



RESEARCH AND INNOVATION MANAGEMENT CENTRE
ANNUAL REPORT
2017

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Foreword

Assalamualaikum WBT and Greetings to all,

In the name of Allah, the Most Beneficent and Most Merciful, by the Grace of God, we have been able to complete the publication of our 2017 Annual Report for the Research and Innovation Management Centre, Universiti Utara Malaysia.

This year's Annual Report is about capturing the dynamic performance characteristics of efforts to improve Universiti Utara Malaysia's performance in research, publication and innovation. These efforts permeate in every associated activity within the university and helped UUM achieve the Malaysian Research Assessment (MyRA) 4-star rating for 2016 assessment year. That continued in 2017 and is reflected in this report.

I would also like to take this opportunity to acknowledge my predecessor, Professor Dr. Noor Azizi Ismail who provided leadership and guidance during this period and the many anonymous reviewers and contributors who helped in completing this report.

It is hoped that the information contained in this report can be used by all parties in our efforts to enhance the research and innovation sector.

Wassalam,

PROF. DR. AYOIB CHE AHMAD
Deputy Vice-Chancellor (Research and Innovation)
Universiti Utara Malaysia

1.0 Introduction

The Research and Consultation Centre was established on the 1st of May 1986. On the 1st of January 2006, the centre was merged with the Publishing, Broadcasting, and Media Technology Division and renamed the Department of Research and Innovation. On 1st of January 2008, after a restructuring exercise, the department was renamed as the Research and Innovation Management Centre (RIMC).

RIMC's role is to manage, motivate, and stimulate research among academicians to increase the overall productivity of the University, by helping to produce impactful publication through research, increased participation, and quality research output.

1.1. Vision

To drive the management discipline towards human development that ensures the sustainability of faith, nation, and country through excellence in research and innovation.

1.2. Mission

To lead in research management that facilitates the formation and transfer of knowledge in the disciplines of social sciences and management.

1.3. Objective

- To promote cooperation between the University and other outside organisations especially in the fields of research, consultation, and innovation;
- To involve the University in national development through the academic staff of the University as a consultant in national development projects;
- To encourage the academic staff of the University to involve themselves in the activities of research, consultation, and innovation to gain experience and further strengthen their expertise in their respective fields;
- To coordinate and identify the activities of research and innovation carried out by the academic staff of the University; and
- To promote cooperation between academic staff from various disciplines at the University in carrying out the activities of research.

2.0 Organisational Structure and Function

This section describes the structure and function of the organisation under the office of the Research and Innovation Management Centre (RIMC), the research ecosystem, Centres of Excellence (CoE), Research Units, and Niche Areas of research.

Structure and functions of the organisation describe the role of all entities under the office of the RIMC and those associated with it.

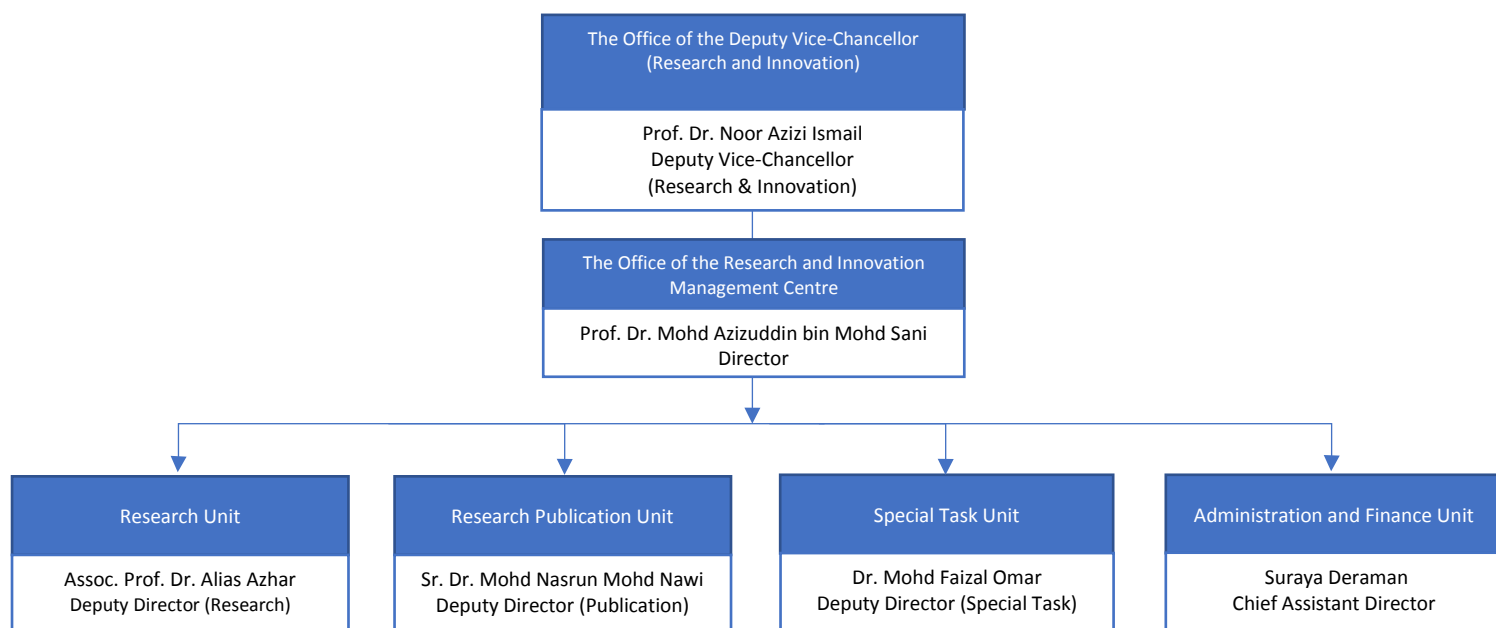


Figure 1 Organisational Structure of RIMC

2.1. Research and Innovation Management Centre (RIMC)

RIMC consists of four main units, namely the Research Unit, Research Publication Unit, Special Task Unit, and the Administration and Finance Unit. Table 1 describes the main functions of the RIMC.

Unit	Main Function
Research	<ul style="list-style-type: none"> Coordinate research activities. Coordinate and build databases for the systematic management of research in UUM Organise seminars, workshops, and lectures on research related to the interests of the University Disseminate research opportunities Determine niche areas of research and expertise available in UUM as per national needs
Research & Publication	<ul style="list-style-type: none"> Manage the research development of the UUM academic community, especially regarding the dissemination of research results Carry out activities to raise awareness and enhance writing culture among academic staff

	<ul style="list-style-type: none"> ▪ Carry out activities to improve writing skills and publishing ▪ Act as the secretariat for the issuance of incentive schemes ▪ Govern the publication statistics related to the academic community to be reported to the management of the University
Special Task	<ul style="list-style-type: none"> ▪ Coordinate innovation and pre-commercialisation activities such as exhibitions and competitions, smart partnership, promotion of R & D, etc. ▪ Coordinate the documentation process for the protection of University community intellectual property (IP), such as search engine registration of IP and IPR in MyIPO ▪ Act as the secretariat for collecting and reporting data for MyMohes, MyRA, UIGreen, and Strategic Plan ▪ CoE Secretariat ▪ Support Research University (RU) agenda
CoE Secretariat	<ul style="list-style-type: none"> ▪ Coordinate CoE activities ▪ Coordinate the appointment for Research Fellow and Associate Fellow at CoE ▪ Act as the secretariat for collecting and reporting for CoE achievement ▪ Secretariat for University JKCOE ▪ Secretariat for University HiCOE
Administration and Finance	<ul style="list-style-type: none"> ▪ Manage the financial affairs of the department ▪ Manage the affairs of posts, appointments, leave, and discipline ▪ Manage asset and inventory of department ▪ Assist in managing financial management of research ▪ Assist in managing assets, inventory, and research demands ▪ Secretariat University JKPI

Table 1 The Main Functions of Units within RIMC, UUM

2.2. Innovation and Commercialisation Centre (ICC)

In addition to RIMC, ICC serves to enhance collaborative research with public agencies and the private sector, particularly for new grants, industrial relations, and commercialised research results. Starting in January 2016, ICC had taken over RIMC functions in terms of the Intellectual Property (IP) management and commercialisation activities.

2.3. Committee for Research and Innovation (JKPI)

The function of the Research and Innovation Committee is to interpret and implement the policies of research, publication, and innovation of the University, and as such, it has to consider and approve:

- a. the research, publication, and innovation grants for academic staff of the University,
- b. the final report of an investigation that has expired / has been completed; and
- c. the extension of the investigation period and transfer or allocation of research funds.

In 2017, this committee had met six times. Table 2 lists some of the major decisions made by the committee.

Decisions Made	Description
Classification of Science and Technology (S&T) or Social Science (SS) for Academic Staff and Student Information	<ul style="list-style-type: none"> ▪ A paper on the proposed S & T or SS classification review for academic staff and student information was brought into the 47th JKPI Meeting No. 6/2016. ▪ The classification is required to ensure the accuracy of data encoding for various agendas such as MyRA, MyMoheS, strategic plans and etc. ▪ The classification was approved in the 48th JKPI Meeting No.1/2017 according to the result of the review.
Appointment of Research Fellow for International Fundraising at RIMC	<ul style="list-style-type: none"> ▪ The appointment of a Research Fellow (International Fundraising) at RIMC could be a catalyst for international fund-raising, thereby enhancing the University's achievement in MyRA's assessment to meet the University's aspirations to be recognized as a Research University (RU). ▪ The proposal of the appointment of Research Fellow was approved in the 49th JKPI Meeting No.2/2017.
Establishment of UUM Research Ethics Committee and Appointment of the committee members	<ul style="list-style-type: none"> ▪ The 47th JKPI Meeting No. 6/2016 has approved the Research Ethics Guidelines and RIMC was proposed to establish a Research Ethics Committee and should be stated in the guidelines. ▪ The establishment of the committee was approved in the 49th JKPI Meeting No.2/2017.
Updating Self-Financed Research Guideline	<ul style="list-style-type: none"> ▪ RIMC has made some improvements in its own Financing Research Guide ▪ The manual was approved in the 49th JKPI Meeting No.2/2017.
Social Innovation Grant Scheme (SIGS)	<ul style="list-style-type: none"> ▪ SIGS 2017 is aimed at assisting the government in improving the social welfare of the people through the transformation of the community's knowledge, skills, behavior and aspirations. ▪ This grant was approved in the 50th JKPI Meeting No.3/2017 to help researchers in the creation of an impactful and orderly social innovation project, helping to meet the new criteria of MyRA in social innovation.
Establishment of Community Network and Social Innovation Committee and UUM Community Network Guidelines	<ul style="list-style-type: none"> ▪ The existence of the committees and guidelines will assist the university in monitoring the implementation of social innovation community projects to ensure that it is in line with MyRA's requirements. ▪ The proposal of the committees and guidelines establishment was approved in the 50th JKPI Meeting No.3/2017.
Research Expansion For Commercialization Grant Scheme (RECGS)	<ul style="list-style-type: none"> ▪ The Innovation and Commercialization Centre (ICC) has presented the Application for Research Grants and Product Development for Commercialization at the 46th JKPI Meeting No. 5/2016. ▪ The name of the grant has been converted into RECGS and approved in the 50th JKPI Meeting No.3/2017.

UUM Research Collaboration Grant (1 + 3)	<ul style="list-style-type: none"> ▪ The grant was approved in the 50th JKPI Meeting No.3/2017 as one of the initiatives to meet the needs of MyRA and the country in general. ▪ The new criteria of MyRA I (December 2016 amendment) promotes research collaboration between Public University, Private University, Agency and Industry.
Updating the Guidelines for Research Collaboration between UUM and External Parties (including Matching Grant)	<ul style="list-style-type: none"> ▪ RIMC has made some improvements in the Guidelines for Research Collaboration between UUM and External Parties (including Matching Grant). ▪ The manual was approved in the 51st JKPI Meeting No.4/2017.
Social Innovation Grant Scheme (Rolling) (SIGS(R))	<ul style="list-style-type: none"> ▪ The grant was approved in the 51st JKPI Meeting No.4/2017 to help researchers in the creation of an impactful and orderly social innovation extension project, helping to meet the new criteria MyRA® I (December 2016 amendment) - social innovation.
Research Infrastructure Grant Scheme (RIGS)	<ul style="list-style-type: none"> ▪ The new criteria of the Malaysian Research Assessment, MyRA I (December 2016 amendment) encourages a recognized research laboratory based on core competencies. ▪ Thus, RIGS was approved in the 51st JKPI Meeting No.4/2017 as one of the initiatives to meet the needs of MyRA and the country in general.

Table 2 Approved Matters by the UUM's JKPI Committee for 2017

2.4. Committee for CoE Strategic Development and Achievement (JKCoE)

CoE Strategic Development and Achievement Committee Meeting is to be held quarterly to view the progress, or achievement and also to strategize the way forward of the various CoE. In 2017, this committee had met three times which was chaired by Vice Chancellor.

2.5. Niche Areas of Research

Strategic research initiatives and networks build on areas of existing research strength by bringing together a critical mass of expertise from across the Schools, with four key aims: to address large-scale multi-disciplinary research challenges; to increase the capacity to influence national and international research, policy, and funding agendas; to strengthen internal cross-disciplinary research collaborations; and to provide a platform for large-scale funding applications, recruitments, and international research partnerships. Refer to Figure 2 details.

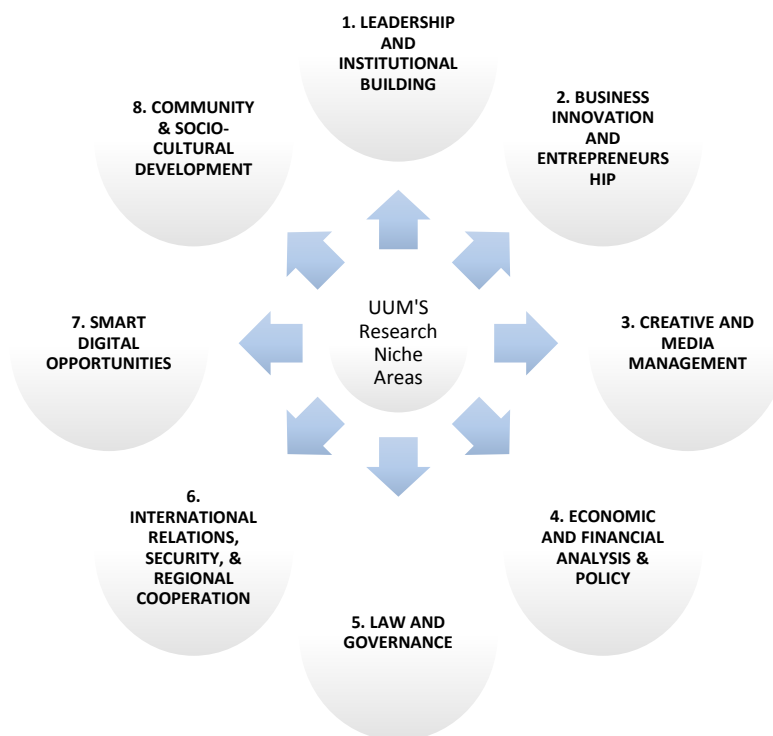


Figure 2 UUM's Research Niche Areas

The establishment of Centres of Excellence (CoEs) in each School is one of the R&D&I strategies for 2016 to cultivate and improve the quality of research and development (R&D) within UUM, to ensure the direction of UUM remains competitive in various fields of research, expertise, and services at national and international levels in line with UUM's eight niche areas for research. This effort was furthered in 2017 through strategical awards of grants and focus in increasing the number of high impact research project.



Professor Dr Noor Azizi Ismail Shares Tips on How to Increase The Number of High-Impact Research Projects with all the Directors of the UUM Centres of Excellence (CoE)

Niche Area	Type	Centre/Unit	Level
1. Leadership and Institutional Building	Centres of Excellence	<ul style="list-style-type: none"> ▪ Institute of Tun Dr Mahathir Mohamad's Thoughts (IPDM) ▪ Institute for Business Competitiveness, Standards, and Sustainability Initiative ▪ Disaster Management Institute ▪ Institute of Excellent Teachers and Leaders in Education ▪ Langkawi International Research Centre for Tourism and Hospitality 	University SBM STML SEML STHEM
	Research Units	<ul style="list-style-type: none"> ▪ Philosophy and Civilisation ▪ Language and Cross Cultural ▪ Event Management 	SEML SEML STHEM
2. Business Innovation and Entrepreneurship	Centres of Excellence	<ul style="list-style-type: none"> ▪ Cooperative & Entrepreneurship Development Institute (CEDI) ▪ Centre for Testing, Measurement and Appraisal (CeTMA) ▪ Institute for Product and Brand Management ▪ Technology and Supply Chain Excellence Institute ▪ Asian Halal Laboratory Institute ▪ Institute for Leadership, Innovation and Change 	University University SBM STML STML OYAGSB
	Research Units	<ul style="list-style-type: none"> ▪ Knowledge Science Research Lab ▪ Operational Excellence 	STML STML
3. Creative and Media Management	Centres of Excellence	<ul style="list-style-type: none"> ▪ Institute of Creative Humanities, Multimedia & Innovation 	SMMTC
	Research Units	<ul style="list-style-type: none"> ▪ Advanced Communication ▪ Civic Media 	SMMTC SMMTC
4. Economic and Financial Analysis & Policy	Centres of Excellence	<ul style="list-style-type: none"> ▪ Asian Research Institute of Banking and Finance (ARIBF) ▪ Economic and Financial Policy Research Institute ▪ Institute for Strategic and Sustainable Accounting Development ▪ Institute of Shariah Governance and Islamic Finance 	University SEFB TISSA IBS
	Research Units	<ul style="list-style-type: none"> ▪ Trade and Regional Integration ▪ Sustainable Agriculture and Food ▪ Environment and Sustainability ▪ Risk Management ▪ Political and Economic Risk ▪ Auditing and Assurance ▪ Tax and Customs ▪ Accounting Information Systems 	SEFB SEFB SEFB SEFB SEFB TISSA TISSA TISSA
5. Law and Governance	Centres of Excellence	<ul style="list-style-type: none"> ▪ Asian Research Institute for Corruption (ARIC) ▪ Legal and Justice Research Centre ▪ Malaysian Institute of Political Analysis 	University SOL GSGSG
	Research Units	<ul style="list-style-type: none"> ▪ Syariah and Islamic Banking Law ▪ International Law 	SOL SOL

6. International Relations, Security, and Regional Cooperation	Centres of Excellence	▪ Northern Corridor Research Centre (NCRC)	University
		▪ SOIS Institute of Asian Studies	SOIS
		▪ Institute for Indonesia, Thailand and Singapore	GSGSG
		▪ Institute of Excellence in Islamic Jerusalem Studies	GSGSG
	Research Units	▪ Security and Foreign Policy Studies	SOIS
		▪ Maritime and Port Management Studies	SOIS
		▪ International Business Strategy and Political Economy	SOIS
		▪ The State, Human Rights, and Democratisation Studies	SOIS
7. Smart Digital Opportunities	Centres of Excellence	▪ Institute for Advanced and Smart Digital Opportunities	SOC
	Research Units	▪ Data Science Research Lab	SOC
		▪ Human Centred Computing Research Lab	SOC
		▪ InterNetWorks Research Lab	SOC
		▪ Optical Computing Research Lab	SOC
8. Community Development and Socio-Cultural	Centres of Excellence	▪ Decision Support and Business Intelligence	SOC
	Research Units	▪ Institute for Psychotherapy, Correctional, & Rehabilitation	SAPSP
		▪ Institute of Local Government	SOG
		▪ Institute of Strategic Industrial Decision Modelling	SQS
		▪ Quantitative Method Development and Improvement	SQS
		▪ Volunteerism and Social Care	SAPSP
		▪ Expressive Arts	SAPSP
		▪ Environmental Policy	SOG
		▪ Urban Planning and Housing	SOG

Table 3 List of Niche Areas, Centres of Excellence (CoEs) and Research Units (RUs)

2.6. Research Governance

To ensure the implementation and management of UUM's research per quality standards, RIMC continually updates its research guidelines. Further guidelines were introduced in 2017 to bolster existing guidelines. The introduced list of guidelines and their description are listed in Table 4.

Guidelines	Description
CoE Research Membership Guidelines	This guideline describes the general requirements for applying, membership as researchers for UUM's Centre of Excellence (CoE).

Table 4 List of Guidelines for Research in UUM

3.0 Management of Research Input

This chapter reports the fund-raising activities and acquisition of research, procurement of government, private, and international grants, and financial research management.

3.1. Generation and Acquisition of Research Funds

UUM obtains funds through three main sources, namely through government grants, private grants, and international grants. The government grants here are defined to include both external and internal sources. The total amount received in 2017 (as of 18th April 2018) stands at RM11,300,411.88 funding 369 research projects for that year. The funds were divided into government grants consisting of RM6,967,159.60 for 49 projects from external government agencies, RM2,610,500.00 financing 285 projects from university grants, followed by international grants totalling RM1,087,449.28 for 18 projects, while private grants totalled 635,303.00 for 17 projects. The percentages of funding are as in Figure 3.

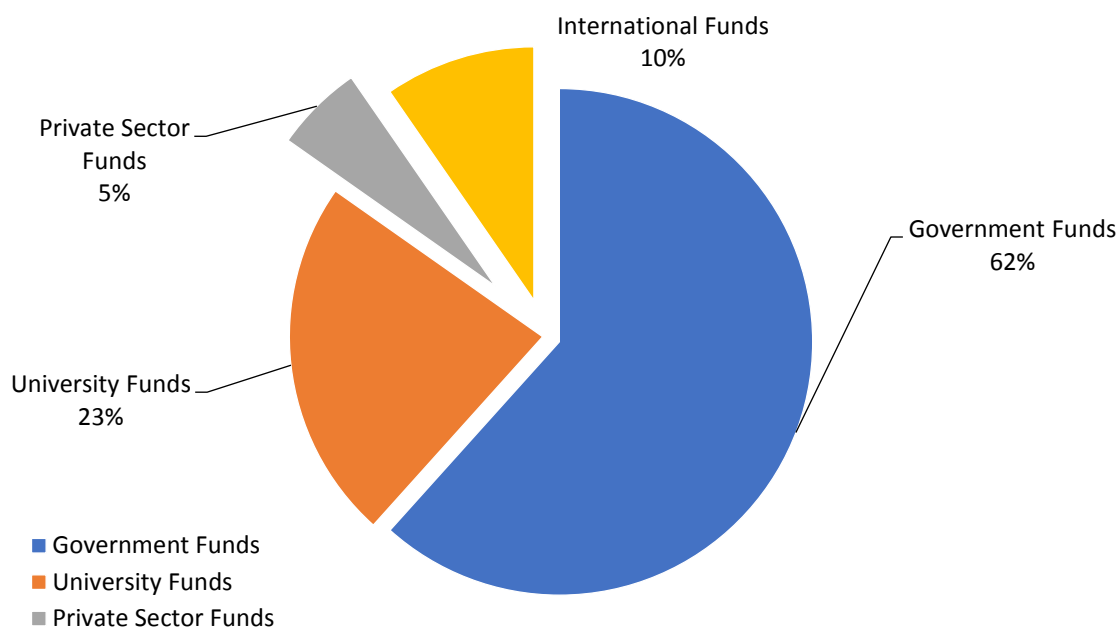


Figure 3 Main Sources for Research Funds for UUM for 2017

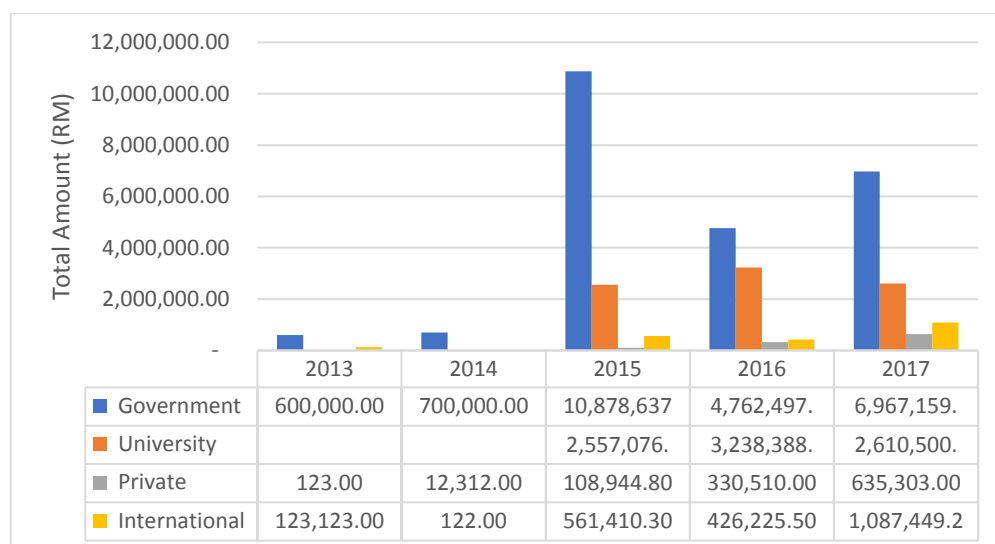


Figure 4 UUM's Acquisitions of Research Funds for 2013-2017

3.2. Procurement of Government Grants

In 2017, the highest turnover of government grants was received from the Ministry of Higher Education (MOHE) totalling for 49 research projects at RM6,967,159.60, followed by Construction Industry Development Board (CIDB) at RM89,520.00. Table 5 shows the sources of government grant revenue for 2017, while Table 6 illustrates the government grant revenue breakdown by UUM departments (PTJ).

Source of Funds	Number of Project	Amount (RM)	Percentage (%)
Ministry of Higher Education (MOHE)	33	6,595,422.60	95%
Construction Industry Development Board (CIDB)	2	89,520.00	1
Institution Grants	2	39,525.00	1
Lembaga Zakat Negeri Kedah Darul Aman	1	23,600.00	0
Others	11	219,092.00	3
Total	49	6,967,159.60	

Table 5 UUM's Procurement of Government Grants for 2017

The top five highest recipient of government grants was School of Quantitative Sciences at RM3,008,560.00, followed by School of Languages, Civilisation, and Philosophy at RM2,053,000.00, School of Computing at RM456,330.00, School of Business Management at RM273,333.00 and School of International Studies at RM203,790.00. The highest number of grants awarded was to School of Computing with seven (7) projects.

Department/Centre/Institute	Number of Projects	Amount (RM)
School of Quantitative Sciences	5	3,008,560.00
School of Languages, Civilisation, and Philosophy	2	2,053,000.00
School of Computing	7	456,330.00
School of Business Management	6	273,333.00
School of International Studies	5	203,790.00
Tunku Puteri Intan Safinaz School of Accounting	3	170,077.00
Othman Yeop Abdullah Graduate School of Business	3	164,300.00
School of Education and Modern Languages	4	152,787.20
School of Economics, Finance and Banking	5	126,742.40
Islamic Business School	2	123,600.00
School of Government	2	70,000.00
School of Applied Psychology, Social Work, and Policy	3	60,336.00
School of Tourism, Hospitality, and Environmental Management	1	53,000.00
School of Technology Management and Logistics	1	51,304.00
Total	49	6,967,159.60

Table 6 Departmental Breakdown of Government Research Funds for 2017

MOHE approved a total allocation of RM4,595,422.60 in 2017 to fund 33 projects, of which were RM4,860,000.00 for a Top-Down project, RM1,571,375.40 for 28 Fundamental Research Grant Scheme (FRGS) projects, RM131,187.20 for 2 Knowledge Transfer Programme (KTP) and RM32,860.00 funded a Prototype Research Grant Scheme (PRGS) projects. Details are shown in Table 7.

Ministry of Higher Education Funds Schemes	Number of Projects	Amount (RM)
Top-Down	2	4,860,000.00
Fundamental Research Grants Scheme (FRGS)	28	1,571,375.40
Knowledge Transfer Programme Grant Scheme (KTP)	2	131,187.20
Prototype Research Grants Scheme (PRGS)	1	32,860.00
Total	33	6,595,422.60

Table 7 Breakdown of MOHE Research Funds Schemes for 2017

3.3. Procurement of Private Sector Grants

Revenue for Private Sector grants in 2017 was obtained through 17 projects with a total of RM635,303.00. Table 8 and Table 9 show the acquisition of Private Sector grants and Private Sector networking.

Source of Funds	Number of Projects	Amount (RM)	Percentage (%)
Khazanah Research institute	1	239,197.00	38
CIMB Investment Bank Berhad	3	105,000.00	17
Amanah Ikhtiar Malaysia	1	66,926.00	11
YaPIEM	4	57,330.00	9
Koperasi Co-opbank Persatuan Malaysia Bhd	1	52,450.00	8

Dibuk Synergy Sdn Bhd	1	30,000.00	5
FXBitLab Holdings Sdn Bhd	1	20,000.00	3
Dr. Aishah Solution Sdn Bhd	1	18,900.00	3
PKT Longistics Group Sdn Bhd	1	13,500.00	2
Overview Sdn Bhd	1	12,000.00	2
Small Medium Enterprise Development Bank Malaysia Berhad	1	10,000.00	2
Malaysian Association of Risk and Insurance Management (MARIM)	1	10,000.00	2
Total	17	635,303.00	

Table 8 UUM's Procurement of Private Sector Grants for 2017

The highest recipient of the Private Sector grants for 2017 was School of Economics, Finance, and Banking at RM369,147.00, followed by Islamic Banking School at RM66,926.00, and School of Technology Management and Logistics at RM62,400.00. The highest number of grants awarded was to School of Economics, Finance, and Banking with 6 projects.

Department/Centre/Institute	Number of Projects	Amount (RM)
School of Economics, Finance, and Banking	6	369,147.00
Islamic Business School	1	66,926.00
School of Technology Management and Logistics	3	62,400.00
School of Law	1	52,450.00
School of Business Management	2	25,870.00
School of Computing	1	20,000.00
School of Education and Modern Languages	1	16,510.00
School of Tourism, Hospitality, and Environmental Management	1	12,000.00
School of Multimedia Technology and Communication	1	10,000.00
Total	17	635,303.00

Table 9 Departmental Breakdown of Private Sector Grants for 2017

3.4. Procurement of International Grants

Revenue for international grants in 2017 were acquired via 18 projects with a total of RM1,087,449.28. Turnover was highest for two Erasmus projects with RM452,896.95 for Erasmus Higher Education International Capacity Building and RM186,534.00 for Erasmus Charter for Education (EU Grant), followed by Transparency International with a project totalling RM105,000.00.

Table 10 and Table 11 show the acquisition of international grants and international networking.

Source of Funds	Number of Projects	Amount (RM)	Percentage (%)
Erasmus Higher Education International Capacity Building	1	452,896.95	42
Erasmus Charter for Education (EU Grant)	1	186,534.00	17
Transparency International - Malaysia	1	105,000.00	10
Universitas Pasundan	2	60,000.00	6
Universitas Muhammadiyah Prof. Dr. Hamka	4	60,000.00	6
Newton -Ungku Omar Fund	1	52,418.33	5
Universitas Telkom	1	40,000.00	4
National University of Singapore (NUS)	1	30,000.00	3
Aber Majan Trad Co, Oman	1	20,000.00	2
Sekolah Tinggi Kesejahteraan Sosial Bandung	1	20,000.00	2
Universitas Air Langga, Surabaya	1	20,000.00	2
University of the Immaculate Conception (UIC)	1	20,000.00	2
Others	2	20,600.00	2
Total	18	1,087,449.28	

Table 10 UUM's Procurement of International Grants for 2017

The School of Languages, Civilisation and Philosophy with the highest International funds for 2017 followed by School of Computing at RM168,090.50 and Othman Yeop Abdullah Graduate School of Business at RM105,000.00.

Department/Centre/Institute	Number of Projects	Amount (RM)
School of Languages, Civilisation and Philosophy	1	452,896.95
School of Computing	1	186,534.00
Othman Yeop Abdullah Graduate School of Business	1	105,000.00
School of Technology Management and Logistics	2	82,418.33
Tunku Puteri Intan Safinaz School of Accounting	2	60,000.00
School of Education and Modern Languages	4	60,000.00
School of Applied Psychology, Social Work, and Policy	3	60,000.00
School of Business Management	2	50,000.00
School of Quantitative Sciences	2	30,600.00
Total	18	1,087,449.28

Table 11 Departmental Breakdown of International Funds for 2017

3.5. Disbursement of University Research Funds

A total of RM2,610,500.00 research funding was disbursed for 2017 through 285 projects from various grants approved by the University. 2017 saw the continuation of the university funded Development Grants created as an effort to help increase the number of researchers (Principal Investigators) among UUM lecturers. Through this programme, another 107 were added previous approved 139 projects with a total amount of RM930,000.00 or 36% of the total grants disbursed. Refer to Table 12 for details and breakdown projects and funding.

Source of Funds	Number of Project	Amount (RM)	Percentage (%)
Development Grants	107	930,000.00	36
GPCOE-S	36	430,000.00	16
GPCOE-RU	20	250,000.00	10
Postgraduate Incentives	41	210,000.00	8
Special Grant	20	198,000.00	8
SIGS	15	150,000.00	6
University Grants (More than RM 10,000)	3	130,000.00	5
Case Studies	17	90,500.00	3
RECGS	4	75,000.00	3
SoTL	12	72,000.00	3
GPCOE-U	3	30,000.00	1
College Grants	5	25,000.00	1
University Grants (Less than RM 10,000)	2	20,000.00	1
Total	285	2,610,500.00	

Table 12 UUM's University Research Funds Disbursement for 2017

The highest recipient of the university grants was the School of Computing with total funds received at RM365,000.00, followed by School of Quantitative Sciences at RM360,000.00, School of Technology Management and Logistics at RM345,000.00, Tunku Puteri Intan Safinaz School of Accounting at RM222,500.00, and School of International Studies at 170,000.00. The highest number of grants awarded was to the Tunku Puteri Intan Safinaz School of Accounting at 38 projects.

Department/Centre/Institute	Number of Project	Amount (RM)
School of Computing	24	365,000.00
School of Quantitative Sciences	23	360,000.00
School of Technology Management and Logistics	32	345,000.00
Tunku Puteri Intan Safinaz School of Accounting	38	222,500.00
School of International Studies	18	170,000.00
School of Economics, Finance, and Banking	23	160,000.00
School of Education and Modern Languages	21	156,000.00
School of Multimedia Technology and Communication	14	155,000.00
School of Business Management	15	112,000.00
Othman Yeop Abdullah Graduate School of Business	10	105,000.00
School of Languages, Civilisation, and Philosophy	14	85,000.00
School of Government	12	80,000.00
School of Tourism, Hospitality, and Environmental Management	9	80,000.00
School of Law	13	75,000.00
School of Applied Psychology, Social Work, and Policy	9	65,000.00
Islamic Business School	6	40,000.00
School of Creative and Performing Art Industry Management	4	35,000.00
Total	285	2,610,500.00

Table 13 Departmental Breakdown of University Research Funds for 2017

3.6. Management of University Research Funds

University Research funds, an allocation of RM3,758,977.93, was approved for 2016 by MOHE. During this period, a total of RM3,024,255.09 or 80.5% was spent to finance research projects, namely Talent Development (RM298,453.51), Research Prominence (RM2,132,836.75), Wealth Creation (RM514,964.83), and Bridging the Grand Challenge (RM78,000.00). These funds were received and distributed according to the needs of the activities under MyRA and monitored by MOHE (refer to Figure 7).

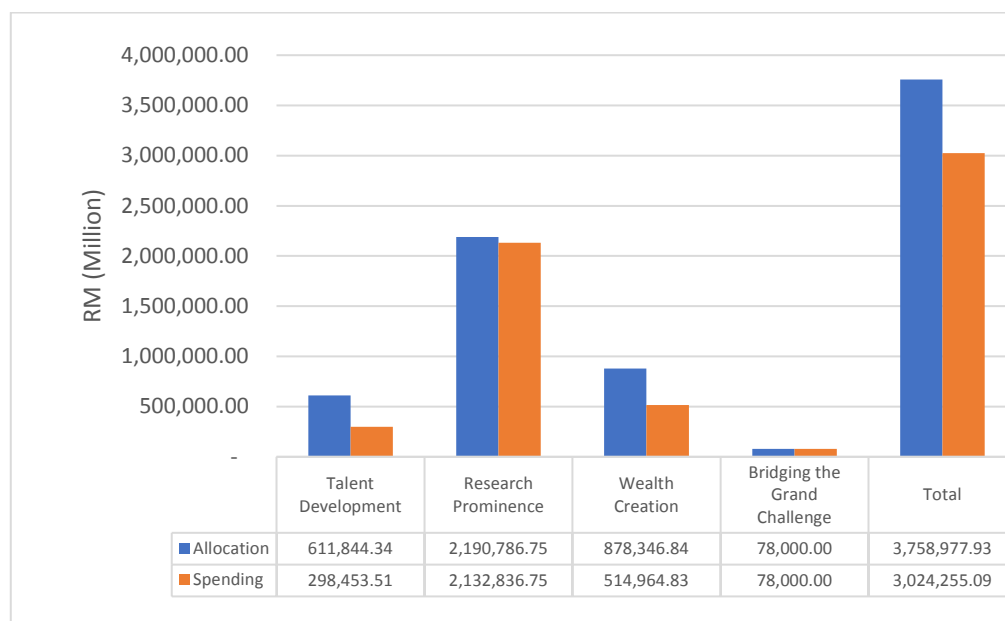


Figure 5 Breakdown of MyRA Funds Approved and Spending for 2017

4.0 Management of Research Output

This section describes the research output consisting of management R&D personnel, intellectual property, publication of research results, commercialisation of research results, and the promotion of research and innovation.

4.1. Principle Investigators (PIs)

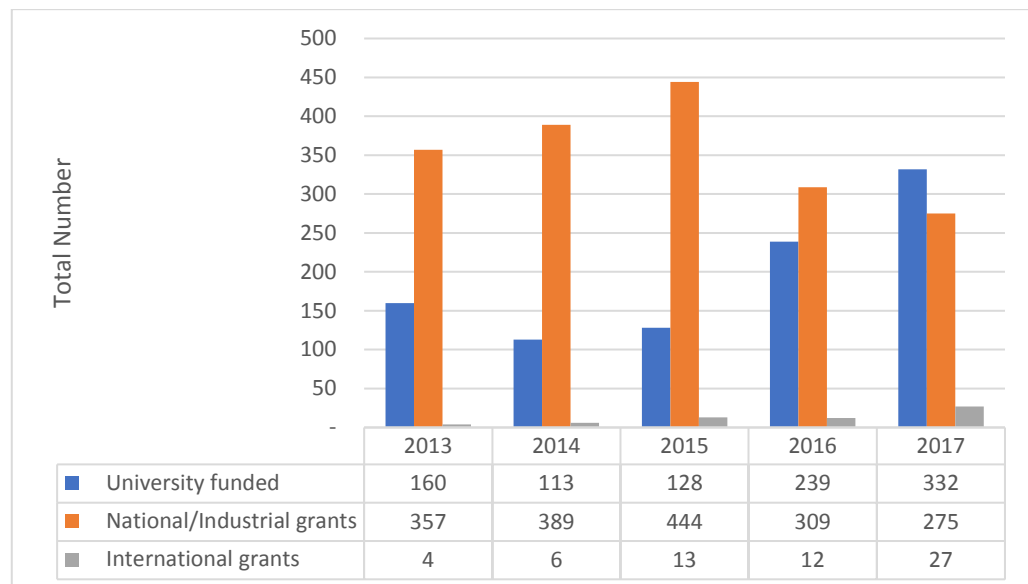


Figure 6 UUM's Principle Investigators for 2013-2017

4.2. Intellectual Property Protection

To ensure that each research project is protected, RIMC through ICC is responsible for ensuring that any potential commercialisation of research results will be protected to ensure that copyright is preserved.

The List of UUM's Intellectual Property for the year 2015 and 2017 are shown below:

No	Category	Total
1.	Patent Filing	3
2.	Patent Granted	0
3.	Trademark	0
4.	Copyright	113
5.	IPRs-Books	22
TOTAL		138

Table 14 UUM's Number of IP Products per Category for 2017

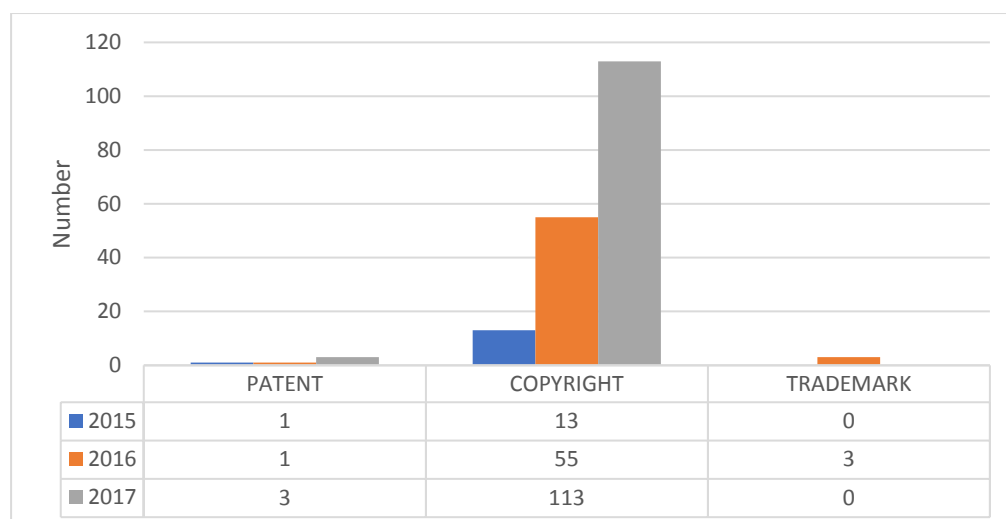


Figure 7 UUM Intellectual Property Registration for 2015-2017

4.3. Publication of Research Results

Various strategies were planned to help increase the University's publishing statistics for 2017. RIMC took proactive steps by providing academic's space and opportunities in an effort to improve the achievement of the number of research outputs in high-impact journals. In order to increase the quantity and quality of research outputs, RIMC conducted several workshops providing exposure and guidance to academic staff in publishing research results in a responsible and ethical manner. RIMC had taken the initiative to conduct several research publication consolidation programs as follows:

No.	Activities/Programs	Date	Location
1.	Roundtable Discussion Workshop with RIMC Research Publications Fellow	2 Mei 2017	EDC Hotel and Resorts
2.	Journal Publishing Workshop Journal with Managing Editor, Associate Professor Dr. Nor Azwadi Che Sidik (UTM)	18 July 2017	College of Law, Government and International Studies (COLGIS)
3.	Roundtable Discussion with the Publishing Bureau for the Universities Council of Professor	2 August 2017	Multipurpose Room, School of Qualitative Study, UUM
4.	Sharing Session and Briefing on Work Coordination	19 Sept. 2017	Executive Meeting Room RIMC, UUM
5.	Workshop on Effective Writing for Publication with Reputable Journal by Associate Professor Dr. Azizan Marzuki (USM)	10 Sept. 2017	EDC Hotel and Resorts
6.	Writing and Citation Strategies Workshop by Associate Professor Sr. Dr. Syahrul Nizam Kamaruzzaman (UM) and Associate Professor Sr. Dr. Adi Irfan Che Ani (UKM)	3 Oct. 2017	EDC Hotel and Resorts
7.	Q1 Publication Workshop	31 Oct 2017	EDC Hotel and Resorts
8.	Maximizing the Visibility and Impact of Your Published Research workshop by Associate Professor Dr. Azam Hussain	14 Nov. 2017	College of Law, Government and International Studies (COLGIS)

Table 15 Publication Unit RIMC, UUM Activities for ISSC 2016

Publishing is one of the key performance indicators of a university. UUM's management must think and formulate various methods in terms of strategy, policies, and related action plans to increase the number of publications in indexed and high impact journals.

In 2017, UUM successfully issued 803 documents in Scopus/WoS/ERA publications, including proceedings contributing 29% to the number of publications between the years 2015 to 2017, as shown in Figure 8 and Table 16.

	2015	2016	2017
Total Number of Publications in Scopus/WoS/ERA, including refereed proceedings	460	1057	803

Figure 8 Number of Publications in Scopus/WoS/ERA, including refereed proceedings for 2015-2017

No.	Measurement	Achievement
1	Total number of publications in Scopus indexed journals	535
2	Total number of publications in WoS indexed journals	57
3	Total number of publications in Scopus indexed conference proceedings	154
4	Total number of publications in WoS indexed conference proceedings	57
	Total Number of Publications in Scopus/WoS indexed journals, including indexed conference proceedings	803

Table 16 Number of Publications Breakdown for 2017

Publication Incentive

Various initiatives and incentives had been introduced to generate publications and encourage lecturers to produce publications. Among them is the provision of financial rewards (Figure 9).

Issuance of Incentive Scheme

- i. *Publication Incentive Scheme for Journal Articles, Books, and Chapters in Book.*
The main aim of establishing this scheme is to give incentive or reward to UUM academic members who have written and published journal articles, books, and chapters in books to assist in increasing the number of publications. For 2017, as many as 711 applications were approved to receive this publication incentive, totalling RM414,373.25.
- ii. *Payment Scheme for Journal Publication Fees (SPYPJ)*
The payment scheme for journal publication fees (SPYPJ) is a scheme to encourage and reward UUM academic staff to improve the statistics of publication of journal articles, primarily in WoS / Scopus indexed journals.

For the duration of 2017, 75 applications were received for approval and totalled RM99,119.21.

Publication Incentive Schemes	2015		2016		2017	
	Total	RM	Total	RM	Total	RM
Publication Incentive Scheme for Journal Articles, Books, and Chapters in Book	504	133,979.00	494	298,312.30	711	414,373.25
Payment Scheme for Journal Publication Fees (SPYPJ)	56	36,713.21	67	93,565.51	75	99,119.21
Total of Incentive	560	170,692.21	561	391,877.81	786	513,492.46

Figure 9 Publication Incentive Statistics for 2016-2017

4.4. Commercialisation of Research Results

Product	Income Generated (RM)	Type of Product/Service	Company Involved
Manager's Coffee Prof. Dato' Seri Dr. Mohamed Mustafa bin Ishak	545,999.75	Business Model	Uniutama Education and Consultancy Sdn. Bhd.
Filem Sungai Borneo Dr. Ahmad Hisham bin Zainal Abidin	308,840.75	Film	Uniutama Management Holding Sdn. Bhd.
Museum Inventory & Barcode Tagging System Dr. Shahrul Azmi Mohd Yusof	29,500.00	System	Uniutama Education and Consultancy Sdn. Bhd..
Hisba Spiritual Journal Dr. Mardzelah Makhsin	20,000.00	Training	Uniutama Education and Consultancy Sdn. Bhd.

Table 17 UUM's List of Commercialized Products that achieved (20,000) threshold for 2017

4.5. Promotion of Research and Innovation

To ensure research results are known to the industry and society, the promotion of research activities and expertise of UUM also proceeded through various planned activities.



Exhibits and competitions of research and innovation are one of the important platforms to publicize, especially to the industry about research results of the University, seek collaboration opportunities and gain recognition for the products and expertise of the University.

The 9th International Conference and Exposition on Inventions by Institutions of Higher Learning (PECIPTA) 2017

In 2017, UUM participated in the International Conference and Exposition on Inventions by Institutions of Higher Learning (PECIPTA) which was held from 7th to 9th October 2017 with the theme "Nurturing Entrepreneurs through Education, Industry, Technology and Social Innovation". PeCIPTA 2017 organized by MOHE in collaboration with Universiti Malaysia Terengganu (UMT) and Universiti Sultan Zainal Abidin (UniSZA) was officiated by the Higher Education Minister, the honorable Dato 'Seri Idris Jusoh.

A total of 89 gold medals, 96 silver medals and 183 bronze medals were awarded to researchers as well as special awards to 12 products out of the 416 innovation products that have been featured, of which UUM won two gold medals, four silver medals and seven bronze medals.

5.0 Summary of Research Performance

5.1. MyRA Performance Indicators

MyRA is an online system which was developed to enable Public Institutions of Higher Learning (IPTA) and Private Institutions of Higher Learning (IPTs) class universities and colleges to make a self-assessment of their research achievements of research, development, and commercialisation (R&D&C). The Malaysian government gives priority to R&D&C activities conducted by local universities to develop the national economy. MOHE create MyRA instruments to enable the university to evaluate the performance of local public and private institutions in terms of R&D&C.

The MyRA instrument is divided into seven sections (Figure 13 and Table 23). Each section has its own weightage which contributes to the overall 100%.

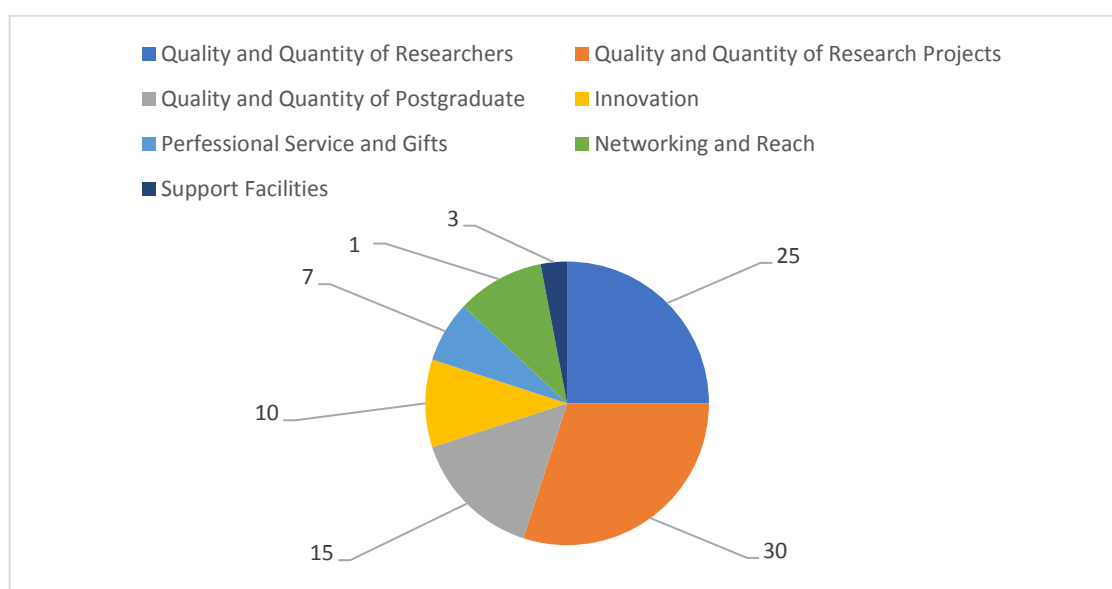


Figure 10 MyRA Instrument Criteria Weightage

Criteria	Weightage	Score (2016)	Score (2017)
Quality and Quantity of Researchers	25	15.09	18.63
Quality and Quantity of Research Projects	30	11.52	12.23
Quality and Quantity of Postgraduate	15	20.46	24.77
Innovation	10	4.04	5.66
Professional Service and Gifts	7	4.31	5.57
Networking and Reach	10	8.61	9.79
Support Facilities	3	1.94	2.63
Total	100	65.97	79.28

Table 18 UUM Performance MyRA Instruments Criteria Summary Report (Unverified) for 2016-2017

6.0 Glossary

CAS	:	College of Arts and Science
COB	:	College of Business
COLGIS	:	College of Law, Government, and International Studies
FRGS	:	Fundamental Research Grant Scheme
ICC	:	Innovation and Commercialisation Centre
IP	:	Intellectual Property
IPTA	:	Public Institutions of Higher Learning
IPTS	:	Private Institutions of Higher Learning
ITEX	:	International Invention and Innovation Exhibition
JPU	:	University Management Committee
KPI	:	Key Performance Indicators
KTP	:	Knowledge Transfer Programme
LRGS	:	Long-Term Research Grant Scheme
MOHE	:	Ministry of Higher Education
MyIPO	:	Intellectual Property Corporation of Malaysia
MyRA	:	Malaysia Research Assessment
PRGS	:	Prototype Research Grant Scheme
R&D&C	:	Research and Development and Commercialisation
RIMC	:	Research and Innovation Management Centre
TRGS	:	Trans Disciplinary Research Grant Scheme
UUM	:	Universiti Utara Malaysia

7.0 Reference

1. Laporan Pencapaian Penyelidikan, Penerbitan Penyelidikan dan Inovasi 2017 Universiti Utara Malaysia (UUM)
2. 2016 Annual Report, Research and Innovation Management Centre, UUM
3. 1999 Annual Report, Consultation and Research Centre, UUM
4. 1994 Annual Report, Consultation and Research Centre, UUM
5. Appendix D: Periodical Expenditure Reporting of Using University Research Funds – Monitoring Report for 2017

Appendix A: List of Promotional Activities Organised by RIMC for 2017

No	Activity/Program	Date	Location
1.	Engaging Business Effectively and Translation of Research to Commercial Workshop	1 Feb. 2017	Seminar Hall, Islamic Centre, UUM
2.	Vice-Chancellor Meeting with Dean, Director of U-CoE / S-CoE and Chair of RUs	5 Feb. 2017	Seminar Hall A, Convention Complex, UUM
3.	Fundamental Research Grant Scheme (FRGS) proposal assessment workshop	5–7 Feb. 2017	Grand Alora Hotel, Alor Setar
4.	Strengthening UUM's Phase II towards Research University (RU) 2016 Workshop	19 Feb. 2017	TH Hotel & Convention Centre, Alor Setar
5.	CoE Agreement Signing Ceremony	26 Feb. 2017	Seminar Hall C, Convention Complex, UUM
6.	MyRA Glossary Training of Trainers (TOT) Workshop	5 Mar. 2017	Seminar Hall C, Convention Complex, UUM
7.	Grant Application for Knowledge Transfer Program - KTP Lifetime Learning Scheme of the 2017 Rolling Plan Briefing	7 Mar. 2017	Executive Meeting Room, RIMC, UUM
8.	CoE Research Grant Briefing	7 Mar. 2017	Seminar Hall C, Convention Complex, UUM
9.	Deputy Vice-Chancellor for Research and Innovation Meeting with the Director of CoE and Chair of Rus	8 Mar. 2017	Senet Meeting Room, UUM
10.	RIMC 2016 Annual Report and CoE Membership Guidelines Workshop	13–16 Mar. 2017	De Baron Resort, Pulau Langkawi
11.	2017 Prototype Development Grant Scheme (PRGS) and Fundamental Research Grant Scheme (FRGS) grant winners Appreciation Ceremony for 2017	6 Aug. 2017	EDC Hotels & Resorts
12.	A Talk by Deputy Director-General of Higher Education Malaysia (TKPPTM) with the Director of CoE UUM: Strive for Excellence	21 Aug. 2017	Manager's Coffee, UUM
13.	Research Generation Grant Agreement Signing Ceremony and Financial Briefing	20 Sept. 2017	Seminar Hall, Islamic Centre, UUM
14.	Cooperative Program between RIMC and the First Group Discussion (FGD) program by ISEAS, Singapore	7–8 Nov. 2017	Executive Meeting Room, RIMC, UUM

Appendix B: List of UUM's Centre of Excellence (CoE)

Name of U-CoE

Institute of Tun Dr Mahathir's Thoughts (IPDM)

Northern Corridor Research Centre (NCRC)

Co-Operative and Entrepreneurship Development Institute (CEDI)

Centre for Testing Measurement & Appraisal (CeTMA)

Asian Research Institute of Banking and Finance (ARIBF)

Asian Research Institute for Corruption (ARIC)

Appendix C: List of UUM's Centre of Excellence (s-CoE) and Research Units (RUs)

College	School	
UUM COB	SCoE	SBM 1. Inst. for Business Competitiveness, Standards, & Sustainability Initiative
		2. Institute for Product and Brand Management
		STML 3. Disaster Management Institute
		4. Technology and Supply Chain Excellence Institute
		5. Asian Halal Laboratory Institute
		SEFB 6. Economics and Financial Policy Research Institute
		IBS 7. Institute of Syariah Governance & Islamic Finance
		TISSA 8. Inst. for Strategic & Sustainable Accounting Development
	RU	STML 1. Knowledge Science Research Lab
		2. Operational Excellence
		SEFB 3. Trade and Regional Integration
		4. Sustainable Agriculture and Food
		5. Environment and Sustainability
UUM CAS	SCoE	6. Risk Management
		7. Political and Economic Risk
		TISSA 8. Auditing and Assurance
		9. Tax and Customs
		10. Accounting Information Systems
	RU	SOC 1. Institute for Advanced and Smart Digital Opportunities
		SAPSP 2. Institute for Psychotherapy, Correctional, & Rehabilitation
		SMMTC 3. Institute of Creative Humanities, Multimedia, & Innovation
		SEML 4. Institute of Excellent Teachers and Leaders in Education
		SQS 5. Institute of Strategic Industrial Decision Modelling
		SOC 1. Data Science Research Lab
		2. Human Centred Computing Research Lab
		3. InterNetWorks Research Lab
		4. Optical Computing Research Lab
		SAPSP 5. Volunteerism and Social Care
		6. Expressive Arts
		SMMTC 7. Advanced Communication
		8. Civic Media
		SLCP 9. Philosophy and Civilisation
		10. Language and Cross Cultural
		SQS 11. Decision Support and Business Intelligence
		12. Quantitative Method Development and Improvement
UUM COLGIS	SCoE	SOL 1. Legal and Justice Research Centre
		SOG 2. Institute of Local Government Studies
		STHEM 3. Langkawi International Research Centre for Tourism and Hospitality
		SOIS 4. SOIS Institute of Asian Studies
	RU	SOL 1. Syariah and Islamic Business Law
		2. International Law
		SOG 3. Environmental Policy
		4. Urban Planning and Housing
		STHEM 5. Event Management
GRADUATE SCHOOL	SCoE	SOIS 6. Security and Foreign Policy Studies
		7. Maritime and Port Management Studies
		8. International Business Strategy and Political Economy
		9. The State, Human Rights, and Democratisation Studies
GRADUATE SCHOOL	SCoE	OYAGSB 1. Institute for Leadership, Innovation, and Change
		GSGSG 2. Institute for Indonesia, Thailand, and Singapore
		3. Malaysian Institute of Political Analysis
		4. Institute of Excellence in Islamic Jerusalem Studies