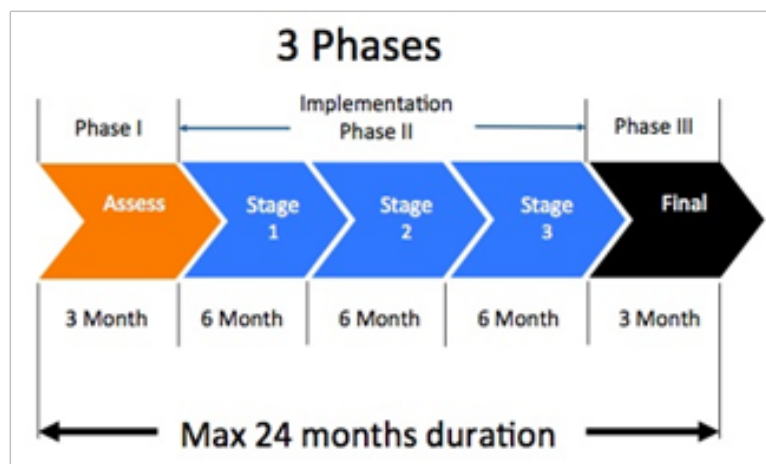


Figure 4: VACCINE Methodology (Ahmad, 2010)

Output

With a very clear KPI and concerted effort to realign and synergize all resources, UTM has exceeded almost all the critical KPIs that were set, as shown in Table 1. UTM SCOPUS publication, ISI impact factor and SCOPUS citation have increased (2008-2012) by 121%, 880% and 304%, respectively. Significant increases are registered for the number of postgraduate students (184%) and doctorate students (251%) for the duration from 2008-2012. Dramatic increased in the number of Intellectual Property (157%) and amount of endowment fund were also registered during 2008-2012.

Table 1: KPI for UTM (Zaini, 2013)

	Indicators	2008	2012 (target)	2012 (Actual)	2020 (target)
1	Staff with PhD	737	1300	1143	2100
2	SCOPUS journals	678	2500	1500	15,000
	ISI impact factors	153	1200	1500	7000
	SCOPUS citation	1372	5000	5552	50,000
3	Postgraduate (%)	25%	50%	53%	70%
	Postgraduate no.	4,850	11,500	12,883	14,000
	PhD students no.	1269	4000	4455	7000
4	Mean Intake CGPA	3.11	3.60	3.71	4.00
5	Research grant (RM m)	124	120	87	400
6	Intellectual property	1075	3000	2770	10,000
7	Spin-off companies	1	100	18	1000
8	Staff research load	30%	55%	55%	70%
9	Endowment (RM m)	0	50	50	500

The achievement of the KPIs has created motivation and inspiration within the internal eco-system in UTM and its stakeholders, hence providing the required momentum and stamina for UTM to reach the targeted destination of being in the top 50 universities in the world by 2020, as set by MOHE. MOHE in particular is very satisfied with the achievements of UTM despite giving only very minimal funding and resources. Since MOHE has seen the promising progression of UTM to achieve one of its main targets, MOHE has agreed to provide additional funding and support to UTM to accelerate further the transformation process in UTM. In fact MOHE has openly encouraged other universities in Malaysia to learn and emulate the strategy that was employed by UTM to transform itself to the current state. UTM also has been invited by numerous local and international universities and organizations to share its success story.

The biggest challenge to date is to change the mindset of UTM staff from status quo and complacency to a new mindset suitable to response to challenges in achieving the noble target. Hence, based on UTM experiences, it is suggested for universities who want to go for a similar journey should embark first with the mindset change initiative.

Feedback

Being prepared to improve weaknesses and limitations is a progressive and excellent work culture that needs to be nurtured. UTM practices transparent re-evaluation process with an open mind to gather feedbacks from stakeholders on how to enhance the effectiveness of the strategy, implementation methods, outcomes and expected impacts. Continuous feedbacks are gathered through regular formal scheduled meetings with the Board of Directors, senior management team, staff and the public. UTM also provides an online feedback portal, idea@utm.my for everyone to give ideas, suggestions or comments.

CONCLUSION

The transformation program of UTM has delivered its intended outcome. Almost all of the KPIs that were set in 2008 have outstandingly surpassed the targets in 2012. The proposed

Change Management Framework that comprises the five important elements, namely the context, input, process, outcome and feedback has guided UTM in navigating the uncharted journey of change management to reach its intended destination on timely manner. The setting up of the UTM Transformation and Risk Management Division that oversees the implementation of the transformation strategies and its deployment of VACCINE process methodology has enabled UTM to reduce the risk of failure that normally happen in other change management initiatives.

REFERENCES

- [1] Ahmad Rahman Songip, 2010. Value Creation Acceleration through Creativity & Innovation Experience (VACCINE), Universiti Teknologi Malaysia
- [2] De Wit and Meyer, Strategy: Process, Content, Context, 4th Edition, Cengage Learning, 2010
- [3] Donlan, T.G. Delusions of Adequacy, Barron's, Mar 6, 2006
- [4] EPU (Economic Planning Unit of Malaysia) from www.wawasan2020.com/
- [5] Felder, R.M. & Rousseau, R.W. Elementary Principles of Chemical Processes, 3rd Ed, Wiley, 2005
- [6] Harvard University from <http://www.harvard.edu/>
- [7] Kotter, J.P. Leading Change, Harvard Business School Press, 1996
- [8] MOHE (Ministry of Higher Education of Malaysia) from <http://www.mohe.gov.my/portal/en/info-kementerian-pengajian-tinggi/pelan-strategik.html>
- [9] PEMANDU (The Performance Management & Delivery Unit of Malaysia) from <http://www.pemandu.gov.my/>
- [10] Russell, R.H. & Koch, J.I. Palladium Group White paper on Operational Excellence, 2009.
- [11] UTM Office of Corporate Affairs (OCA), 2013 from <http://corporateaffairs.utm.my/wp-content/uploads/2011/03/utm-strategy-map-2013.jpg>
- [12] Zaini Ujang. Successful Transformation (In Malay). Skudai: UTM Press, 2009
- [13] Zaini Ujang. Innovation-Led Culture, Elevation of the University High Value Creation. Skudai: UTM Press, 2010

[14] Zaini Ujang. Inspiring Creative and Innovative Minds (In Malay). Skudai: UTM Press, 2011

[15] Zaini Ujang. New Academia. Skudai: UTM Press, 2012

[16] Zaini Ujang. Revitalizing the The Soul of Higher Learning. Skudai: UTM Press, 2013

[17] Zook, C. & Allen, J. Profit from the Core, Harvard Business School Press, 2001