THE CONTEXT OF APEX

Universiti Sains Malaysia (USM) was selected to implement the Accelerated Programme for Excellence (APEX) in 2008. APEX is a fast track development programme to enable institutions of higher education to be recognised as world class entities. The programme aims to facilitate the university selected to be on an international level and also to motivate and help raise the level of excellence in higher education. The APEX programme was identified as one of the most critical initiatives to help transform Malaysian Higher Education. As a result of this initiative, the Ministry of Higher Education requested all local public and private institutions to submit their proposals for consideration to be selected as an APEX University, with the prestigious APEX status being awarded to the successful one.

USM's mission in implementing the APEX program is to become a pioneering university, trans-disciplinary and research-intensive university that empowers future talents and enables the bottom billions to transform their socioeconomic well-being.

"We aspire to lead and innovate in achieving excellence at the international level through advancing and disseminating knowledge and truth, instilling qualities that stress academic excellence and professionalism, developing holistic individuals and providing a strong commitment towards society's aspiration, the country's vision and universal aspirations".

USM also incorporated the concept of sustainability to achieve its vision as an APEX university, which is:

"Transforming Higher Education for a Sustainable Tomorrow"

This statement of the university's vision is based on its initial efforts to develop alternatives for the future. Sustainability is one of the five scenarios that encouraged Universiti Sains Malaysia to adopt the concept of *university in the garden*. Universiti Sains Malaysia is described as a large tree. This tree is symbolic of knowledge while the tree roots are nurtured with care by professionals who are committed and dedicated. The branches in turn, symbolise the holistic development of mind without losing sight of a sustainable relationship with nature.

There are several reasons why USM was selected to implement the APEX Programme:

1. Outstanding achievements in teaching and learning programs as well as research and innovation justify Universiti Sains Malaysia the status.

2. Universiti Sains Malaysia is in the best position to achieve world-class university status. Universiti Sains Malaysia has also developed basic infrastructure to compete globally and to attract quality employees as well as local and international students.

3. Universiti Sains Malaysia is the only university to receive five-star recognition by the Malaysian Qualifications Agency (MQA) which makes Universiti Sains Malaysia the best university in terms of research and contributions to the community.

4. Universiti Sains Malaysia's sustainability programme was acknowledged by the United Nations University's Regional Centre of Expertise (UNU-RCE) in 2005.

5. Universiti Sains Malaysia has created a structured and systematic research programme in line with the integration between science and literature.

6. Since 2004, Universiti Sains Malaysia has rolled out institution a plan for the future up to 2025. These plans outline a number of global reach features and also programs with sustainability–led concepts.

7. In 2007, Universiti Sains Malaysia was selected as one of four research universities in Malaysia by the Ministry of Higher Education.

These outstanding achievements prove that USM is able to continue to move forward towards becoming a world-class university.

APEX Framework (2008-2013)

Figure 1:The USM's APEX university framework
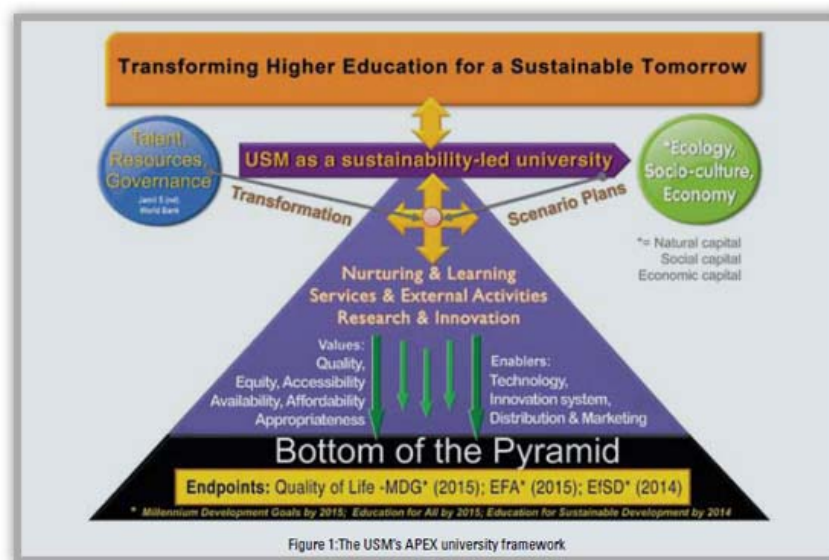
As the first Apex University, Universiti Sains Malaysia adopts a two-stage approach. First, the university intends to be world-renowned for its sustainability concepts. Second, it aims to be a leader in the sustainability process.

In this effort, Universiti Sains Malaysia has embarked on several initiatives to take on social responsibility in development by protecting the ecology, conserving natural resources and promoting human development in the framework for campus

sustainability. To achieve this mission, Universiti Sains Malaysia will initialise steps to reconstruct the learning program, research and other activities without compromising environmental sustainability.

In enhancing this program, Universiti Sains Malaysia continues to move forward towards sustainability by making changes in the teaching and learning process, research and innovation activities and services to produce outstanding graduates. However, the main goal of this program is to support efforts to improve human well-being, especially the world's bottom billion.

APEX Transformation Strategies
1. Transforming Nurturing and Learning
2. Transforming Research and Innovation
3. Transforming Services and External Activities
4. Transforming Students
5. Transforming the Concentration of Talent
6. Transforming Resources
7. Transforming Governance

Conclusion

In conclusion, under the APEX aegis, USM intends to position itself as a world renowned university for sustainability, nurturing, learning, conducting research and providing services relevant to the future. The transformation as leading sustainability-led university will enable the orientation towards a growth and development model that focuses on safeguarding environmental and natural resources, food security, energy production as well as socio-cultural diversity and lifestyle within an engaging trans-disciplinary mode. In pursuing the path of

sustainability as the way forward, we hope to embrace the protection of the multiple ecosystems, the conservation and restoration of resources, as well as heightening human and intellectual capitals. USM With the support given during the programme, USM is able to transform itself as a leading sustainability-led university. Through sustainability, we intend to orient higher education towards a growth and development model that safeguards environmental and natural resources, food security and energy production as well as sociocultural diversity and lifestyles engaged in a trans-disciplinary mode. In choosing this sustainability path forward, we hope to embrace the protection of the multiple ecosystems, the conservation and restoration of resources as well as the heightening of human and intellectual capitals. USM will further position itself to facilitate the convergence of existing and future global and universal aspirations as outline in the mission statement, with the ultimate quest of improving the livelihood of billions at the base of the world's socio-economic pyramid.

'KNOWLEDGE AND VALUES' IN TRANSFORMING HIGHER EDUCATION IN USM

Synopsis

Leading (Bitara) Higher Education

The term "University", as an institution of higher learning, is derived from the Latin word *"universes"* which means "as a whole" or "universal". Higher education is education or higher education level. Education comes from the Latin word *e-ducere* which means "carry out" (to lead out). This refers to the efforts to tap a person's inner potential to live in nature with humans and other living things (Yero, 2002). Therefore, education management and knowledge management especially at the *universiti bitara* such as USM, should take into account the reality

of human nature and values that form the core of human life. According to the principles of knowledge philosophy, epistemology covers the theory of knowledge and ontology is the knowledge of existence. Education and knowledge have a very close relationship with the axiology which is the theory and understanding of values.
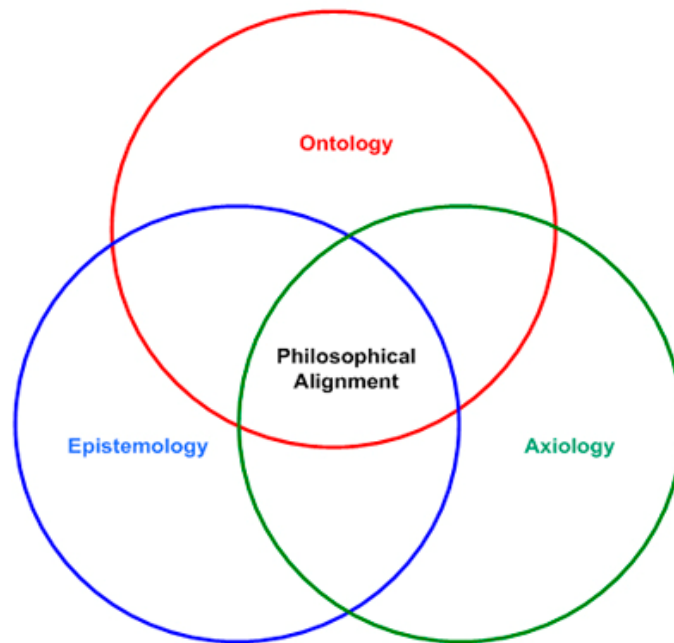
Adjustment of the principles of knowledge philosophy

The most basic thing about science is epistemology, is involving the theories about knowledge itself, which comprises the types of knowledge, hierarchy and its unity. As a *universiti bitara* and APEX university, USM should take into account the diversity of knowledge, including empirical knowledge, rational knowledge, and spirituality. It is improper for a university to narrow the scope of knowledge to focus only on the empirical sciences / the scientific, and ignoring or underestimate other types of knowledge.

Knowledge diversification is obtained in different ways by different persons & skills / inclination. Scientific knowledge is generated by scientists using empirical observation involving the senses. Knowledge of reason / rationality is generated through rationale by those in the humanities and social sciences; whilst, spiritual knowledge is generated through meditation and inspired by those who tend to religious tradition.

In terms of ontology, knowledge exists in a hierarchy. The arrangement is from bottom to top (like a pyramid), ranging from scientific knowledge, rational knowledge and spiritual knowledge. This can be seen clearly for instance in the fields of local wisdom advocated by USM.

SPIRITUAL KNOWLEDGE
RATIONAL KNOWLEDGE
EMPIRICAL KNOWLEDGE

Knowledge Pyramid: From Empirical Knowledge to Rational Knowledge to Spiritual Knowledge

All these meet the construction of human nature which ontologically consists of spirit (spiritus/intellectus), mind/reason/soul, and corpus.

Axiology

As education and knowledge are managed by humans and concerns humans, so the core of human life, which is values, should be given special attention. Values cover ethics and aesthetics. In the context of education and science, the main focus is on the values of ethics, especially in the area of truth and goodness, which leads to the

common good. In the context of society and Eastern traditions the forecast covers the real and unreal.

In terms of governance, to nurture & strengthen values, a specific style is needed. Borrowing a term from the current debate in the corporate world, the best governance model for this is that of human governance. In accordance with the structure of human as understood by prominent educators and Western psychoenergetic science (Tiller, 2008) & Eastern religious tradition, this model empowers integrity & excellence by taking into account the psychological dimension, especially spirituality and religion.

Outcome

In ideal conditions, although knowledge is diversified and hierarchical, they remain within an integral unity, not in separate boxes, each of which is related to the other, but complement the other to make the human holistic, truly knowledgeable, possess wisdom & morals / ethics. This is the main mission of a university (as a universal institution), which is to make the human holistic, knowledgeable and ethical.

This is also the end outcome of human governance, with all the values:

i.   Radiating from the human conscience.
ii.   Upholding the common good, and
iii.   Seeking divine grace to guarantee continuous prosperity and happiness to all!
"In other words, the ultimate goal of transforming higher education is to build the 'perfect' human civilization and humanity that can use all common sense and

effort to enable changes that could also improve the quality of human life and preserve the continuity of developed and strengthened civilization."

Output

Thus, even if a USM student may lead in some forms of knowledge, they still need to equip themselves with other types of knowledge. For this condition to be true then USM should intensify its minor-major program. The nature of the inter-disciplinary and multi-disciplinary across the fields of arts and science must be strengthened.

Education Management & Knowledge Management:

• Back to the original concept of the university (*Universes*)

• Niche & unity/integration of knowledge–holistic, wisdom-knowledgeable, ethical-cross-field.

• Human Reality

• Environment Reality

• Values (the core of life)

• Fundamentals of Knowledge Philosophy: Epistemology - the theory of knowledge & Ontology - knowledge existence

• Premised upon the nature of the human person: soul/*aqal* (spiritual & intellectual), soul / mind (mind / reason / soul) and body (corpus).

USMers (Staff & Students):

• Cultivating a niche in national achievement

• Driving niche areas at regional and global level

• Reaping the global position, prominence and Eminence

• Relevant to the local community & humanity

Attributes

Thus, the values that should be strengthened are:

i. Truth

ii. Trustworthiness

iii. Transparency

iv. Accountability

v. Justice

vi. Humanity

vii. Strengthen Human governance that is capable of transmitting soul & conscience (*qalbu*), towering wisdom & discernment, the common good and seeking blessings (divine grace).

viii. Highly Ethics & Aesthetics, Integrity, Professional, High Impact / Effectiveness, Results, Soul Spirituality, Religious.

With this, staff and students of USM can be equal mover and innovate in:

i. Fostering achievement in niche areas at national level.

ii. Driving the niche areas at regional level, and

iii. Securing positions of global prominence and eminence,

iv. Remaining relevant to the community & humanity.

Conclusion

These values can ensure that universities, in particular USM, are able to translate knowledge ideals, whether science or technology, or the social sciences and humanities, or the arts and culture, in a realistic equilibrium within the context of the nation, the people of the world that satisfies human nature, yet seeking and hopeful of continuous blessing of the divine. This contrast with conventional philosophy and values, premised primarily on the measure of wealth economically

and success materially, often at the expense of the spiritual, and which ultimately will be detrimental to the environment and mankind in the long run.

ENABLER 1: GOVERNANCE
HUMAN GOVERNANCE FOR A SUSTAINABLE TOMORROW

Philosophy

> Governance has been identified as one of the three main pilllars in the transformation plan of the USM-APEX university. In order to steer confidently and effectively into the Blue Ocean, USM proposes "supportive governance" as its vehicles. The primary issue in supportive governance is not simply the autonomy from the government, but how to build a credible internal overall audit system that would necessitate less intervention from outside agencies – government, legislature and politicians, funding bodies, etc.

Synopsis

Governance has been identified as one of the pillars in transforming Universiti Sains Malaysia to achieve greater heights and status. It is considered as one of the routes and "a must have criteria' towards achieving greater autonomy as well as to ensure greater integrity and transparency. Universiti Sains Malaysia has always embedded the characteristics of good governance as the transformation catalyst for

USM-APEX way forward. The main characteristics of internal good governance in Universiti Sains Malaysia is to establish and build a good internal system that would necessitate less intervention from the Government, consequently reinforcing the autonomy status of the University.

Transformation of USM Governance in 3 key activities, namely:
    a) Services, administration and financial;
    b) Nurturing and learning; and
    c) Research and innovations.

Outcome

The primary purpose of governance is to create an environment that ensures the University can operate without much intervention from any agency outside the University eco-system, and that the respective leaders within the University management system can work without much interference from the University higher authorities, while ensuring proper check and balance, integrity and transparency to encourage responsible, accountable and ethical behaviour of University community.

Output

Our Aim in Good Governance & Integrity:
- Application of all Treasury Circular has been agreed to be adopted by LGU.
- Application of all Public Service Circular adopted by LGU.
- The practice of responsibility, transparency, accountability and value for money.
- Strengthening governance systems, structures and elements of check and balance.

- Generation of revenue shall ensure the protection of the University.
- Disciplinary actions against the officers and staff who ignore or neglects to perform the duties.
- Scheduled auditing for major organizational structures of the University.
- Governance of revenue generation for more than 30% of the operating budget in 2015.
- Governance of profit subsidiaries as a contribution to the University

Attributes

Autonomy

Reputable universities worldwide are built on a culture of autonomy. USM would propose for a supportive governance autonomous university with strong accountability and transparency which will promote quality teaching, research and effective management. It is particularly important for USM to establish clear governing principles which include administrative representation, students' representations and external entities representation.

Autonomy for USM

A. Premises; USM recognises that its Autonomy will be derived mainly from three sources.

1. The government's continued recognition of its Apex status with a view that it shall be a pace setter university to be emulated by universities in the country and later at least at the ASEAN Region.

2. The University itself recognises that autonomy depends on its ability in the medium and long term to be able to generate income streams that can sustain its supporting activities; its facilitation activities and its engagement and positioning activities.

3. That it continues to get support and funding of up to 70 percent of its costs of operations; recognising that its maximum support cost of 30 percent can be derived from income generating activities.

B. The Basis of Autonomy will be based on:

1. The Consitution of Malaysia and laws of the land

2. The fundamentals of Government Rules pertaining to its funding Mechanism

3. The Act of Parliament Governing the Establishment; Governance and Running of Univ; currently UCCA, its amendments or the equivalents act there of

4. Its Charter, Constitution and Statutes and its Good Governance Practice

5. Its ability to continue to generate income streams of the future under its Financial and Income Generation Sustainability Framework (FIGSF)

The Future

1. It will pursue to encourage the government to enact a special act of Parliament under the USM Apex Act or Equivalent, making it a separate autonomous body supported by the government.

2. It will continue to pursue its pace setting act as a leading university pursuing its Good Governance Practice in empowerment and decentralization of its internal

entity through its internalisation autonomy, staff service scheme and students empowerment process by strengthening its students parliament.

3. It will consult, negotiate and launch its financial sustainability through its FIGS culminating through efforts of endowment, private university enterprise, private medical institute enterprise and corporatizing open learning, full fee enterprise for professional based courses and research facilities services.

Time Frame

No.	Governance	Short Term	Long term
1	APEX Act		2015
2	Drafting and reviewing the Statutes of the University in accordance to the APEX Constitution and University Good Governance and Integrity	2013-2014	
3	Review *Kaedah Tatatertib Pelajar* by inserting different mechanisms of political freedom in and outside the campus	2013	
4	Review of *Sistem Pengisytiharan Harta Universiti* to be more organized and comprehensive		2014
5	Good Governance Structure containing complete document of the PTJs/Centre/Institutes/Departments This document will be the 'birth certificate' and information of all PTJs.	2013	
6	Repositioning of PTJs, *Pusat Kecemerlangan Akademik, Pusat Kecemerlangan Penyelidikan, Pusat Bukan Akademik, Pusat Komuniti, Pusat*		2014

No.	Description		
	Servis in accordance to University's Constitution.		
7	Reorganization of the Vice-Chancellor's delegation of power to the respective Heads of Department/Deans		2014
8	Governance and integrity in income generation of the University		2014
9	Reducing Red-Tapes and Bureaucracy		2015
10	Strengthening Internal Auditor's Office – Creating clear TOR and process in internal auditing	2013	
11	Create awareness in Good governance integrity, accountability and transparency		2014
12	Strengthening Ombudsman Office	2013	
13	Strengthening Student Parliament to higher level	2013	

Conclusion

It is indisputable that many reputable universities in the world are built on a culture of good governance and autonomy. These world class universities acknowledge that supportive governance autonomous university with strong accountability and transparency will promote quality teaching, research and effective management

and administration. As such, it is timely and essential for USM to act now for the establishment of clear governing principles which include administrative representations, student representations and external entities representation.

ENABLER 2:
FINANCIAL SUSTAINABILITY: TRANSFORMING BEYOND 2013

Synopsis

Going beyond the present aspirations, USM recognizes the need to look at future needs, present and future problems of humanity as well as risk factors in the form of competitions and threats. In charting its vision of the future, USM has identified two key elements that are fundamental in its APEX 2nd phase transformation plan. These elements are "knowledge fundamentals" and "values". In line with the 2nd phase development plan, USM recognizes four core pillars that need to be strengthened: Academic, Research, Positioning and Service. These core pillars are to work in tandem in order to ensure that the vision and mission of the university are achieved. To ensure the success of these four core pillars, it is vital that all supporting mechanisms are in place. Resources, governance, talent, financial sustainability and Institutional Autonomy must be strengthened in order to support the four pillars. Figure 1 summarizes the symbiotic relationship of all these elements. To realize the APEX 2nd Phase Transformation plan, taskforces have been set up to develop action plans and provide a comprehensive roadmap with clear outputs and impacts. The road map will have short term and long term goals and targets.
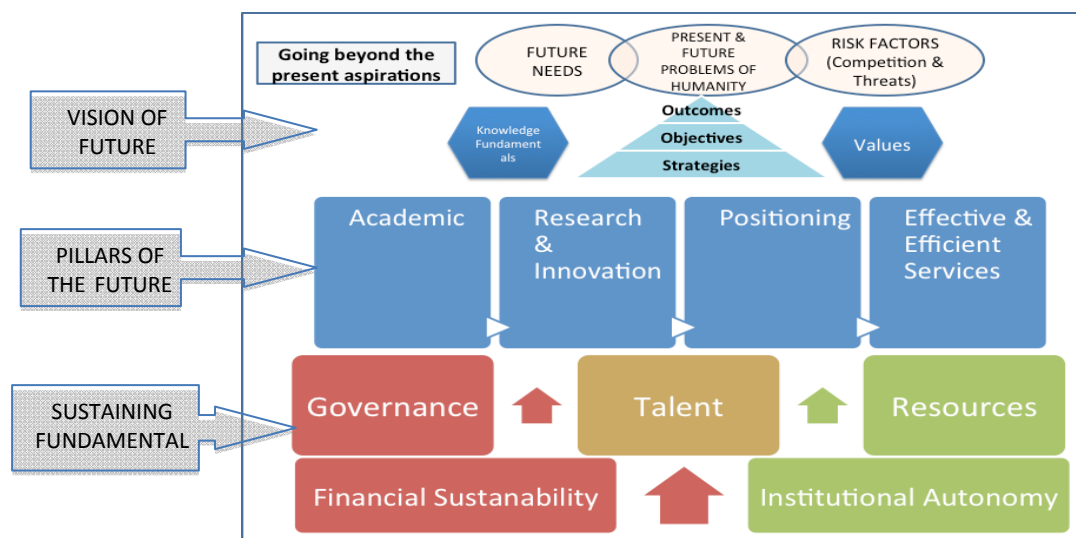
Figure 1: APEX 2nd Phase Transformation Plan

Financial Sustainability: The Philosophy

In line with the APEX 2nd phase transformation plan, Financial Sustainability is one of the five supporting mechanisms that are fundamental to the success of the four core pillars. The philosophy of Financial Sustainability is to create income and reduce cost without reducing the ability to conduct core functions (Figure 2). Thus, innovative and radical measures are required to achieve Financial Sustainability.

Figure 2: Components of financial sustainability

USM's financial sustainability is defined as the ability to continue operating for six months (emolument equivalent) using its own reserves. Bank Negara Malaysia on

Figure 1: APEX 2nd Phase Transformation Plan

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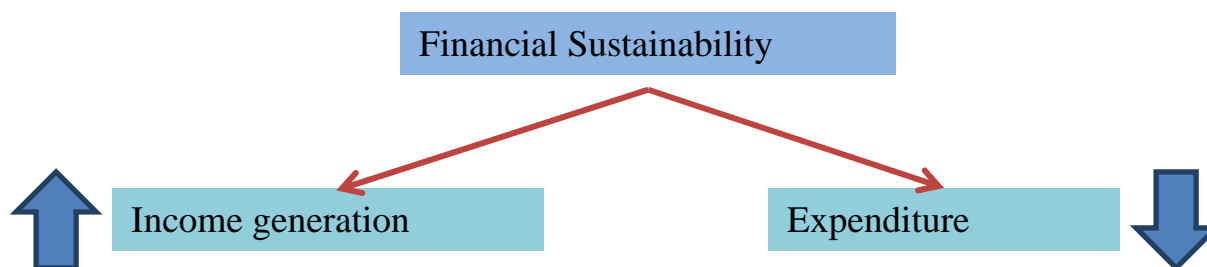

Figure 2: Components of financial sustainability

USM's financial sustainability is defined as the ability to continue operating for six months (emolument equivalent) using its own reserves. Bank Negara Malaysia on

the other hand uses the benchmark of a quantum equivalent to 10 month of operational budget. In order to achieve this, it is pertinent that USM strive to achieve a level of reserve to sustain operation for at least 6 months.

Towards Achieving Financial Sustainability

In order for USM to move towards the APEX 2nd phase agenda, it is vital that the University is financially sustainable. USM must now take radical and innovative measures to ensure that a sound financial plan is in place as the government gradually reduces its aid. USM recognizes that strategies must include ways to increase and create income as well as reduce expenditure through optimization of its activities without affecting its ability to conduct core functions.

Strategies

USM's strategies for generating income include the following measures:

- Diversification of Sources of Income
    - Reduce dependency on government funding – diversifying financial resources
- Proper Costing of Services and Products Offered
    - Full cost recovery of intellectual services
- Public-Private Initiatives
    - Avenues to engage in smart public-private initiatives must be leveraged as part of USM's income generation initiatives.
- Tuition Fees Rationalization Exercise
    - Determine the cost involved in graduating each student and engage in a tuition fee rationalization exercise
- Governance issues

- o Relooking at financial standing order that impede income generation initiatives
- o Incentives for income generation
- o Human resources
- o (outcome) increase income generation

Strategies to reduce expenditures:

1. Focus on cost-efficiency
- Shared facilities and human resource
  - o USM needs to relook how that facilities that are redundant can be shared in order to ensure optimum usage.
- Shared Administrative Set-up
  - o Examine if there are administrative set-ups that can be combined or shared
- Human Resources
  - o Relook at USM employment and training policies – RLKA and RPTA, contracts, part-time, associates etc.
  - o Multi-tasking
  - o Utilization of graduate students

2. Focus on cost recovery initiatives
- Identify hidden cost and proper costing in decision-making – maintenance, depreciation, utilities

3. Divestment of Non-core activities

- Activities that are non-central must be reexamined to evaluate its usefulness and relevance to the core functions of the university.

(outcome) - Reduce expenditure

Attributes
- Emolument
- Services and supplies
- Purchase of capital assets
- Donation and fixed charges
- Allowances for doubtful charges
- Loss on diminution in value of investment
- Loss on write off of short term investment
- Property, plant and equipment write-offs
- Depreciation
- Other expenses

Time Frame

USM targets to have at least 3 months reserves in emolument equivalent by 2014, 6 months by 2019 and 10 months by 2023 (Figure 3).

2014:
3 months

2019:
6 months

2023:
10 months

Figure 3. Level of reserves as % of Budget (2014-2023)

Note: Reserves as % of budget is a function of both income and expenditure

Conclusion

Universiti Sains Malaysia's operational cost is expected to increase each year due to the higher cost of operation as well as the possibility of bigger student intake. Currently, more than 90% of the operating cost is funded by public funding. However, it is possible that the government will not be able to continue this support in the future especially with the increase in the number of public universities in the country. In the year 2010, USM's operational income obtained from the government was reduced from the previous year by 0.08%. The National Higher Education Strategic Plan (2007 - 2020) targets a reduction of public funding for all public universities to 70% by year 2015. Consequently, in 2013, the USM's operational budget approved by MoHE reduced by 4% from 2012. Taking all these situations into account as well as the possibility of future unanticipated events such as a recurring of the global economic crisis, it is significant that USM prepares itself financially by finding avenues to increase its monetary resources as well as being able to reduce its expenditure and dependency on government funds.

ENABLER 3: RESEARCH AND INNOVATION

GLOBAL RESEARCH PROMINENCE WITH TALENTS HELPING HUMANITY

Introduction

Research is the catalyst behind USM's drive towards achieving the APEX targets and its vision to transform higher education for a sustainable tomorrow. In line with the University's values quality, equality, availability, accessibility, affordability and appropriateness, USM has set its mission to be a pioneering transdisciplinary research university that empowers future talents and enables the bottom billions to transform their socio-economic well-being. Such a remarkable

mission is achieved through its seven key APEX thrusts which are future-oriented, unique, sustainability, humanity, universality, change and sacrifice. To that end, research at USM is driven by three main thrust areas namely curiosity-driven, people-focused and industry-driven.

As a leading research university, USM is committed to continue doing research that is sustainable with high impact and has the capacity to produce blue sky cutting edge research. This can be achieved by generating new knowledge for the world and creating innovation to transform the country and humanity. Research at USM in the second phase should result in:

- linking industry and innovation
- giving impact to society
- changing technology to commercialization
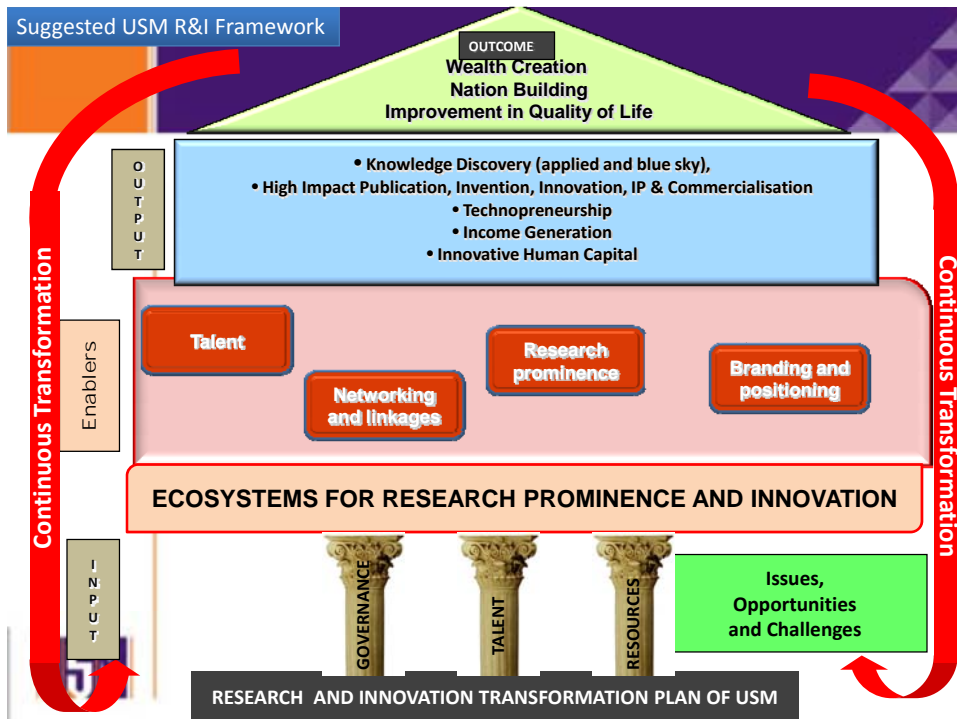- generating income for the university
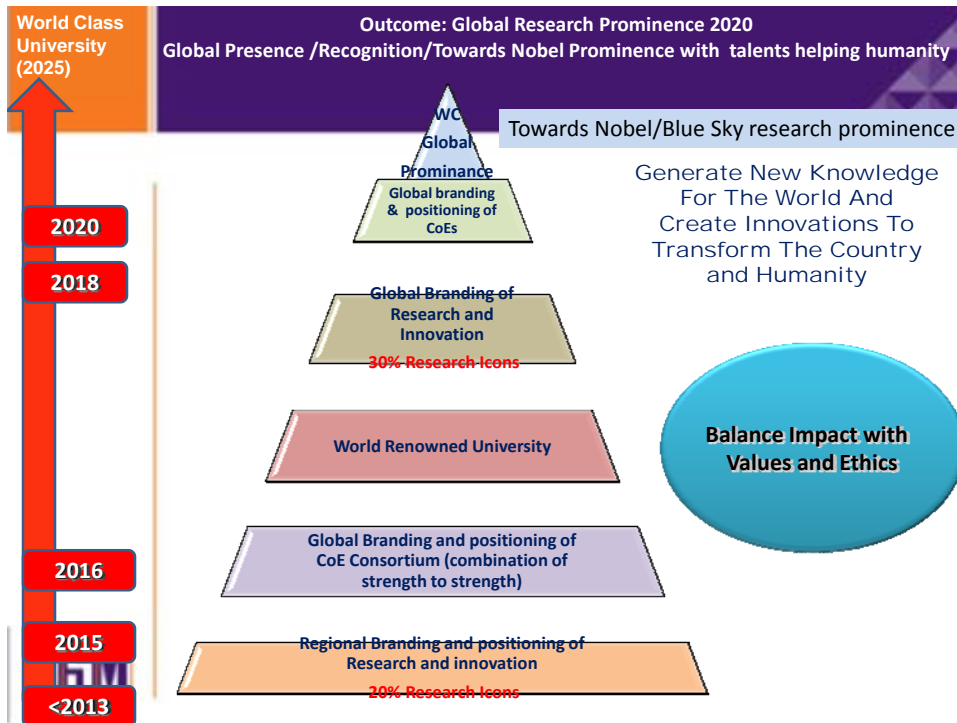
Figure 1: R & I Framework

Figure 2: Global research prominence

The key areas of research strengths at USM include Medical & Health, Engineering, Social transformation, Climate change, ICT, Energy security, Food security and Environmental sustainability.
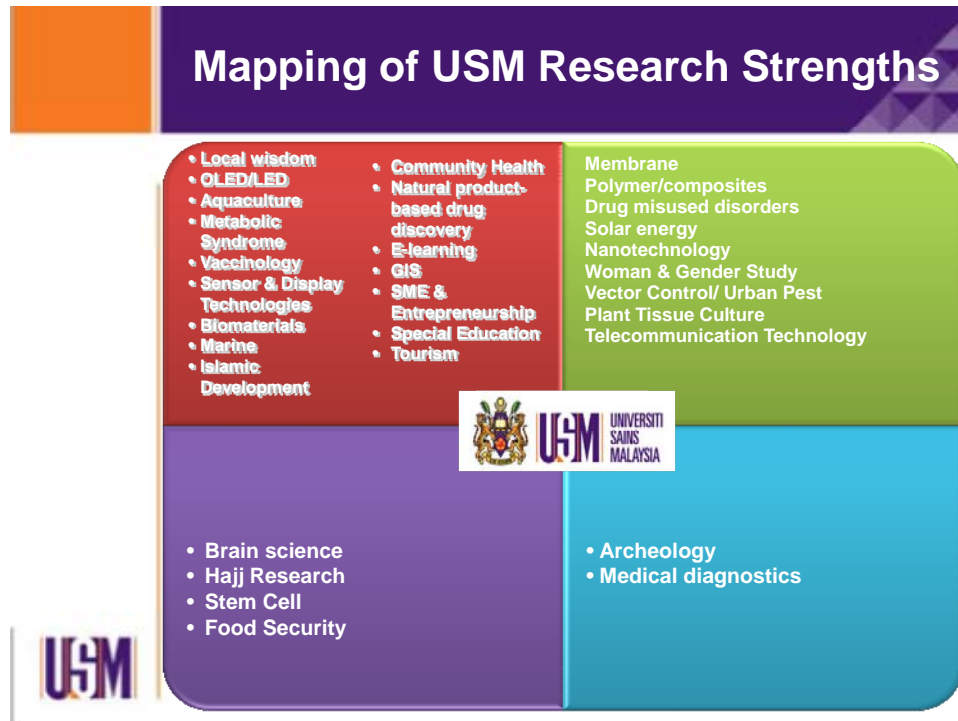
Figure 3: Research strengths at USM

As the first university in Malaysia to adopt Blue Ocean Strategy, USM aspires to be a leader not only academically but also in terms of contributing to the community by changing the lives of bottom billions and enhancing their socio-economic well-being. Research at USM is based on Blue Ocean Strategy to provide local solutions for global problems by concentrating on research outcomes and technology development that will reduce equity and enhance sustainability that the less fortunate should always be taken into consideration when transforming higher education in research and education.

To achieve various milestones in line with its transformation plan, USM has come up with a long term strategic plan and model to transform higher education. It aims to become a sustainability-led university by 2013, to be known as a world renowned university for sustainability by 2016 and to be a world class university by 2020. To reach these milestones, USM needs to retain local talents, attract the best brains and enhance its research edge through setting up of Centres of Excellence that can become regional powerhouses in the future.
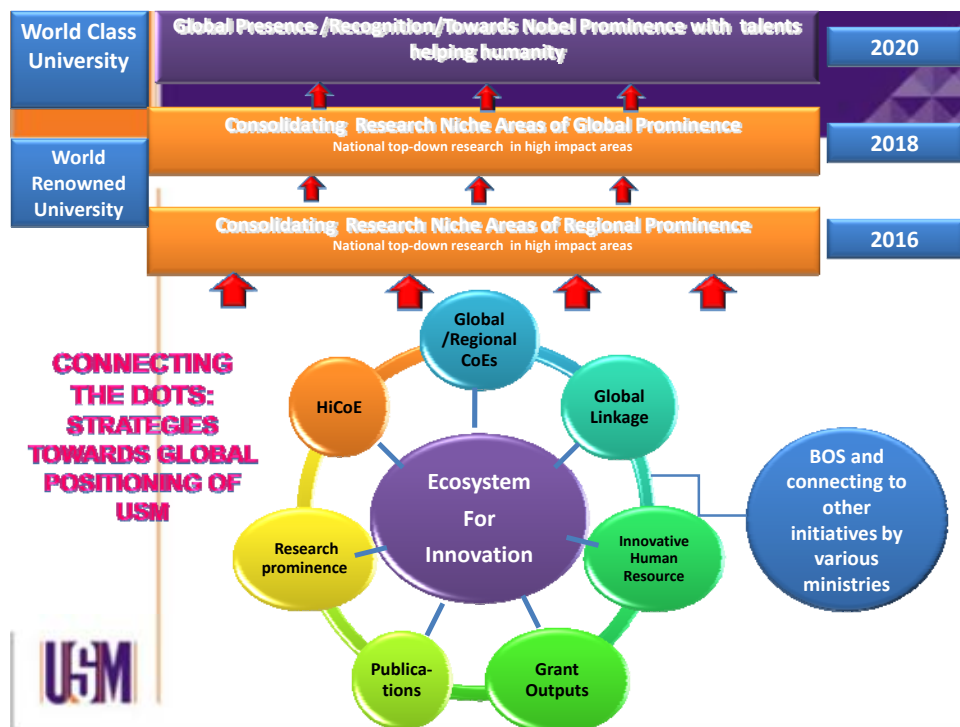

Figure 4: Time frame

Conclusion

Underlying USM's roles and goals is the intention that the university will meet the current expectations of modern era universities which include generating of new

knowledge, disseminating the knowledge, facilitating the translation of knowledge into tangible and non-tangible products, training human capital to be relevant and to support the innovative culture, enhancing the commercialization of R & D product and to provide empowering solutions to the community. USM will continue its role in educating and nurturing world-class researchers who are capable of utilising local products for the benefits of the society with the aim of producing output which can assist the bottom billions.

ENABLER 4:
BUILDING A GLOBAL MINDSET CITIZEN

Philosophy

In transforming USM for the APEX programme, the university is reviewing its activities in all areas, including nurturing and learning, research and innovation, consultancy and services, students and alumni. This review will particularly address the seven thrusts of the National Higher Education Action Plan (MoHE 2007), which consists of:

a. Widening access and enhancing equity

b. Improving the quality of teaching and learning

c. Enhancing research and innovation

d. Strengthening the institution

e. Intensifying internationalization

f. Enculturation of lifelong learning

g. Delivery system

On the other hand, USM's constructivist paradigm constitutes four pillars which are:

   a. Learning to know

   b. Learning to do

   c. Learning to live together

   d. Learning to be

The Transformation Plan amalgamates MoHE's seven thrust plans with USM's constructivist paradigm through nurturing and learning, improving innovativeness and creativity, creating a student centered environment leading to market relevance with a strategic outcome based on the 3rd phase of NHESP. In order to achieve excellence, these strategic outcomes require a radical global mindset approach. These Initiatives are student with multi-cross cultural skills, learning agility-negotiation skills-a cross cultural multi lingual and able to adapt & adopt as stipulated in NHESP(9th MP) in achieving a first class mind set.

Introduction

In today's globalized economy, and as the world is getting more borderless, the job market is becoming increasingly global. Globalized businesses require talent to compete at a global level. In fact, government agencies too, are becoming global in nature. A global graduate isn't simply a highly educated young adult who can speak a foreign language. Employers want talented graduates who can work with people from different backgrounds and embrace different perspectives. Competition is becoming increasingly stiff, where employers will seek after graduates who are well equipped for the global market.

It is crucial for higher learning institutions to be focusing on producing graduates

that meet the expectation of global employers, be it Multinational Corporations (MNCs) or Small Medium Enterprises (SMEs), who operates across borders. Universities need to provide the right environments and opportunities for students to flourish and enable them to develop not only sound employability skills, as were currently focusing on, but a global mindset too.

To make our graduates more relevance for the future job market, USM should start producing more graduates to fulfill the need of various potential employers, be local or international.

Future graduates will not be limited to having good knowledge in a particular area of studies within a particular nation or society. Graduates will be exposed to a wider range of global issues, problems and challenges. Hence it is important for universities to produce graduates with global mindsets.

Global Mindset

Forbes defines global mindset as the ability to perceive and decode behaviours in multiple cultural contexts. It is an ability to connect from other cultures on an intellectual as well as emotional level.

Characteristics of graduate with graduates with global mindset include:

a. Knowledge – Graduates should have broad perspectives and extensive knowledge. Graduates to be exposed and understood various perspectives and philosophical views and stance that exist within their specific area of studies, as well as extensive knowledge.

b. Conceptualization: analytical skills, understanding of global influence.

c. Flexibility – open minded, willing to change old habits

d. Sensitivity – accept different values and beliefs

e. Judgment – self confident, previous experience

f. Reflection – aware, strives to learn

Architecture : Strategic Outcome of Nurturing and Learning

National Higher Education Strategic Plan (NHESP) "The National Mission as announced in the Ninth Malaysia Plan (9th MP) on 31 March 2006, emphasised the second phase on the government's effort to achieve Vision 2020. The MOHE has the main role of initiating the mission to raise the capacity for knowledge and innovations, as well as encouraging a first class mind set to the nation "

The 7 thrust of NHESP, 2007

The Four Pillars of Education USM@THEAPEX April 30, 208 pg.24

Global Mindset Citizen

Strategic Outcome

Initiatives

Learning to know
Learning to do
Learning to live together
Learning to be

•Student with multi-cross cultural skills
•Learning agility-negotiation skills- a cross cultural multi lingual
•Able to adapt & adopt

4. Competencies for Global Environment.

Graduates need to have strong drive and resilience, able to work in multi-cultural teamwork and collaboration, highly adaptable, capacity to develop new skills, negotiation skill across cultures Multicultural learning agility, global entrepreneurships, highly confident with cultural agility. Above all, USM graduates should be nurture based on sound universal values.

Key competencies of a global graduate underlines by Association of Graduate Recruiters, UK are:

a. **A global mindset** – the ability to see the world from a cosmopolitan viewpoint and have an awareness of different cultures and values and how one's own culture and values differ.

b. Global **knowledge** – alongside a global mindset is the need for knowledge of

global business activity and specific background knowledge of the economics, history, and culture of different countries.

c. Cultural **agility** – the ability to understand the perspectives of individuals from different cultures and backgrounds and to empathies with these views, and responds to them. It is also the ability to cope with and adapt to living in different environments.

d. Advanced **communication skills** – the ability to communicate effectively (speaking, listening and presenting) with others from around the world and, where required, communicate in the native language.

e. Management **of complex interpersonal relationships** – the ability to manage relationships with diverse teams and clients from across the globe and deal with inherent challenges (e.g. socio-cultural, political).

f. **Team-working and collaboration** – the ability to work collaboratively and empathetically with diverse teams from across the globe.

g. **Learning agility** – the ability to rapidly assimilate knowledge and develop understanding in order to rapidly respond and adapt to new challenges, circumstances and cultures.

h. **Adaptability, flexibility, resilience, drive and self-awareness** – these attributes underpin the above global competencies and are essential, enabling qualities.

Timeline

2014 – 2018

- Target 25% USM graduates possess between 50% - 75% of key competencies of global graduates

Student development initiatives, programmes and activities, should focus and give emphasis on;

- Enhanced employability skills and competencies including soft-skills, communication skills.
- Building confident through student empowerment programmes and activities and involvement in university Governance.
- Revisit student activities with proper guideline and procedures, refocus.
- Improve student Internship and exchange program, focusing more on international internship.
- Develop networking with outsider (Industry, NGO's, private and public sector)
- Increase numbers of students involved in activities and program at national and international level to exposure the student knowledge (e.g. Seminar/Paper presenting/Competition)
- Participation students in innovation program or competition and trained them to be more competitive at international level
- Enculturation of public speaking, debate, forum and paper presentation among all students.
- Collaborative effort to facilitate opportunities for industry to introduce the idea of global business activity as early as possible
- Developing degree programmes to include more of these global employability skills to ensure we're producing the best talent for multinational employers to recruit from, both for their operations in Malaysia and in other countries.
- More exposure to real world projects within the university.

2019 – 2023

- Target – 50% Target 25% USM graduates possess between 75% - 100% of key competencies of global graduates.

Student development initiatives, programmes and activities, should focus and give emphasis on;

- Focus on cultural agility - Negotiation across cultures, communication skills across cultures,
- Collaboration and create the networking within international level.
- Provide more opportunities for students to both study overseas and experience the global workplace through internships and work placements;

Conclusion

USM curriculum and students life should focus on broad-based knowledge, multi-perspectives, excellent communication and language competitions, multi-lingual and multi-cultural outlook, good understanding of Continuous Education Strong Moral Values, Positive attitude, cross-cultural competencies in problem solving, decision making, analytical skills.

EMPOWERING TALENT: STAFF

CURRENT SCENARIO: APEX TALENT ROADMAP PHASE 1

During phase I the objectives of USM was on:

- Getting the best talent
- Nurturing talent for growth
- Retaining and grooming talent

Under getting the best talent HR focused on:

- Looking for alternative Talent sourcing

- Contingent labor procurement

- Improving on selection criteria and process

- Prepare an on-boarding program for new recruits

- Focusing on recruiting future leaders

- Preparing better benefit/rewards to attract better candidates for selection

New talents recruited were nurtured for growth through several initiatives:

- Performance management was intensified through the introduction of HCMS
- Career Planning for the academic was emplaced
- For the Administrator due to various schemes career planning was much harder to developed
- APEX Leadership Program was introduced to developed future leaders
- Succession Planning was formally discussed and developed to address the gap in identifying future successor for key positions and also for critical positions at all levels

Existing talents were further groomed and retained through several actions:

- Internal Mobility – a more structured internal mobility for the non academic staff was enforced
- Professional Network – this was one of the element measured in MYRA
- Goals Management – Jobs were KPI driven and managed
- Community Engagement – Community engagement was highly encouraged
- Managing Attrition- Attrition for whatever reason need to be managed so that USM will not lose the best talent that has been nurtured and groomed

To realize the objectives above a part of Human Resources process were decentralized mainly the recruitment process of the academic staff.

However, decentralizing the process of recruitment of academic staff to the schools alone without empowering the people who manages it with knowledge and skill required was not the best solution. What was missing in phase one was empowering the people with the knowledge and the required skills to carry out the task.

PHASE 2

Empowering Current and Future Talents

Attributes of the empowered talents/staff:

- **Engagement:** More transparency into USM's objectives, rules and procedures and processes makes staff more engaged and more motivated to help the organization succeed

- **Balance:** Empowered staff will act in the best interests of the customer while staying within the boundaries of the corporate standard.

- **Adaptability:** A well-implemented knowledge system provides feedback loops for staff to learn from others and from their own mistakes. Over time, they will develop the skills to easily work through a variety of different STAKEHOLDERS and situations, supported by the collective knowledge of the organization

The new paths to achieve extraordinary and sustainable results are through:

- Empower both people and process
- Use the Right Tool for the job

- Take out the trash- a thorough house cleaning of data
- Provide Decision Support at the moment of truth – to embed institutional knowledge that can be a catalyst to good governance.

Initiative

- Develop current and future leaders
- Develop a multi racial workforce composition
- Develop a Lean work force
- Establish Talent Development Program
- Full engagement from top management and staff
- A Strategic workforce planning emplaced

Workforce Composition
- Operational Efficiency
- Workforce Culture & Mindset
- Internal Mobility – Structured Job Rotation
- Strong HR Strategic Talent
- Qualified Talent Expertise

Lean Workforce
- Right Sizing/Head count
- Job Sizing/Alignment
- Optimization workforce/talents
- Outomation of Process
- Mobile Workforce

Leadership & Talent Management
- Teamwork & responsibility
- Performance management
- Establish Administrative Organization (cross board) to build-up the spirit of sharing and togetherness

Top Management & Staff Engagement
- USM Direction : APEX, RU, PSPTN etc
- Support facilitation
- Information - Guidelines & Policy
- Good Governance with transparency & accountability
- Compatitive Remuneration Package
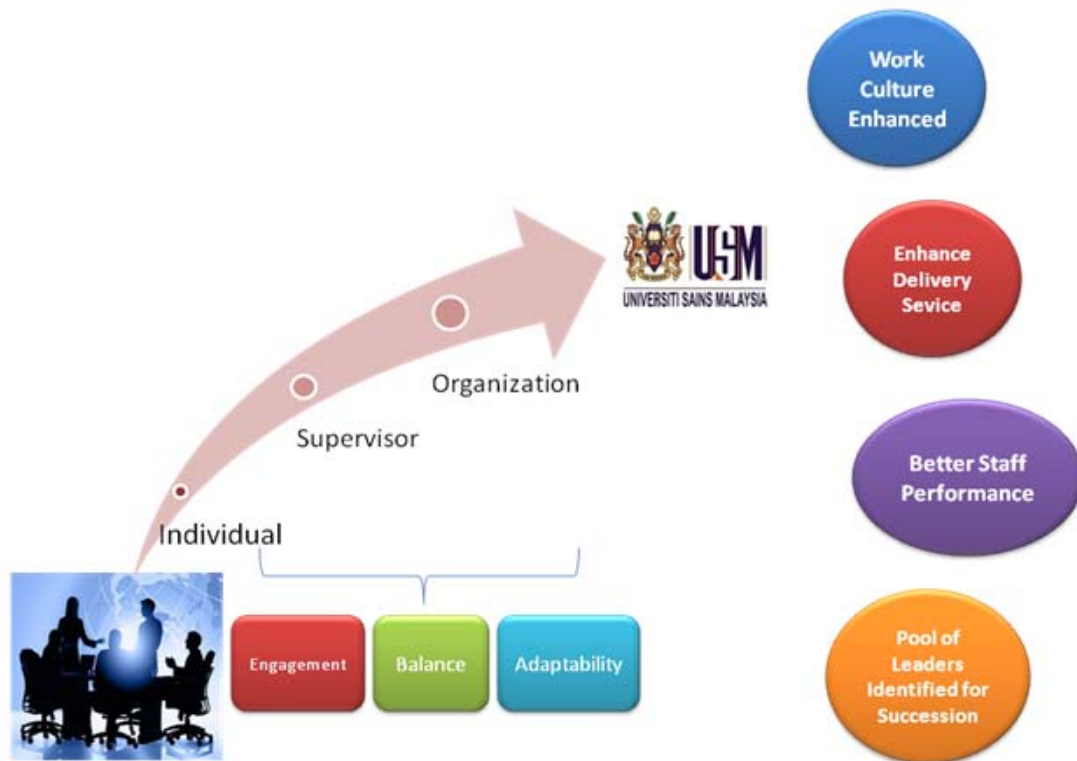
Strategic Workforce Planning
- Resources Planning
- Learning Roadmap
- Talent Analytics
- Succession & Career Planning

Output

- By empowering talent:
  - USM will create independent entrepreneurship throughout the organization structure
    - In a knowledge-based organization the organization hierarchy is flattened with a multi-skilled workforce

- USM will change the way a manager [Supervisor] functions and will assume more leadership and coaching roles when the staff are properly trained and empowered.
- A ready pool of leaders for succession
- A sustainable knowledge Organization

SUPERVISOR
- Disseminate Information
- Facilitates work process
- Make life easier
- Helps build team
- Support abilities of subordinates

INDIVIDUAL
- Seeks responsibility
- Take prudent risks
- Personal stake in his work
- Accepts responsibility
- Generate ideas
- Makes decision

ORGANIZATION
- New operational guidelines
- Support facilitation
- Able to change old hierarchies for achievements
- Rewards responsible ownership

Outcome

- A more cost effective and efficient management delivery system
- Increase Employee satisfaction and loyalty
- An organization that embed an atmosphere of contentment and honour
- A sense of Ownership of the organization
- Better customer service

Conclusion

Excellent higher institutional eco-sphere that can be benchmarked with strong holistic value, attaining first class global mind set with relevant, dominance, prominence and eminence characteristic in positioning itself in the leading role for sustainable tomorrow.

ENABLER 5:
ACADEMIC TRANSFORMATION BEYOND 2013:
NURTURING RESPONSIBLE GLOBAL CITIZENS

Synopsis

The Ministry of Higher Education (MOHE), through the growth of premier knowledge centres in Malaysia, strives for the development of a higher education environment that prioritises excellence in teaching and learning (T&L). The **National Higher Education Plan (NHEP)** or Pelan Strategik Pengajian Tinggi Negara (PSPTN) was formulated with the goal of attaining the integration and synergy of the different higher education centres in the country to ultimately acquire an international reputation for excellence in tertiary education. One major aim of this plan is to establish a stable foundation to produce the diverse intellectual human capital needed to contribute innovative knowledge for the development of the country.

The implementation of the Accelerated Programme for Excellence (APEX) programme in Universiti Sains Malaysia (USM) is an opportunity to realize this goal. Among the underlying principles of the USM APEX Transformation Plan is the assimilation of sustainable development into the educational system. Graduates are nurtured and imbued with the need to embrace ecological protection, conservation of resources and human development based on the virtues of equity, accessibility, availability, affordability, appropriateness; as well as being able to articulate a wholesome meaning of quality. Furthermore, the mission of USM to be "a pioneering, transdisciplinary and research-intensive university that empowers

future talents and enable the bottom billions to transform their socioeconomic well-being" parallels the APEX vision of "Transforming Higher Education for a Sustainable Tomorrow"

In formulating the road map for APEX second phase rolling plan, the following questions have been considered.

- How have external factors (e.g., PSPTN, accreditation requirements), current and future global trends affected public higher education in Malaysia?
- What are the possible future trends that will affect USM?
- How have internal factors (being an RU and APEX with diverse demand) affected the execution and delivery of our academic programmes?
- What should USM do in the near- and long-term to continue to improve its academic programmes, and uphold the university's mission in ensuring institutional growth and student success (including employability)?

Outcome

The major outcome of this academic transformation is to ensure that USM exhibits **"Prominence in sustainability programmes to nurture Responsible Global Citizen (RGC).** RGC are envisaged as people with wide perspective and an augmented comprehension of the world in terms of socio-economy, politics, culture, technology and environment. They should also respect the value diversity, be responsive to social injustice and contribute assiduously to local and global communities to make the world a more sustainable place.
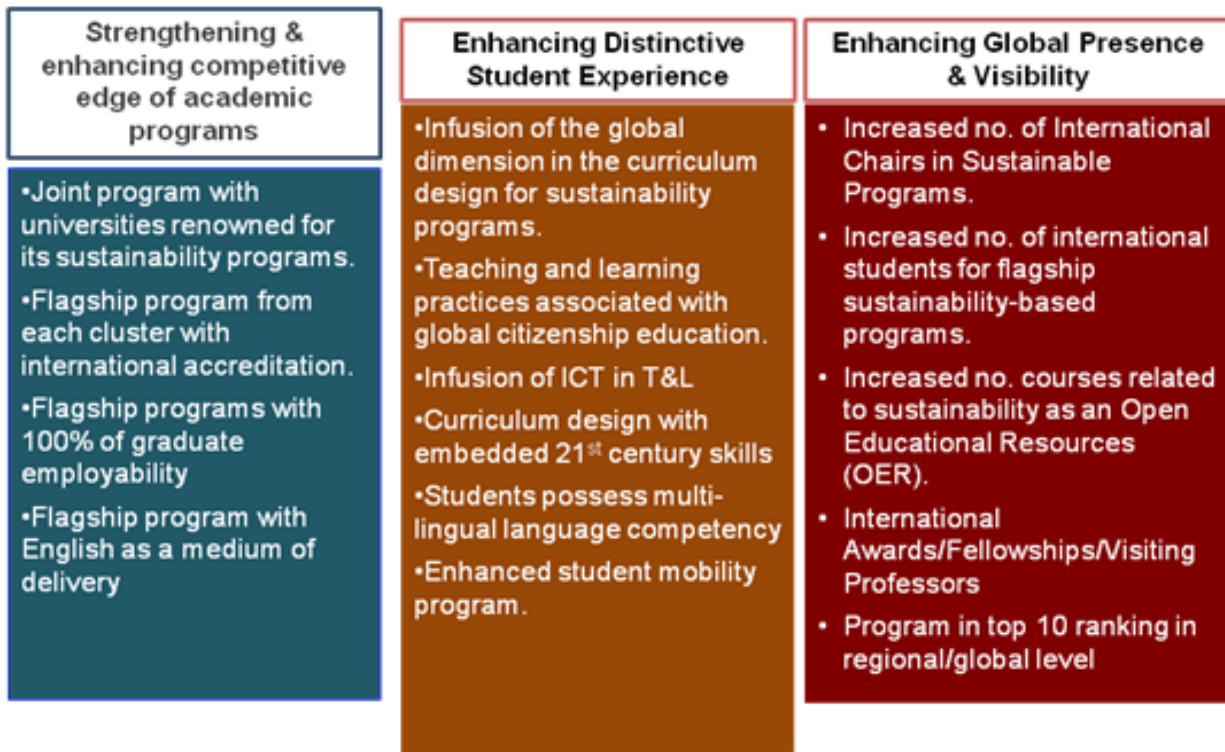
Source: www.LTScotland.org.uk/globalcitizenship

Output

Three (3) key strategic objectives and measurable outputs have been identified to achieve the ultimate goal of the plan.

1. Strengthening the competitive edge of academic programmes.
2. Achieving excellence in teaching and learning as well as improving the student experience.
3. Enhancing global presence and visibility.

Prominence in Sustainability Programs to Nurture Responsible Global Citizens

Strengthening & enhancing competitive edge of academic programs	Enhancing Distinctive Student Experience	Enhancing Global Presence & Visibility
•Joint program with universities renowned for its sustainability programs. •Flagship program from each cluster with international accreditation. •Flagship programs with 100% of graduate employability •Flagship program with English as a medium of delivery	•Infusion of the global dimension in the curriculum design for sustainability programs. •Teaching and learning practices associated with global citizenship education. •Infusion of ICT in T&L •Curriculum design with embedded 21st century skills •Students possess multi-lingual language competency •Enhanced student mobility program.	• Increased no. of International Chairs in Sustainable Programs. • Increased no. of international students for flagship sustainability-based programs. • Increased no. courses related to sustainability as an Open Educational Resources (OER). • International Awards/Fellowships/Visiting Professors • Program in top 10 ranking in regional/global level

Attributes

Attainment of these objectives and outputs will produce students inculcated with 21st century skills, knowledge, experience and behavior to ultimately become responsible global citizens. These students are projected to have enhanced adaptability, flexibility and mobility not only as a result of curriculum design but also from their overall experiences at USM.

Strategy

In achieving the outcome, USM offers various academic programmes pertaining to deeper understanding of sustainability so that the graduates produced will be more involved, committed and dedicated to sustainable wellness of the institution,

community, society and global environment. In this way, the graduates will be ethically responsible and morally sound. These programmes can be further strengthened by involving the entire academic ecosystem in Malaysia and should revolve around the provision of a liberal education system to enhance core competencies and build global mindsets. The USM ecosystem refers to all constituents of the academic environment in the university (e.g. student, lecturer, pedagogy and curriculum) that have interweaving relationships with one another. Programmes crafted for these constituents that emphasize aspects such as social justice, the appreciation of diversity and the importance of sustainable development can already be incorporated into the existing curriculum.

ENABLER 6:
SERVICES: BEYOND THE RESEARCH AND ACADEMICS

Synopsis

Universiti Sains Malaysia can be described as a heterogeneous organisation and as a public university whose primary role is in the development of the country's human capital. To share in global growth, Universiti Sains Malaysia has to compete effectively. This will depend on education, teaching and research and a clear focus on higher value added goods, services and industries.

SERVICES at Universiti Sains Malaysia encompass all forms of service activities which can generate monetary gains for USM through commercialised services as well as activities that can improve the quality of life and wellbeing of an individual, group or community through social services.

Objectives

Financial Strategy: Cost Recovery + xx %

✓ To minimise misuse of government funding

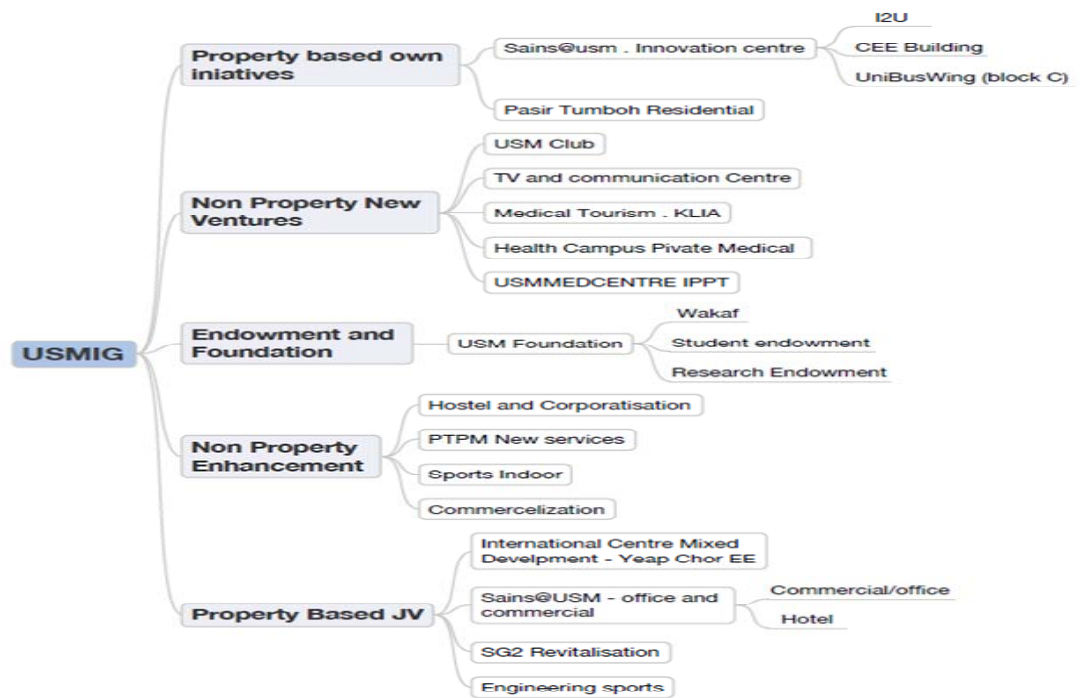✓ To achieve supplementary income for USM and staff   to be identified and

Figure 14: Income generation

Under the current situation, the average contribution from the above defined SERVICES (Item 5 and 8 to 10, see Table 1) is about 10%; hence there are ample opportunities to enhance these services.

Table 1 Average contribution

ITEM	TYPES OF INCOME (for 2006-2011)	Average Contribution	Projected Contribution
1	Government grant - Operational	75.10%	NA
2	Government grant - IRPA/E-science	0.84%	NA
3	Tuition and miscellaneous fees	5.93%	NA
4	Amortisation of Government development grant	6.50%	NA

5	Rental	0.69%	1.00%
6	Dividend	0.10%	NA
7	Interest	1.01%	NA
8	Hospital services	0.80%	1.00%
9	Contributions for research and others	3.79%	4.50%
10	Other income	5.52%	6.00%

Conclusion

SERVICES provided, ultimately, not compromise the primary role of the various "cost-centres" and at the same time "enhance" others which have a niche with low cost and high returns – relooking service.

ENABLER 7: POSITIONING
POSITIONING USM: FROM USM TO THE WORLD

The Premise

In the second phase, positioning is considered a critical pillar in the creation of a value proposition based on uniqueness and an image distinctive of the new-age USM. An APEX university, as an entity, MUST be different in principles, values, advocacy, and disposition from others in the fraternity. That USM has never capitalized on this 'status' is a truism, which needs addressing, given the fact that this accord is ensconced in its constitution. Premised upon a university that champions the cause of sustainability, USM is also literally a University in the Garden, depicting the affinity between its roles and functions as an institution of higher learning and actualizing the embrace of nature, reflectively mindful of the global ecological setting. In tandem with the current thrust and awareness on the

wellness concept, USM also actively promotes the Healthy Campus or *Kampus Sejahtera* campaign, again demonstrating the willingness to lead in a different but effectual manner, consistent with its motto – We Lead. As the transformation dynamics continue to be developed from the initiatives of the first phase, USM's vision of the APEX agenda will be retained for the forthcoming positioning exercise. The vision of USM APEX University will thus remain as in its positioning statement:

Transforming higher education for a sustainable tomorrow

Mission

"USM is a pioneering, trans-disciplinary research intensive university that empowers future talents and enables the bottom billions to transform their socio-economic well-being"

Positioning USM

In this second phase, USM will further strive to position itself, to be more visible, as an institution that empowers future talents to be eminence, prominence, dominance and relevance in all facets. Driven by the excellent and conducive research ecosystem has attracted global talents to come to its campuses. Quite apart from its APEX status, USM has been accepted as a university that champions sustainability, which offers quality education. In the second phase of APEX, USM aspires to be a university that produces, holistic, empowered, future talents, with a global mindset. (Figure 15)

Global Prominence in Research and Community Outreach

Playing the role of a university that champions knowledge transfer from the developed countries to the developing ones, USM will enhance collaborative research frameworks in strategic areas, with partnering advanced countries and on the other end, outreaching the communities of the bottom billions via our community outreach programs.

Forging Global Mindset

USM will redefine quality talent in the context of a larger framework. We will nurture holistic people, which will encompass the process of attracting, nurturing, grooming and retaining talents. USM APEX students would be purposefully nurtured to be able to seek, assemble, and to use knowledge with wisdom. Imbued by holistic values, USM staff would be empowered and nurtured into leaders and decision makers of caliber, in line with our motto—We Lead. In the second phase, USM aspires to groom leaders both students and staff of leadership material at the regional and global levels.

The Soul of APEX Quality

APEX is all about excellence-academically, research-wise and services. In the second APEX phase, the essence of excellence, which is quality, will be further elevated by the recruitment of the best talents (students and staff) available and to groom them into excellent and holistic persons. USM will also steadfastly continue in its pursuit of transforming the livelihood of those peripheral to society at large, the much-neglected bottom billions to levels congruent with outstanding achievements and acceptable standards of dignity and humanity. While continuing to play a leading role in the nation's research, USM will be positioned as the right place - to conduct research, to obtain holistic quality education, and to cater for the

right future endeavors. In the second phase, USM's global rating will first be benchmarked against the best in the region, and in the subsequent phase, against major global players.
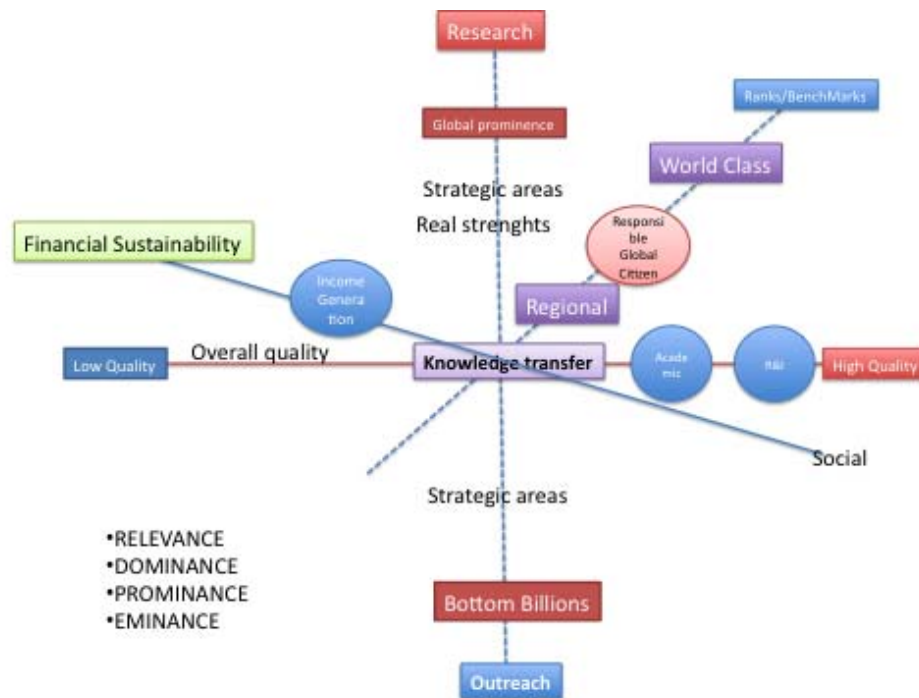
Engaging the stakeholders

Understanding the roles and functions of a university is crucial. USM continuously engages and meets the expectations of the stakeholders – Students, Community at large, Government, and Industries as well as local and international counterparts. Continuous engagement will be a deterrent to the 'silo' syndrome.

Outreaching the Community

USM will strive to emerge as a global leader in sustainable outreach and community engagement with the bottom billions, beginning with the Asia-Pacific region based on humanitarian and humanistic values focusing on the following themes which reflect the strengths of USM's talent:

- Health

- Education

- Environment

- Socio-economic

- Culture and heritage

This is to ensure that USM is an entity that is relevant to society, engaged in the sustainable betterment of the community through sustainable outreach programmes, ultimately serving as a point of reference or benchmark in sustainable community engagement on a global platform. Towards this end USM will strive to engage stakeholders in meaningful, sustainable and inclusive engagement with the community in projects designed to produce sustained impact on the target community, requiring the projects to be creative and innovative in ensuring that the target community is provided with skills and knowledge so that the change to their livelihood is sustainable.

Conclusion

Pushing for stronger brand equity at the local, regional and global, USM will position itself as a university that produces quality talents for nation building. It will enhance itself as a university that champions sustainability causes, producing high impacts to science, knowledge and society, especially the bottom billions. The new positioning proposition of USM will encompass an attitude of responsibility to the organization, towards humanity and to the environment, which subscribes to USM's vision and therefore will be pursued with passion.