FRAMEWORK OF THE VICE-CHANCELLOR'S ANNUAL ADDRESS 2015

TOGETHER FOR EXCELLENCE OF THE UNIVERSITY (BUKU) 2015: DRIVING EXCELLENCE IN NATIONAL HIGHER EDUCATION

CONTENTS

PART A: INTO 2015

BUKU 2015
2015 Global Perspective
Malaysian Higher Education Scenario 2015
Prospects for USM in 2015
Analysis of USM Strengths, Weaknesses, Challenges and Opportunities
    USM strengths and Efforts to enhance our strengths
    Challenges to USM that can be turned into new strategic objectives
    Opportunities that USM can grasp
    Weaknesses that can be turned into strengths
What is APEX
The Long and Challenging Journey of APEX
APEX Challenges
BUKU 2015 Strategic Objectives

PART B: 2014 ACHIEVEMENTS

Overall Performance
Performance in Talent Management
Performance in Resource Management
Performance in Governance Management
Performance in Community Engagement
Performance in Media Highlights
Conclusion

PART C: STRATEGIES TO DRIVE EXCELLENCE IN 2015

STRATEGY 1	***TRANSFORMATION OF TALENT AND HUMAN RESOURCES (30)***
Transformation 1	Transformation of Governance and Talent Governance and Talent Transformation Programmes – 4
Transformation 2	Student Empowerment Student Empowerment Programmes – 5
Transformation 3	Transformative Learning and Teaching Transformative Learning and Teaching Programmes – 4
Transformation 4	Broadening Focus on Community Engagement Broadening Focus on Community Engagement Programmes – 6
Transformation 5	New Programmes and New Directions of the Schools New Programmes and New Directions of the Schools Programmes – 6

Transformation 6	Continuation of Programmes from 2014 Building upon Programmes from 2014 - 5
STRATEGY 2	***DRIVING EXCELLENCE AT THE INTERNATIONAL LEVEL - 40***
Excellence 1	World Class Research Programmes towards World Class Research – 2
Excellence 2	2015 Research Excellence 2015 Research Excellence Programmes – 6
Excellence 3	New Niche New Niche Programmes – 6
Excellence 4	Changing of Research Management Method Programmes to Change Research Management – 4
Excellence 5	Focus on Strengthening Research University Foundation Programmes to Focus on Strengthening Research University Foundation – 6
Excellence 6	Academic Internationalisation Academic Internationalisation Programmes – 7
Excellence 7	Positioning for International Sustainability and Community Engagement International Sustainability and Community Engagement Programmes – 3
Excellence 8	Schools, Research Centres and Service Centres (PTJs) PTJ Development Programmes – 7
STRATEGY 3	***TRANSFORMATION OF MANAGEMENT AND FINANCE AND ENTREPRENEURSHIP – 11***
Entrepreneurship 1	Increasing Income Generation Programmes to Increase Income Generation – 3
Entrepreneurship 2	University's Business and Entrepreneurship University's Business and Entrepreneurship Programmes – 3
Entrepreneurship 3	Income Generation Income Generation Programmes - 5
STRATEGY 4	***TRANSFORMATION OF CAMPUS DEVELOPMENT - 30***
Development 1	Main Campus Main Campus Programmes – 6
Development 2	Bertam Bertam Campus Programmes – 2
Development 3	Entrepreneurship-Based Research Campus Entrepreneurship-Based Research Campus Programmes – 7

Development 4	Engineering Excellence
	Engineering Excellence Programmes – 4
Development 5	Medical and Health Campus Integration
	Medical and Health Campus Integration Programmes – 5
Development 6	Off-Campus Entity
	Off-Campus Entity Programmes - 6

STRATEGY 5	***SHARING OF EXPERTISE AND KNOWLEDGE TRANSFER - 4***
Sharing 1	Knowledge Transfer
	Knowledge Transfer Programmes – 3
Sharing 2	Centre for Economic Development
	Centre for Economic Development Programmes - 1

PART D:

Outcome and Output Framework
Aligning APEX Phase II, PSPTN and PPPM SPT
National Output and APEX Phase II
2015 Target in APEX Phase II Framework

PART E: JOINT RESPONSIBILITY

Students
Staff
Academicians
Alumni And *Jasa Budi*
University's Efforts at Driving Excellence
Voluntary Work to Unite All Universities
The Unity of Knowledge: Arts in Science, Science in Arts
2015 Challenges

APPENDIX FRAMEWORK OF THE VICE-CHANCELLOR'S ANNUAL ADDRESS 2015

PART A: INTO 2015

1. 2014 has left us with many memories to cherish, and challenges from which we have learnt much be it at national, institutional or individual level. Directly or indirectly, we were deeply affected by many events that happened in 2014. For example, our country lost two passenger aircrafts with all on board and heavy floods inundated the East Coast and other states such as Perak, Johor, Perlis and Negeri Sembilan. The floods in Kelantan were of personal significance, as they affected our USM community at the Health Campus and both staff and infrastructure were utilised in various programmes during and after the floods. We were also not spared from various challenges that could have damaged the reputation of our university had these not been handled professionally and with due procedure. We also lost a few friends who passed away. Some were very close to us such as the late Tan Sri Dato' (Dr.) Haji Ani Arope, former Chairman of the USM Board of Governors until 2010, who passed away at the end of December 2014. May the souls of those who have passed on be blessed by Allah s.w.t.

2. Nearly 500 staff and students were affected by the recent heavy floods. We express our sympathies to those who lost their property in this unfortunate tragedy. USM has become the Centre for Health Services in Kelantan as a result of this disaster, because almost all other hospitals in Kelantan were incapacitated due to the floods. As such, special assistance was received from the Ministry of Education Malaysia (MoE) to operate emergency programmes at USM Hospital, supply additional staff and volunteers to assist at the hospital and supply necessary equipment such as contributions from 1MDB and goods donated by individuals; not forgetting moral support from all parties including H.R.H. Tuanku Chancellor, the Pro-Chancellor, Chairman and members of the Board of Governors.

3. For flood victims, we received donations of more than 10 tonnes of goods while clothing donated to flood victims came to almost 1 tonne and in excess of RM150,000 was donated by various parties including USM staff and students, the community of Universti Malaysia Sabah (UMS), Usains Holdings Sdn. Bhd. and the Centre for Innovation and Productivity in Public Administration (PiPPA).

4. In this disaster, to date, our Health Campus and USM Hospital are safe from floods and have become the centre for the Kelantan State Health Department Operation Room. USM Hospital has done us proud by providing the best healthcare services during critical moments of the disaster even though at one stage nearly 40 % of the staff were affected by the floods and unable to come to work.

5. During the peak of the flooding in Kelantan and other places, USM opened five (5) operation rooms, the last being the Ministry of Education (MoE) War Room which is largely operated by the Division of Students' Affairs & Development (HEPP) to handle post-flood management. To date, the number of USM staff and student

volunteers who have served in various places is estimated to be more than 4,000 people including those at USM Hospital, volunteers for school clean up operations, cooking in the base camp at USM Health Campus which houses 200-400 volunteers at any one time, assisting the hospitals and patients, technical teams who restored water supply to schools, and staff who man the 24-hour operations rooms. USM has also become the centre for repatriating medical volunteers for various post-flood operation duties.

6. The 2014 disaster has taught us a lot - those we can depend upon, those who are genuine friends and partners of the university. This valuable lesson will remain in the minds of many. The concept of I LOVE USM or *SAYA SAYANG USM* which was introduced two years ago has evidently become instilled into the hearts and minds of the USM community.

7. Besides this, the University is still in the process of assisting staff and students who were affected by the floods resulting in the final examinations being postponed. The re-sit examination is currently being conducted for flood affected students. This is a timely reminder to us all that disaster can strike at any time and no one is spared. I am sure that the academicians among us will seek scholarly reasons as to why all these occurred.

BUKU 2015

8. This 2015 annual address is still based on the theme of BUKU, expanding on the branding introduced via BUKU 2012, BUKU 2013 and BUKU 2014 of "Together for Excellence of the University" or BUKU as the keyword in the Vice-Chancellor's annual address. It still aims to strengthen the culture of collaboration and co-operation. BUKU 2015 is still working towards instilling the culture of excellence in the entire campus community encompassing all aspects of work culture with a focus on output and impact.

9. The main objective of USM in 2015 is **"Driving Excellence"** which refers to the implementation of programmes to attain excellence at all levels of the university, regardless of challenges to be encountered whether anticipated or otherwise.

10. The 2015 Annual Address will focus on five (5) sections as follows:

10.1 **Part A: Into 2015** which addresses the increasingly challenging global scenario in 2015 and the overall global scenario of higher education namely the Scenario of Malaysian Higher Education and challenges to USM in 2015 which will be explained besides examining our strengths, weaknesses, opportunities and challenges to USM.

10.2 **Part B: 2014 Achievements**; which summarises the overall achievements, performance of talent, resources and governance management as well as media highlights.

10.3 **Part C: 2015 Strategies**; this is the most important part that explains the five (5) strategies together with their strategic objectives and programmes for 2015.

10.4 **Part D: Outcome and Achievement**; which will set targets for 2015 and align these with the Malaysian Education Development Plan for the Higher Education Sector (PPPM SPT).

10.5 **Part E: Joint Responsibility**; which will detail our responsibilities at various levels in USM

11. Therefore the essence of BUKU 2015 consists of five (5) Strategies and 115 programmes for excellence. These are aimed at steering the university community towards a culture of excellence, excellent achievements and impactful output.

2015 Global Perspective

12. 2015 has begun and it is not expected that we will see a diminution of the global challenges faced in 2014. Global challenges are expected to become ever more complex and these will continue to evolve around peace, economic stability and global unity. The challenges at regional level are the ASEAN Community as well as the continuation of peace conflicts between countries and within countries.

13. The challenge of global higher education is how to integrate national and regional higher education systems more effectively. Also, how a University which is a prominent stakeholder in higher education can contribute towards economic growth through institutional capability, academia and producing graduates in line with the needs of industry and economy to survive or thrive in the era of globalisation. The challenge for a university is also to show how it can adapt trans-disciplinary technology and develop latest knowledge to ensure its own sustainability.

Scenario of Malaysian Higher Education in 2015

14. The launching of the Malaysian Education Plan for Higher Education Sector (PPPM SPT) will be carried out in the first quarter of 2015; it incorporates a few “Shifts” currently being drafted and these can be viewed through a virtual website of the Ministry of Education. The essence of PPPM SPT has been reviewed and taken into consideration; APEX Phase II plans will be aligned with PPPM SPT when it is launched.

15. With the launch of PPPM SPT, realignment of the PSPTN has to be carried out. It is expected that realignment to APEX PHASE II will also need to be carried out; APEX Phase 2 can then be carried out in line with PPPM SPT.

16. USM is also actively planning what needs to be incorporated under the 11th Malaysia Plan 2016-2020. BUKU 2015 therefore includes USM's preparation under various sections which will subsequently be discussed.

USM Prospects in 2015

17. USM needs to brace for global challenges in 2015 with a responsive and anticipatory approach besides prepare for the possibility that budget 2015 will be reviewed and restructured.

18. In Malaysia, among the potential challenges are implementation of GST, the need to increase productivity, rationalise cost, implement impactful programmes and also be prepared to assist in current and future needs of the nation. Besides that, the University must be willing and able to respond to current and future natonal needs such as during natural disasters and other challenges.

19. Restructuring of budget 2015 will occur due to the drop in crude oil prices, depreciation of the ringgit especially against the US Dollar and the floods on the East Coast, especially in Kelantan.

20. USM is currently aligning the APEX II Plan to PPPM SPT and PSPTN and has incorporated these changes in BUKU 2015. The main principle for BUKU 2015 is to 'Drive Excellence' in 2015 via APEX Phase II. It is however likely to be affected by the restructuring of the national budget, and what we have planned may face delays in implementation.

Analysis of USM Strengths, Weaknesses, Threats and Opportunities

21. In the formulating of planning, alignment or transformation programmes, the fundamental focus will be on the strengths, weaknesses, threats and opportunities (SWOT) of USM. The SWOT analysis is as follows:

USM Strengths and Efforts to Enhance It

22. Table A1 shows USM's strengths in the areas of talent, resources, institution and output, outcome and impact.

Table A1. USM Strengths

STRENGTHS	
TALENT 1. The expertise of USM researchers are recognised at the national and world levels. 2. USM researchers are often invited to provide consultancy and training services. 3. USM is among the Malaysian universities with the highest percentage of researchers with PhD qualifications.	RESOURCES 1. Flexible resource utilisation 2. Assets and well planned utilisation 3. Variety of resources including long-term resources 4. Prudent financial management.
INSTITUTION 1. Some areas of USM research are recognised in the world rankings. 2. Some Centres of Excellence in USM are recognised at the national level	OUTPUT, OUTCOME AND IMPACT 1. The findings of USM research have a huge impact on the community such as archeology and KTP (Knowledge Transfer Program) projects. 2. USM produces many Ph.D. graduates (more than 500 graduated in 2014) in this was we are able to support the National K-Economy agenda. 3. APEX & RU programmes provide platforms to strengthen research and academic programmes 4. High performance students 5. Renowned, recognised and wide-spread academic programmes 6. Strong in trans-disciplinary efforts 7. Upholding the concept of Sustainability 8. Capabe collaboration and industry networking 9. Capable community engagement 10. Implementation of industry engagement activities (ICAP Forum, Student Empowerment) 11. Culture of tolerance among students 12. Diversity of students

	13. Close relationship between students and the ecosystem of the university 14. Flagship projects 15. Sustainability enculturation 16. Student Leadership 17. Concept of a warm university through programs such as 1USM and *Saya sayang USM*

Threats to USM that can be turned into new strategic objectives

23. Table A2 summarises threats to USM in the areas of talent, resources, institutions and output, outcome and impact. The threats are therefore categorised under these headings.

Table A2. USM Threats

THREATS	
TALENT 1. Experienced USM researchers are often pinched by other institutions. 2. Plagiarism has become easier due to technology (plus the lack of academic ethics and integrity) 3. Lack of skills relevant to the industry 4. Change of industry focus from manufacturing sector to service sector 5. Slow adaptation to rapid changes in the industry 6. Marketability of graduates	RESOURCES 1. Sources of financing for USM research is still highly dependent on internal resource of RU which is "not guaranteed" and declining 2. Systematic reduction of budget by the Ministry of Education 3. Increased student enrollment without accompanying increase in resources. 4. The position of the Malaysian economy, GST and disasters
INSTITUTION 1. Some USM laboratories are still not ISO accredited. For example, the School of Pharmacy has yet to receive ISO 17025 certification. 2. Programmes offered by Private institutions of higher learning are our competion. 3. Social factors 4. National political factors	OUTPUT, OUTCOME AND IMPACT 1. Lack of competitive research to match the needs of local industry 2. Competition with public and private higher learning institutions in the northern region of Peninsula Malaysia

5. Religion, between moderation and extremism 6. USM is sometimes misrepresented in the mass media	

Attainable USM Opportunities

24. Table A3 summarises USM's opportunities in the areas of talent, resources, institution and output, outcome and impact.

Table A3. USM Opportunities

OPPORTUNITIES	
TALENT 1. Combining expertise with universities or research institutions to build best models and practices 2. Green technology and environmental projects 3. Spirit of students 4. Selected students and students who select USM 5. Cultural diversity 6. Attracting international students 7. Many young researchers are placed in the world renowned institutions 8. Access to international research grants	RESOURCES 1. Facilities and Infrastructure at Sains@USM are a potential platform to be developed to advance USM research activities to a higher level. 2. Exploring the state of the art research for niche areas.
INSTITUTION 1. Establishment of an ASEAN Union in the near future provides opportunities to enhance mobility of researchers in the ASEAN region and to increase collaborative research in the region. With the existing network of CLMV (Cambodia, Laos, Myanmar and Vietnam), we are ready to attract established researchers to join us. 2. The economic downturn in the Australian region may attract Australian researchers to work in Malaysia.	OUTPUT, OUTCOME AND IMPACT 1. Opportunity to build and strengthen student experience in non-academic programmes 2. Opportunity to explore new academic programmes that place USM niche areas in the international arena such as through open and virtual education 3. Opportunity to strengthen ICT and technological progress for teaching and learning 4. Opportunity to strengthen strategic collaboration at international level 5. Opportunity to become a leading

	institution in sustainability. 6. Opportunity to strengthen niche area collaboration with industry, regional and state development agencies. 7. Academic programmes that are relevant and responsive to knowledge advancement, industry demand and integrated with current needs and the needs of the younger generation

Weaknesses that can be turned into strengths

25. Table A4 summarises USM weaknesses in the areas of talent, resources, institution and output, outcome and impact.

Table A4: USM Weaknesses

TALENT 1. Involvement of researchers with industry has much room for improvement. 2. Poor command of the English language 3. University plans are affected by age gap and skills gap 4. Disparity of workload between productive and less productive staff 5. Critical thinking 6. Soft skills 7. Lack of time and academic qualifications	RESOURCES 1. Recognition of teaching 2. Implementation of OBE 3. Skills and values to be integrated in the curriculum 4. Old approach in assessment and learning assessment methodologies 5. Strengthening IQA and CQI in academic programmes 6. Physical infrastructure and equipment need to be maintained and upgraded.
INSTITUTION 1. Governance and autonomy	OUTPUT, OUTCOME AND IMPACT 1. The rate of commercialisation for USM research products needs to be enhanced. 2. High-impact graduates

WHAT IS APEX?

26. The idea of giving APEX or the Accelerated Programme for Excellence status to public universities began around 2007 as part of the initiatives included in the National Higher Education Strategic Plan (PSPTN). In early 2008, public universities were asked to submit a proposal to the Ministry of Higher Education (at the time).

26.1 Universiti Sains Malaysia (USM) began to establish its workforce to provide ideas and suggestions through the "Dream Team" headed by the former Vice-Chancellor Professor Tan Sri Dato' Dzulkifli Abdul Razak which led to the birth of the "Black Book" that outlined USM's proposal based on the theme "Transforming Higher Education for a Sustainable Tomorrow" by making sustainability as the key issue to move the overall national higher education transformation agendas.

26.2 When USM was announced as an APEX University by the Minister of Higher Education (MoE), Dato' Seri Mohd. Khalid Nordin, there were many people who doubted and looked down on USM. However, USM took up the responsibility entrusted by MoE to implement the suggested proposal with the hope that if it is successful, it will also help other universities to achieve excellence as well. Therefore, one of the main intentions of APEX is to share experiences and best practices with other universities.

26.3 For USM, APEX means that to leverage our strengths together to make changes, to drive for excellence, to work together in the existing knowledge ecosphere to transform higher education for a sustainable tomorrow through various mechanisms such as research, innovation, invention and creativity, funding and financial sustainability, good governance, human resource development and empowerment, and continuous talent development.

26.4 In fact, APEX also means that making the best use of every resource available and mobilise all the efforts to achieve the goal, mission and vision that is based on our motto "We Lead" by being fully committed to elevate the name of USM in the spirit of 1USM, voluntarily to help those who are in need, those who are marginalised and to be involved in community engagement for future prosperity and sustainability.

26.5 Therefore, the original idea of APEX is to have a change in the mindset of higher education that goes beyond just producing more graduates that can enter and be accepted into job markets easily and research products that can be commercialised. All that is true, but the idea of APEX is to produce graduates having quality and global mindsets that are able to work and provide invaluable contributions throughout the world. APEX is also intended to provide a world that has a strong sustainable relationship with God, nature and mankind.

The Long and Challenging Journey of APEX

27. APEX is also intended to produce individuals that emphasise on volunteerism, ready to use their knowledge and experience to ensure the survival of mankind in the future. The word "future" has become one of the keywords in each implemented activity because whatever has been done today will affect the lives in the future.

27.1 In fact, the ideas such as Kampus Sejahtera, Knowledge Transfer Programme, Local Knowledge, Students' Parliament, PIMPIN siswa programme and many others are part of the bigger Blue Ocean Strategy agenda that emphasise on thinking out of the box, improving governance (good governance) in all work processes by adopting a transparent and accountable principle through a controlled given autonomy.

27.2 In implementing various existing APEX agendas, USM is not exempted from undergoing various bitter experiences. The first biggest challenge was the technical error in announcing USM's admission list of new students in 2009. USM was for the first time exercising the freedom to choose the best students before the selection of students by the University Admission Unit (UPU) for public universities. Various accusations had been made from the public especially from the perspective of racism. An English newspaper and a leader of a political party had urged the Vice-Chancellor to step down from his position. This matter had lasted for more than six months. In comparison, a university abroad experiencing the same problem can resolve the matter in less than a week.

APEX Challenges

28. USM once again made the headlines in the front page of an English newspaper in 2013 regarding the issue of rats being the problem at USM Hospital. This issue was reported again by the same newspaper in July and September of 2014 when this issue was broadcasted again and went viral in the students' Facebook.

28.1 It was not surprising when USM once again made the headlines of newspapers regarding the issue of USM did not live up to its expectation as an APEX university as its Engineering laboratories were not functioning properly and not fully utilised. In fact, USM engineering studies have the most prominent achievements in various world rankings lists. Its Chemical Engineering studies was ranked 38th in the world and two lecturers were listed as the most influential scientific minds in one of the world rankings.

28.2 The fact is that the media and the public are very supportive of the USM APEX initiatives since 2008. They came with lots of great expectations and they eagerly want to see the results. With the current public perception, it is not an easy task to change their mindset and to help them understand what have been done and currently are being done in the process of a higher education transformation.

28.3 The challenge is on how to realise the existing ideas and to change our mindset to achieve the expected successes as soon as possible. USM will continue to work hard and believe that it can be done within the existing mission and vision framework. APEX is for the benefit of the people and the nation.

BUKU 2015 Strategic Objectives

29. 4 Strategic Objectives in BUKU 2015 are:

1. Positioning and strengthening of driving excellence for higher institutions programmes systematically, focused and comprehensively.
2. Programmes are designed based on the clear and adopted main principles of national, sectoral and institutional strategic planning.
3. The programmes have to be responsive to the latest scenarios that could affect the plan and its implementation whether it affects, aligns or strengthens the platform.
4. Assess the impacts from the current and future implementation.

30. Therefore, the USM STRATEGIC OBJECTIVES are still moving towards:

1. BECOMING A LEADING UNIVERSITY IN ADVANCED AND NICHE AREA RESEARCH
2. BECOMING A UNIVERSITY OF CHOICE FOR LOCAL AND INTERNATIONAL STUDENTS
3. FOCUSING ON THE 7 PILLARS OF APEX IN THE APEX PHASE II PLANNING
4. BECOMING A UNIVERSITY FOR REFERENCE IN ISSUES ON SUSTAINABILITY
5. BECOMING A UNIVERSITY WITH AUTONOMOUS GOVERNANCE

PART B 2014 ACHIEVEMENTS

Overall Performance

31. The performance throughout 2014 is currently being collected and analysed. The performance presented here is tentative and can be further explored. Data on achievements in research is currently being assessed and updated. The early indication shows that there is an increase in the impact factors and the number of publications by lecturers which had exceeded the target as well as an increase in the number of productive lecturers.

32. In the case of citations, 225 USM lecturers had cumulative citations of more than 100, 144 lecturers more than 250, 78 lecturers more than 500, 28 lecturers more than 1000, 7 lecturers more than 2500 and 3 lecturers more than 5000. The early figures showed that there were 3,754 publications (2013 performance: 2,648), 28 Patents (Granted: 8 & Filed: 20), and 596 new research grants in 2014 (Table B1).

Table B1: USM STAFF CITATIONS

CUMULATIVE CITATIONS	2014 PERFORMANCE	>100	>250	>500	>1000	>2500	>5000
100 - 250	81	225					
251 - 500	66		144				
501 - 1000	47			78			
1001 – 2500	24				28		
2501 – 5000	4					7	
>5000	3						3
TOTAL	**225**						

33. As for the performance of USM in QS Subject Rankings, 12 areas of research in USM were listed in the “top 200” in the world with Environmental Science being consistently ranked at 28 in the world. Environmental sciences, pharmacy, engineering and technology were listed in the “Top 100” (Chart B1 and B2).

34. Besides, the Centre for Drug Research and INFORMM have demonstrated impressive advancement in core research and recently, REDAC is in core services while another two (2) Research Centres have been approved of their establishment, which are ISDEV (Research Centre for Islamic Development Management) and INOR (Institute of Nano Opto Electronics Research and Technology). The recently operated PiPPA (Centre for Innovation and Productivity in Public Administration) has also demonstrated a very encouraging performance.

35. For example, in the category of talent, Professor Latif Ahmad won the Merdeka Award and he has been listed as one of the World's Most Influential Scientific Minds by Thomson Reuters. Professor Bassim Hameed was also listed as one of the World's Most Influential Scientific Minds. Meanwhile, Associate Professor Dr. Lim Jit Kang received the Young Scientist Award from MOSTI. These are a few examples of the outstanding talents of 2014, with many others though not listed, who had contributed to the university, people, nation and the world.

36. USM also has a research network with world-renowned institutions such as RIKEN in Japan, Yale in United States of America and University of Cambridge in UK as well as a few institutions especially in France and Germany.

37. USM has leading academic programmes in chemical engineering and environmental technology. Besides, the international offshore medical programme USM-KLE at India will enter its second phase this year and the first batch of students are expected to graduate by next November.

38. In the area of industrial relations, there are:

- Establishment of clusters to meet the needs of a niche industry and the corporate sector (SME-Assist Cluster and 3C)
- Long-term strategic relationship with industries (e.g. Toray, CIMB, Fuji, Altera)
- Industry cooperation through student internship, temporary academic staff, industry applied research projects and lab testing services

39. Currently, USM has a total of 33, 350 students with 22,269 undergraduate students (including 8,000 part-time students) and 11,081 postgraduate students.

39.1. USM students are actively involved in the activities carried out by USM or the activities organised by the students themselves. There were 98.49% of the first year students, 99.72% of the second year students, 99.84% of the third year students and 100% of the fourth year students involved in activities. 99.65% of the final year students are actively involved in the assessment of MyCSD points.

39.2. Student involvements in volunteer corps and kampus sejahtera are very encouraging. USM Volunteer Corps comprises of 2,000 students who are very actively participating in off-campus activities. The Kampus Sejahtera Volunteers comprises of 10,108 students who carried out in-campus volunteerism activities that focus more on activities related to various issues of sustainability.

40. In terms of international collaborations, USM has signed a total of 425 Memorandum of Understanding (MOU) and Memorandum of Agreement (MOA) with various institutions in more than 60 countries.

41. In terms of quality, 80.1% of USM graduates are employed. Out of that, 16.1% of them found jobs in multinational companies (MNCs) and almost 5% of them working abroad. USM produced a total of 1,720 Master's students and 583 Ph.D. students in 2014.

Performance in Talent Management

42. Lean management and lean human resource management were implemented in 2014. The planning that has been implemented includes staffing management, transforming work by reducing the number of processes and using advanced technologies for all categories of staff and management methods.

Chart B1: *QS Ranking By Subjects*

Chart B2: *USM LEADS MALAYSIA IN 7 SUBJECTS*

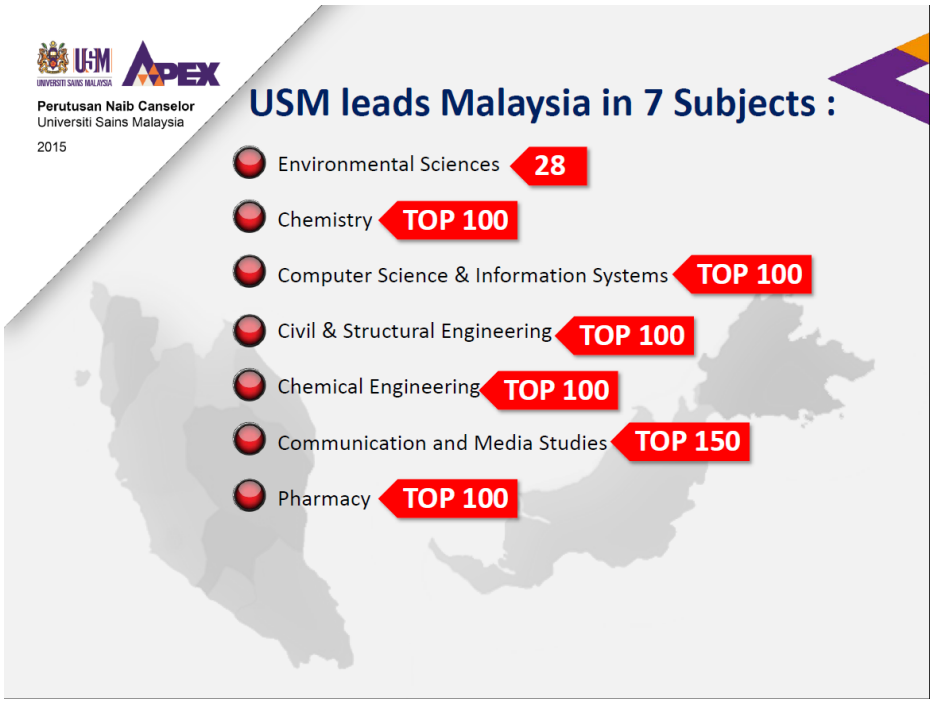
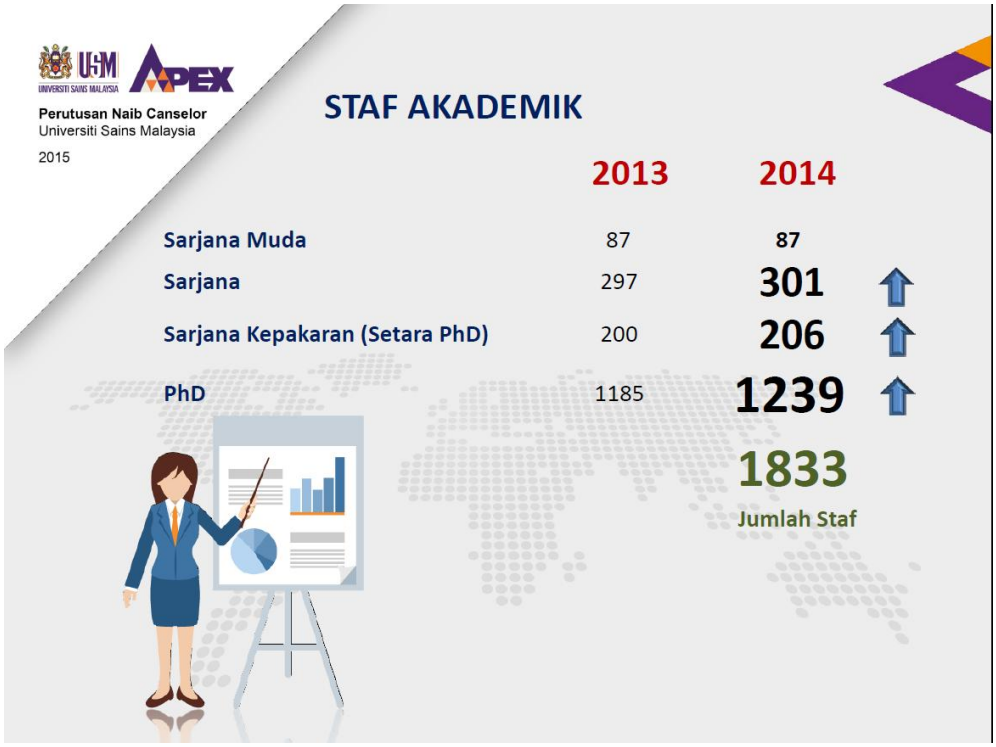


Chart B3: Academic Staff



Performance in Resource Management

43. The number of staff with higher qualifications has increased as shown in Chart B3. At present, more than 71% of the lecturers are principle researchers.

Performance in Governance Management

44. The success of governance management in USM is impressive which includes:

- Strengthening the governance and management of USM Hospital
- USM Foundation
- USM Dashboard Scorecard
- Establishment of University Human Resources Council
- Establishment of University Research Council
- Establishment of University Sustainability Council
- Establishment of University Security Council
- *Integrity Pact* in all matters relating to finance of the university
- Establishment of university integrity unit and implementation of University's Governance and Integrity Committee (Jitu) to replace JKTU
- Finalising the amendment of 15 New University Statutes (relating to governance)
- USM Gift & Endowment Policy
- Amendment of new student disciplinary rules
- Compilation of all policies and guidelines of university that have been approved by the authority of the university

45. Financial Sustainability with the introduction of Outcome Based Budgeting (OBB). It is a management of public sector performance which aims at determining the programmes/ activities that achieved the agreed objectives, produced the expected outcomes, produced outcomes that meet the needs of the customers and stakeholders and, the best option and alternative policy are employed.

Performance in Community Engagement

46. Throughout the years from 2011 to 2014, the number of community engagement projects carried out by USM (BJIM) APUCEN (which has 47 members) was 317 collaborative community engagements and 237 projects at the national and international levels.

Performance in Media Highlights

47. The value of USM news in the media: Advertising Value Index (AVI) or Advertising Value Equivalency (AVE) measures the cost of news coverage by measuring the space (print media - column inches) or time (electronic media) based on the current value (price) of advertising cost. Advertising agencies are able to calculate this cost and this measurement can serve as a guide to the amount of actual cost saved by the institution when the institution is using the services or media advertising space.

48. The total number of USM news in 2014 achieved AVI/AVE of more than RM40 million. The interesting thing was that the news from the USM website has become the reference for many news media in this country. The number of hits for some news in the USM website has reached 30,000 hits. Majority of the news are expected to have around 500 to 1000 hits in a month. In 2013, the AVI/AVE for USM news was RM20 million.

Conclusion

49. Malaysia faced many challenges in 2014. The performance of USM in 2014 was very encouraging despite facing many challenges and obstacles from all angles and various parties. The intention of USM is to ensure that all the parties in USM work together to achieve success.

PART C: STRATEGIES TO DRIVE EXCELLENCE IN 2015

50. USM will focus on five (5) main strategies in 2015. These main strategies are based on future needs, in line with the current development of higher education and in accordance to the 7 Pillars of Apex Phase II presented in 2014. The 2015 programme is a continuation of the 2014 programme. A total of 25 thrusts and 115 programmes are expected to be implemented.

51. Later, Section D will show the mapping of these strategies with the overall APEX Phase II in 2015. Therefore, this section is to

1. Focus on 2015 strategies. These strategies will be followed by special programmes which will become part of the amended Pillars of APEX Phase II or a new programme.
2. Confirm that the 2014 programme will be continued as an amended programme or a continuing programme.

52. Therefore, 2015 strategies are divided into 5 strategies as shown in Chart C1 namely

1. Talent and Human Resource Transformation Strategy
2. Driving Excellence Strategy
3. Entrepreneurship and Financial Sustainability Strategy
4. Campus Development Strategy
5. APEX Expansion and Partnership Strategy

CHART C1. 2015 STRATEGY DRIVERS

STRATEGY 1 TRANSFORMATION OF TALENT AND HUMAN RESOURCES

53. Through strategy 1: transformation of talent and human resource, 6 main programmes are identified namely transformation of governance and talent, transformation of students, transformation of departments, transformation of community engagement, transformation of teaching and learning and continuation of APEX programme

Transformation 1 Transformation of Governance and Talent

54. The APEX Programme stresses on the overall excellence of the university community and therefore it requires a driving excellence programme that focuses on human resource and talent, especially among the staff. Throughout 2014, a few prominent foundations have been identified for transforming talent. Among the needs identified are the need to inculcate a work culture ingrained with goodwill and sincerity, simple and non-overlapping management, leadership training and, succession planning for the management and academic staff. Meanwhile, increase in productivity among some staff members is identified as greatly in need as well.

Governance and Talent Transformation Programmes – 4

55. The focus of governance transformation is to implement a few programmes aim at improving the governance efficiency of USM to raise achievements through:

- P1 A comprehensive Human Resource Management Policy was formulated which will be led by the Human Resources Development Council.
- P2 Transformation of the “heart” through the Apex Leadership Programme and with infusion and intervention programmes at the lower, intermediate and advanced levels, including 'onboarding’ programme for new faculty members.
- P3 Practicing lean management by reviewing the administrative process just as what has been done in HOSPITAL USM and the admission process for the academic division.
- P4 Academic Staff Planning is more focused on succession planning for a group of subjects and fields that will take the needs of academic and research niches into consideration.

Transformation 2 Student Empowerment

56. USM students are well-known for their abilities to manage their own needs and therefore, the university will continue to support programmes that will build the ability of students to manage their talents and affairs by themselves on the basis of working together and sustainability.

Student Empowerment Programmes - 5

57. The objective is to develop a sense of empowerment within all students as a basic foundation, to build a high level of student confidence and empathy. Among these programmes are

- P1 APEX Scholar, which aims to help students achieve academic excellence and strengthen them with soft skills, leadership and global interactivity.
- P2 Kampus Sejahtera that focuses on the area of sustainability, implements self-sufficiency programmes in the campus and outside the campus with the cooperation from RCE Penang.
- P3 Volunteer Corps is strengthened with disaster management skills and volunteer impact programmes.
- P4 Innovation from students to benefit the community based on Knowledge Transfer programme.
- P5 ASEAN Students' Parliament

Transformation 3 Transformative Learning and Teaching

58. The alternative learning scenario will become the foundation to transform staff and students which will be explored in 2015. Similarly with the transformative teaching efforts.

Transformative Learning and Teaching Programmes - 4

59. Both efforts are aimed to encounter the increasingly advanced technological challenges which are reasonable and could be applied in the learning and teaching process. The main programmes are

- P1 Planned transformative learning with well-defined directions.
- P2 Transformative teaching is implemented in various modalities as deemed appropriate.

Transformation 4 Broadening Focus on Community Engagement

60. USM changes its role or increases its role in the development of the community by initiating transformation through its ability to provide linkage to the market, government and civil community.

61. A comprehensive community engagement transformation will assist the university to move further ahead in community engagement besides academics and research activities.

Broadening Focus on Community Engagement Programmes - 6

62. Among the identified programmes are

P1 USM Prihatin
P2 Marginalised Community
P3 Education for underpriviledged
P4 Life long service for physically challenged people - *USM OKU* Policy; Inclusive Education (PRINCE); School in Hospital; Universal Design; SOS OKU; OKU Multi-disciplinary assessment
P5 Visit my Campus Programmes
P6 Leverage on Academic and Research Commodity programme

Transformation 5 New Programmes and New Directions of the Schools

63. Academic transformation that will be implemented this year will focus on how USM can create its new academic programmes or, its existing or new directions of the schools to become the top choice of the students to enrol in the programmes.

64. The main objective is to explore new potential areas and create programmes or having the Schools upgrade their capabilities.

New Programmes and New Directions of the Schools Programmes - 6

65. Six programmes or Schools are introduced, namely
P1 Refocusing of the School of Industrial Technology
P2 School of Heritage Sciences and offering the international heritage science programme
P3 Establishment of School of Lifestyle Sciences and offering the Bachelor of Science (Lifestyle Sciences)
P4 International Programme for Bachelor of Management and Coordination, a joint effort between School of Management and the School of Distance Education, accredited by The Association to Advance Collegiate Schools of Business (ACCSB) International
P5 International Institute of Lifelong Learning
P6 International College of Liberal Arts Studies and Science offering international programmes for language, education and management.

Transformation 6 Continuation of Programmes from 2014

66. Continuing the policy and implementation. APEX Phase II programmes outlined in BUKU 2014 will be continued and will be modified where necessary. Among the programmes that will be continued without much changes are the programmes that are based on the 7 pillars of APEX.

Building upon Programmes from 2014 - 5

67. Among the programmes that will be continued are

P1 Apex Global Fellowships
P2 Community engagement for focused community similar to the Banding area community programme
P3 Agro-tecture - urban agriculture based on the concept of urban green
P5 Internship Student Mobility and sector focused industrial training.
P6 PIMPIN SISWA

STRATEGY 2 DRIVING EXCELLENCE AT THE INTERNATIONAL LEVEL

68. The efforts of driving excellence in USM in order for USM to become well-known in the world will be centered on how the world of academic and higher education institutions recognise USM. This recognition begins with talents having high potential, a significant output that can be emulated and the programmes that can be participated by USM or any other institutions that can be emulated by USM.

69. Among the driving excellence efforts are driving excellence in research, academic, students, community engagement and network as well as sustainability.

Excellence 1 World Class Research

70. The objective is to develop Y-generation talents/researchers that can help USM to drive excellence in various fields of research.

Programmes towards World Class research - 2

71. Programmes that are expected to be implemented:

P1 Establish a conducive talent mobility ecosphere. In order to achieve excellence in research, talent or researcher must move across the field, sector (industry or research institutes), institutions and country which were represented by the middle layer of talent mobility ecosphere.
P2 Young Researcher Development Programme including the Mentor-Mentee with iconic researchers programme. It also includes development with the world's leading researchers programme, with the hope that this will generate useful ideas for their research. More Nobel Laureate Award winners will be invited to give lectures in USM to encourage researchers in USM to do good science.

Excellence 2 2015 Research Excellence

72. The objective is to identify new clusters or niche research that will drive USM to achieve excellence in research

2015 Research Excellence Programmes - 6

73. Programmes that can be identified are
    - P1 USM-RIKEN Centre for Aging Science
    - P2 Conservation and Sustainable Productivity of the Mangrove Ecosystem
    - P3 Crime and Public Safety
    - P4 Cerebral Palsy Research Cluster (CPRC)
    - P5 Management and Conservation of Belum-Temengor Forest towards Achieving World Heritage Status
    - P6 MyARK Genome Project - Malaysian All Repository of living Kingdoms Genome Project

Excellence 3 New Niche

74. The objective is to intensify cluster or niche research that has achieved excellence in research to a higher level

New Niche Programmes - 6

75. New niche programmes are
    - P1 Archaeological Research Project: Prehistory and Protohistory of Malaysia
    - P2 USM-Yale Drug Addiction Research Programme
    - P3 Halal Vaccine - strengthening the halal hub platform in meningococcal meningitis and typhoid. Vaccine test will be continued and pre-clinical tests are planned to be implemented at the end of 2015
    - P4 Green Technology Research – preparation of USM Green Tech Master Plan
    - P5 Green Technology; preparation of Master Plan
    - P6 Local Knowledge Cluster

Excellence 4 Changing of Research Management Method

76. Research Excellence Ecosphere to enhance international research collaboration activities through internal consolidation by providing a platform to revise focus and to improve the performance of collaboration and efficiency.

Programmes to Change Research Management Method - 4

77. Research management programmes are
    - P1 Focusing on advanced research field, research affairs and efforts to establish new centres/institutes/administrative platform or to strengthen the existing facilities
    - P2 Office of International Research Collaboration.

P3 Widening the scope of the Innovation and Commercialisation Office
P4 Widening the scope of Research Initiatives Centres (CRIs) into integrated laboratory services and developing talent through cluster leadership.

Excellence 5 Focus on Strengthening Research University Foundation

78. Continuing the efforts in strengthening the foundation of a research university as what was outlined in 2014.

Programmes to Focus on Strengthening Research University Foundation – 6

79. Programmes of strengthening the foundation of research university are
P1 Utilising the latest and advanced infrastructure coupled with industry collaborations to establish laboratories.
P2 New research identified based on clusters will be centred at CRIS in order to be developed as research excellence centres; Genomic Science & Variome; Biomaterials; Forensic Identity; Rehabilitation; Craniofacial Science; Exercise & Sports Science; Sustainable Water Source for Water Supply; Membrane; Development of New Method for Determination of Odour Pollution from Solid Waste and Kenaf
P3 Commercialisation by tracking down various methods appropriate for outcome.
P4 Develop Research to Market.
P5 Research Icons: Programmes that will be continued to be developed
P6 Iconic Research - such as Green Technology; OLED; Printable Large Area Electronics; gan-On-Gan; Internet of Things (IOT)

Excellence 6 Academic Internationalisation

80. University realises the need to face academic competition in various fields which justifies the need to improve the employability of graduates. At present, USM is well-known at the international level for its quality academic programmes and exposure of lecturers at the international level. Herefore, USM will continue to nurture the talent of staff members to push academic excellence higher and develop graduates with global citizenship attitudes and global mindset to complement the nation-building programmes and begin carefullt implementing the internationalisation of programmes and students as well as staff.

Academic Internationalisation Programmes - 7

81. Among the academic programmess that can be implemented are
P1 International Academic Collaboration with several identified universities (such as the establishment of USM-KFSU Japanese Centre in USM)

P2 International Alumni Network
P3 International Promotion Activities
P4 International Accreditation Programme
P5 Increase in international students
P6 Staff and student mobility
P7 Global Thinking Student Plan

Excellence 7 Positioning for International Sustainability and Community Engagement

82. Programmes at the international level aim at increasing the visibility of university in both the niche thrust areas.

Positioning for International Sustainability and Community Engagement Programmes - 4

83. Among the programmes that can be implemented include

P1. Putting USM on the world map on collaborations through involvement in conferences, lectures and dialogues whether as a participant or an organiser.
P2. Benchmarking practice via the Sustainability Assessment Methodology (SAM) and University Sustainability Ranking.
P3. Internationalisation of Community Engagement – increasing the number of programmes that are appropriate for community engagement at the international level through collaboration.
P4. Programmes for National Disaster Management Conference.

Excellence 8 Schools, Research Centres and Service Centres

84. All the Responsibility Centres (RCs) have produced a 5-year plan in a few series of consultations with various responsibility centres and this plan will be continued throughout 2015.

85. The main objective is to allow RCs to develop APEX Phase II Development plan that is in line with the desire of the university and the establishment of the RCs.

RCs Development Programme - 7

86. The RCs Development Programme is based on 5 main programmes and each RC has to fulfil the followings:

P1 Elevate the position of RC and USM
P2 RC Internationalisation Programme
P3 RC Research Programme
P4 RC Academic Programme

P5 Increase in Income Generation Programme
P6 Autonomous RC Programme (not all RCs)
P7 Community engagement and knowledge transfer programme

STRATEGY 3 TRANSFORMATION OF MANAGEMENT AND FINANCE AND ENTREPRENEURSHIP

87. The financial management area of the university is currently undergoing a few changes and the fundamental purpose is to address on how to generate the university's income so that the university can be financially sustainable.

88. University Entrepreneurship is one of the earlier efforts to mobilise the culture of income generation which is the fourth thrust of the University.

Entrepreneurship 1 Increasing Income Generation

89. The aim is to increase income generation from the academic activities

Programmes to Increase Income Generation - 3

90. Programmes to improve income generation of the university are
P1 USM Technical College (Apex College)
P2 The APEX School
P3 Increase the capability of USM service centres to generate income such as CETREE, National Poison Centre, Tuanku Fauziah Museum and Arts Gallery, Doping Control Centre, the Centre for Advanced Analytical Toxicology Services (CAATS), P3Neuro. Centre for Herbal Standardisation (CHEST), PiPPA and USM Press

Entrepreneurship 2 University's Business and Entrepreneurship

91. Widening the entrepreneurship programme to graduates to enhance their marketability. Provide entrepreneurial skills to the academia for the purpose of commercialisation, knowledge transfer and community engagement as well as exploring the new area of sustainability-based entrepreneurship.

University's Business and Entrepreneurship Programmes – 3

92. Programmes to improve revenue generation of the university are
P1 Postgraduate Entrepreneurship aims to increase the ability of Masters and Ph.D. students to undergo entrepreneurship enculturation and move towards better economic ability.

P2 The purpose of entrepreneurship among the academia is to encourage focused entrepreneurship enculturation in the efforts to enhance the capability of consultation and commercialisation.
P3 Focused Undergraduate Green Entrepreneurship to ensure that USM entrepreneurship programmes centred on the concepts of sustainability and green technology.

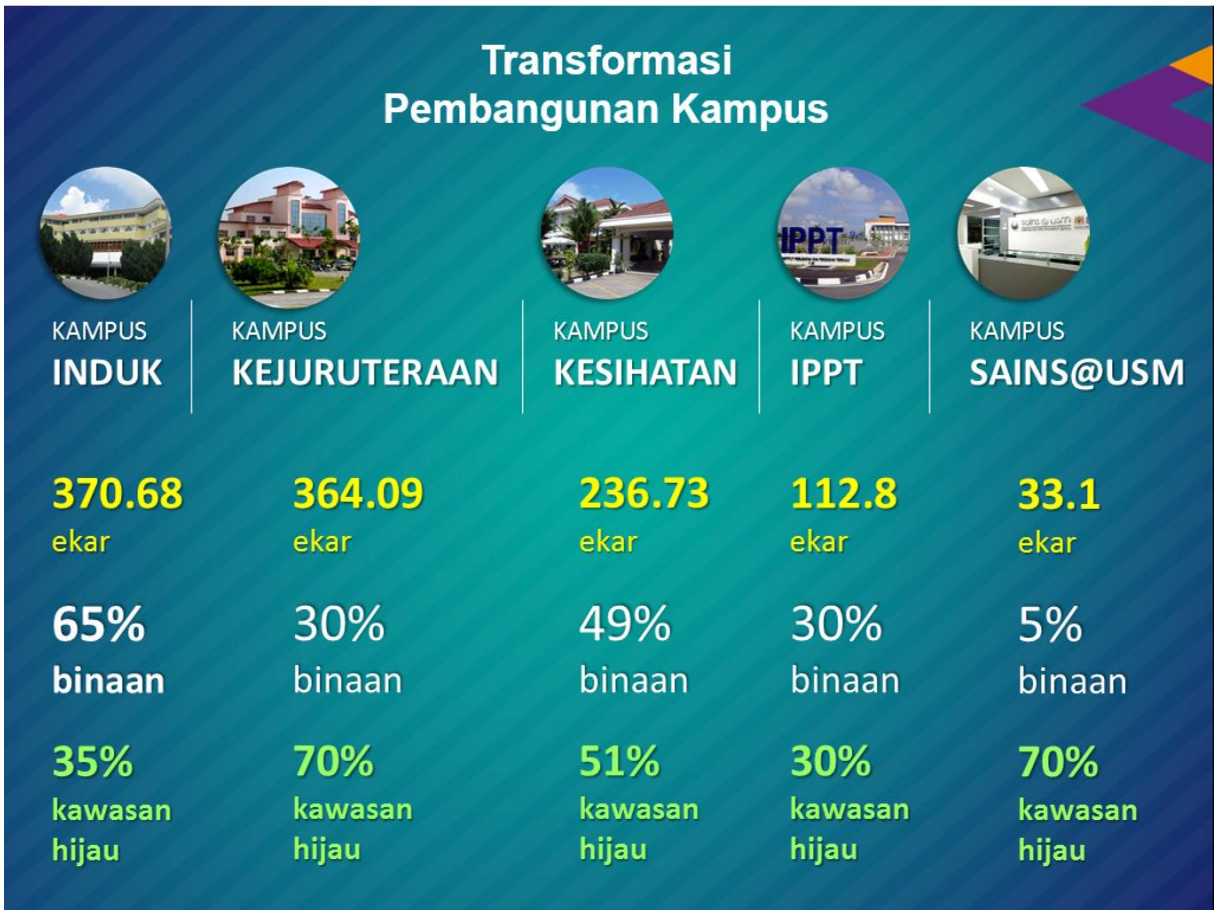
Entrepreneurship 3 Income Generation

93. Implementing income generation mechanism and rationalisation of cost rationalisation, and varied income mechanism including the restructuring of financial sustainability in moving towards financial autonomy.

Income Generation Programmes – 5

94. Programmes:
P1 Sg2 Revitalisation Project; Research on the ability and the planning of implementation plan.
P2 Sains @ USM; Phase 2A: NCIA / CREST / USM INCUBATOR;
P3 Implementation of Usains Holdings business development
P4 USM FOUNDATION - Scholarship and building financing programme
P5 USM ENDOWNMENT PROGRAMME– targeting on the CONVENTIONAL AND ISLAMIC ENDOWNMENT PROGRAMME

Table D1: Development Transformations



STRATEGY 4 TRANSFORMATION OF CAMPUS DEVELOPMENT

95. At present, USM has five (5) campuses and a few branch operations namely the Main Campus, Engineering Campus, Health Campus, Bertam Campus, Sains@ USM, Centre of Graduate Studies at KL, KLE India, 11 School of Distance Education Centres and 2 off-campus research centres. All the transformations must include the overall plan of USM into consideration. The strategy is to make use of the campus in accordance to the direction of the university.

96. Table D1 shows the existing campuses, their build-up area and the extent of the respective campus areas that have been used for development.

Development 1 Main Campus

97. Development of the main campus will strengthen a few aspects to make the campus operations more sustainable and efficient.

Main Campus Programmes - 6

98. Programmes

P1 **Chancellory 2** with relocation of RCMO, RNI, CIO, BJIM, PTI, Legal Office, Ombudsman, OSC Bursary and KKAUSM Office, Women Association, Association of Muslim staff and PPPJJ Production Department.

P2 Joint development with industries such as Toray USM building, Tan Sri Azman Hashim Sports Complex and the establishment of Water Sports Centre in Bukit Merah with MK Land.

P3 Eureka Complex becomes the New Institute of Postgraduate Studies (IPS) to house postgraduates and international students. PPKT will be centralised at the complex as well.

P4 Merging of Public Relations Office and Strategic Communinations Office to become the USM Media Centre

P5 Centralisation of all design services to become Creative Design House (CDH) to boost the designers' creativity and to encourage innovation.

P6 Establishment of a lean University Operation and Coordination Office to monitor, coordinate and enhance the relationship and communication among USM internal entities during major events, emergency and assistance programmes that need to be coordinated among campuses.

Development 2 Bertam

99. Grouping of all Schools and Centres to become a stronger IPPT such as School of Pharmaceutical Sciences, Drugs and Medicine Research Centre, Doping Control Centre, CAATS and National Poison Centre (pending the approval from the government in terms of funding and appropriate timing).

Bertam Campus Programmes - 2

100. Programmes

P1. Implementation of the programme to shift off-campus programmes back to Bertam campus.

P2 Phase 2A: Enhancement of the ability of IPPT as a tertiary referral centre in niche area and continuation of impactful clinical research as well as enhancement in dental services.

Development 3 Entrepreneurship-Based Research Campus

101. Phase 2 of Sains@USM Development Programme to turn Sains@USM into a Technology, Science and Entrepreneurship Research Campus.

Entrepreneurship-Based Research Campus - 7

102. Programmes

P1 Launching of USM Club
P2 Development of I2U
P3 Focus on Entrepreneurial Research Campus
P4 Development of accommodation complex
P5 Expanding focused industrial relations through ICE
P6 Transform Sains@USM into an integrated management site like Campus Director's Office by centralising all the administration, management and entrepreneurship affairs to the Campus Director's Office. Entities that are involved in this integration management are IPTTN, CCB, CHEST, CEDEC, INoR, I2U, ICC and CIBER. This plan will save manpower and to improve efficiency.
P7 Transforming IPPTN to RC of HiCoE standard.

Development 4 Engineering Excellence

103. Engineering Campus is expected to improve its visibility with several programmes that will bring forth impact in research. Efforts are actively being carried out to enhance the capability in engineering entreprenuership.

Engineering Excellence Programmes - 4

104. Programmes

P1. Integrated Laboratory Building - this integrated laboratory building is equipped with various equipment moved from existing laboratories or new equipments from industry collaborations.
P2. New REDAC Building – will be placed in one of the completed integrated laboratories and the new REDAC laboratories will become one of the most well-equipped centre of excellence.
P3 Research and advanced cluster management through SERC.
P4 Engineering Entrepreneurial Development Programme through the Campus Director's Office which includes engineering and technology management training.

Development 5 Medical and Health Campus Integration

105. Transform Health Campus and USM HOSPITAL into health and medical referral centres on the East Coast to serve as a teaching hospital, research

intensified hospital and sustainable hospital that can operate during disasters such as during the floods in 2014.

Medical and Health Campus Integration Programmes - 5

106. Programmes
P1 Campus Integrated Management system
P2 Hospital Integrated Information System
P3 Continuous improvement in the quality of services to transform the hospital to become a teaching hospital for specialist and sub-specialist.
P4 USM Hospital: Continuous Equipment Replacement Plan.
P5 Strengthening Disaster Standard Operating Plan of USM Hospital

Development 6 Off-Campus Entity

107. Apart from the programmes focused in 2015 or in the new strategy 4, all USM campuses are always being monitored to ensure that they are safe, clean and, appropriate and conducive for learning and research. Campus development programmes will save cost if the property and assets of the university are well-maintained.

Off-Campus Entity Programmes - 6

108. Programmes
P1 CMECS – Center for Marine Reseach. Transform CMECS into a referral centre for marine biology research and moving towards HiCoE. More programmes to generate income and to collaborate with the industry will be implemented.
P2 Lenggong Archaeological Site – a piece of land will be acquired from the State of Perak to build an off-campus research centre focused on Archaeology and other related fields.
P3 PPPG KL – IPS USM Learning Center in KL will offer a few more courses for Postgraduates and it is expected to become a financially self-sufficient learning centre.
P4 KLE India as the Centre for USM lnternational Medical Education will enter the second phase when the first batch of students graduate this year and a new collaboration agreement will be implemented.
P5 11 PPPJJ LEARNING CENTERS – strengthening facilities at the learning centres phase by phase.
P6 MARA Pre-U - continuing support programme for Kolej MARA KULIM

STRATEGY 5 SHARING OF EXPERTISE AND KNOWLEDGE TRANSFER

109. Continue and expand the concept of sharing through knowledge transfers, best practices adaptation and improving needs-based sharing and demands-need sharing through strategic collaboration.

Sharing 1 Knowledge Transfer Programme

110. Knowledge Transfer Programmes led by USM through APEX sharing concept has entered into transition phase with several strategic steps to be implemented and launched in an appropriate time.

Knowledge Transfer Programmes - 3

111. USM and national knowledge transfer programmes are:

P1 National KRA Core Knowledge Transfer Programme
P2 Online Integrated Knowledge Transfer Monitoring programme
P3 KTP Roll out Programme in IDR Perak, KTP Melaka, KTP Johor
P4 Formation of National / PUSAT @USM KTP centred at TORAY-USM KTP building

Sharing 2 Centre for Economic Development

112. Centre for Economic Development (PPE) is deemed as the backbone to the local economic activities. It has various functions including setting up various centres such as the Centre of Sales and Marketing, Local Product Exhibition Center, Information Centre of Rural Tourism, Skills Training Centre and so forth in the local community.

113. In this Integrated Economic Development Concept, NCIA will make full use of the existing mini-RTC and PPD and cooperate with related agencies to set up new centres as needed. In order to realise this aspiration, at the early stage, NCIA will cooperate with Universiti Sains Malaysia (USM) and other agencies such as Ministry of Rural and Reginal Development (KKLW) and Town and Rural Planning Department (JPBD) to establish Community Innovation Centres that act as a local centre to coordinate local community activities. Through this partnership, NCIA will be represented by graduate trainees to carry out various support activities to ensure the success and the effectiveness of this concept. The involvement of graduate trainees who will be placed in certain involved areas is one of the main components in the proposed outreach models and this is in line with the Knowledge Transfer Agenda supported by the government.

Centre for Economic Development Programmes - 1

114. CED programmes will begin with 1 programme

P1 Community Innovation Centre – Joint effort of NCIA and USM in driving the National KTP. Sharing of best practices with mutual understanding as shown in Table. Approved by NCIA Governing Council on 15 January 2015.

PART D:

OUTCOME AND OUTPUT FRAMEWORK

115. Table D1 shows the outcome and output statements used by USM as its dashboard and consist of outcomes for APEX, Research University and Operation. This outcome and output measurement is easy to understand and it is also suitable to be used for benchmarking. However, this measurement needs to be interpreted by examining the inputs and the trends for several years in order to assess the impacts.

Table D1: USM Outcome and Outputs Framework

NO	CATAGORY	OUTCOME STATEMENT		OUTPUT STATEMENT
A	**APEX UNIVERSITY PROGRAMMES**	1	Achieve world-class status of Research University that focuses on sustainability	Ranking of the university in the world
		2	Achieve renowned status of sustainable university in the world	
		3	Become a leader of community activities in the Asia-Pacific region	
		4	Managing changes in resources, talent and governance	
B	**RESEARCH UNIVERSITY (RU)**	1	Improvement in quantity and quality of researchers	Research and Innovation
		2	Improvement in quantity and quality of research	
		3	Improvement in quantity of Postgraduates	
		4	Improvement in quality of Postgraduates	
		5	Improvement in innovation	
		6	Improvement in Professional Services & Gifts	
		7	Widening efforts in networking and linkages	
		8	Improvement in support facilities	

C	**OPERATION**	1	Increase in the number of quality students/graduates	Teaching and Learning
		2	Increase in the number of excellent staff	
		3	Increase in the number of Smart Partnership with the industry and community	

ALIGNING APEX PHASE II, PSPTN AND PPPM SPT

116. APEX Phase II and PPM SPT are currently being amended as shown in Charts D1-D2. It shows that the 7 PILLARS of APEX can be aligned with the 10 SHIFTS in PPM SPT.

CHART D1: ALIGNING USM APEX PROGRAMME & MALAYSIAN EDUCATION DEVELOPMENT PLAN (HIGHER EDUCATION)

117. 7 alignments are:

J1 RI Apex is aligned with Global Engagement and Innovation Ecosystem

J2 Apex Leadership is aligned with Holistic Graduates and Talent Excellence of Higher Education

J3 Apex Sharing is aligned with transformed Education Presentation

J4 Apex Extension and Positioning is aligned with global engagement
J5 Academic and Students Development is aligned with lifelong learning and globally online learning communities
J6 Financial sustainability is aligned with the Financial Sustainability objective in the Malaysia Education Blueprint (Higher Education)
J7 Institutional Development is aligned with solid Governance.

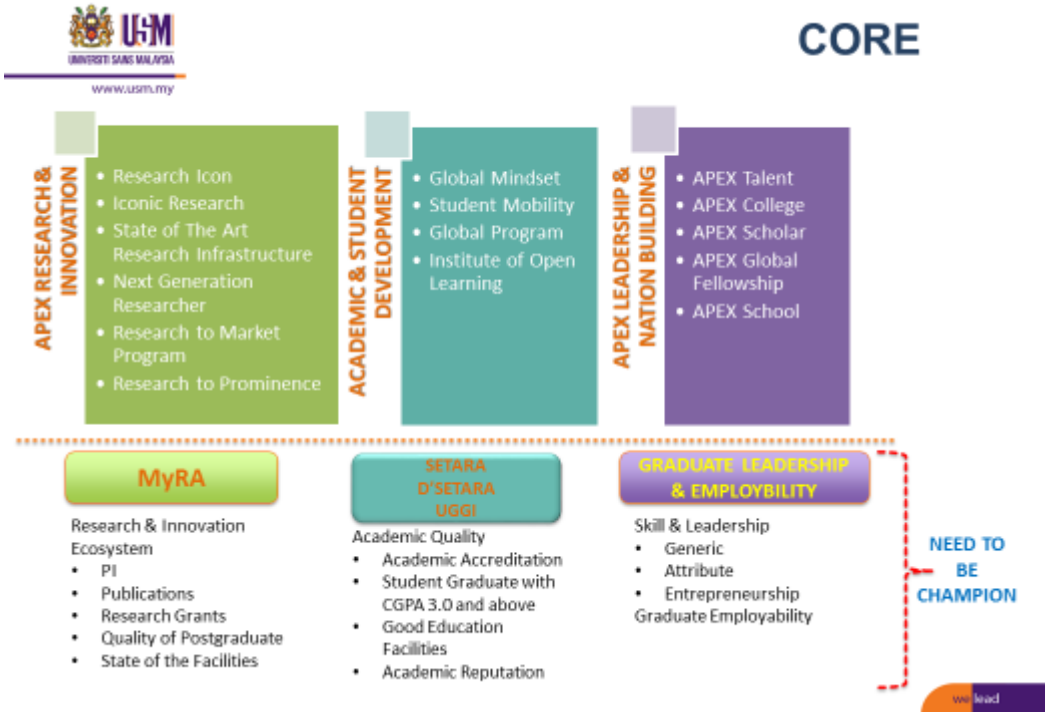
CHART D2: ALIGNING APEX PHASE II AND PPPM PT

NATIONAL OUTPUT AND APEX PHASE II

118. Chart D3 shows the alignment of some national OUTPUT measurements with USM APEX in the following 3 mappings:

P1 Apex Research and Innovation and its sub-elements with MyRa
P2 Apex Academic and Student Development with SETARA and D'SETARA as well as its sub-elements
P3 Apex Leadership and Nation Building

CHART 3: ALIGNMENT OF OUTPUT



2015 TARGET IN APEX PHASE II FRAMEWORK

119. TABLES D2-D8 show the mappings between 2015 Programmes and APEX PHASE II. Appendix 2 shows the overall target. The implemented programmes have various targets of directions and it is clearly shown in the objectives in Part A. With the achievements in the number of USM internal publications and USM Scorecard, it can be concluded that the anticipated output of USM in 2014 was encouraging.

120. Table 2 summarises the mappings of BUKU 2015 framework namely the 5 Strategies and 25 strategy drivers with 25 identified strategic objectives. Appendix A complements the overall picture by putting 115 programmes with 115 targets for 2015.

CHART D2: ALIGNMENT OF APEX PHASE II & BUKU 2015

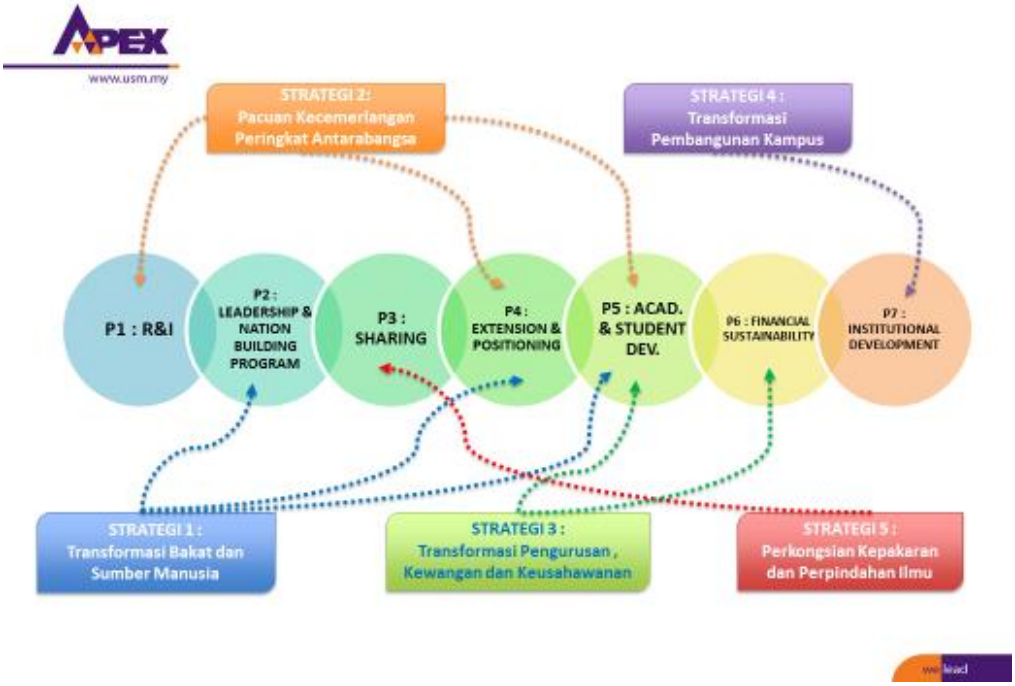


CHART D3: PILLAR 1 – APEX RESEARCH AND INNOVATION

CHART D4: PILLAR 2 – APEX LEADERSHIP AND NATION-BUILDING

P2: APEX LEADERSHIP & NATION BUILDING PROGRAM

STRATEGI 1 : Transformasi Bakat dan Sumber Manusia

- TRANFORMASI 1 :Transformasi Urustadbir dan Bakat
  - P1 : Dasar Pengurusan Sumber Manusia yang menyeluruh
  - P2 : Transformasi Qalbu melalui program Apex Leadership Program dan program infusion dan intervensi
  - P3 : Pengurusan kejat
  - P4 : Perancangan Staf Akademik yang lebih berfokus kepada pelan penggantian dalam kelompok subjek dan bidang
- TRANSFORMASI 2 : Pengupayaan Pelajar
  - P1 : APEX Scholar
  - P2 : Kampus Sejahtera kumpulan fokus dalam bidang kelestarian
  - P3 : Kor Sukarelawan yang akan dimantapkan
  - P4 : Inovasi Dari Pelajar kepada Masyarakat
  - P5 : Student Parliament

CHART D5: PILLAR 3 – APEX SHARING

P3 : APEX SHARING

STRATEGI 5 : Perkongsian Kepakaran dan Perpindahan Ilmu

- TR : Program Perpindahan Ilmu
  - P1 : Program Perpindahan Ilmu Teras KRA Negara
  - P2 : Program pemantauan Perpindahan Ilmu bersepadu
  - P3 : KTP di IDR Perak, KTP Melaka, KTP Johor
  - P4 : KTP Nasional@USM
- Pusat Pembangunan Ekonomi (PPE)
  - P1 : Pusat Inovasi Komuniti

CHART D6: PILLAR 4 – APEX EXTENSION AND POSITIONING

P4 : APEX EXTENSION & POSITIONING

STRATEGI 1 :Transformasi Bakat dan Sumber Manusia

- T4: Pelebaran Berfokus Libat Sama Komuniti
  - P1 : USM Prihatin
  - P2 : Komuniti terpinggir (Marginalized Community)
  - P3 : Pendidikan untuk golongan terendah (Education for Underpriviledged)
  - P4 : Life Long Service for OKU's
  - P5 : Program Pelancongan Kampus (Visit my Campus Programmes)
  - P6 : Program Leverage on Academic and Research Commodity

STRATEGI 2 : Pacuan Kecemerlangan Peringkat Antarabangsa

- KA7 : Kedudukan Antarabangsa Kelestarian dan Libat Sama
  - P1 : Putting USM in World Map on Collaborations, Regionalism and Strategic Global Events
  - P2 : Sustainability Assessment Methodology (SAM) and University Sustainability Ranking
  - P3 : Pengantarabangsaan Libat Sama Komuniti
  - P4 : Program Persidangan Kebangsaan Pengurusan Bencana

CHART D7: PILLAR 5 – ACADEMIC AND STUDENT DEVELOPMENT

P5 : ACADEMIC & STUDENT DEVELOPMENT

STRATEGI 1 : Transformasi Bakat dan Sumber Manusia

- T3 : Pembelajaran Dan Pengajaran Transformatif
  - P1 : Pembelajaran Transformatif yang akan dirancang dan ditetapkan hala tujunya
  - P2 : Pengajaran Transformatif yang akan dilaksanakan dalam pelbagai modaliti mengikut kesesuaian
- T5 : Program Baru Dan Arah Tuju Baru Pusat Pengajian
  - P1 : Refocusing School of Industrial Technology
  - P2 : Pusat Pengajian Sains Warisan atau dan penawaran program antarabangsa sains warisan
  - P3 : Penubuhan Pusat Pengajian Sains Gaya Hidup atau dan penawaran Program Pengajian Sarjana Muda Sains (Sains Gaya Hidup)
  - P4 : Akreditasi The Association to Advance Collegiate Schools of Business (ACCSB) International Program Ijazah Sarjana Muda Pengurusan dan Penyelarasan Program antara Pusat Pengajian Pengurusan dan Pusat Pengajian Pendidikan Jarak Jauh
  - P5 : International Institute of Lifelong Learning
  - P6 : International College of Liberal Arts Studies and Science dan program antarabangsa international programme of language, education and management

CHART D7A: PILLAR 5 – ACADEMIC AND STUDENT DEVELOPMENT

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P5 : ACADEMIC & STUDENT DEVELOPMENT

- STRATEGI 2 : Pacuan Kecemerlangan Peringkat Antarabangsa
  - KA6 : PENGANTARABANGSAAN AKADEMIK
    - P1 : Kolaborasi Akademik Antarabangsa
    - P2 : Rangkaian Alumni antarabangsa
    - P3 : Aktiviti promosi antarabangsa
    - P4 : Academic Program/ Accreditation
    - P5 : International Student Enrolment
    - P6 : Student & Staff Mobility/ Attachment
    - P7 : Pelan Pemikiran Global Pelajar
  - KA8 : Pusat Pengajian, Pusat Penyelidikan dan Pusat Perkhidmatan
    - P1 : Peningkatan kedudukan PTJ dalam USM
    - P2 : Program Pengantarabangsaan PTJ
    - P3 : Program Penyelidikan PTJ
    - P4 : Program Akademik PTJ
    - P5 : Program Peningkatan Penjanaan Kewangan
    - P6 : Program PTJ Berautonomi (tidak semua)
    - Program KTP dan libat sama komuniti
- STRATEGI 3 : Transformasi Pengurusan , Kewangan dan Keusahawanan
  - K2 : University Entrepreneurship and Business
    - P1 : Keusahawanan Pasca Siswazah
    - P2 : Keusahawanan Ahli Akademik
    - P3 : Keusahawanan Hijau Pra Siswazah

CHART D8: PILLAR 6 – FINANCIAL SUSTAINABILITY

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P6 : FINANCIAL SUSTAINABILITY

- STRATEGI 3 : Transformasi Pengurusan , Kewangan dan Keusahawanan
  - K1 : Peningkatan Penjanaan Kewangan
    - P1 : Kolej Teknikal USM (Apex College)
    - P2 : The APEX School
    - P3 : Pusat perkhidmatan USM menjana kewangan. CETREE, Pusat Racun Negara, Muzium danGaleri Tuanku Fauziah, Pusat Kawalan Doping, The Centre for Advanced Analytical Toxicology Services (CAATS), P3Neuro. Centre for Herbal Standardization (CHEST) dan PIPPA dan Penerbit
  - K3 : Program Penjanaan Kewangan
    - P1 : Sg2 Revitalization
    - P2 : Sains@USM
    - P3 : USains Holdings
    - P4 : YAYASAN USM
    - P5 : PROGRAM ENDOWMENT USM

CHART D9: PILLAR 7 – INSTITUTIONAL DEVELOPMENT

CHART D9A: PILLAR 7 – INSTITUTIONAL DEVELOPMENT

TABLE 2: STRATEGIES, STRATEGY DRIVERS AND STRATEGIC OBJECTIVES

STRATEGY	DRIVER	PROGRAMME
STRATEGY 1 Transformation of Talent and Human Resources	T.1: Transformation of Governance and Talent	SO1: Increase in Staff Productivity and Cultivate the Culture of Excellence
	T.2: Student Empowerment	SO2: Strengthening Talent Based On Togetherness, Cooperation and Sustainability
	T.4: Widening Focus on Community Engagement	SO4: Linkage to Industry, Government and Community
	T.5: New Programmes and New Directions of the Schools	SO5: Improvement in the Capability of Academic Programmes to become the Programmes of Choice by Students
	T.6: Continuation of 2014 Programmes	SO6: Continuation of Policy and Strengthening Programmes
STRATEGY 2 Driving Excellence at the International Level	KA1: World Class Research	SO1: Driving Excellence in Various Fields of Research
	KA2: 2015 Research Excellence	SO2: A Shift in USM Impactful Research
	KA3: New Niche	SO3: Intensify Niche or Cluster Impactful Research to A Higher Level
	KA4: Redifining Management Roles	SO4: Improvement in Research Ecosphere and Visibility of USM
	KA5: Focus on Strengthening the Foundation of a Research University	SO5: Continuation of Research University Strengthening Efforts
	KA6: Academic Internationalisation	SO6: Improvement in international competitiveness and academic quality with global thinking mindset as well as improvement in the employability of graduates
	KA7: International Sustainability and Community Engagement Position	SO7: Strengthening and improving the visibility of USM in leading niche community engagement and sustainability
	KA8: Schools, Research Centres and Service Centres	SO8: PTJ Strategic Plan is in line with the aspiration of PTJ establishment and aligned with the direction of USM via APEX Phase II

STRATEGY 3 Transformation of Management, Finance and Entrepreneurship	K.1: Increase in Income Generation	SO1: Generate income from academic activities and services
	K.2: University's Business and Entrepreneurship	SO2: Widening Entrepreneurship Programmes to Students and Academia
	K.3: Income Generation Programmes	SO3: Financial Sustainability
STRATEGY 4 Transformation of Campus Development	PE.1: MAIN CAMPUS	SO1: Strengthening the campus to become more Sustainable and Efficient
	PE.2: BERTAM	SO2: The 4th campus of USM
	PE.3: SAINS@USM	SO3: Entrepreneurship Research Campus
	PE.4: ENGINEERING CAMPUS	SO4: Engineering Excellence
	PE.5: HEALTH CAMPUS	SO5: Health and Medical Referral Centre in the East Coast
	Off-Campus Entity	SO6: Strengthen and develop programmes in line with the objectives.
STRATEGY 5 Sharing of Expertise and Knowledge Transfer	TR1: Knowledge Transfer Programme	SO1: Leading in Knowledge Transfer Programme based on APEX Sharing concept
	TR2: Centre for Economic Development	SO2: Backbone to the local economic activities

PART E JOINT RESPONSIBILITY

121. Driving excellence should be the responsibility of all. It should not remain as an aspiration only but it also involves behaviours and actions. The 9 Thrusts of APEX have to be hold firmly together with the 5 values of APEX. Reinforcement to the true meaning of Qalbu is the foundation to the transformations implemented by PTI and applied by PTJ.

TABLE E1. EXAMPLE OF STUDENT'S FRAMEWORK

STUDENTS	1. Global-Thinking Student Plan 2. ASEAN Students' Parliament 3. Heavy Floods 4. Sustainability Programmes	1. Driving excellence together with the university to face ASEAN challenges in 2015	1. USM provides freedom to think and act for students 2. USM provides Student Empowerment 3. 2015 is the year where USM students have to manifest the spirit of "We Lead" at the ASEAN university level 4. Cultivate the spirit of volunteerism in every student, "Ready for the not ready"	1. Make USM Campus to become a Global Campus via increased interaction with international students, including those who are in the campus 2. Make knowledge culture as a prominent milestone in instilling values and the thrusts of APEX among students 3. Make the culture of volunteerism as a key element among USM students to help those who are in need 4. Kampus Sejahtera and Volunteer Corps can become a platform for volunteerism enculturation

STUDENTS

122. USM students, whether they are undergraduate students, distance-learning students, postgraduate students, off-shore students or pre-university students, they all have a great responsibility. This responsibility includes having high ethical values. Students are recommended to

T1 Make USM Campus to become a Global Campus via increased interaction with international students, including those who are in the campus.
T2 Make knowledge culture as an important milestone in instilling values and the thrusts of APEX among students.
T3 Make the culture of volunteerism as a key element among USM students to help those who are in need.
T4 Kampus Sejahtera and Volunteer Corps can become a platform for volunteerism enculturation.
T5 Manifest the spirit of "We Lead" at the ASEAN universities level.

123. Table E1 shows the framework that can be implemented by students

TABLE E2: EXAMPLE OF STAFF'S FRAMEWORK

STAFF	1. Heavy Floods 2. Human Transformation Centre programmes	1. Driving excellence together with the university to face ASEAN challenges in 2015	1. Spirit of togetherness and "Saya Sayang USM" should exist among the staff themselves. 2. The culture of volunteerism should be widened among the staff. 3. Helping university by improving work performance.	1. Administrative staff should be more effective and productive in driving the USM APEX Agenda. 2. The spirit of "Saya Sayang USM " should be translated in the form of volunteerism, contributing ideas and many more

STAFF

124. Staff can move towards an improvement of togetherness, to be more productive and to reduce conflicts. In line with this, staff is expected to:

S1 Administrative staff should be more effective and productive in driving the USM APEX Agenda.
S2 The spirit of "Saya Sayang USM" should be translated in the form of volunteerism, contributing ideas and many more.
S3 Helping university by improving work performance to ensure that the KPI of the departments can be achieved.

125. Table E2 shows the framework that can be implemented by staff

TABLE E3: EXAMPLE OF ACADEMIC STAFF'S FRAMEWORK

FOR ACADEMIC STAFF	1. World-class research 2. Community engagement projects	1. Driving excellence together with the university to face ASEAN challenges in 2015	1. Spirit of togetherness and "Saya Sayang USM" should exist among the staff themselves 2. Academic Staff should be the role model to students and administrative staff as well as off-campus community 3. The number of academic contributions need to be futher improved	1. Academic staff needs to double their efforts and energy to contribute to the university in the form of journal publications and academic writing. 2. "Knowledge Sharing" approach with off-campus community should be mobilised actively and in an integrative form.

ACADEMICIANS

126. Academia and the academic profesion are noble and they can become the exemplary role model to students, staff and community. Therefore, the following things can be implemented:

A1 Academic staff needs to double their efforts and energy to contribute to university in the form of journal publications and academic writing.

A2 "Knowledge Sharing" approach with off-campus community should be mobilised actively and in an integrative form.

A3 Academic staff should be the role model to all students, administrative staff and off-campus community.

127. Table E3 shows the framework that can be implemented by the academic staff

ALUMNI AND *JASA BUDI*

128. The University has always welcomed the presence, support and participation of alumni at various levels, locations and stages of career development. Besides the officially registered USM Alumni Association, there is also a registered focused

Alumni Association. In addition, there are many unofficial USM Alumni networks that are in contact with one another.

129. The Alumni Liaison Office has mobilised several local and international Alumni Secretariats to strengthen the relationship between alumni and USM. USM Alumni have also been set up in Sabah, Melaka, Kelantan and Acheh. Efforts to strengthen and enhance these networks are currently being implemented and ongoing.

130. USM also hopes that staff who have left the university will remain in touch through Kelab Jasa Budi, a club registered under university leadership to serve as a platform for maintaining ties between the university and its former staff.

UNIVERSITY'S EFFORTS AT DRIVING EXCELLENCE

131. Driving excellence at university level requires commitment of the entire University community to work together across various disciplines. It involves equipment and facilities sharing for various purposes through focused and strategic action embracing the values and culture of excellence to develop leadership sucession and implement intervention and strategic programmes together in a synergised ecosphere that includes the industry in order to harness our collective strength and not have to rely on individuals. The silo mentality is no longer appropriate for the process of transformation in higher education today.

132. The success of these efforts should be measured based on: their impact to the community, nation and the world, a realistic attitude towards the environment, a willingness to explore the future in a more innovative, creative and viable manner by mastering competitiveness in an entrepreneurial spirit, as well as good management of perception premised upon the foundation of knowledge or the university's fundamental of knowledge that needs to be maintained.

133. USM has identified nine foundations or thrusts that should be adhered to by its entire community to ensure that efforts in driving excellence can be implemented in accordance to the needs of nation-building and continued sustainability. These values need to be embraced fully in order to achieve excellence and thereby ensure that its achievements are balanced to narrow the existing gap through the implementation of strategized special programmes involving both academic and administrative communities.

134. The nine thrusts of Apex are knowledge, the future, uniqueness, sustainability, humanity, universality, change, sacrifice and wellness. These thrusts are to be realised through the understanding of six key values of Apex namely quality, equity, readiness, accessibility, affordability and appropriateness that will support the efforts towards achieving excellence. Basically, a firm adherence to these thrusts will help

strengthen the spirit of higher education which is not merely in producing graduates who are able to think creatively and innovatively besides being independent and highly competitive; but also to ensure that the thrusts will be embraced and realised by the researchers and the rest of the community to mobilise their strengths for a realistic achievement of our national higher education agenda.

135. In a rapidly changing world that is filled with challenges, the university needs to have a firm grip on these thrusts to remain relevant and able to meet the existing demands and find the best way to engage with other parties. This must be viewed holistically, not just by students but also by academicians and researchers in order to improve accountability and integrity in all our efforts.

136. Students need to master these values so that they can move beyond their comfort zone and a lackadaisical attitude towards mastering new knowledge and work towards equipping themselves with skills for their future. Various mechanisms exist, ranging from leadership in clubs and societies, voluntary activities and so forth to the students' parliament which trains students to become future leaders.

137. The two main components of this university – students and lecturers/researchers should not be too idealistic but should also be realistic in whatever they do be it exploring knowledge, research or personal development as idealism and realism reinforce one another.

138. The entire university community has to master the competitive edge and the attributes that differentiates us from others in order to remain competitive and build a strong brand in various fields.

139. The University is no longer an ivory tower that exists isolated from the community but should engage with as many parties as possible through various networks of collaboration at regional or international level to mobilise all our strengths to continuously contribute to the community, nation and the world.

140. The University is a tower of knowledge that needs to collaborate with others to ensure that whatever it possesses – knowledge and expertise, human resources and other resources can truly be mobilised to develop and build the country, nation and the world.

VOLUNTARY WORK TO UNITE ALL UNIVERSITIES

141. First hand knowledge of the destruction wrought by the Kelantan floods, including the University Malaysia Kelantan (UMK) campus will definitely touch our hearts and encourage the burying of differences in order to extend a helping hand.

142. USM became ground zero for relief efforts as our Kubang Kerian campus was not affected by the flood. USM Hospital is fortunate and thankful to be spared, enabling it to receive patients transferred from flood affected hospitals through various means including by helicopter.

143. Even though faced with a shortage of hospital staff due to several being affected by the floods and medical experts who were assisting at areas outside the campus besides limited medical infrastructure, USM Hospital managed to fulfil its responsibility by providing treatment to dialysis patients who required double the normal rate of treatment. Thanks to the Ministry of Health and Ministry of Education who also helped enhance the relief efforts by providing additional funds to accelerate the necessary arrangements for community welfare and health.

144. There are many hidden blessings behind to disaster. One is that it has taught us to prepare a Standard of Procedure (SoP) to face such an incident if ever it recurs in the future. For example, how to evacuate students trapped in the flood and bring them back to campus especially to sit for examination. More than 400 students were brought back to USM campus or rescued from their campuses such as students from UMK and a few other universities.

145. Besides that, as we are now witnessing, many USM staff and student volunteers are in Kelantan to help in post-flood relief operations such as cleaning of schools and offering other assistance.

146. All involved universities lent their hands voluntarily by mobilising all levels of staff to provide transportation, food, lodging, and other services including available expertise.

147. USM is honoured to have provided the "War Room" to coordinate all efforts, collect information, liaise with various departments particularly those in the field and provide other efforts that enhanced the effectiveness of the flow of work which was also managed by all other universities in rendering assistance for school cleaning operations in Kelantan.

148. This was a hidden blessing for all universities because before this they focused on sharing expertise in the field of research and training, but now they are working hand in hand, reaching out to the people and community directly as one large academic community.

149. This is also a prominent element of Driving Excellence – working together, sharing knowledge and experience as well as displaying a true spirit of volunteerism regardless of difference for the benefit of the community and the country.

150. These efforts need to be continued in the future. USM is determined to play a role to mobilise these efforts continuously and turn such efforts into a wide scale field work in the sharing of expertise in various areas that can be fully exploited for post-flood reconstruction.

151. It was sad to see the badly damanged library books and the silt soil still covering the UMK campus. Many of its physical facilities were destroyed. Appropriate efforts will be undertaken to aid reconstruction and use expert knowledge to deal with such similar situation in the future.

152. USM and other universities across the nation have the expertise and vast knowledge strength that can be pooled together for this purpose. This is also the time for us to be realistic in taking full advantage of various knowledge disciplines – from waste water management, housing, public facilities, health, clean water sources, mitigation and engineering etc. need to be carried out systematically and in an orderly manner.

153. At present, efforts are focused on sending teams of volunteers to help in restoring and cleaning of schools as well as other related aid efforts. However, we need to think in the long term on how to work together to ease the burden and suffering of the flood victims.

154. This includes providing health infrastructure, public facilities and also counselling to help those who are facing stress due to this unexpected and unprecedented natural disaster. A holistic view should be taken, and this is also an opportunity for us to realise the concept of identity development through integrated education based on local needs.

155. This concerted, cross-disciplinary efforts undertaken by all universities represents the best example of the strength possessed by our country resulting from its investment in knowledge and higher education over the years. As stated by the second Minister of Education, Dato' Seri Idris Jusoh during his recent visit to the Ministry of Education War Room at USM Health Campus, we need to act quickly together, implement new methods and cast off the old mindset in working together to help the community without hindrance from rules and red tape that can delay our efforts.

The Unity of Knowledge: Arts in Science, Science in Arts.

156. Academic communities the world over recognise the existence of different types of knowledge. Knowledge can generally be classified into two groups, namely the sciences and the arts. These two classifications of knowledge are often regarded as distinct groups with no connection between the two. This understanding of the

perceived dichotomy towards knowledge and education has resulted in impaired thinking. Generally, humans master the material aspects of knowledge like facts and figures at the expense of the soul, values and feeling. These recommendations in this section are from the thoughts of a renowned scholar of which we should take note, and apply accordingly.

157. As members of an eminent university, we in USM should reject such obsolete and destructive epistemology and educational practices, and instead pioneer fresh and constructive practices. Knowledge is diverse, but for a complete life humans need unity – unity of knowledge. Knowledge is like the human condition. Humans possess the elements of heart, body and soul, each with various needs. However, for a healthy human existence these elements need to be nurtured holistically. These elements exist in a hierarchy from the body to the heart, to the highest level which is the soul. So too is knowledge. In order to benefit humankind, knowledge must be unified and nurtured in an integrated manner. In a similar manner, knowledge is structured hierarchically, beginning with empirical knowledge to rational knowledge (*aqliah*) to spiritual knowledge (*rohaniah*).

158. The unity of arts and sciences as described above was well accepted in the past during classical Islamic civilisation. This unity was manifested in many prominent personalities. Umar Khayyam for instance was a famous mathematician and poet. His poem titled The Rubaiyyat of Umar Khayyam reverberates throughout Europe and America until now. Ibn Sina was a philosopher and medical expert whose magnum opus *Kitab al-Syifa* (The Book of Healing) was a reference in European universities, similarly Ibn Tufayl. These luminaries all appreciated the unity and hierarchy of knowledge. Such concept of knowledge and education is appropriate with the term and concept of "university" that originated from the Latin word “*universes*” which means comprehensive and integrated.

159. The question is, how are we to reinstate the unity of knowledge and education that has so long been a victim of dichotomy? This is a difficult question, but it needs to be addressed immediately.

159.1 First, we begin by rejecting the romanticised efforts of those who treat science as the ultimate arbiter of meaning in human life. On the contrary, we must dare to speak out and voice the following: "... in an age of "disruption" and the veneration of science and technology, "the humanities and the arts are central to any life that one should want to live." (Don M. Randel, Mellon’s President Annual Report, 2012). We must then demonstrate the hybrid nature that exists in certain disciplines such as Architecture and various craftsmanship. In such disciplines, students can appreciate science, technology, sociology and the arts simultaneously in the harmonious blend of the quantitative and the qualitative, the objective and the subjective, the concrete and the abstract.

159.2 Next, we can introduce teaching modules which allow students to study the arts such as drawing, music, dance and folklore. Each of these arts can be studied scientifically and the students can understand the biological aspect of these respective arts. However, full and complete understanding can only take place when we teach students to appreciate each arts qualitatively within the context of the respective communites and cultures.

160. A truly constructive and positive culture can be developed by reviving the concept of unity of science and arts. This can be done by breaking down the walls of dichotomous thinking that has taken root. In the 21st century, this effort has been pioneered in various ways such as at Rutgers University, New York University, Binghamton University in New York (SUNY) and University of Cambridge. (MSY 2014)

2015 CHALLENGES

161. 2015 has just begun and our country had faced numerous economic, social and political challenges. The challenges that lie ahead will affect everyone, without fear or favour. USM will take proactive steps which will form the core of our management in 2105 by still maintaining our 2015 targets, although there may be a need to reduce the degree of projected achievable output.

162. Besides measures announced by the Government, USM is also focused on cost rationalisation in the non-core activities. Efforts to increase internal and external collaboration to create a cost-sharing platform and increase income from low-risk supporting activities will be implemented.

163. Besides the economic situation, disasters, weak ringgit and drop in oil prices, the interest of the stakeholders will also be taken into consideration in managing perception and driving the university towards excellence.

164. In closing, I wish for all of us to be blessed in whatever we do, improve ourselves and adopt a positive outlook in all that we do. Take care of our family and loved ones as our first priority and ensure that conflicts arising from personal interest are avoided while carrying out our daily duties and work. To the Muslims, be sure to fulfil our obligations such as keeping the prayer times, paying religious tithes and maintaining good relationships with those around us.

165. AMEEN YA RABBB

15 January 2015

APPENDIX A

<table>
<tr><th colspan="4">FRAMEWORK OF THE VICE-CHANCELLOR'S ANNUAL ADDRESS 2015</th></tr>
<tr><th colspan="4">TOGETHER FOR UNIVERSITY'S EXCELLENCE (BUKU) 2015: DRIVING EXCELLENCE IN NATIONAL HIGHER EDUCATION</th></tr>
<tr><th>STRATEGY NO.</th><th>DRIVERS</th><th>PROGRAMMES</th><th>2015 TARGET</th></tr>
<tr><td colspan="4">Part C: 2015 Strategies</td></tr>
<tr><td rowspan="6">STRATEGY 1
Transformation of Talent and Human Resource</td><td rowspan="5">T.1
TRANSFORMATION 1
Transformation of Governance and Talent</td><td colspan="2">SO1
Increase in Staff Productivity and Cultivate the Culture of Excellence</td></tr>
<tr><td>P1.
Comprehensive Human Resource Management Policy</td><td>R1.
Formulation of Policy</td></tr>
<tr><td>P2.
Transformation of the heart through Apex Leadership Programme and infusion and intervention programmes</td><td>R2.
Basic, intermediate and advanced levels' Onboarding Programme</td></tr>
<tr><td>P3.
Lean management</td><td>R3.
Analysing and reviewing Administrative Process</td></tr>
<tr><td>P4.
Academic Staff Planning that focuses more on succession planning for subjects and fields</td><td>R4.
Planning for the needs and Implementation</td></tr>
<tr><td rowspan="5">T.2
TRANSFORMATION 2
Student Empowerment</td><td colspan="2">S02.
Strengthening Talent Based On Togetherness, Cooperation and Sustainability</td></tr>
<tr><td>P.1
APEX Scholar</td><td>R1
Implementation</td></tr>
<tr><td>P.2
Kampus Sejahtera that focuses on the area of sustainability</td><td>R2
Self-sufficiency programmes</td></tr>
<tr><td>P.3
Strengthening Volunteer Corps</td><td>R3
Disaster management skills and volunteer impact programmes</td></tr>
<tr><td>P.4
Innovation from students to</td><td>R4
Knowledge Transfer</td></tr>
</table>

		the community	Programme
		P.5 ASEAN Students' Parliament	R5 Premier Conference
	T.3 **TRANSFORMATION 3** Transformative Learning and Teaching	**SO3** Relevant to Technology Advancement and Alternative Education	
		P.1 Planned transformative learning with well-defined direction	R1 Planning and Setting of Direction
		P.2 Transformative teaching is implemented in various modalities as deemed appropriate	R2 Implementation
	T.4 **TRANSFORMATION 4** Widening Focus on Community Engagement	**S04** Linkage to Industry, Government and Civil Society	
		P.1 USM Cares	R1-R6 Implementation in accordance to Community Engagement Niche Areas of Expertise
		P.2 Marginalised Community	
		P.3 Education for the Underpriviledged	
		P.4 Life Long Service for OKU's	
		P.5 Tour and Visit Our Campus Programme	
		P.6 Programme Leveraging on Academic and Research Commodity	
	T.5 **TRANSFORMATION 5** New Programmes and New Directions of the Schools	**SO5** Improvement in Capability of Academic Programmes to make the Academic Programmes to Become the First Choice of Students	
		P.1 Refocusing School of Industrial Technology	R1 Refocusing
		P.2 School of Heritage Sciences or/and offering of international heritage	R2 Offering of International Programmes

		science programme	
		P.3 Establishment of School of Lifestyle Sciences or/and offering of Bachelor of Science (Lifestyle Sciences)	R3 Process of Establishment and Offering of Programme
		P.4 Bachelor of Management programme - international Programme accredited by The Association to Advance Collegiate Schools of Business (ACCSB) and jointly coordinated by the School of Management and the School of Distance Education	R4 Implementation
		P.5 International Institute of Lifelong Learning	R5 Planning and Setting of Direction
		P.6 International College of Liberal Arts Studies and Science and international programme of language, education and management	R6 Planning and Setting of Direction
	T.6 **TRANSFORMATION 6** Continuation of 2014 Programmes	**SO6** Continuation of Policy and Strengthening of Programmes	
		P.1 Apex global fellowships	R1-R6 Continuation of implementation and strengthening of programmes includes new modus such as COMMUNITY INNOVATION PIMPIN SISWA
		P.2 Education for marginalised community	
		P.3 Community engagement for focused community	
		P.4 Agro-tecture - urban agriculture based on the concept of green urban	
		P.5 Internship Student Mobility and sector focused industrial training	

		P.6 PIMPIN SISWA PIMPIN SISWA	

FRAMEWORK OF THE VICE-CHANCELLOR'S ANNUAL ADDRESS 2015			
TOGETHER FOR UNIVERSITY'S EXCELLENCE (BUKU) 2015: DRIVING EXCELLENCE IN NATIONAL HIGHER EDUCATION			
STRATEGY NO.	**DRIVERS**	**PROGRAMMES**	**2015 TARGET**
Part C: 2015 Strategies			
STRATEGY 2 Driving Excellence at the International Level	**KA1** **WORLD CLASS RESEARCH: Towards a World Class Research**	**SO1** Driving Excellence in Various Fields of Research	
		P.1 Establish a conducive talent mobility ecosphere	R1 Effective Management, Resource and Governance
		P.2 Young Researcher Development Programme	R2 Number of Mentor-Mantee Number of Science Journalism Workshops
	KA2 **2015 RESEARCH EXCELLENCE**	**SO2** Producing more Impactful Research	
		P.1 USM-RIKEN Centre for Aging Science	R1 Establishment of USM-RIKEN International Centre for Aging Science (URICAS) Signing of MoU
		P.2 Conservation and Sustainable Productivity of the Mangrove Ecosystem	R2 Fundamental Research International Collaboration
		P.3 Crime and Public Safety	R3 Focused Crime Dimension
		P.4 Cerebral Palsy Research Cluster (CPRC)	R4 Joint Implementation and Collaboration with Agency
		P.5 Conservation and Management of Belum-Temengor Forest Towards Achieving World Heritage Status	R5 Initiative towards the Establishment of USM Belum-Temengor Research Centre

		P.6 MyARK Genome Project – Malaysian All Repository of Living Kingdoms Genome Project	R6 Development of Malaysian Mega Diversity Repository
	KA3 **NEW NICHE**	**SO3** Intensify Niche or Impactful Research Cluster to the Highest Level	
		P.1 Archaeological Research Project	R1 Pre-history and Proto-history of Malaysia Asian Archaeology Training and Reference Centre
		P.2 USM-Yale Drug Addiction Research Programme	R2 Programme Development USM/YSM Certification Programme
		P.3 Halal Vaccine	R3 Strengthening the halal hub platform in meningococcal meningitis and typhoid
		P.4 Green Technology Research	R4 Preparation of USM Green Tech Master Plan
		P.5 Disaster and Mitigation Research Cluster	R5 Template for disaster management integrated system
		P.6 Local Wisdom Cluster	R6 Expansion
	KA4 **REDEFINING MANAGEMENT ROLES**	**SO4** Increasing USM's International Visibility and Research Ecosphere	
		P.1 Focusing on advanced research field	R1 Establish new centres/institutes/administrative platforms or strengthen the existing facilities
		P.2 International Collaboration Office	R2 Office of the International Research Collaboration
		P.3 Innovation and Commercialisation Office	R3 Widening scope

		P.4 Centre for Research Initiatives (CRIs)	R4 Widening of scope to provide integrated laboratory services and developing talents through cluster leadership
	KA5 **FOCUS ON STRENGTHENING THE FOUNDATION OF RESEARCH UNIVERSITY**	**SO5** Continuation of Research University Strengthening Efforts	
		P.1 Latest and advanced infrastructure	R1 Collaboration with industry to establish laboratories
		P.2 Centralisation of Potential New Research Clusters to become Research Excellence Centres	R2 9 potential new fields have been identified to be developed as research Centres
		P.3 Commercialisation	R3 Strengthening of outcomes strategy
		P.4 Research to Market Programmes	R4 Global Embedding Knowledge Transfer Principles
		P.5 Research Icons	R5 Global Prominence in Publications, researchers, laboratories placement and global research icons in USM niches
		P.6 Iconic Research	R6 5 of Iconic Research for External Linked
	KA6 **ACADEMIC INTERNATIONALISATION**	**SO1** Increase in international competitiveness and academic quality with global thinking mindset as well as increase in graduates' employability	
		P.1 International Academic Collaboration	R1 Academic and Staff Collaborations Programme in areas of mutual interests QW: Toyohashi and Peshawar University
		P.2 International Alumni Network	R2 Implementation

		P.3 International Promotion Activities	R3 Promotion and recruitment
		P.4 Academic Programme/ Accreditation	R4 Total Academic Quality Enhancement
		P.5 International Student Enrolment	R5 Dedicated programme to increase student enrolment
		P.6 Student & Staff Mobility/ Attachment	R6 Continue with more newer universities
		P.7 Global Thinking Student Plan	R7 Program with right environment of APEX Ecosphere
	KA7 **SUSTAINABILITY AND COMMUNITY ENGAGEMENT POSITION AT INTERNATIONAL LEVEL**	**SO7** Strengthening and improving the visibility of USM in leading niche community engagement and sustainability	
		P.1 Putting USM in World Map on Collaborations, Regionalism and Strategic Global Events	R1 1 SUMMIT
		P.2 Sustainability Assessment Methodology (SAM) and University Sustainability Ranking	R2 Assess 200 Universities in the world to review the content of sustainability
		P.3 Internationalisation of Community Engagement	R3 International Community Engagement Collaboration
		P.4 Programmes for National Disaster Management Conference	R4 Implementation
	KA8 **SCHOOLS, RESEARCH CENTRES AND SERVICE CENTRES**	**SO8** PTJ Strategic Planning that is in line with the aspiration of the PTJ's establishment and aligned with USM's direction via APEX Phase II	
		P.1 Elevate the position of PTJ in USM	R1-R7

		P.2 PTJ Internationalisation Programmes	Planning and implementation with each PTJ setting its own target with capability assessment
		P.3 PTJ Research Programmes	
		P.4 PTJ Academic Programmes	
		P.5 Increase in Income Generation Programmes	
		P.6 Autonomous PTJ Programmes (not all PTJs)	
		P.7 Knowledge Transfer and Community Engagement programmes	

FRAMEWORK OF THE VICE-CHANCELLOR'S ANNUAL ADDRESS 2015			
TOGETHER FOR UNIVERSITY'S EXCELLENCE (BUKU) 2015: DRIVING EXCELLENCE IN NATIONAL HIGHER EDUCATION			
STRATEGY NO.	**DRIVERS**	**PROGRAMMES**	**2015 TARGET**
Part C: 2015 Strategies			
STRATEGY 3 Transformation of Management, Finance and Entrepreneurship	**K.1** **ENTREPRENEURSHIP 1** Increase in Income Generation	**SO1** Generate income from academic activities and services	
		P.1 USM Technical College (Apex College)	R1 Capability Assessment and Early Movement of Establishment
		P.2 The APEX School	R2 Implementation
		P.3 Income generation through USM service centres. CETREE, National Poison Centre, Tuanku Fauziah Museum and Arts Gallery, Doping Control Centre , The Centre for Advanced Analytical Toxicology Services (CAATS), P3Neuro.	R3 Increase in the ability to generate income

		Centre for Herbal Standardization (CHEST), PIPPA and USM Press	
	K.2 **ENTREPRENEURSHIP 2** University's Business and Entrepreneurship	**SO2** Widening Entrepreneurship Programmes to Students and Academia	
		P.1 Postgraduate Entrepreneurship	R1 Module development and pilot test
		P.2 Academia Entrepreneurship	R2 Implementation of Focused Entrepreneurship Enculturation pilot test
		P.3 Undergraduate Green Entrepreneurship	R3 Implementation of Sustainability Entrepreneurship and Green Technology pilot test
	K.3 **ENTREPRENEURSHIP 3** Income Generation Programmes	**SO3** Financial Sustainability	
		P.1 Sg2 Revitalization	R1 Capability assessment and planning of implementation plan
		P.2 Sains@USM	R2 Phase 2A: NCIA / CREST / USM INCUBATOR
		P.3 USains Holdings	R3 Implementation of Business Development
		P.4 USM FOUNDATION	R4 Scholarship & Endownment
		P.5 USM ENDOWNMENT PROGRAMME	R5 Conventional and Islamic Endownment

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<tr><td colspan="5">Part C: 2015 Strategies</td></tr>
<tr><td rowspan="9">STRATEGY 4
Transformation of Campus Development</td><td rowspan="7">PE.1
DEVELOPMENT 1
MAIN CAMPUS</td><td colspan="2">SO1
Strengthening campus to become more Sustainable and Efficient</td></tr>
<tr><td>P.1
Chancellory 2</td><td>R1
Implementation and Relocation of departments at Chancellory 2</td></tr>
<tr><td>P.2
Toray USM building and Tan Sri Azman Hashim Sports Complex</td><td>R2
Development</td></tr>
<tr><td>P.3
Kompleks Eureka
Eureka Complex</td><td>R3
IPS and Centralisation of PPKT</td></tr>
<tr><td>P.4
USM Media Centre</td><td>R4
Merging of Public Relations Office and Strategic Communinations Office</td></tr>
<tr><td>P.5
Creative Design House</td><td>R5
Merging and centralisation of Designers</td></tr>
<tr><td>P.6
University Operation and Coordination Office</td><td>R6
New establishment</td></tr>
<tr><td rowspan="3">PE.2
DEVELOPMENT 2
BERTAM</td><td colspan="2">SO2
The 4th campus of USM</td></tr>
<tr><td>P.1
Shifting of off-campus programmes back to Bertam campus</td><td>R1
Implementation</td></tr>
<tr><td>P.2
Enhancement of IPPT ability</td><td>R2
A tertiary referral centre in niche area and continuation of impactful clinical research as well as enhancement in dental services</td></tr>
<tr><td>PE.3
DEVELOPMENT 3</td><td colspan="2">SO3
Entrepreneurship Research Campus</td></tr>
</table>

	SAINS@USM	**P.1** Launching of USM Club	R1 Launching of USM Club
		P.2 Development of I2U	R2 Development
		P.3 Entrepreneurial Research Campus	R3 Focus
		P.4 Accomodation complex	R4 Development
		P.5 Focused industrial relations	R5 Implementation and Expansion of Focused Industrial Relations through ICE
		P.6 Transformation of SAINS@USM	R6 Integration such as Institute for Integrated Management
		P.7 IPPTN	R7 Transformation towards HiCoE
	PE.4 **DEVELOPMENT 4** ENGINEERING CAMPUS	SO4 Engineering Excellence	
		P.1 Integrated Laboratory Building	R1 Equipment
		P.2 New REDAC Building	R2 Shifting to New Building (Integrated Laboratories)
		P.3 Research and advanced cluster management through SERC	R3 Implementation
		P.4 Engineering Entrepreneurial Development Programme	R4 Engineering and technology management training
	PE.5 **DEVELOPMENT 5** HEALTH CAMPUS	SO5 Health and Medical Referral Centre at the East Coast	
		P.1 Campus Integrated Management system	R1 Implementation
		P.2 Hospital Integrated Information System	R2 Implementation

		P.3 Quality service programme	R3 Continuous Improvement
		P.4 HUSM	R4 Continuous equipment replacement plan
		P.5 HUSM Disaster Standard Operating Plan	R5 Strengthening Operation Plan
	PE.6 **DEVELOPMENT 6** Off-Campus Entity	**SO6** Strengthen and develop programmes in line with the objectives	
		P.1 CMECS – Center for Marine Reseach	R1 A referral centre for marine biology research and moving towards HiCoE
		P.2 Lenggong Archaeological Site	R2 Process to acquire a piece of land to build an off-campus research centre focused on Archaeology and other related fields
		P.3 IPS USM Learning Center in KL (PPPG KL)	R3 Increase in offering of Postgraduate programmes
		P.4 KLE INDIA	R4 USM International Medical Education Centre
		P.5 11 PPPJJ LEARNING CENTERS	R5 Strengthen facilities
		P.6 MARA Pre-U	R6 Continuation and Expansion of Joint Programme with Kulim MARA College

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<tr><td colspan="5">Part C: 2015 Strategies</td></tr>
<tr><td rowspan="7">STRATEGY 5
Sharing of Expertise and Knowledge Transfer</td><td rowspan="5">TR1
Knowledge Transfer Programme</td><td colspan="3">SO1
Leading in Knowledge Transfer Programme based on APEX Sharing concept</td></tr>
<tr><td>P.1
National KRA Core Knowledge Transfer Programme</td><td>R1
Fifth roll out/KRA1</td></tr>
<tr><td>P.2
Integrated Knowledge Transfer Monitoring programme</td><td>R2
Online implementation</td></tr>
<tr><td>P.3
KTP at IDR Perak, KTP Johor</td><td>R3
Roll out programme</td></tr>
<tr><td>P.4
Nasional@USM KTP</td><td>R4
Formulation</td></tr>
<tr><td rowspan="2">TR2
Centre for Economic Development</td><td colspan="3">SO1
Backbone to the local economic activities</td></tr>
<tr><td>P.1
Community Innovation Centre</td><td>R1
Implementation</td></tr>
</table>