

BUKU APEX 2014

TOGETHER FOR UNIVERSITY'S EXCELLENCE

"INCLUSIVITY, SUSTAINABILITY AND EXCELLENCE"

8.1.2014

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1USM

WE LOVE USM

INTRODUCTION

Let me begin this New Year speech with the lafaz, Bismillahirrahmanirrahim and reminding us of the verses of al-Quran from

- i. Chapter of al-Maidah verse 8, *mafhumnya*:
"O you who believe, be steadfast for (obeying the commands of) Allah, (and) witness for justice, Malice against any should not prompt you to avoid doing justice. Do justice. That is nearer to Taqwa. Fear Allah. Surely, Allah is All-Aware of what you do."

"Wahai orang-orang Beriman, hendaklah kamu menjadi orang-orang yang selalu menegakkan kebenaran kerana Allah, menjadi saksi dengan adil. Dan janganlah sesekali kebencianmu terhadap sesuatu kaum, mendorong kamu untuk tidak berlaku adil. Berlaku adillah kerana adil itu lebih dekat kepada taqwa. Dan bertaqwalah kepada Allah, sesungguhnya Allah Maha mengetahui apa yang kamu kerjakan."

- ii. Chapter of Adh-Dhariyat Verse 47, *mafhumnya*:
"And the sky was built by US with might. And Surely, We are expanding more and more"

"Dan langit itu kami dirikan dengan kekuasaan kami (dalam bentuk binaan yang kukuh dan rapi) dan sesungguhnya Kami adalah mempunyai kekuasaan yang luas tidak terhingga"

1. Firstly let us give our sincerest and utmost gratitude to AllahSWT, the Almighty, that with his continued blessings we are able to gather here today, to listen, comprehend and adopt the contents of the USM Vice-Chancellor Annual Speech for the year 2014. This year's annual speech, titled BUKU 2014, is following the generic name of the past 2 years' speeches - BUKU 2013 and BUKU 2012. This year's speech will focus on the planning, implementation and outlook for Universiti Sains Malaysia in 2014 and APEX Phase 2 from 2014 to 2018.

2. This year we will also focus on the **1USM - We Love USM** slogan. The trust that has been placed on me to lead USM will continue with more earnest dedication and commitment. I need to continue to guide the campus community, striving for excellence together and once again I call upon the entire campus community, including all students and staff of all categories (the academics, professionals and supporting staff) to continue our unending journey towards our common goal and mission.

3. **1USM** is what we strive for. **We lead** is how we do things. **We love USM** is what we believe in. A friend asked me to remind us all and call upon everyone to improve ourselves at least by one percent (1%) rather than relying on a few people to improve by a hundred percent (100%).

4. 2014 will be another challenging year for USM and the nation. USM will be 45 years-old since its establishment and will commemorate its 50th Convocation in September this year and its graduates and thus Alumni will surpass 130,000. USM will be moving into the 6th year of its APEX programme and the 1st year of the new Phase 2 programme, from 2014-2018.

5. The New Year speech will be deliberated in five segments: the theme; the 5 years of achievements that have become the hallmarks of excellence of the university; the launching of the APEX Phase 2; the outlook of 2014 and the implementation of the 2014 programmes.

The New Year outlook examines the Quality and Relevance for staff and students in talent, financial sustainability, resources and institution.

THE THEME OF INCLUSIVITY, SUSTAINABILITY AND EXCELLENCE (ISE)

6. The theme of ISE adopted for this year's speech is synchronised with the overall plan of the university to include as many of its staff and students as possible to adopt two important objectives: sustainability for tomorrow and excellence for today. Thus we will progress into the next five years in our quest for both objectives with the participation of everybody.

7. USM APEX University in its second phase needs to be engaged in the building, empowering and enculturation of excellence through:

- i. Doubling of achievements from our academics and researchers,
- ii. Empowering our schools, centres and resources,
- iii. Empowering talented students and lecturers,
- iv. Transforming the minds of administrators and staff members to be more productive,
- v. Leading in sustainability and developing the transformation leadership,
- vi. Transforming and transferring knowledge and technology,
- vii. Building upon and improving on strategic linkages

The seven requirements will be consolidated into the strategic moves and their implementation will be constantly monitored and reviewed.

8. USM APEX Phase 2 fundamental focuses on bringing equity, responsibilities and excellence to the work place (PTJ) and organisation within USM. The APEX Programmes need to be established on the following:-

- i. Provide internal governing mechanism and autonomy,
- ii. Self-driven administration and support, and
- iii. Financial sustainability

9. The university is readying itself for a *modus operandi* that will focus on the theme of inclusivity, sustainability and excellence (ISE) founded upon quality and relevance under the labelling of Sustainable Led University (SLU). I would therefore reiterate my usual encouragement and call upon all leaders in the university from heads of departments, the supervisors to their assistants, the senior management, the heads of units, deans, directors, administrators, to students society leaders, the Students Representative Council, and Members of Students Parliament to adopt the theme whole heartedly.

10. Our more important task this year is to build upon the concept of inclusivity in all areas that we do and undertake. Inclusivity means that in all undertakings, the entire campus community will take part in its activities through volunteerism, academic activities, research undertakings, community engagement and activities that bring benefits to staff and students. Records show that about eighty-five percent of students are involved in campus activities and many of our staff is engaged through their involvement in Continuous Professional Development programmes, training programmes and other university programmes assigned to them. Nevertheless, many of the staff members have yet to become active volunteers working along with the community and students. In this instance, let us show our appreciation to all students and staff that have been involved in volunteerism work through their societies and departments which have helped the less fortunate in many ways during the events that have unfolded this year.

11. At the same time inclusivity means that programmes and activities should benefit and give a positive impact to as many people as possible. Inclusivity will use the concept of **1USM** and **We LOVE USM**. Thus inclusivity is

“The fact or policy of not excluding members or participants on the grounds of gender, race, class, sexuality, disability, etc.” (Collins).

Enables all community to fully benefit from wealth of the country is the definition of the Malaysia New Economic Model (pg 9).

12. **1USM** appropriately is directly under the concept of inclusivity and I call upon everyone to subscribe to the idea and mindset.

1USM is based on the principles of together and togetherness. It is about unity in many activities undertaken. It encourages group dynamism. It settles in the concept of working as a team and striving together under a common goal. It is expected this will enable service departments working for a common aim on a common platform, merging under a single stream of services but also remains independent and diverse. Many examples of programmes to be undertaken in the future require the concept of 1USM to be applied thoroughly.

13. **We love USM** already with its own logo and song is a bottom driven idea and is based on the following objectives that all of the community continue to serve USM and works through the success and challenges presented to us.

- To encourage more staff to practice healthy lifestyle. Healthy lifestyle of staff will improve the quality of work and also leads to healthy social life of campus community.
- Improving caring community programme through instilling the sense of belonging and caring for each other.
- Strengthening of mentoring programmes has been designed so mentors can be the social agent to promote caring community in USM.
- Fostering and training more volunteers to help those who need help. Mentor Programmes are based on the concept of helping oneself and helping others based on volunteerism.

14. Sustainability is the hallmark of our university and will continue to be so in our goal to become a sustainable university. As a reminder, Sustainability in USM is based on the 7 pillars of APEX Thrusts;

- i. The future,
- ii. Being different,
- iii. Sustainability,
- iv. Humanity,
- v. Universality,
- vi. Change and
- vii. Sacrifice.

In USM APEX Phase 2, these will be embedded into programmes and will spread more intensively in all aspects of university and campus life from actions, to fundamentals and relevance.

15. Excellence will continue to be the hallmark of University's quest. Although such definitions may move from the fundamentals of tangible to include also the intangible, it is

important that excellence remain the hallmark. Excellence will be defined from three main perspectives; how well we utilise resources for specific goals? How productive is our talents? and have we reached the ultimate benchmark?

16. This year's theme is realising ***the Excellence with Sustainability and Inclusivity***. The questions are:

- How do we arrive here?
- How well have we done?
- How sustainable are our activities? and
- How inclusive have we been?

17. It is with this aim that we propel into the business of educating and strengthening our knowledge in 2014 and ultimately these goals can be achieved if we utilise two fundamentals - Quality and Relevance - for the talents that we have, for the resources that we utilise, for the governance that we adopt in those five areas of sustainability identified above. In simple words, 'Excellence' means 'Quality', 'Relevance' means 'Inclusivity' and ***ultimately Quality and Relevance*** means 'Sustainability'.

18. I would like to remind myself and everyone that success does not come easy, success does not provide short cuts in our pursuit to establish strong fundamentals of knowledge and essence of excellence and success is also not about indulging in past glories and over glorifying achievements. We must frown and shy away from this practice. The practice of overstatement and over claiming should also be frowned upon. We must earnestly and sincerely safeguard our university against efforts to undermine higher education through many means. As such Quality and Relevance must be the fundamentals and the fundamentals need to be built upon, strengthened and accelerated together for the ultimate achievements.

19. A few items of concern in the above issues of sustainability, inclusivity, excellence, quality and relevance include;

- i. Research Enculturation,
- ii. Academic Strength,
- iii. Network Strength,
- iv. Individual Serenity,
- v. Institutional Stability,
- vi. Environmental Stability,
- vii. Sustainability Culture,
- viii. The Sejahtera Culture, and
- ix. Relationship culture.

We should take the nine items as a general checklist when we are evaluating our way forward. At the institutional level this has been undertaken. It is most pertinent that all schools, centres, and institutes adopt the same analysis.

NURTURING THE SOUL AND SEJAHTERA TRANSFORMATION PROGRAMME

20. The university will begin in earnest a programme aimed at enriching the Sejahtera concept in many programmes to continue to nurture the soul of the university and its communities. The essence is to strengthen the staff commitment to excellence work culture with nurturing and enriching the soul through systematic infusion in the staff training. It will be based on nurturing the civil society culture, integrity culture, mental well-being, good value culture. Many staff will be involved in this programme through a three (3) year

schedule. The programme will be known as ***Sejahtera Transformation Programme*** under the stewardship of the Office of Transformation.

21. ***Nurturing the Soul*** agenda will push the institution for further excellence. It is believed that not only individuals will be more motivated towards the excellent work culture but the individuals' well-being and general well-being will be enhanced. Imam Al Ghazali forwarded a few analogy on the relationship between '*hati-akal-anggota fizikal*' (soul-mind-physical) and it is useful for all walks of life. In general it explains the impact of the clean soul on life. A clean soul is the right and effective initiation point to approach life in a holistic manner.

22. *"A similar influence of philosophy is also apparent in al-Ghazali's view of human beings. Human beings consist of soul and body, but their essence is the soul. The human soul is a spiritual substance totally different from the body. It is something divine (amr ilahi), which makes possible human knowledge of God. If the soul according to al-Ghazali is an incorporeal substance occupying no space (as Ibn Sina implies, though he carefully avoids making a direct statement to that effect), then al-Ghazali's concept of the soul is quite different from the soul as 'a subtle body' as conceived by theologians at large. According to al-Ghazali, the body is a vehicle or an instrument of the soul on the way to the hereafter and has various faculties to maintain the bodily activities. When the main faculties of appetite, anger and intellect are moderate, harmonious and well-balanced, then we find the virtues of temperance, courage, wisdom and justice. In reality, however, there is excess or deficiency in each faculty, and so we find various vicious characteristics. The fundamental cause for all this is love of the world (<http://www.scribd.com/doc/54252025/Al-Ghazali-Purification-of-The-Soul>)"*

23. The prevalence dynamism of working for excellence among campus communities in the university need to be spread to the whole campus not only through the above programmes but also the intense dynamism of internalisation process which need to be embarks extensively at levels. The Apex phase 2 is aimed at focussing on new dynamism in relation to quality and relevance on the seven (7) pillars of APEX and seven (7) Thrusts of Phase 2.

24. They are depicted in the financial sustainability, institutional enhancement and global mindset. In its original form in Phase 1 these are the talent, governance and resources. To realise quality talent, the realisation will be to move the talent to global mindset; to improve the use of resources, financial sustainability will be the aim; to improve governance; move towards institutional enhancement is the next destination. The three (3) pillars are all geared towards producing Quality moving towards Inclusivity and Excellence.

25. The move towards relevance lies in the initial phase Apex Phase 1 of becoming world Class Research University and Sustainable Led University and regional centres in community engagement in the future. To ensure this dynamism continues, Global Research Prominence, Leadership and Nation Building, Apex Sharing, Apex Extension and Positioning are crafted as the new pillars.

26. On Relevance it is about a certain relationship; practical and especially of social applicability. Relevance establishes credibility – like in a court of law - the relevance of a given item of evidence prove or disprove a case or its elements; relevance can help build brands and credibility like in advertising and marketing. Likewise, the content of our curriculum and the character of our university must be relevant to the times. What we research must be relevant to knowledge pursuits as much as it is relevant for finding solutions to pressing

environmental, developmental and socio-economic problems, and above all must help lift the poor from their plight. If people's character defines their behaviour, the reverse is also mostly true – discrete behaviour patterns will show insight into their character. So it is worth pondering, what others would conclude about USM's character judging from our behaviour as an institution? Are we relevant?

27. Relevance and USM's Scenario Planning: The question of relevance to the time and space was an integral part of the elaborate 'scenario planning' exercises undertaken by USM during the middle of the last decade. Through this process we concluded that universities which are primarily driven by market forces; those led by special interest groups such as scholars, state or corporations; universities which are totally invisible, and those focused mainly on financial motives are at best 'wrongly relevant' in spirit or pursuits. On the extreme end of this spectrum are institutions engaged in unethical teachings and research.

28. Selectively relevant: The same scenario planners finally settled on a university model that mimics nature for its own existence and the provision of goods and services. Like the symbiosis that exists in ecosystems where everything is related to everything else, we chose to be 'selectively relevant' by ensuring a symbiotic relationship with the communities we are set up to serve. Like in nature we wish to be symbiotically connected to everything we can define as having a stake in us – those whom our actions affect or influence and those whose actions affect or influence us. From this consideration emerged eventually the University in a Garden scenario. This choice was an endorsement of the view that universities should be selectively relevant, as we cannot be all things to all people at all times. What we should do though is to excel in a strategically chosen area that has wide implication for now and the future. This brings us to the next point – Sustainability.

29. On Sustainability: In higher education, one side of the sustainability coin represents the efforts of a university to be competitive in the red ocean environment by attracting quality students, competent staff, adequate facilities and finances. Often, the focus here is on maintaining status quo, best practices and excellence. The other side of the coin represents the major global sustainability challenges, as highlighted by the Brundtland commission's report and its triple bottom line approach - environment, economy and society. The report argues that current developmental paradigms that deplete natural resources, increase pollution, change climate, and widen the rich-poor gap are simply not sustainable. Thus protecting our planet, lifting people out of poverty and advancing economic growth are interconnected aspects of the same thing – sustainability or sustainable development. Addressing these challenges is the realm of 'blue ocean strategy' in the context of USM.

30. The red and the blue ocean spaces usually exist side by side and our challenge is to increase competitiveness to stay successful in the red ocean and be innovative enough to move out to the blue ocean space as quickly as possible. Having opted to be selectively relevant as an institution promoting sustainability, the ability to sustain this stability seems to define sustainability for us. In reality this means that every step needs to be taken in the right direction with reflective realignment and proactive action.

THE 10 YEARS IN REVIEW 2004-2008 AND 2009-2013

31. USM has been evaluated from the quantitative aspects in the Key Performance Indicator (KPI) National Higher Education Strategic Plans (PSPTN), Key Performance Indicator

(KPI) APEX, and Malaysia Research Assessment Instrument (MyRA) and also in qualitative aspects based on Guide to Assessing APEX Special Agenda – Community Engagement in the review of the five year APEX performance. Other performance by ascertaining our position at the international level through rating and ranking were also undertaken.

32. The auditing by the Special APEX Committee in November has shown that USM is at the right pathway in determining the way forward as a university focused on sustainability and also community engagement. There are however challenges to be faced. In general we have gone through a ten-year period of improvements, with the last five (5) years at more accelerated phase.

33. USM will continue to push for a university distinctively different and the success of USM to be more visible in pushing for the public understanding of the new era of transformation in higher education.

34. USM's position in discipline based ranking is very high and impressive. The overall positioning in general rating and ranking need to be assessed well.

35. USM in the last five years has faced tremendous challenge and the understanding of what APEX University is all about. Our future challenge is to build a strong foundation and fundamentals and pushing for the right model of APEX that will fit the need of Malaysia and become relevant to the nation and the quality achievements that surpassed international benchmarking.

36. I have chosen to review the progress of the university 5 years before since the beginning of the APEX Programme for the university. In this review, taken from the book "USM in Numbers: Apex Special Edition", what was produced the previous year are again presented, but this year it is in the 5 years averages of improvement including the achievements in 2013 and also the achievements 5 years before.

37. The achievements are not insignificant but are also by no means excellent in all aspects. The BUKU 2013 reviewed in the same book also shows the achievements and the gap in realising some of the targets.

38. The following summarises the achievements.

Table 1
Pre APEX and Post APEX Achievements

Items	2004-2008	2009-2013	% increase
New Research Grants	2717	4897	80%
Cumulative Publications (Citation Indexed Journal) (ISI/SCOPUS)	3392	10464	209%
Publication per staff	0.74 (2008)	1.50 (2012)	102%
Enrolment PG	7801 (2008)	12097 (2012)	55%
PhD Graduates	521	1315	152%
Patents Filed and Granted	40 filed 34 granted	287 filed 35 granted	617%


39. Other achievements – The University is also proud to be part of the achievements in many fields. Notably we maintained a good position in many rankings and we will continue to monitor our progress and at the same time join other rankings worldwide that is based on “sound methodology and least cost”. Table 2 shows our rankings in subject matter, one of those that give us guidance. Table 3 shows the summary of our position in many other ratings and rankings.

40. We also celebrate outstanding individuals and groups that won awards and accolades based on fundamentals performance and rigour. The achievements range from academic to research to sporting achievements at both national and international level. More of these are available in “USM in Numbers: Apex Special Edition”, and also newspaper reporting booklet of the University.

Table 2
Other Achievements

Items	2004-2008	2009-2013	% increase
Academic staff	1760	1887	7%
No of Alumni	101,471	133,642	32%
No of Graduates	35,426	32,171	-9%
**Percentage of Fulltime Undergraduates with CGPA 3.0 and above		2009 - 59% 2010 - 58% 2011 - 66% 2012 - 67% 2013 - 70%	

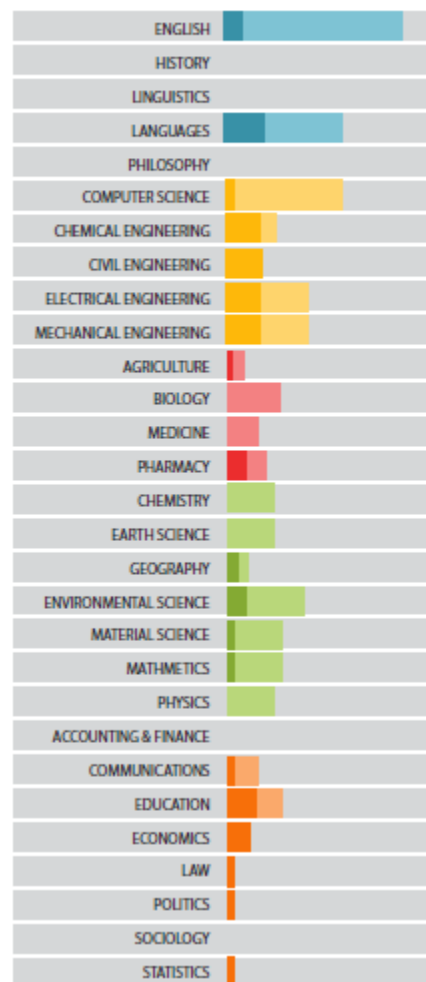
Table 4
USM Performance and Achievements

						
ASSESSMENTS	2008	2009	2010	2011	2012	2013
Malaysia Research University Assessment (MyRA)	RU Status 6 bintang (2007 – 2009)		Matured RU Status - 6 bintang -			N/R
Peer Review CAPs PSPTN	N/R	N/R	✓	✓	✓	N/R
Peer Review CAPs APEX	N/R	N/R	✓	✓	✓	N/R
SETARA	-	Tier 5 (Cemerlang)	-	Tier 5 (Cemerlang)	-	N/R
D'SETARA - Perubatan, Pergigian dan Farmasi - Kejuruteraan ; Sains Kesihatan - Hospitaliti dan Pelancongan	-	-	-	Tier 4 Tier 5 -	-	N/R
Generic Community Engagement	N/R	N/R	N/R	N/R	100%	
QS-WUR Ranking	313	314	309	335	326	355
Webometrics (world):	-	-	Not in top 500 Top 3 in MAS	428 Top 3 in MAS	437 Top 1 in MAS	307 Top 1 in MAS

MALAYSIA

Table 3: USM Ranking in Subject Matter

INSTITUTIONAL REPRESENTATION BY SUBJECTS



TOP INSTITUTIONS BY SUBJECT

1	Universiti Kebangsaan Malaysia (UKM)	1	Universiti Sains Malaysia (USM)	1	Universiti Malaya (UM)	1	Universiti Sains Malaysia (USM)
2	Universiti Sains Malaysia (USM)	2	Universiti Malaya (UM)	2	Universiti Kebangsaan Malaysia (UKM)	2	Universiti Malaya (UM)
3	Universiti Malaya (UM)	3	Universiti Kebangsaan Malaysia (UKM)	3	Universiti Putra Malaysia (UPM)	3	Universiti Putra Malaysia (UPM)
4	Universiti Putra Malaysia (UPM)	4	International Islamic University Malaysia (IIUM)	4	Universiti Sains Malaysia (USM)	4	Universiti Kebangsaan Malaysia (UKM)
5	Universiti Teknologi Malaysia (UTM)	5	Universiti Utara Malaysia (UUM)	5	Universiti Utara Malaysia (UUM)	5	Universiti Teknologi Malaysia (UTM)
1	International Islamic University Malaysia (IIUM)	1	Universiti Malaya (UM)	1	Universiti Sains Malaysia (USM)	1	Universiti Sains Malaysia (USM)
2	Universiti Malaya (UM)	2	Universiti Sains Malaysia (USM)	2	Universiti Malaya (UM)	2	Universiti Teknologi Malaysia (UTM)
3	Universiti Sains Malaysia (USM)	3	Universiti Teknologi Malaysia (UTM)	3	Universiti Teknologi Malaysia (UTM)	3	Universiti Putra Malaysia (UPM)
4	Universiti Kebangsaan Malaysia (UKM)	4	Multimedia University (MMU)	4	Universiti Kebangsaan Malaysia (UKM)	4	Universiti Kebangsaan Malaysia (UKM)
5	Universiti Putra Malaysia (UPM)	5	Universiti Putra Malaysia (UPM)	5	Universiti Putra Malaysia (UPM)	5	Universiti Malaya (UM)
1	Universiti Malaya (UM)	1	Universiti Sains Malaysia (USM)	1	Universiti Putra Malaysia (UPM)	1	Universiti Sains Malaysia (USM)
2	Universiti Kebangsaan Malaysia (UKM)	2	Universiti Malaya (UM)	2	Universiti of Malaysia Sabah (UMS)	2	Universiti Putra Malaysia (UPM)
3	Universiti Sains Malaysia (USM)	3	Universiti Kebangsaan Malaysia (UKM)	3	Universiti Teknologi Malaysia (UTM)	3	Universiti Malaya (UM)
4	Universiti Putra Malaysia (UPM)	4	Universiti Teknologi Malaysia (UTM)	4	International Islamic University Malaysia (IIUM)	4	Universiti Kebangsaan Malaysia (UKM)
5	Universiti Teknologi Malaysia (UTM)	5	Universiti Putra Malaysia (UPM)	5	Universiti Malaysia Sarawak (UNIMAS)	5	Universiti Teknologi Malaysia (UTM)
1	Universiti Malaya (UM)	1	Universiti Sains Malaysia (USM)	1	International Islamic University Malaysia (IIUM)	1	Universiti Sains Malaysia (USM)
2	Universiti Kebangsaan Malaysia (UKM)	2	Universiti Malaya (UM)	2	Universiti Putra Malaysia (UPM)	2	Universiti Malaya (UM)
3	Universiti Sains Malaysia (USM)	3	Universiti Putra Malaysia (UPM)	3	Universiti Sains Malaysia (USM)	3	Universiti Putra Malaysia (UPM)
4	Universiti Putra Malaysia (UPM)	4	Universiti Kebangsaan Malaysia (UKM)	4	Universiti Kebangsaan Malaysia (UKM)	4	Universiti Kebangsaan Malaysia (UKM)
5	Universiti Teknologi Malaysia (UTM)	5	Universiti Teknologi Malaysia (UTM)	5	Universiti Teknologi MARA (UITM)	5	Universiti Teknologi Malaysia (UTM)
1	Universiti Sains Malaysia (USM)	1	Universiti Sains Malaysia (USM)	1	Universiti Malaya (UM)	1	Universiti Sains Malaysia (USM)
2	Universiti Kebangsaan Malaysia (UKM)	2	Universiti Putra Malaysia (UPM)	2	International Islamic University Malaysia (IIUM)	2	Universiti Malaya (UM)
3	Universiti Putra Malaysia (UPM)	3	Universiti Malaya (UM)	3	Universiti Sains Malaysia (USM)	3	Universiti Teknologi Malaysia (UTM)
4	Universiti Teknologi Malaysia (UTM)	4	Universiti Teknologi Malaysia (UTM)	4	Universiti Teknologi Malaysia (UTM)	4	Universiti Putra Malaysia (UPM)
5	Universiti Malaya (UM)	5	Universiti Kebangsaan Malaysia (UKM)	5	Universiti Teknologi MARA (UITM)	5	Universiti Kebangsaan Malaysia (UKM)
1	Universiti Kebangsaan Malaysia (UKM)	1	Universiti Malaya (UM)	1	Universiti Malaya (UM)	1	Universiti Putra Malaysia (UPM)
2	Universiti Putra Malaysia (UPM)	2	Universiti Kebangsaan Malaysia (UKM)	2	Universiti Kebangsaan Malaysia (UKM)	2	Universiti Kebangsaan Malaysia (UKM)
3	Universiti Sains Malaysia (USM)	3	Universiti Sains Malaysia (USM)	3	Universiti Sains Malaysia (USM)	3	Universiti Malaya (UM)
4	Universiti Malaya (UM)	4	Universiti Putra Malaysia (UPM)	4	Universiti Utara Malaysia (UUM)	4	International Islamic University Malaysia (IIUM)
5	Universiti Teknologi Malaysia (UTM)	5	Multimedia University (MMU)	5	Universiti Teknologi MARA (UITM)	5	Universiti of Malaysia Sabah (UMS)
1	Universiti Putra Malaysia (UPM)	1	Universiti Putra Malaysia (UPM)	1	Universiti Malaya (UM)	1	Universiti Kebangsaan Malaysia (UKM)
2	Universiti Malaya (UM)	2	Universiti Malaya (UM)	2	Universiti Kebangsaan Malaysia (UKM)	2	Universiti Sains Malaysia (USM)
3	Universiti Sains Malaysia (USM)	3	Universiti Sains Malaysia (USM)	3	Universiti Sains Malaysia (USM)	3	Universiti Malaya (UM)
4	Universiti Kebangsaan Malaysia (UKM)	4	Universiti Kebangsaan Malaysia (UKM)	4	Universiti Teknologi MARA (UITM)	4	Universiti Putra Malaysia (UPM)
5	Universiti Utara Malaysia (UUM)	5	Universiti Teknologi Malaysia (UTM)	5	Universiti Teknologi Malaysia (UTM)	5	Universiti Teknologi Malaysia (UTM)
1	Universiti Malaya (UM)	1	Universiti Kebangsaan Malaysia (UKM)				
2	Universiti Kebangsaan Malaysia (UKM)	2	Universiti Teknologi Malaysia (UTM)				
3	Universiti Sains Malaysia (USM)	3	Universiti Sains Malaysia (USM)				
4	Universiti Teknologi Malaysia (UTM)	4	Universiti Malaya (UM)				
5	Universiti of Malaysia Sabah (UMS)	5	Universiti Putra Malaysia (UPM)				

THE LAUNCHING OF THE APEX PHASE 2 (2014-2018)

41. The APEX Phase 2 planning began in January 2013, when the consultative document for APEX Phase 2 was launched to be used as a basis for discussion and directions. The concept of ecosphere was introduced with the idea of transforming eco-system into three dimensional focuses. This allowed us to consider many aspects of focus area through 360 degrees and many missed linkages were identified and more challenges were understood. The main discussions centred around seven enablers as described below representing the desire of the university to move in accelerated dynamism. The seven enablers is further refined in the implementation phase which begins this year under seven (7) Key Result Areas represented by seven (7) pillars.

42. The APEX Phase 2 covers the period 2014-2018 and is launched internally today. The publication “The White Book on Apex Phase 2” is aimed at building resources. In other words, the ultimate goal of transforming higher education is to build a ‘perfect’ human civilisation and humanity that can use common sense and effort to enable changes that could also improve the quality of human life and preserve the continuity of development and strengthens civilisation.

43. Human Governance has been identified as one of the main focus in the transformational plan of the USM-APEX University. In order to steer confidently and effectively into the *Blue Ocean*, USM proposes supportive governance as its vehicle. The primary issue in supportive governance is not simply gaining autonomy from the government, but how to build credible internal overall governance and audit system that would necessitate less intervention from outside agencies and stakeholders. In this sense, empowerment programme represents one of the pathways forward.

44. Going beyond the present aspirations, USM recognises the need to look at future needs, present and future problems of humanity as well as risk factors in the form of competition 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.

45. These elements are “knowledge fundamentals” and “values”. In line with the 2nd phase development plan, USM recognises 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 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 pillars. These are represented in the enablers.

46. To realise the APEX 2nd Phase Transformation plan, taskforces have worked to develop action plans and provide a comprehensive roadmap with clear outputs and impacts. The roadmap will have short term and long term goals and targets. It is now included in “The White Book on Apex Phase 2”. This represents overall targets. It is meant to be flexible, adjustable and reaffirmed and realign as the APEX journey progresses.

47. 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, and focuses on sustainability, humanity, universality, change and sacrifice. As a leading research

university, USM is committed to continue doing research that is sustainable with high impact and has the capacity to produce cutting edge research.

48. 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 APEX second phase should result in:

- linking industry and innovation
- giving impact to society
- changing technology to commercialisation
- generating income for the university

49. Research at USM is driven by three main thrust areas namely curiosity-driven, people-focused and industry-driven. The key areas of research strengths at USM include Medical & Health, Engineering, Social Transformation, Climate Change, ICT, Energy Security, Food Security and Environmental Sustainability, Research and Innovation, Global Research Prominence with Talents Helping Humanity.

50. In general APEX Phase 2 intends to achieve the following:

- Widening access and enhancing equity
- Improving the quality of teaching and learning
- Enhancing research and innovation
- Strengthening the institution
- Intensifying internationalisation
- Enculturation of lifelong learning
- Delivery system

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

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

- i. 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.
- ii. 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.
- iii. Cultural agility – the ability to understand the perspectives of individuals from different cultures and backgrounds and to empathise with these views, and responds to them. And also the ability to cope with and adapt to living in different environments.
- iv. 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.
- v. 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).

Characteristics of graduates with global mindset include:

- i. The ability to work collaboratively and empathetically with diverse teams from across the globe.
- ii. Learning agility – the ability to rapidly assimilate knowledge and develop understanding in order to rapidly respond and adapt to new challenges, circumstances and cultures.
- iii. Adaptability, flexibility, resilience, drive and self-awareness – these attributes underpin the above global competencies and are essential, enabling qualities.

53. 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.

54. Services at USM 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.

55. USM need to be positioned well. In this second phase, USM will further strive to position itself, to be more visible, as an institution that empowers future talents to levels of eminence, prominence, dominance and relevance in all facets, driven by an excellent and conducive research ecosphere which 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 with the main focus of a sustainable led university.

56. The university will also focus on key result area of becoming global prominence in research and also playing the role of a university that champions knowledge transfer from the developed countries to the developing ones. We will enhance collaborative research frameworks in strategic areas by developing partnerships with advanced countries and on the other end, outreaching the communities of the bottom billions via our community outreach programmes.

57. USM aspires to be a university that produces, holistic, empowered, future talents, with a global mindset, empowering the bottom billions through meaningful and sustainable University-Community Engagement.

58. It is hoped that the APEX University will produced students of global mindset, high academic achievements, active in sustainability and volunteerism, will be attached to industry or community and are multinational organisations and corporations or international outlook and linked (40%).

59. The university moves and is vibrant through the vibrancy of its Staff. We intend to develop staffs that are focussed in their duty and are in a productive capacity mode, able to move in *e-mode*, ready to increase their skills set through training enhancement, are self-righteous and kind hearted soul. The University cherishes all its staff who contributes evenly to its success and to their personal achievements.

60. APEX Phase 2 Fundamentals consists of Seven Enablers which are summarised below.

Table 5
7 Key Enablers

ENABLERS	KEY OBJECTIVES
E1. Good Governance	E1.1. To establish and build a good internal system that would necessitate less intervention from the government, consequently reinforcing the autonomous status of the university.
	E1.2. To ensure university can operate without much intervention from outside the university through its eco-system and university management system can operate efficiently and effectively and independently within the university
E2. Developing and Empowering Talent	E2.1. Workforce planning through talent analytics and available positions
	E2.2. Talent Sourcing through recruiting future leaders/attracting staff, recruiting process, contingent labour procurement, selection, on boarding.
	E2.3. Engaging and retaining the best talent through internal mobility programme, goal management, professional network, community involvement and managing attrition and retain management.
	E2.4 Nurturing the best talent through career planning, succession planning, performance management and leadership development.
E3.Nurturing responsible citizen	E3.1. Strengthening and enhancing competitive edge of academic programmes. Joint programme with universities renowned for its sustainability, flagship programme from each cluster with international accreditation, Flagship programme with 100% of graduate employability, Flagship programme with English as a medium of delivery.
	E3.2. Enhancing Distinctive Student Experience. Infusion of the global dimension in the curriculum design for sustainability programmes. Teaching and learning practice associated with global citizenship education. Infusion of ICT and T&L. Curriculum design with embedded 21 st century skills. Students possess multi-lingual language competency. Enhanced student mobility programmes.
	E3.3 Enhancing Global Presence and Visibility. Increased number of international chairs in sustainable programmes. Increased number of international students for flagships sustainability based programmes. Increased number of courses related to sustainability as open educational resources (OER). International awards and fellowship visiting professors. Programme in top10 rankings in regional/ global event.
E4. Research and Innovation	E4.1 Linking industry and innovation. Changing technology to commercialisation. Giving impact to society. Reinjection of knowledge back to teaching and learning. Generating income for the university.
	E4.2 Curiosity driven. People focused, industry driven.
E5.Finance	E5.1 The philosophy of financial sustainability is to create income and reduce cost without reducing the ability to conduct core functions.
	E5.2 Key initiatives. OBB. Cost Recovery. Cost Rationalisation. Income Generation. Efficient Asset Management
E6. Positioning	E6.1 To position as the university that drives sustainability championing the cause of the bottom billion, while achieving global prominence in research, industrial linkages, and knowledge transfer.
E7. Services	E7.1 To achieve financial sustainability while maintaining continued commitment to social responsibility as a public university through services monetary in nature
	E7.2 To position as the university that produces good future talent with civic consciousness through services non-monetary in nature

61. APEX Phase 2 Pillars - The seven pillars will form the strategic thrusts of APEX Phase 2 which is described in general here but is detailed in the publications listed.

Table 6
APEX PHASE 2: 7 Pillars and 7 Key Result Areas

Pillar 1 :	Research and Innovation
KRA:	Global Research Prominence
PROGRAMMES: 6	Research Icons Iconic Research State of Art Research Infrastructure Next Generation Researches Research To Market Programmes Research to Prominence Programme
Milestones:	Main - World Class RU. 10 years
Pillar 2:	APEX Leadership and Nation Building
KRA:	Part of Developed Nation
PROGRAMMES: 4	APEX Talent, Apex College, Apex Scholars, Apex Global Fellowships
Milestones:	Main - International Graduates and National Builders
Pillar 3:	APEX Sharing
KRA:	Transformation of Higher Education Institutions
PROGRAMMES: 4	Transformation of Rakan RU, Apex Governance Best Practices
Milestones:	Main - Continuous Sharing Programme
Pillar 4:	APEX Extension and Positioning
KRA:	Visible, Distinctive Sustainable Led University
PROGRAMMES: 5	Education for Under privileged, positioning towards global prominence
Milestones:	Main - Sustainable Led University
Pillar 5:	Academic and Students Development
KRA:	Prominence in Sustainability and Global Mindset
PROGRAMMES: 6	Global mindset, student mobility, world class programmes, institute of open learning, institute of sustainable tourism research, institute of liberal sustainable education
Milestones:	Main - Sustainable Led University
Pillar 6:	Financial Sustainability
KRA:	Financial Autonomy
PROGRAMMES: 4	7 programmes. Sg2 Revitalisation, Sains@USM, UsainsHoldings, Facilities and Services, Private hospital, private university, foundation and waqaf
Milestones:	Main - Operational Independence
Pillar 7:	Institutional Development
KRA:	Enhanced and Empowered USM
PROGRAMMES: 6	Bertam Campus, HUSM, USM Teaching Hospital, Renowned Engineering Centre, USM Internal Enhancement Programme, USM External Linkages
Milestones:	Main - Empowerment internally; enhancement of external linkages

62. APEX Phase 2 Key Result Area, Pillars and 10 years milestones are presented in the chart below. The milestones are meant to be targets. It need to be reviewed, its measurement and achievements are matters of contention. It should be the general guiding principles of achievements and pathways.

Table 7
APEX PHASE 2: 7 Pillars and 7 Key Result Areas and 10 years Milestones

APEX KEY RESULT AREA – OUTCOME				
APEX KRA	PILLARS	3 years	5 years	10 years
1. Global Research Prominence	1. APEX Research and Innovation	World Class RIU 500	World Class RIU 400	World Class RIU 200
2. Developed Nation	2. APEX Leadership and Nation Building Programme	25% Graduates International & National Builders	35% Graduates International & National Builders	50% Graduates International & National Builders
3. Transformation of Higher Education Institutes	3. APEX Sharing	1 RUs	2RUs	3 RUs
4. Visible, Competitive and Distinctive	4. APEX Extension and Positioning	National Led Sustainable University	ASEAN Led Sustainable University	ASIA PACIFIC Led Sustainable University
5. Prominence in Sustainability and Global Mindset	5. Academic and Students Development	More than 30% programme at ASEAN and linked	More than 30% programme at ASIA PACIFIC and linked	More than 30% programme, at globally and linked
6. Financial Autonomy	6. Financial Sustainability	30% of operational independence (less emolument)	40% of operational independence (less emolument)	50% of operational independence (less emolument)
7. Enhanced and Empowered USM	7. Institutional Development	30% empowerment and enhancement	40% empowerment and enhancement	50% empowerment and enhancement

OUTLOOK 2014 - Realising the Excellence through Sustainability and Inclusivity

63. The University in 2014 will continue with rigour the plans set for APEX Phase 2, Research University status and the move to become a premier university of choice. It is envisaged that strong challenges will persist in its journey with many campuses, stakeholders, large campus community and the comprehensive programmes that it offers. The outlook for 2014 is described below in various headings in general and specific explanations and will be followed by the implementation plans of 2014 that will be undertaken by the university and its entities. Some of the outlooks have been forwarded by the campus communities.

PILLAR 1: APEX Research and Innovation

64. Towards becoming prominent in research globally, inter-disciplinary transdisciplinary research will need to be improved and the concept of **We Love USM** when applied will mean less territorialism and the need to focus on the virtues of such interdisciplinary work become more paramount. We have defined research centres and research service centres pathway and also to push Centres for Research and Innovation playing significant role in the formation of new research centres and to improve the laboratory to product to market pathways. The following examines the outlook on research and innovation:-

65. Centre for Research Initiatives (CRIs)

64.1 CRIs will be strengthened to function as centres that facilitate the creation of sustainable centre of transdisciplinary research excellence (CoE) so as to position USM research at the global level. Its mission is to provide strategic direction for research agenda of USM, identify and nurture transdisciplinary cutting edge research initiatives and institutionalise these initiatives to be centres of excellence. This includes SERC, CRIs Life Sciences, Fundamental Science, Health and Clinical Science and Liberal and Social Sciences.

64.2 CRI Life sciences will spearhead the effort for the Incubator Centre due to be constructed beginning of the year.

66. Innovation and Commercialisation

Increase in number of products for commercialisation through various means including formation of spin off and joint ventures and investments with Usains. Eight (8) products are being negotiated for commercialisation with thirteen (13) products being on push for pre-commercialisation and eighteen (18) more being evaluated for pre-commercialisation.

67. Outlook of Research Centres and Service-based Research Centres

67.1 Moving 46 Research-Based, Service-based, national HiCoe, RUC, LRGS and others to a higher level performance.

67.2 Centres for Research Services will be modelled on a TOR Dedicated to their establishments. Includes repositioning of CAATS, re-invigorating Doping Centre, positioning of CHEST.

67.3 Strategy for Existing RC & SRC - Facilitating existing Research Centre and Service-based Research Centre to go for HiCoE. All RC & SRC will be required to perform self-assessment using the HiCoE instrument. Selected RC & SRC will be given infrastructural, human resource and financial support. The DNA of RC formulated based on their current status is shown in Chart 3.

- 66.4 Strategy for Existing HiCoE
- Developing the global brand
 - Develop their competency/expertise niche area
 - Tie-up with Global CoEs

68. The Talent Development Strategy

68.1 Enriching Research Culture. The university will intensify its efforts to push for higher level achievements among its talented academic staff by encouraging and providing support for them to produce publications in higher level journals. At the same time, completed research projects will be identified to undergo programmes for knowledge transfers, commercialisation or publication in books and other intellectual property efforts.

68.2 All lecturers from the more junior level will be encouraged to apply for initial research grants while those that have not started research in any areas will be nurtured into research mode as required of every lecturer in a research university.

68.3 The University will focussed more on higher level researchers to be placed and associated at renowned research institutions to produce higher level output as well as becoming role model not only as researchers but also as research leaders in their field or a cluster of research fields.

PILLAR 2: APEX Leadership and Nation Building Programme

69. Developed Nation – we are continuing with the focus to be part of the nation builder. The real value of APEX University to the nation is to build and offer the nation graduates of distinctive capability and skills. Education should be a transformational tool in moulding and determining a nation's future as espoused by the nation's leadership. Thus the National Builder Programme should be built upon and revolved around:

- Talent retention is a strategy that enables talent in USM to be retained and well appreciated and rewarded.
- Talent grooming is to build upon potentials and ensures USM produces the desired national builders
- Talent succession
- Global talent

PILLAR 3 : APEX Sharing

70. Transformation of Higher Education Institutes – is a concept where programmes and good practice derived from the APEX and other programmes is shared among other higher education institution in many ways, such as seminars, workshops, networks, projects, programmes, in general and dedicated. At the very least we become part of bigger effort to transform the higher education landscape of the nation. The challenge is to move the campus community in the spirit of sharing and transfer of knowledge and to be actively engaged in the real sense.

71. The key transformation effort is how to rollout good practices to other higher education institutions. More importantly, is whether such good practices are demand driven for there are others which are needs driven. The APEX Community Engagement framework, students'

parliament and knowledge transfer programmes are good examples of needs driven. USM hopes more demand driven initiatives are asked for from other higher education institutions.

PILLAR 4: Apex Extension and Positioning

72. Visible, Distinctive and Sustainable Led University is the key result of the focus of activities of extension and positioning of the university to the outside world. This is a continuous effort to position and make our university programmes become a recognised effort and relevant. A number of efforts has been realised to move USM into a Sustainable Led University and this should be the corner stone of APEX. It should differentiate us from other universities. The essence of sustainability traversing through the academic, research and extension programmes through staff and students will be continued earnestly.

73. New programmes will be outlined for implementation including pushing for a wider and deeper integration of the sustainability elements in the above areas. An advanced framework of WEHAB +3 (Water, Energy, Health, Agriculture and Bio Diversity + Climate Change/Disaster Risk Management, Production and Consumption, and Population and Poverty) is now being adopted by the University for the inclusion of the aspects of sustainability. What need to be done are the acceleration and the need to be visible and distinctive in our sustainability programme.

74. Sustainability Assessment Methodology (SAM) is a tool that has been developed in USM and will be rolled out this year to be used by other universities.

- SAM uses descriptive indicators reflecting sustainability quality assessment
- The final percentages are semi quantitative, reproducible and descriptive
- Ranking requires quantitative and reproducible results at all times
- SAM is an excellent management tool for decision making under uncertainty.

75. External Services to the community and industry involves activities in helping or organising efforts that involve knowledge sharing where people offer their knowledge, time and skill to improve life, productivity, performance, potential and sustainability and to advance human welfare and development of the community outside USM. External services also enable USM to provide tangibles or intangible products which include knowledge sharing, resources, experience and skill for others as income generation for USM. It is important that guiding principles for external services to be formulated.

76. Industrial linkages need to be built on strength of cooperation with industries through initiatives based on the sectors need and how experts in USM are able to transfer knowledge and technological know-how to the need of the industry and at the same time able to improve research and academic competencies. Enhancing the research competencies that will elevate more opportunities for commercialisation is a core objective of good industrial collaboration. Collaboration will be enhanced following some models such as the CREST-NCIA-USM Collaborative Research Centre (Incubator) at Sains@USM. USM has also obtained industrial linked Research Grants for industrial based 33 (9) (14) (3) projects valued at RM 8.35 million from 17 companies specialising in Electrical and Electronics industry.

77. Knowledge Transfer Programme (KTP) is recognised as part of USM APEX sharing programme. KTP is a mechanism to integrate the university academia, graduates, industry and community through joint projects that will benefit the target group in identified key result area. The knowledge originating from the higher education institution is delivered via the programme to benefit the industry. A total of 300 projects are being implemented. USM is now working with

PEMANDU, MOE, and the State Government of Melaka to expand the concept through PSDT concept via Green Technology Key Result area. In the next phase we are now creating the networks of knowledge transfer institutions. USM will be establishing a KTP Centre to manage the above with a dedicated centre via a sizable donation and University own fund to be known as the TORAY USM KTP Centre.

78. USM Global Network will house global network secretariats that facilitate, coordinate and provide services to the members of their network. It will house networks originating from Penang and networks that USM plays a leading role. Guiding principles will be formulated. The network of networks will be RCE Penang Education for Sustainable Development. It will focus on youth and Sejahtera concept. Both of the above will be realised through projects involving the youth and school children around the northern region of Malaysia. It will also form networks with schools to apply the concept of “Education for Sustainable Development”. In addition the other networks that will form part of the centre are:

- APUCEN Asia-Pacific University-Community Engagement Network (APUCEN) - The Asia-Pacific University-Community Engagement Network (APUCEN) is a regional network of academic institutions concerned with the promotion of the culture of university-community engagement by universities in a proactive holistic and participatory way.
- South East Asian Sustainability Network (SEASN) - The South East Asia Sustainability Network (SEASN) is an alliance of higher education institutions and other related sustainability organisations, agencies, NGOs, and industries in South East Asian countries committed to promote, engage and integrate sustainability in their teaching, research, community engagement and institutional engagement.
- Global Higher Education Network (GHEN) - The Global Higher Education Network (GHEN) is an international network of academics, policymakers, researchers and interested groups in higher education. GHEN acts as an advisory think tank on current developments of higher education ecosystems. The network will focus on the higher education future and alternative scenario.
- ASEAN Local Knowledge Network (ALKN) ASEAN Local Knowledge Network (ALKN) - The ASEAN Local Knowledge Network (ALKN) is a network of local and regional researchers sharing and applying relevant local knowledge, values, ethics, cultures, and practices into current societal lifestyles with the goal of sustaining the positive, impactful and inclusive past practices for the future.

79. Establishing Innovative Community Engagement

78.1. Innovations in Community Engagement will bring new light, will bridge, and will transform existing collective wealth of knowledge, research, innovations, and student efforts closer to community. In many ways CE will allow gradual closing of gaps and cracks between Universities and Community. It will eventually make the current underutilised knowledge, resources and all the common good that universities advocate for the well-being of the community and eventually lead to a sustainable future.

78.2. USM, as an institution of higher learning, with the expertise and resources available, should share it with the community in its effort to transform higher education and community for a better future. Together USM and the community need to move on and evolve. The way the community will evolve in the long term will depend on all of the responses that the institutions of higher education are able to articulate accordingly. Transfer of knowledge is the key element, and USM has a pivotal role in its creation and its

social use. It is important for USM to become, consciously and intentionally, analysts of the changes that are happening, and of the possible initiatives in anticipating, choreographing, intervening and guiding these changes towards a smooth transformative transition from USM to Community. USM needs to strategise accordingly. Now is the moment to widen the horizon of knowledge, education and research in community, and to move beyond creating socio-economic well-being towards the transformation of a community as a whole and the creation of a sustainable community through a true knowledge-based society.

PILLAR 5. APEX Academic and Student Development

80. Prominence in Sustainability and Global Mindset - The APEX Academic and Student Development pillar is aimed at the biggest campus community; the students and the lecturers. The challenge is how to be prominent in sustainability and global mindset through various long term programmes that requires commitment, strategic decisions, long term investments and at the same time quick results. We still need to improve on our internationalisation level, international students, and internationalised programmes towards creating an internationalised USM. A new policy on internationalisation will be crafted soon. The outlook below noted some of the challenges.

81. Academic Outlook of Schools and Academic Programmes

80.1 Adopting USM Policy on Sustainability 2013 with the mission of making tomorrow better than today by innovative curricular approaches. This will cover the domain of Academic/Teaching. A policy will be designed to Integrate sustainability into the academic curriculum at all levels using all modalities of delivery to ensure that necessary knowledge, skills, perspectives, value systems and issues are introduced and their relevance to the three pillars of sustainability emphasised fully through formal, non-formal and informal teaching.

80.2 A five year academic plans - All USM schools have completed their five year work plan. Based on each strategic plan, an overall plan for the all the schools will be produced in mid-March after the consultation process has finished. Chart 4 shows the average DNA of the school's commitment to the future in terms of teaching, research and extensions programme.

82 Academic Succession Plan 2014

- i. Efforts are being undertaken to reduce the high ratio of students and staff by maintaining the current enrolment and increasing the number of academic staff through the return of academic staff currently on training and through the open market selection especially for new programmes and for increasing the capacity of research centres.
- ii. Professors and lecturers on contract will be employed based on their contributions at various levels of their competencies.

83. "School of Lifestyle Science" with potentials of Bachelor of Lifestyle Sciences (Hons) ; Public Health Policy, Health Promotion, Nutrition & Micronutrients, Environmental, Bachelor of Health promotion & Policy and Bachelor of Nutrigenomics, Bachelor of Sustainable Health And Bachelor of Health Management will be undertaken at feasibility stage.

84. "School or Programme in Bachelor of Science in Heritage and Local Knowledge Studies to Management will be undertaken at feasibility stage. The need is paramount both for national heritage and also for the service sectors of the economy.

85. Postgraduates (PG)

- PG affairs are of great interest to the university and a special task force has been set up and many consultations have been made. The challenges facing postgraduates' studies are many, and are interlinked from fees to quality of supervision and funding from university and external agencies.
- The ease of registering, ease of accessibility to funding, matching supervisors to students' field of studies and research grants associated with the postgraduates' research are factors being looked at.
- Postgraduate studies are also heavily subsidised and no national fee structure has been setup.
- The university is committed to ease those factors while at the same time ensuring quality.
- Efforts are being made to increase the number of internal funding and increasing the accessibility of lecturers to research grants.

86. Students Admission policy of USM has been formulated to take into account and recognising that students should be admitted based on their choice of selection and using the Merit of the students, the Potential of the students as basis of admission. In addition the diversity aspects of the students are also taken into account. Thus the university adopts a number of strategies for admission so as to cater for different needs of special groups to enter university. This will be further refined to allow lifelong learners easier accessibility to the process.

87. Online learning – The use of technology and alternative media and the influence of online learning will be given prominence attention. It is worth noting the following technology trends and issues - personal computers, the proliferation of mobile devices, the rise of social networks, the next generation of networks, the privatisation of the cloud, the promise of large data, the flipped classroom, the future of the learning space, the legitimisation of online learning, the evolution of the college campus, and the advent of the urban operating system.

"Higher education faces an onslaught of disruptive forces right now—and no one should be surprised to hear that news. Burgeoning technologies such as MOOCs and mobile devices are disrupting institutional structures from the classroom and across entire campuses. As tech transforms these learning environments, universities must decide whether to resist the change or get out in front of it. To choose the latter option, however, we need to envision what universities of the future will look like—if they exist at all." (Davide Savenije) (Link: <http://www.educationdive.com/news/12-tech-trends-higher-education-cannot-afford-to-ignore/156188/>).

Another note from a lecturer:

"I am writing to thank you for the valuable techniques on iPad for teaching. I am teaching Biochemistry and we have to remember and understand metabolic pathways where in most cases difficult to explain using powerpoint. I tried to teach my students the pathways using educreations where I draw the pathways myself and explain as I go using my iPad. I noticed that the students interact more and understand my teaching better. I usually call up a few of them to repeat what I have taught and they seemed to understand better and enjoy the class. I am thankful to have learnt that from you at CDAE and I feel so much excited to teach in this interactive environment. Thank you"

PILLAR 6: Institutional Development Outlook

88. Empowering USM – The level of funding for USM directly from the government will be in accordance with on the need basis and approved. Thus it is important for the university to gear towards empowering itself internally to manage the university through various strategies. These include programmes that will reduce cost, especially fixed cost. The outlook below noted some of the challenges.

89. Transformational Leadership – need to address the relationship issue between the leader and the group being led. A transformational leader at every level need to work around the programme and activities at their institutions and be there as part of the entity. The staff and community in their entities should be encouraged to be part of the community especially those who need more help in their work and also in matters outside their work sphere.

90. Women Staff – The University's staffing is evenly spread between male and female and is gender blind in the selection of academic staff and professional administrators. It is my sincere intention to see that the university community has zero tolerances of gender discrimination in any form that is construed as unbecoming. Entities in the University entrusted to look at the affairs of the staff need to look beyond service matters into the affairs of woman staff especially in regards to child care, kindergarten services and after office hours care services.

91. New Policies of the University – These include USM Energy Policy that is aimed at reducing three percent (3%) of energy consumption. The approach taken is via 'zero cost' and 'low cost'. Steps taken include energy awareness, energy audit, changing hardware to low energy consumption fittings and lowering air-conditioning temperatures. Sustainable Policy has been adopted and will be rolled out soon to the university. Research Policy will also be introduced in the near future outlining research directions of the university.

92. The Asset and Property Management – The University has identified the needs for an efficient and coordinated asset and property management system and office. This is necessary for efficient utilisation and realisation of assets and property values. In addition the need for a total asset management is crucial at the time when utilisation rate is a crucial factor for full asset potential to be realised.

93. Lean management – The University is committed to ensure that a lean management is fully planned and implemented. The year 2013 has seen such streamlining, and total auditing of the manpower needs will soon be completed to be used as basis for lean management. The ratio of students to academic staff will be used as a general guideline. The more important factor will be the switch to e-management and the use of mobile platform and the application of multi-tasking to support a lean workforce.

94. Succession planning – Succession planning is crucial for efficient management. A general framework has been adopted and the human resource and the academic division will need to work the detail plan for succession planning for administrators and technical and medical personnel. Academic succession planning is also essential and will be given due consideration. The academic administrators' succession planning framework needs to be drawn out also.

Chart 1

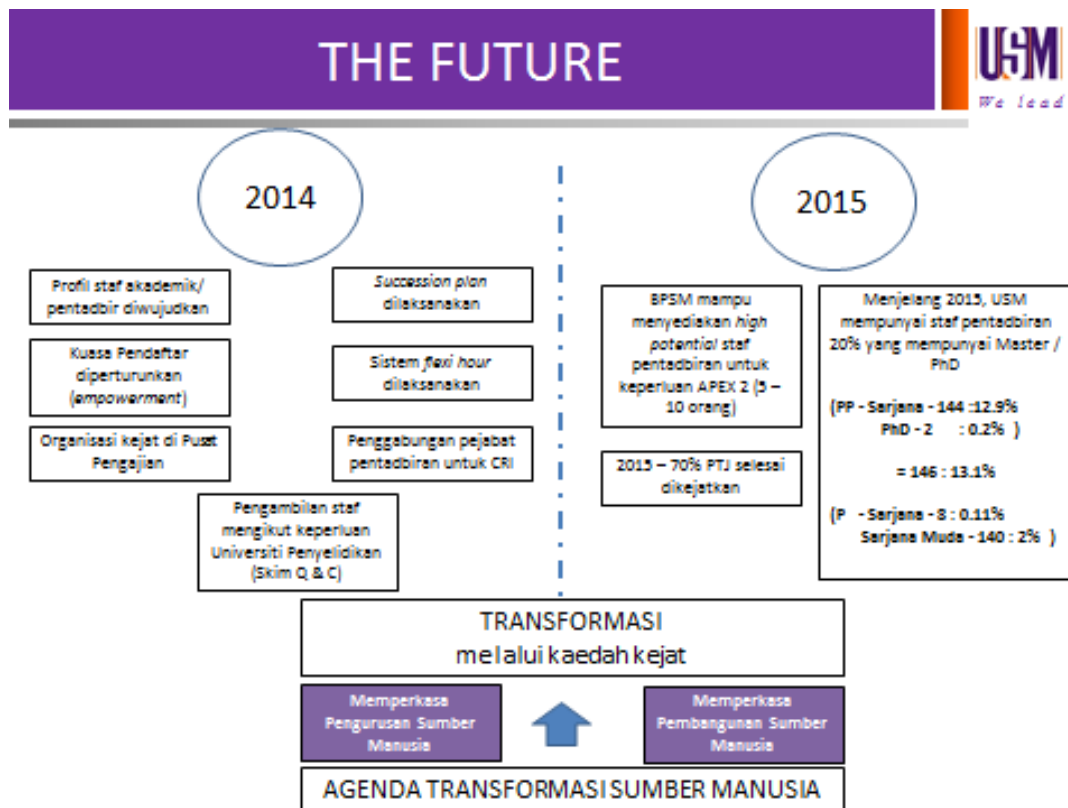
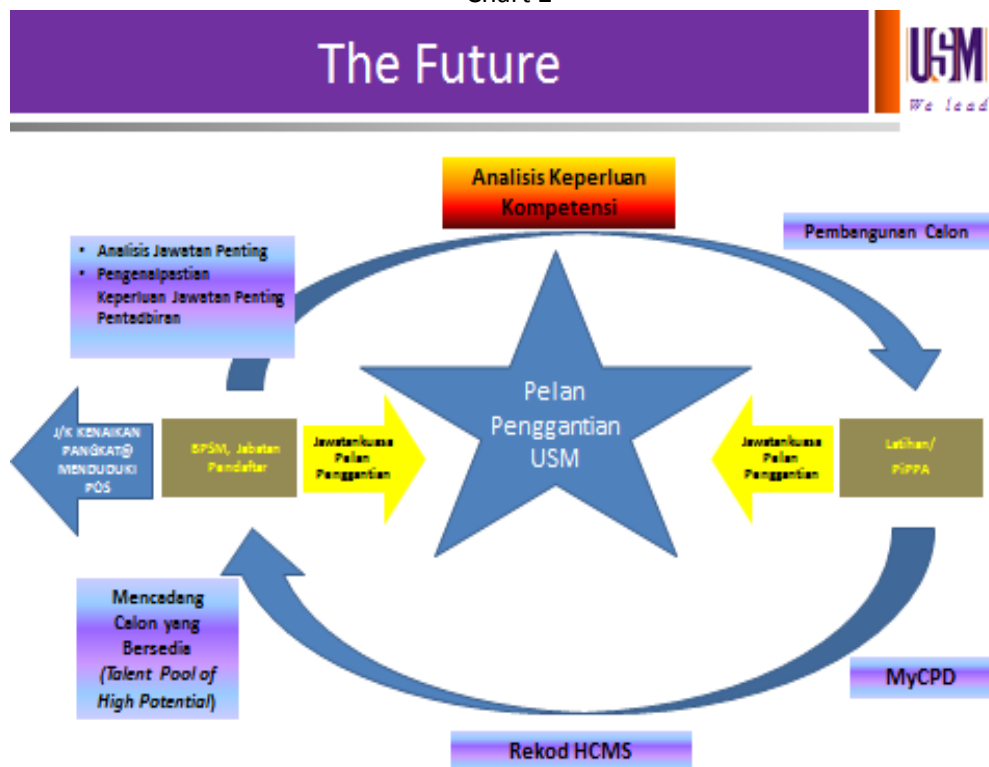


Chart 2



*Cadangan oleh Jawatankuasa Talent Management 2010

95 Guiding Principles of USM Internal Services Centres - the following has been outlined as a guide to ensure efficient services are provided by internal service centres.

- Intra service collaborations meetings
- Annual intra services forum
- Linking and synchronising the internal services on shared services
- USM Helpdesk
- Internal services to be cost efficient
- USM e-bay to match requirements of PTJ
- Guiding principles will be formulated.

96. Empowerment is one of the important pillars in the APEX Phase 2. It is viewed as a very important principle to move this university. Empowering talents: Students and staff are among considerations and actions being taken. Empowerment is based on the idea of giving someone the power, authority, skills, resources, and opportunity to make decisions and to take actions. For example Support staff need not refer to managers for approvals and hold them responsible and accountable for outcomes of their actions. They (those to be empowered) must be knowledgeable, equipped and trained so that they are able make good decisions. It must be based on principles, limits, variations and framework. Empowerment is all about what we can give and what we should not give (for example if it is against the law). In empowerment, sometimes guideline (softer) is better than policy (too rigid). It should also preserve the University Values and Integrity and Brand values and able to be financially sustainable.

97. Empowerment Programme includes those for staff, centres and schools, students (this has been done) and staff. Empowerment should drive innovation, support entrepreneurship and we should leverage on industry and also as many entities within the university as possible, PTJs including campuses.

PILLAR 7: Financial Sustainability Outlook

98 Financial Sustainability - the challenge is to increase the income streams for the university and be less dependent on the government to run the university. We are already utilising more than 15% of our internal income for operational expenditure. We therefore need to find other means of income generation but they should not be too risky. In addition we find means to reduce more fixed costs and find alternative human resource mechanisms of hiring staff. Furthermore, we need to increase our income generation mechanism to improve cash earnings and look into a new approach to carry out investments. The following examines the outlook on financial sustainability.

99 Centre for Business Development, Entrepreneurship and Risk Management (CBER) will undertake functions on risk assessment and cost recovery involving university business, entrepreneurial deployment and risk management.

- i. University business by coordinating and monitoring income generation projects of USM. Providing advisory and consultancy services to the cost centres of the University on financial sustainability. It will also identify strategy and action plan for income generation to the University.
- ii. Entrepreneurial development includes
 - Planning, coordinating and supervising entrepreneurial development for academic and support staff and students of the University

- Assisting in the creation of entrepreneurial eco-system of the university by strengthening and intensifying efforts and initiatives to instil the entrepreneur culture in the university. The initiatives include courses, training and practical internship
 - Assisting in the networking with Alumni, Entrepreneurs, Industry, agencies and entrepreneurial NGOs.
- iii. Risk Management includes
- Conducting due diligence and risk analysis on all aspects of projects, companies, ventures and joint ventures of the University
 - Providing advisory and consultancy services to internal units of the University in handling risk and minimising risk to the University projects.
- 100 USAINS Holdings Sdn Bhd restructuring needs to be undertaken based on the following.
- 100.1 Restructuring Philosophy – To reposition the company to enable it to assist and facilitate the university in achieving its mission. Thus it should serve to generate more income to the University.
- 100.2 The objective of the restructuring is to enable the University to achieve its 30% income generation capability. In addition, USAINS should also assist the University in managing the business side of the University where more efficient services could be obtained.

THE 2014 IMPLEMENTATION OF PROGRAMMES - 70 PROGRAMMES

101 2014 STRATEGIC OBJECTIVES

The 2014 Implementation Plans will be based on the Seven (7) main pillars and the Seven (7) Key Result Areas to achieve the following Strategic Objectives this year.

Strategic Objective 1

To position and improve on the research performance of the university via different modalities such as new strategic moves, improve research enculturation, strategic collaborations and investments necessary towards global prominence in research.

Strategic Objective 2

To begin implementation programmes of national builder type with considerations of producing graduates with the enabled attributes and work and collaborate with others for maximum impact towards nation building agendas.

Strategic Objective 3

To continue and expand the concept of sharing through knowledge transfers, best practices adoption and improving on need-based sharing and begin demand-need sharing through collaboration.

Strategic Objective 4

To enhance existing programmes and launched new programmes that will enable the university to serve the nation, community and stakeholders through reinforcing the essence of a Sustainable Led University via transfers, collaborations and Sustainability Bench Marking

Strategic Objective 5

To continue nurturing the talent of staff to push academic excellence higher and develop graduates with a global citizenship attitudes and global mindset to complement the nation building programmes and begin careful internationalisation of programmes and students as well as staff.

Strategic Objective 6

To strategically implement income generation mechanism, rationalisation of costs, varied income mechanism including restructuring for financial sustainability moving towards financial autonomy.

Strategic Objective 7

To improve institutional development strategy of lean management, improve productivity and increase efficiency of processes on the soft strategy and implement and improve physical development strategy to fully utilise and realise USM asset and property potentials.

102 APEX Research and Innovation Programmes**Long Term Key Result Area:**

Global Research Prominence

2014 Strategic Objective 1

To position and improve on the research performance of the university via different modalities such as new strategic moves, improve research enculturation, strategic collaborations and investments necessary towards global prominence in research.

Programmes: 8 in total.

The research agenda of the university will be pushed to a higher level all the way. In addition to the overall planning for the next 5 to 10 years, this year's Global Research Prominence key result will be delivered via programmes listed below and depicted in Table 8.1:-

- i. Research Icons - Programmes for Global Prominence in publications, researchers, laboratories placement and global research icons in USM niche
- ii. Iconic Research - 3 Iconic Research programmes for external linked research
- iii. State of Art Research Infrastructure - Delivering Excellence and Strategic Partnerships in chosen strategic areas with investment in facilities including the construction of an Incubator Centre at Sains@USM complete with equipments.
- iv. Next Generation Researches - New and emerging niche areas to be identified and explored by leveraging on the next generation of researchers placed within these research centres and target to cover all researchers with potential
- v. Research To Market Programmes - From these emerging research niche area, 100 patents are expected to be granted and subsequently commercially produced for the global market
- vi. Research To Market Programmes - Embedding Knowledge Transfer Principles to Research To Market programmes
- vii. Research to Prominence - Programme dedicated with industry to move research to prominence
- viii. Quick Win in RIKEN (QW), IPHARM (QW), CHEST (QW); Rubber Industry Collaborative Centre, Islamic Archeology – PPAG, Orang Utan Sanctuary, ISDEV

103 APEX Leadership and Nation Building Programme (Developed Nation)

Long Term Key Result Area:

Global Research Prominence

2014 Strategic Objective 2

To begin implementation programmes of national builder type with considerations of producing graduates with the enabled attributes, and work and collaborate with others for maximum impact towards nation building agendas.

Programmes: 4 in total

Apex Leadership and Nation Building essentially works on the agenda of Nation Builders. The details of the programme associated with Nation building is being developed under Programmes listed below and depicted in Table 8.2:-

- i. APEX TALENT - Developing Academic and Management Talent Builder
- ii. APEX SCHOLARS FOR UNDERGRADUATES - To be launched in February 2014
- iii. APEX COLLEGE FOR DEDICATED STUDENTS - To be launched in March 2014
- iv. APEX FELLOWSHIP AND GLOBAL FELLOWSHIP - Expansion Programmes

104 APEX Sharing (Transformation of Higher Educations Institutes)

Long Term Key Result Area:

Global Research Prominence

2014 Strategic Objective 3

To continue and expand the concept of sharing through knowledge transfers, best practices adoption and improving on need based sharing and begin demand need sharing through collaboration

Programmes: 9 in total

The Apex Sharing programmes for this year are listed below and depicted in Table 8.3:-

- i. Transformation of Rakan RU - USM as Northern Coordinator for UNIMAP, UUM and UMK
- ii. Transformation of Rakan APEX - Selected Higher Education Institutes
- iii. Transformation of Rakan APEX - Regional Students Movements and Parliament
- iv. APEX Knowledge Transfer Programme – Public Higher Education Institutions, Industry and Community e.g.
 - a. IDR USM
 - b. USM Archeology OutreachCentre
 - c. KTP USM PEMANDU roll out
 - d. Green Technology Institute
 - e. USM-NCIA-CREST incubator
 - f. TUT-USM Collaborative Centres

105 APEX Extension and Positioning (Visible, Distinctive and Sustainable Led University)

Long Term Key Result Area:

Global Research Prominence

2014 Strategic Objective 4

To enhance existing and launched new programmes that will enable the university to serve the nation, community and stakeholders through reinforcing the essence of a Sustainable Led University via transfers, collaborations and Sustainability Bench Marking

Programmes: 9 in total

The Apex Extension and Positioning is designed to make the university visible and distinctive as a Sustainable Led University. The Programmes are listed below and depicted in Table 8.4:-

- i. CE for Displaced Community - Programmes to be relevant at various levels and Distinctive KTP and CE Programmes
- ii. Education for the Underprivileged - Programmes for Bottom Billions intake, Tuition Volunteerism in urban setting, Tuition volunteerism in rural specific community, Education Outreach Overseas and Distinctive KTP and CE Programmes
- iii. Agro-tecture - Urban Agriculture Transformation with Triple Helix and Triple Talent. University-Industry-Agency Helix. Talent: Practitioners, Researchers and Interns. Targets: Urbanites
- iv. Positioning towards Global Prominence – Putting USM in World Map on Collaborations, Regionalism and Strategic Global Events. Example: Ambassadors Summit, USM Dialogue on Higher Education, Muslim Vice-Chancellors Conference
- v. Positioning towards Global Prominence - Putting USM in World Map on Ratings and Benchmarking on Sustainability Assessment Methodology (SAM) and UNIVERSITY SUSTAINABILITY RANKING
- vi. Positioning towards Global Prominence - International Collaboration such as between USM and the Sir Walter Murdoch School of Public Policy and International Affairs – Quick Win
- vii. Positioning towards Global Prominence - USM as Regional Conduit for USM Global Networks of APUCEN, SESSN, GHEN, Local Knowledge Networks
- viii. Positioning towards Global Prominence - STRATEGIC GLOBAL EVENTS and Positions such as GHEC, HEI Global Summit on Sustainability, World University Sustainability Indicator
- ix. Green Tech Institute - Local Builder Distinctive Capacity

Table 8.1: APEX Research and Innovation (Global Research Prominence)

IMPLEMENTATION PLAN APEX 2014				
APEX KRA	APEX PILLARS & PROGRAMMES		PROJECT LEADER -	MILESTONE 2014
Global Research Prominence - WRU	1. APEX Research and Innovation		DVC R&I	RIU Excellence Enhancement Performance
	2014 Strategic Objective 1 To position and improve on the research performance of the university via different modalities such as new strategic moves, improve research enculturation, strategic collaborations and investments necessary towards global prominence in research.			
	1.1	Research Icons	RCMO	Programmes for Global Prominence in Publications, researchers, laboratories placement and research icons global in USM niches
	1.2	Iconic Research	RCMO	3 Iconic Research for external linked research
	1.3	State of Art Research Infrastructure	Research & Innovation	Delivering Excellence and Strategic Partnerships in chosen strategic areas
	1.4	Next Generation	RCMO	RIKEN (QW), IPHARM (QW), CHEST (QW)

		Researches		New and emerging niche areas will be identified and explored by leveraging on the next generation of researchers placed within these research Centres
	1.5	Research To Market Programmes	Innovation & Commercialisation Office	From these emerging research niche areas, 100 patents are expected to be granted and subsequently commercially produced to the global market Embedding Knowledge Transfer Principles to RTM
	1.6	Research to Prominence Programme	Research & Innovation	Programme dedicated with industry to move research to prominence Rubber Industry Collaborative Centre, Islamic Archaeology – PPAG, Orang Utan Sanctuary, ISDEV

Table 8.2: APEX Leadership and Nation Building Programme (Developed Nation)

IMPLEMENTATION PLAN APEX 2014				
APEX KRA	APEX PILLARS & PROGRAMMES		PROJECT LEADER	MILESTONE 2014
Developed Nation	2. APEX Leadership and Nation Building Programme		VC	25% Graduates International & National Builders
	2014 Strategic Objective 2 To begin implementation programmes of national builder type with considerations of producing graduates with the enabled attributes, and work and collaborate with others for maximum impact towards nation building agendas.			
	2.1	APEX Talent	HEAA	Developing Academic and Management Talent Builder
	2.2	APEX Scholars	BHEPP	To be launched in February 2014
	2.3	APEX College	BHEPP & CDAE	To be launched in March 2014
	2.4	APEX Global Fellowships	IPS	Expansion Programmes

106 Academic and Students Development (Prominence in Sustainability and Global Mindset)

Long Term Key Result Area:

Global Research Prominence

2014 Strategic Objective 5

To continue nurturing the talent of staff to push academic excellence higher and develop graduates with a global citizenship attitudes and global mindset to complement the nation building programmes and begin careful internationalisation of programmes and students as well as staff.

Programmes: 10 in total

The Academic and Students Development pillar with the key result area of Prominence in Sustainability and Global Mindset are set out with the following Programmes listed below and depicted in Table 8.5:-

- i. Academic Impact Programme - Online Learning Enhancement Programme to more academic staff as part of E-USM
- ii. Academic Impact Programme – Bachelor of Science degree in Heritage Studies and extensions later on
- iii. Academic Impact Programme – Bachelor of Science in sustainable life style related environment
- iv. Global Mindsets - Dedicated programmes for creating right environment with APEX Ecosphere
- v. Student Mobility - Continuation and Enhancement of Existing Programme including Creating of Special Curriculum for 10 programmes for international semester.
- vi. Student Mobility - Internationalisation policy to be crafted.
- vii. World Class Programmes - Moving for Academic and Staff Collaborations Programme in areas of mutual interest.
- viii. World Class Programme - Total Academic Quality Enhancement Programme
- ix. Quick Wins - Toyohashi and Peshawar University
- x. Institute of Open Learning - Affordable higher education accessibility. Should be self-sustainable.

Table 8.3: APEX Sharing (Transformation of Higher Educations Institutes)

IMPLEMENTATION PLAN APEX 2014			
APEX KRA	APEX PILLARS & PROGRAMMES		MILESTONE 2014
Transformation of Higher Education Institutes	3. APEX Sharing		Continuous Sharing Programme National HEIs: Whole Institutions final Destination
	2014 Strategic Objective 3 To continue and expand the concept of sharing through knowledge transfers, best practices adoption and improving on need based sharing and begin demand need sharing through collaboration		
	3.1	Transformation of Rakan RU	Research & Innovation
	3.2	Transformation of Rakan RU	Registrar / Legal Office
	3.3	APEX Knowledge Transfer Programme	Secretariat of KTP / BJIM
			IPTAs, Industry and Community a. IDR USM b. Kedah USM Archaeology Centre c. KTP USM PEMANDU d. Green Tech Institute with Melaka e. Industry linkages f. USM-NCIA-CREST incubator g. TUT-USM Collaborative Centres

107. Financial Sustainability Programmes

Long Term Key Result Area:

Global Research Prominence

2014 Strategic Objective 6

To strategically implement income generation mechanism, rationalisation of costs, varied income mechanism including restructuring for financial sustainability moving towards financial autonomy.

Programmes: 13 in total

The thrust of the Apex journey and the autonomy begins with careful planning and implementation of programmes that are financially sustainable. In addition to the overall planning for the next 5 to 10 years, this year's Financial Sustainability Programmes are listed below and depicted in Table 8.6:-

- i. USains Holdings Sdn. Bhd. - USains Holdings Restructuring and USM Income Generator for 1/3 of potential earnings outside academic fees
- ii. SAINS@USM 2nd Phase - Phase 2A: Incubator and CREST/EE Centres
- iii. Feasibility study on Sg Dua Frontage Revitalisation - Sg2 Revitalisation Feasibility
- iv. Facilities & Services - Realisation of Facilities and Services of USM to be rented, leased or jointly utilised for income generation
- v. Facilities & Services - strengthening external service pathways for independent profit centres
- vi. Facilities & Services - empowering cost centres to move to income centres
- vii. Private University - Creating or taking over private college to be upgraded to USM private university to create income streams and moving beyond normal academic activities in public universities
- ix. Foundation and WAQAF - USM WAQAF – to create endowment based on Islamic principles
- x. Foundation and WAQAF - USM Foundation – to generate multi resource stream for endowment in research, physical and students scholarships.
- xi. AZMAN HASHIM Sports Centre construction
- xii. Other Special projects for income generation – to be identified from time to time.
- xiii. Other Special projects for income generation, risk assessment and cost recovery

Table 8.4: APEX Extension and Positioning (Transformation of Higher Educations Institutes)

IMPLEMENTATION PLAN APEX 2014				
APEX KRA	APEX PILLARS & PROGRAMMES		PROJECT LEADER	MILESTONE 2014
Visible. Competitive and Distinctive Sustainable Led-University	4. APEX Extension and Positioning			National Led Sustainable University moving towards regional
	2014 Strategic Objective 4 To enhance existing and launched new programmes that will enable the university to serve the nation, community and stakeholders through reinforcing the essence of a Sustainable Led University via transfers, collaborations and Sustainability Bench Marking			
	4.1	CE for Displaced Community	BJIM	Programmes to be relevant at various levels and Distinctive KTP and CE Programmes
	4.2	Education for the Underprivileged	BJIM	Programmes for Bottom Billions intake, Tuition Volunteerism in urban setting, Tuition volunteerism in rural specific community, Education Outreach Overseas and Distinctive KTP and CE Programmes
	4.3	Agro-tecture	HBP AND OTHERS	Urban Agriculture Transformation with Triple Helix and Triple Talent. University- - Industry-Agency Helix. Talent: Practitioners, Researchers and Interns. Targets: Urbanites

	4.4	Positioning towards Global Prominence	SCOMM AND OTHERS	<p>i. Putting USM in World Map on Collaborations, Regionalism and Strategic Global Events. Example: Ambassadors Summit, USM Dialogue on Higher Education, Muslim Vice-Chancellors Conference</p> <p>ii. Putting USM in World Map on Ratings and Benchmarking on Sustainability Assessment Methodology (SAM) and UNIVERSITY SUSTAINABILITY RANKING</p> <p>iii. International Collaboration such as between USM and the Sir Walter Murdoch School of Public Policy and International Affairs – Quick Win</p> <p>iv. USM as Regional Conduit for USM Global Networks of APUCEN, SESSN, GHEN, Local Knowledge Networks</p> <p>vi. STRATEGIC GLOBAL EVENTS and Positions such as GHEC, HEI Global Summit on Sustainability, World University Sustainability Indicator</p>
	4.5	Green Tech Institute	CETREE	Local Builder Distinctive Capacity

Table 8.5: Academic and Students Development (Transformation of Higher Educations Institutes)

IMPLEMENTATION PLAN APEX 2014				
APEX KRA	APEX PILLARS & PROGRAMMES		PROJECT LEADER	MILESTONE 2014
Prominence in Sustainability and Global Mindset	5. Academic and Students Development			More than 50% programmes at ASEAN level and those linked with it
	2014 Strategic Objective 5 To continue nurturing the talent of staff to push academic excellence higher and develop graduates with a global citizenship attitudes and global mindset to complement the nation building programmes and begin careful internationalisation of programmes and students as well as staff.			
	5.1	Academic Impact Programme	CDAE	Online Learning to more academic staff Bachelor of Sc degree in Heritage Studies and extensions there on Bachelor of Science in sustainable life style related environment
	5.2	Global Mindsets	BHEPP	Dedicated programmes for creating right environment with APEX Ecosphere
	5.3	Student Mobility	International Office	Continuation and Enhancement of Existing Programme including Creating of Special Curriculum for 10 programmes for international semester. Internationalisation policy to be crafted.

	5.4	World Class Programmes	BHEA	Moving for Academic and Staff Collaborations Programme in areas of mutual interest. Quick Wins Toyohashi and Peshawar University Total Academic Quality Enhancement Programme
	5.5	Institute of Open Learning	CDAE	Affordable higher education accessibility. Should be self-sustainable

Table 8.6: Financial Sustainability (Financial Autonomy)

IMPLEMENTATION PLAN APEX 2014				
APEX KRA	APEX PILLARS & PROGRAMMES		PROJECT LEADER	MILESTONE 2014
Financial Autonomy	6.Financial Sustainability		Bursar	30% of operational independence (less emolument)
	2014 Strategic Objective 6 To strategically implement income generation mechanism, rationalisation of costs, varied income mechanism including restructuring for financial sustainability moving towards financial autonomy.			
	6.1	Sg2 Revitalisation	BPI	Feasibility study on Sg Dua Frontage Revitalisation - Sg2 Revitalisation Feasibility
	6.2	Sains@USM	BPI	Phase 2A : Incubator and CREST/EE Centres
	6.3	Usains Holdings	Usains	USains Holdings Restructuring and USM Income Generator for 1/3 of potential earnings outside academic fees
	6.4	Facilities & Services	Innovation & Commercialisation Office	i. Realisation of Facilities and Services of USM to be rented, leased or jointly utilised for income generation ii. strengthening external service pathways for independent profit centres iii. - empowering cost centres to move to income centres
	6.6	Private University	BPI	Creating or taking over private college to be upgraded to USM private university to create income streams and moving beyond normal academic activities in public universities
	6.7	Other Special projects		i. Potential commercialisation ii. Reducing liability through Risk Assessment and cost recovery
	6.8	Foundation and WAQAF	BJIM	i. USM WAQAF – to create endowment based on Islamic principles ii. USM Foundation – to generate multi resource stream for endowment in research, physical and students scholarships. iii. AZMAN HASHIM Sports Centre construction

Long Term Key Result Area:
Global Research Prominence

2014 Strategic Objective 7

To improve institutional development strategy of lean management, improve productivity and increase efficiency of processes on the soft strategy, and implement and improve physical development strategy to fully utilise and realise USM asset and property potentials.

Programmes: 15 in total

The Institutional Development Programmes are listed below and depicted in Table 8.7:-

- i. Bertam Campus - Phase 2A: IPPT Enhancement - IPPT as a referral tertiary centre for identified areas. Continuing earnestly with clinical research and other identified areas of services.
- ii. Bertam Campus - the 4th campus of USM - bringing other schools and centres to make IPPT more vibrant i.e. School of Pharmaceutical Sciences, Centre for Drug Research, Doping Control Centre, Centre for Advanced Analytical Toxicology Services (CAATS) and National Poison Centre, subject to approval by the government.
- iii. HUSM - Equipment and Services – Continuous provisions
- iv. USM Teaching Hospital - Restructuring and Quality Enhancement Programme to be fully functional for Teaching Hospital for Specialists and Sub Specialists
- v. Renowned Engineering Centre - Phase 1A : National Referral Laboratories
- vi. 1 USM: We Love USM - Team work enhancement programme.
- vii. E-USM - Mobile, Knowledge and Application platform for teaching, research and administration
- viii. Integrated transport system - comprehensive master plan
- ix. USM Asset and Property Management Office and System - efficiency and utilisation
- x. Succession planning - for administration and academic to be continuously reviewed
- xi. Lean and mobile workforce - sustainable ratios of students to academic staff to support staff
- xii. Internal Service Centres Transformation to be completed
- xiii. Policy Formulation - Research Policy, Empowerment Policy and Sustainable University Policy.
- xiv. Transformation programme - Nurturing the Mindset and soul programme
- xv. USM Physical Master Plan - All Campuses to be redefined and developed

Table 8.7: Institutional Development (Enhanced and Empowered USM)

IMPLEMENTATION PLAN APEX 2014			
APEX KRA	APEX PILLARS & PROGRAMMES	PROJECT LEADER	MILESTONE 2014
Enhanced and Empowered USM	7.Institutional Development	VC	30% empowerment and enhancement
	2014 Strategic Objective 7 To improve institutional development strategy of lean management, improve productivity and increase efficiency of processes on the soft strategy and implement and improve physical development strategy to fully utilised and realized USM asset and property potentials.		

			i. Phase 2A: IPPT Enhancement - IPPT as a referral tertiary centre for identified areas. Continuing earnestly with clinical research and other identified areas of services. ii. The 4th campus of USM - bringing other schools and centres to make IPPT more vibrant, i.e. School of Pharmaceutical Sciences, Centre for Drug Research, Doping Control Centre, Centre for Advanced Analytical Toxicology Services (CAATS) and National Poison Centre, subject to approval by the government
7.1	Bertam Campus	BPI	
7.2	HUSM	HUSM	Equipment and Services – Continuous
7.3	USM Teaching Hospital	HUSM	Restructuring and Quality Enhancement Programme to be fully functional for Teaching Hospital for Specialists and Sub Specialists
7.4	Renowned Engineering Centre	Director of Engineering Campus	Phase 1A : National Referral Laboratories
7.5	1 USM: We Love USM	VC and others	Team work enhancement programme
7.6	E-USM	PPKT and CDAE	Mobile, Knowledge and Application platform for teaching, research and administration
7.7	Integrated Transport System	STF	Comprehensive master plan
7.8	Asset and Property Management	New Office	Efficiency and utilisation
7.9	Succession planning	Registrar	To be continuously reviewed for administration and academic
7.10	Lean and mobile workforce	Registrar	Sustainable ratios of students to academic staff to support staff
7.11	Internal Service Centres	DVC BJIM	Transformation to be completed
7.12	Policy Formulation	LEGAL	Research Policy, Empowerment Policy and Sustainable University Policy
7.13	Transformation programme	Transformation Office	Nurturing the Mindset and soul programme
7.14	USM Physical Master Plan	Dev Dept., Task Force, BPI	All Campuses to be redefined and developed

 : **Quick Win**

109 Continuing Policy and Implementation

In the beginning of the new phase of Apex, the university is committed to continue with the good and excellent programmes and initiatives implemented in the first phase. The good and productive programmes will be continued with either new branding or to have new and added value. Any discontinued programme will be replaced with a better one. As funding will not be limitless, the programmes need to have clear directions and output and impact.

110 Transformational Leadership - USM APEX intends to build excellence on transformational leadership.

- i. Transformational leadership is founded upon leaders that can and able to transform its organisation. The leaders need to have high skill and competencies as well as strongly attach to integrity and accountability. The leaders need to be creative, innovative, able to communicate effectively and able to be the bridge of communication, able to make quick decision and know the decision made will have impact that need to be dealt with in the ecosphere they are managing.
- ii. Leaders in the current leadership position need to be able to build on new values that are based on diversity and universality that can be shared. The leaders need to be far-sighted, have a long term view and thinking that is relevant today and the future.
- iii. The challenge is to develop and train transformational leaders who have high noble values, high integrity and accountability principles and are high tech and high touch.

111 Healthy Staff and Healthy Lifestyle - My most cherished dream is to see the campus vibrant with healthy people adopting healthy lifestyle who continue to work and commit to the well-being of their own career path, build a family institution that they are proud of and be part of a larger 1USM that we are proud of under the banner of WE LOVE USM. Caring for one's own individual life and lifestyle, refraining from smoking and always doing good deeds forms a strong foundation in creating an APEX community that we should all be part of.

112 As such, excellent physical health, excellent mental health, good personality, healthy life style orientation and the Sejahtera community well-being will enable us to achieve satisfaction in our life and work environment. This will contribute towards improving career performance and work performance, and for academicians moving towards becoming renowned academicians. In the process of creating a Sejahtera community, the spirit of volunteerism must continue and adopted at all levels including leadership as described in the transformational leadership heading above.

CLOSING AND CONTINUING TO RAISE THE BAR

113 USM is ready with its strategic implementation plan to move into Phase II of APEX. APEX is our brand and we pray that we will continue to be mandated for many years to come. We have worked hard, we have preserved together, and we faced the 'friendly' onslaught or otherwise together. We continue to pray that the APEX agenda will still be ours to shoulder. Given the all-round support from internal community and friends of USM outside, we are confident that we will be able to execute our implementation plans with the vision set and objectives achieved. We will continue with USM; we will continue under 1USM and the umbrella of We LOVE USM. Together with our friends, we will ensure that we push for excellence realisation.

114 We have a long list of programmes to be implemented, some of which have been outlined while others are still being crafted. The strategic planning of USM is to achieve global prominence as a sustainable led university. Thus the pillars to be raised will be on the platform of quality and relevance, to be inclusive and sustainable, to achieve excellence as we position ourselves to push upwards. We will continue to raise the bar to achieve excellence. Thus the work on research and innovation, and community and industry engagement will continue.

115 Our aim is to produce more global graduates with global mindset through APEX Scholar and APEX Fellowship programme. We will continue to work on improving talent and continue earnestly with our grooming programme. The effort of training and giving more exposure to experiential learning outside the classroom will be directed more to working with external linkages. The personality traits and onsite exposure will involve agencies from public, semipublic, corporate sectors and external overseas linkages.

116 Overall USM is positioning itself to move the research centres and service centres to a higher level performance using creative governance structure, empowerment policy, and higher accountability as a framework. Each centre now is working on a five year development framework to push itself higher.

117 More importantly, we are planning to position ourselves as a sustainable led university and more programmes will be implemented for impact assessment. Our University Council on Sustainability and a Special Senate Committee that examines sustainability programmes and curriculum has been set up. We have launched our “Sustainability Assessment Methodology”, our Sustainable University Policy and reinforced many of our research programmes with sustainability elements.

118 As a university, we are getting ourselves ready for global benchmarking in areas that we can be prominent especially in the area of sustainability, in research areas that relates to sustainability and pushing for our academic disciplines to be accorded international recognition. The global international ranking will be continually monitored and efforts will be put in to balance between national agenda and international rankings which have opposing primaries.

119 We believe sustainability will be the dominant parameters of the future. We would like to be a part of the far sighted community. We would like to embrace the national builder programme and call upon all to join us to prepare and build the future with the talents we have. We cannot achieve this in a single dimension or even on our own; we need integrated efforts. We have noticed frictions, fractions, and the breaking of national unity and national aspirations, which will be our undoing if we choose to remain in the comfort zone. We will continue to nurture the soul, groom the talent but we need everyone’s support. To achieve this, the USM community must unite; break the self-interest and stop embracing the individualistic and materialistic culture. The nation needs its citizens including us to push it to a sustainable nation.

120 We aspire that the APEX University of USM will enable us to use our knowledge and experiences to develop and accelerate programmes to build a talented community; not to build an exclusive group but to build a talented group that will understand inclusivity and adopt sustainability for excellence of nationbuilding.

121 We have learnt many lessons, painful to some maybe, and many sweet memories of successes have crossed our path. We have always been modest and will continue to be so for we believe great achievement is built on strong foundation and also what is left behind for the future to cherish and live with. We want to leave a mark that will be useful and not a spot to be trampled over. The road to success is laid in front, it needs to be travelled along with strategy and commitment.

122 USM will continue on its quest of excellence and work together as a team and will continue to nurture passionate community from all walks of campus life from academicians, professors, researchers, lecturers, professional administrators, managers, laboratory personnel, ground

personnel, office personnel and security personnel both physical and network security and students both undergraduates and postgraduates, full time and part time. We will be 1USM.

123 Strategic collaborations will be enhanced with external stakeholders to tap into many unrealised potentials. We will develop the **Friends of USM Programme** through a new network that will be established that will bring together individuals, organisations and corporations both local and foreign from among alumnus, staff, industry and community who have been with USM and who want to continue to be with us. The launching will be done in the middle of the year to celebrate the 45th anniversary of USM. When USM matures to its 50th year, we hope the Friends of USM Programme will be known worldwide.

124 The University evolves and transforms itself in the last five years. Many achievements have been attained. In so doing, we must pay due respect and pay tribute to all who have been the friends of USM and continue to do so. To those who have parted ways permanently we pray for their well-being in the hereafter. To those who have left us for any reason whatsoever, the University always welcomes back anyone who wishes to be friends of the University. USM is built by everyone involved, yesterday, today and tomorrow. Remain steadfastly USM and We Lead to Excellence.

125 To all friends of the University who have written, communicated ideas and have supported Universiti Sains Malaysia all this while, a BIG thank you and do continue to be with us in propelling our beloved institution together for the betterment of mankind. God Willing.

INCLUSIVITY, SUSTAINABILITY AND EXCELLENCE

**DO THE RIGHT THINGS (EFFECTIVENESS ISSUE)
THEN DO THE THINGS RIGHT (EFFICIENCY ISSUE)**

**THE BEST
AND
MOST BEAUTIFUL THINGS
OF THIS WORLD
CAN'T BE SEEN OR TOUCHED.
THEY MUST BE FELT BY THE HEART.
(ELDERHELPERS.ORG)**

Chart 3
The DNA of USM Research Centre

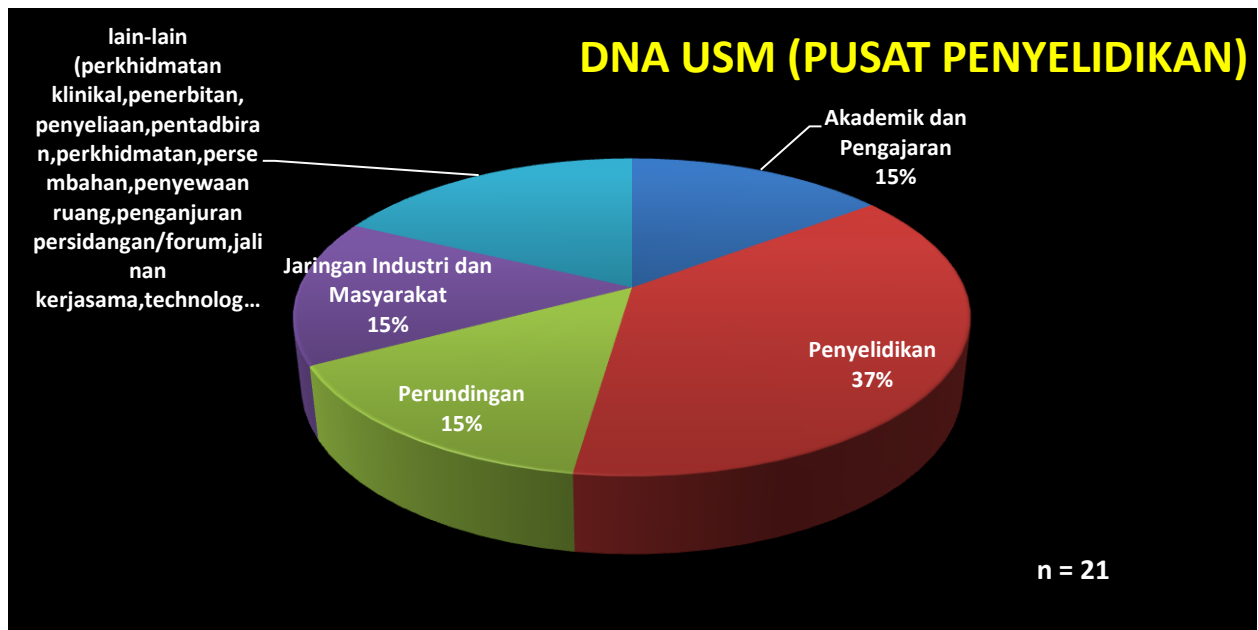
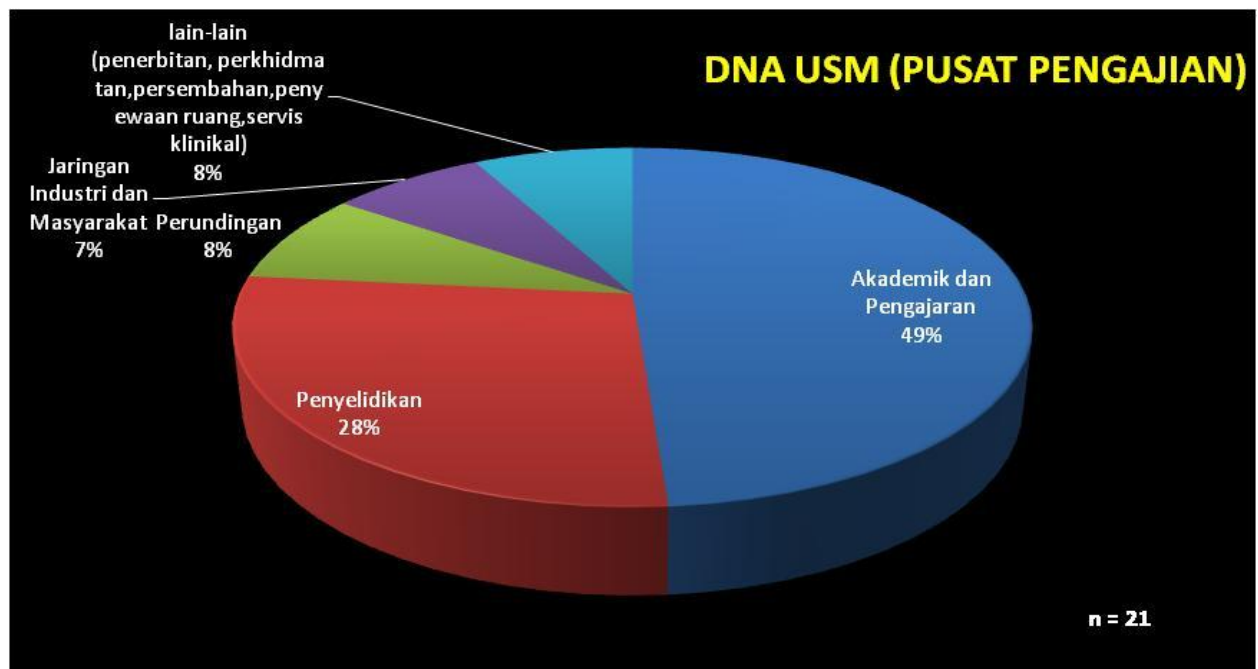
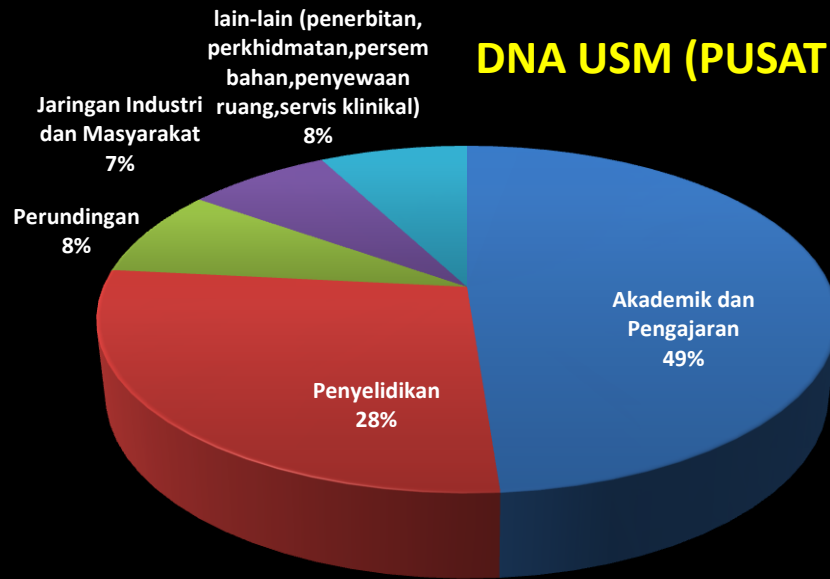


Chart 4
The DNA of USM Schools of Studies

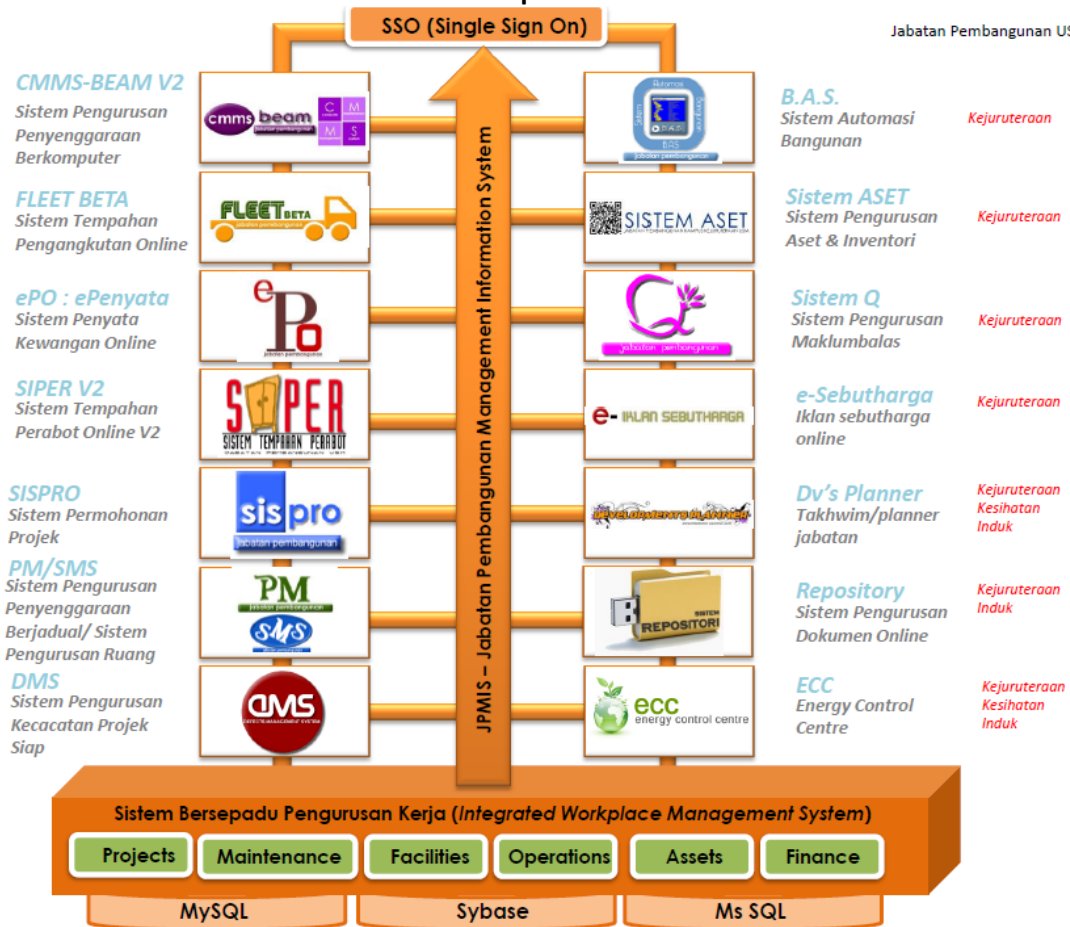


DNA USM (PUSAT PENGAJIAN)



n = 21

Chart 5: DNA of a Department in E USM.



Abbreviations:

USM Universiti Sains Malaysia

BUKU

ISE

PTJ

HiCoE

CoEs

RC

SRC

CRIs

APEX

e-mode

E-USM

SLU

WEHAB

ICT

SAM

WUSA

CBER

ALKN

GHEN

KTP

CE

MoE

PEMANDU

APUCEN

SEASN

APPENDIX A

IMPLEMENTATION PLAN APEX 2014				
APEX KRA	APEX PILLARS & PROGRAMMES		PROJECT LEADER	MILESTONE 2014
Global Research Prominence - WRU	1. APEX Research and Innovation		DVC R&I	RIU Excellence Enhancement Performance
	Strategic Objective 1 To position and improve on the research performance of the university via different modalities such as new strategic moves, improve research enculturation, strategic collaborations and investments necessary towards global prominence in research.			
	1.1	Research Icons	RCMO	Programmes for Global Prominence in Publications, researchers, laboratories placement and research icons global in USM niches
	1.2	Iconic Research	RCMO	3 Iconic Research for external linked
	1.3	State of Art Research Infrastructure	Research & Innovation	DE and Strategic Partnerships in chosen strategic areas
	1.4	Next Generation Researches	RCMO	RIKEN. (QW), IPHARM (QW), CHEST (QW)
				New and emerging niche area will be identified and explored by leveraging on the next generation of researchers placed within these research Centre
	1.5	Research To Market Programmes	Innovation & Commercialization Office	From these emerging research niche area, 100 patents are expected to be granted and subsequently commercially produced to the global Embedding Knowledge Transfer Principles to RTM
	1.6	Research to Prominence Programme	Research & Innovation	Programme dedicated with industry to move research to prominence
				Rubber Industry Collaborative Centre, Islamic Archeology – PPAG, Orang Utan Sanctuary ISDEV
Developed Nation	2. APEX Leadership and Nation Building Programme		VC	25% Graduates International & National Builders
	Strategic Objective 2 To begin implementation programmes of national builder type with considerations of producing graduates with the enabled attributes and work			

	and collaborate with others for maximum impact towards nation building agendas.			
	2.1	APEX Talent	HEAA	Developing Academic and Management Talent Builder
	2.2	APEX College	BHEPP & CDAE	To be launched March 2014
	2.3	APEX Scholars	BHEPP	To be launched February 2014
	2.4	APEX Global Fellowships	IPS	Expansion Programmes
IMPLEMENTATION PLAN APEX 2014				
APEX KRA	APEX PILLARS & PROGRAMMES		PROJECT LEADER	MILESTONE 2014
Transformation of Higher Education Institutes	3. APEX Sharing		VC	Continuous Sharing Programme National HEIs: Whole Institutions final Destination
	Strategic Objective 3 To continue and expand the concept of sharing through knowledge transfers, best practices adoption and improving on need based sharing and begin demand need sharing through collaboration			
	3.1	Transformation of Rakan RU	Research & Innovation	ii.USM as Northern Coordinator for UNIMAP, UUM and UMK
	3.2	Transformation of Rakan RU	Registrar / Legal Office	Selected HEIs
	3.3	APEX Knowledge Transfer Programme	Secretariat of KTP / BJIM	IPTAs ALL , Industry and Community a. IDR USM b. Kedah USM Archeology Centre c. KTP USM PEMANDU d.Green Tech Institute with Melaka e. Industry linkages f. USM-NCIA-CREST incubator g. TUT-USM Collaborative Centres
Visible. Competitive and Distinctive Sustainable Led-University	4. APEX Extension and Positioning		VC	National Led Sustainable University moving towards regional
	Strategic Objective 4 To enhance existing and launched new programmes that will enable the university to serve the nation, community and stakeholders through reinforcing the essence of a Sustainable Led University via transfers, collaborations and Sustainability Bench Marking			

	4.1	CE for Displaced Community	BJIM	Programmes to be relevant at various levels and Distinctive KTP and CE Programmes
	4.2	Education for Underprivileged	BJIM	Programmes Bottom Billions intake, Tuition Volunteerism in urban setting, Tuition volunteerism in rural specific community, Education Outreach Overseas and Distinctive KTP and CE Programmes
	4.3	Agro-tecture	HBP AND OTHERS	Urban Agriculture Transformation with Triple Helix and Triple Talent. University. Industry. Agency Helix. Talent: Practitioners. Researchers and Interns. Targets. Urbanites
	4.4	Positioning towards Global Prominence	SCOMM AND OTHERS	i. Putting USM in World Map on Collaborations, Regionalism and Strategic Global Events Example Ambassadors Summit, USM Dialogue on Higher Education, Muslim Vice - Chancellors Conference
				ii. Putting USM in World Map on Ratings and Benchmarking on Sustainability Assessment Methodology (SAM) and UNIVERSITY SUSTAINABILITY RANKING iii. International Collaboration such between USM and the Sir Walter Murdoch School of Public Policy and International Affairs – Quick Win iv. USM as Regional Conduit for USM Global Networks of APUCEN, SESSN, GHEN, Local Knowledge Networks vi. STRATEGIC GLOBAL EVENTS and Positions such as GHEC, HEI Global Summit on Sustainability, World University Sustainability Indicator
	4.5	Green Tech Institute	CETREE	Local Builder Distinctive Capacity
APEX KRA	APEX PILLARS & PROGRAMMES		PROJECT LEADER	MILESTONE 2014
Prominence in Sustainability and Global Mindset	5. Academic and Students Development		TNC AA	More than 50% programme at ASEAN and linked
	Strategic Objective 5 To continue nurture talent of staff to push academic excellence higher and develop graduates with a global citizenship attitudes and global mindset to complement the nation building programmes and begin careful internationalisation of programmes and students as well as staff.			
	5.1	Academic Impact Programme	CDAE	Online Learning to more academic staff Bachelor of Sc degree in Heritage Studies and extensions there on Bachelor of Science in sustainable life style related environment
	5.2	Global Mindsets	BHEPP	Dedicated programmes for creating right environment with APEX Ecosphere

	5.3	Student Mobility	International Office	Continuation and Enhancement of Existing Programme including Creating of Special Curriculum to 10 programmes for international semester. Internationalisation policy to be crafted.
	5.4	World Class Programmes	BHEA	Moving for Academic and Staff Collaborations Programme in areas of mutual interests. Quick Wins Toyohashi and Peshawar University Total Academic Quality Enhancement Programme
	5.5	Institute of Open Learning	CDAE	The affordable of higher education accessibility. Should be self-sustainable
Financial Autonomy	6. Financial Sustainability		Bursar	30% of operational independence (less emolument)
	Strategic Objective 6 To strategically implement income generation mechanism, rationalisation of costs, varied income mechanism including restructuring for financial sustainability moving towards financial autonomy.			
	6.1	Sg2 Revitalization	BPI	Feasibility study on Sg Dua Frontage Revitalization - Sg2 Revitalization Feasibility
	6.2	Sains@USM	BPI	Phase 2A : Incubator and CREST/EE Centres
	6.3	Usains Holdings	Usains	USains Holdings Restructuring and USM Income Generator for 1/3 of potential earnings outside academic fees
	6.4	Facilities & Services	Innovation & Commercialisation Office	i. Realisation of Facilities and Services of USM to be rented. Leased or jointly utilised for income generation ii. strengthening external service pathways for independent profit centres iii. - empowering cost centres to move to income centres
	6.6	Private University	BPI	Creating or taking over private college to be upgraded to USM private in higher education to create income streams and moving beyond normal academic activities in public universities
	6.7	Other Special projects for income generation		103 Potential commercialization 104 Reducing liability through Risk Assessment and cost recovery
	6.8	Foundation and WAQAF	BJIM	i. USM WAQAF - to create endowment on Islamic principles ii. USM Foundation – to generate multi resource stream for endowment in research, physical and students scholarships. xi. AZMAN HASHIM Sports Centre construction

APEX KRA	APEX PILLARS & PROGRAMMES	PROJECT LEADER	MILESTONE 2014	
Enhanced and Empowered USM	7.Institutional Development	VC	30% empowerment and enhancement	
	Strategic Objective 7 To improve institutional development strategy of lean management, improve productivity and increase efficiency of processes on the soft strategy and implement and improve physical development strategy to fully utilised and realized USM asset and property potentials.			
	7.1	Bertam Campus	BPI	i. Phase 2A: IPPT Enhancement - IPPT as a referral tertiary centre for identified areas. Continuing earnestly with clinical research and other identified areas of services. ii.The 4th campus of USM - bringing other school and centres to make IPPT more vibrant. PP FArmasi, PPenyelidikan dadah dan ubat-ubatan, pusat kawalan doping, CAATS dan Pusat Racun subject to approval by the government
	7.2	HUSM	HUSM	Equipment and Services – Continuous
	7.3	USM Teaching Hospital	HUSM	Restructuring and Quality Enhancement Programme to be fully functional for Teaching Hospital for Specialist and Sub Specialists
	7.4	Renowned Engineering Centre	Director of Engineering Campus	Phase 1A : Laboratories National Referral
		1 USM: We Love USM	VC and others	- Team work enhancement programme.
		E-USM	PPKT CDAE	Mobile, Knowledge and Application platform teaching, research and administration
		Integrated Transport System	STF	comprehensive master plan
		USM Asset and Property Management	New Office	Efficiency and utilization
		Succession planning	Registrar	for Administration and academic continuously reviewed
		Lean and mobile workforce	Registrar	sustainable ratios of students to academic staff to support staff

	Internal Service Centres	DVC BJIM	Transformation to be completed
	Policy Formulation	LEGAL	- Research Policy, Empowerment Policy and Sustainable University Policy.
	Transformation programme	Transformation Office	Nurturing the Mindset and soul programme
	USM Physical Master Plan	Dev Dept., Task Force, BPI	All Campuses to be redefined and developed

Note :

 : **Quick Win**