

November 2013 Engagement



Prof. Ir. Dr. Mohd Azraai bin Kassim
Deputy Vice Chancellor (Research & Innovation)

Content

- UTM Updates
- Our Achievements
- UTM SciVal Expert Launching
- Incoming Events
- MRU Research Output



51st UTM Convocation

24 – 28 October 2013

5,378 Graduates

163 PhD,

1,075 Master,

126 Diploma after Degree,

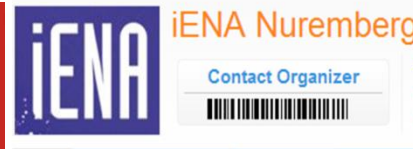
2,493 Degree,

1,521 Diploma.

617 International graduates from 35 countries.



Our Researchers won 3 Best of the Best Awards, 14 gold, 18 silvers 8 bronzes at International Conference and Exposition on Invention of Institutions of Higher Learning 2013 (PECIPTA 2013), 7-9 November 2013, Kuala Lumpur Convention Centre.



31 Oct. – 3 Nov. 2013

International Trade Fair Ideas, Inventions,
New Product Nuremberg German



UTM send six products. We won 2 Gold Medals, 2 Silver and 1 Bronze.

You did it!
Congratulations

Our Researchers Won Awards



The British Invention Show
23 – 26 October 2013

UTM won 3 Special Awards, 8 (Gold) and 1 (Silver)



Virgin Coconut oil-based Cleansing Agent
as the best product





IJN-UTM Cardiovascular Engineering Centre
11 Oct. 2013, IJN, Kuala Lumpur



Sayembara Novel Fiksyen Sains dan Teknologi
UTM-Kumpulan Utusan
22 Oct. 2013, Kuala Lumpur



UTM Low Carbon Asia Research Centre



30 Oct. 2013, Nusajaya

Development of
Low Carbon Society Scenarios for Asian Regions



UTM
UNIVERSITI TEKNOLOGI MALAYSIA



MoU UTM & Lembaga Jurutera Malaysia
23 Oct. 2013, Johor Bahru

UTM BOARD RETREAT 2013

8 – 10 November 2013
Nilai Springs Resort
Negeri Sembilan

GALERIA SISWA

Perasmian akan disempurnakan oleh
YAB Menteri Besar Johor

14 Nov. 2013 Blok M42 & M43, UTM Johor Baharu



HiCOE AUDIT

INSTITUTE OF NOISE AND VIBRATION
(97.35 marks)

18 & 19 Nov 2013, UTM Kuala Lumpur



SciVal Experts Launching



SciVal Experts is an **expertise profiling and research networking tool** that helps *Researchers, Students, Administrators, Managers and Senior leadership* **identify experts and enable collaboration** within their institution and across organizations

<http://scival-expert.utm.my>

What does SciVal Experts do?

- Searchable directory to identify expertise and further collaboration
- Understand 'who knows what' by researcher and department
- Provides accurate, up-to-date author profiles for all the researchers in the institution

Why we Subscribe :

1. Promote university staff expertise.
2. Highlight and market UTM staff expertise to compete globally.
3. Enable staff to benchmark their expertise with other researchers on publications.



SciVal Experts Community

THE UNIVERSITY OF TEXAS

MD Anderson
Cancer Center

Making Cancer History®



INDIANA UNIVERSITY

SCHOOL OF MEDICINE

UIC

UNIVERSITY OF ILLINOIS
AT CHICAGO

**CENTER FOR CLINICAL AND
TRANSLATIONAL SCIENCE**



EINSTEIN



UNIVERSITI
KEBANGSAAN
MALAYSIA
*The National University
of Malaysia*



MEHARRY
MEDICAL COLLEGE



**NORTHWESTERN
UNIVERSITY**



JOHNS HOPKINS
UNIVERSITY

UNIVERSITY OF
Nebraska

WASHINGTON STATE
UNIVERSITY



University of Michigan
Medical School



KANAZAWA
UNIVERSITY



**Georgia Health
Sciences University**



**INSTITUTO
POLITÉCNICO
NACIONAL**



**OREGON
HEALTH & SCIENCE**
UNIVERSITY



राष्ट्रीय प्रतिरक्षाविज्ञान संस्थान
National Institute of Immunology



Memorial Sloan-Kettering
Cancer Center



Clinical and Translational Science
Institute at Children's National



Pediatric Informatics Backbone
for Education and Research

**WAYNE STATE
UNIVERSITY**



**THE
UNIVERSITY
OF UTAH**



**ARIZONA STATE
UNIVERSITY**

UNIVERSITY OF MARYLAND
BALTIMORE



復旦大學
FUDAN UNIVERSITY

UC DAVIS
UNIVERSITY OF CALIFORNIA

	Indicators	2008	2011	2012	2013	Current	2015	2020
1	Staff with PhD	737	1018	1143	1500	1196	1800	2100
2	SCOPUS journals	678	1078	2500	3500	1798	6000	15,000
	ISI impact factors	153	802	2000	3000	1188	4000	7000
	SCOPUS citation	1372	3791	5000	7000	212	10,000	50,000
3	Postgraduate (%)	25%	46%	53%	55.7%	55.5%	60%	70%
	Postgraduate no.	4,850	10,888	12,883	13,156	13,695	13,500	14,000
	PhD students no.	1269	3439	4445	4951	5,090	6000	7000
	PhD Graduate on time	-	-	-	50%	26.9%	60%	90%
	Post-doctoral fellows	<10	<20	<20	300	57	500	1000
4	Mean Intake CGPA (UG)	3.11	3.47	3.71	3.75	3.78	3.80	4.00
5	Research grant (RM m)	124	103	78	150	55.198	200	400
6	Intellectual property	1075	2185	2770	3300	3173	6000	10,000
7	Spin-off companies	57*	14	18	200	17	400	1000
8	Staff research load	30%	50%	55%	60%	60%	60%	70%
9	Endowment (RM m)	0	31.9	50	70	48	100	500

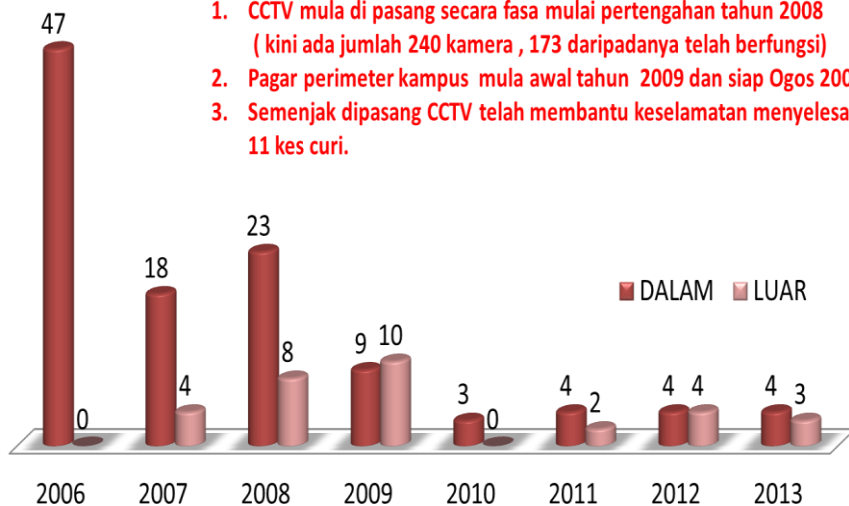
Keselamatan Kampus UTM meningkat



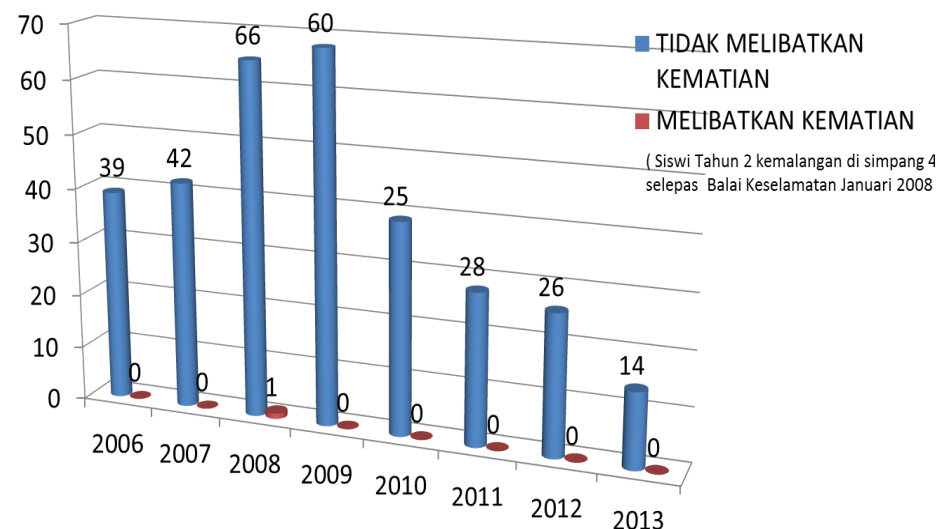
CARTA KEHILANGAN HARTA BENDA UNIVERSITI MENKUT TAHUN 2006-2013

NOTA

1. CCTV mula di pasang secara fasa mulai pertengahan tahun 2008 (kini ada jumlah 240 kamera , 173 daripadanya telah berfungsi)
2. Pagar perimeter kampus mula awal tahun 2009 dan siap Ogos 2009
3. Semenjak dipasang CCTV telah membantu keselamatan menyelesaikan 11 kes curi.

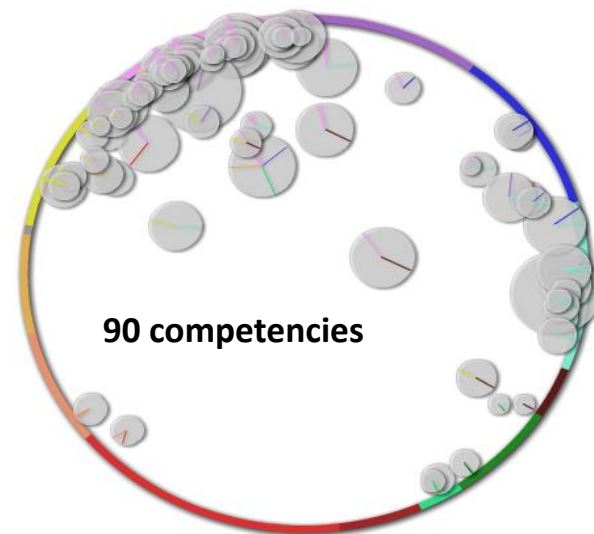
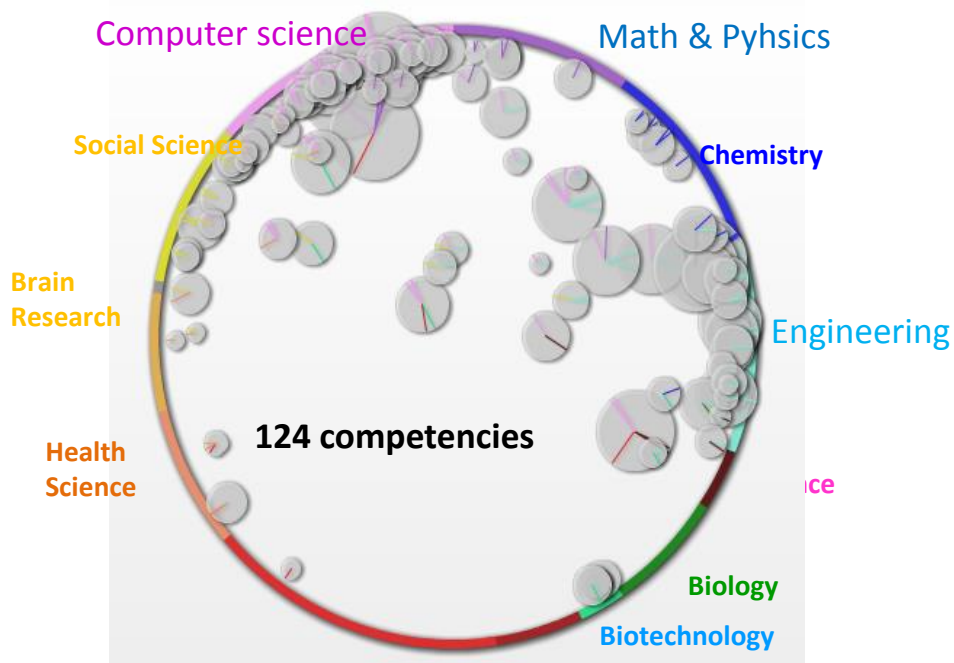


PERBANDINGAN KES KEMALANGAN JALAN RAYA MENGIKUT TAHUN DARI 2006-2013 (Sept 2013)

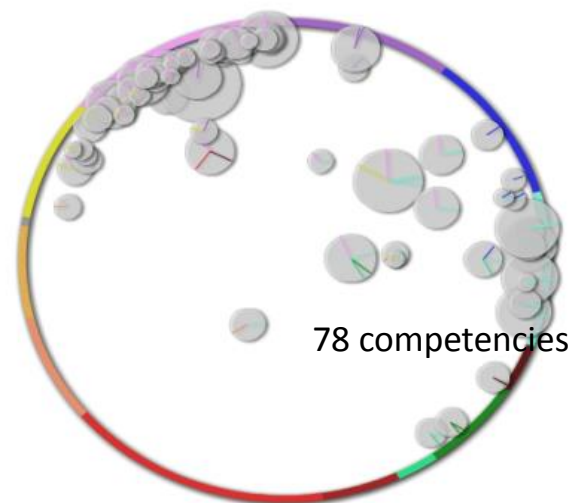


UTM Distinguished Competencies Progress 2011

2012 MAP



2010



Source : SciVAL Spotlight

Overview of the publication output of Universiti Teknologi Malaysia (2008-2012)

7,302
articles in Scopus



6,944
articles in Spotlight



1,906
articles in
124competencies

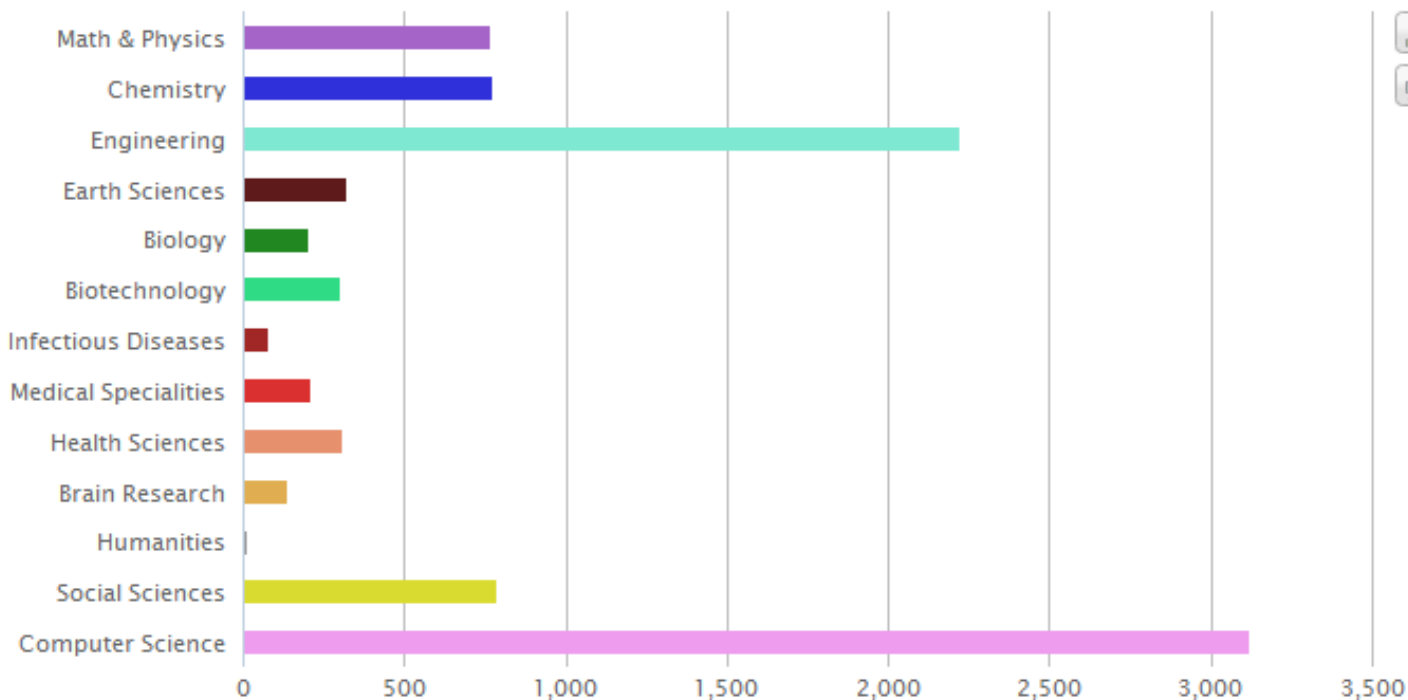
All published articles

Articles in competencies

Both

Pie chart

Bar chart



Source : SciVAL Spotlight

UTM Collaborators in the world



Source : SciVAL Spotlight

Top 10 Researchers in UTM by H-Index

Source: UTM, ISI Web of Science (1999-present)

No	NAME	FACULTY	Citations	h-index ISI WOS
1	Prof Dr Ahmad Fauzi Bin Ismail	Fakulti Kej. Petroleum Dan Kej. Tenaga Diperbaharui (Fpree)	3121	29
2	Prof Dr Hamdani Bin Saidi	Canselori	1656	20
3	Prof Dr Mohamed Mahmoud El-Sayed Nasef	Fakulti Kejuruteraan Kimia	1280	20
4	Prof Dr Thomas Jeffrey Cockburn Hosea	Fakulti Sains	919	17
5	Prof Dr Shozo Komaki	Malaysia-Japan International Institute Of Technology (MJIIT)	710	15
6	Prof Dr Zainuddin Bin Abd Manan	Fakulti Kejuruteraan Kimia	739	13
7	Prof Dr Hadi Nur	Fakulti Sains	460	13
8	Prof Dr Vijay Kumar Arora	Fakulti Kejuruteraan Elektrik	464	13
9	Prof Dr Mohd Marsin Bin Sanagi	Fakulti Sains	397	12
10	Prof Dr Andreas Ochsner	Fakulti Kejuruteraan Mekanikal	591	12



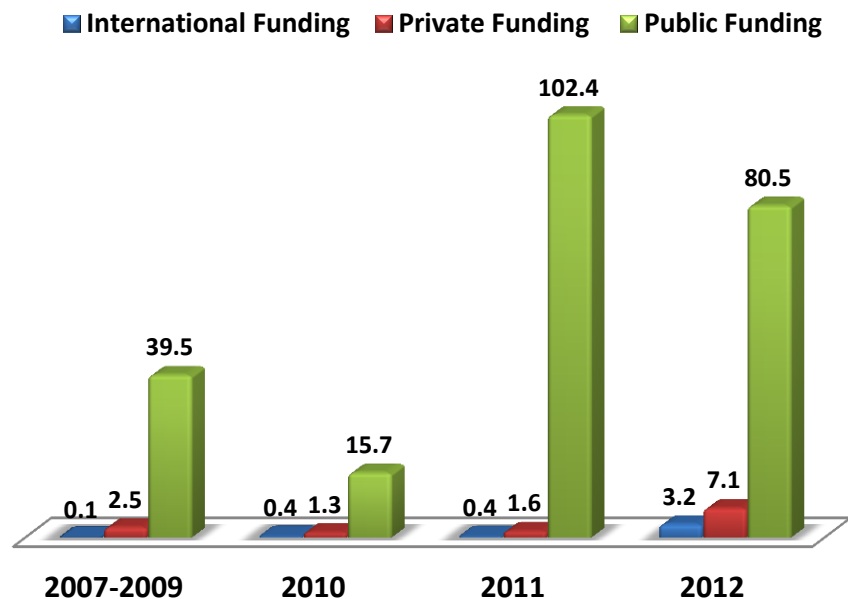
UTM As RU Research Output (2008-2012)

Improved Performance MyRA 1

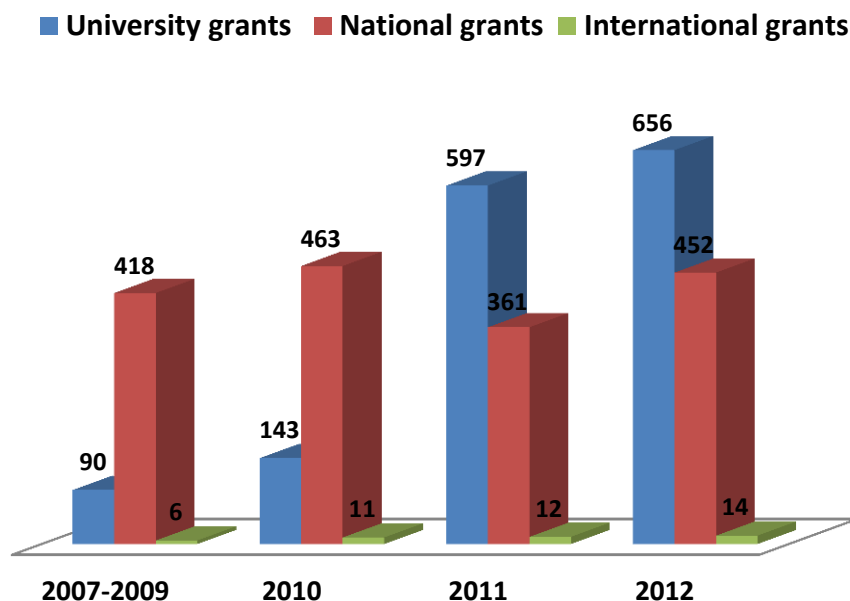
No	Summary and Total Marks	2007-2009	2010	RU Full Mark	2011	2012 (27/3/2013)	
		Marks Obtained	Marks Obtained		Marks Obtained	Status	Marks Obtained
1	SECTION B: Quantity and Quality of Researchers (25%)	19.1	14.3	25	18.6	OK	20.4
2	SECTION C: Quantity and Quality of Research (30%)	17.4	15.2	30	43.8	EXCELLENT	60.8
3	SECTION D: Quantity of Postgraduates (10%)	14.1	16.0	10	17.5	EXCELLENT	21.2
4	SECTION E: Quality of Postgraduates (5%)	6.7	6.3	5	7.9	EXCELLENT	7.1
5	SECTION F: Innovation (10%)	8.9	9.5	10	10.1	EXCELLENT	11.7
6	SECTION G: Professional Services and Gifts (7%)	7.0	7.0	7	7.0	OK	7.0
7	SECTION H: Networking and Linkages (8%)	6.9	6.0	8	6.8	OK	7.3
8	SECTION I : Support Facilities (5%)	4.6	4.6	5	4.6	OK	4.6
TOTAL MARKS (B, C, D & E must be > 50)		57.3	51.8	70	87.8	OK	109.5
OVERALL SCORE (Entry level > 75 for MRU)		84.6	78.7	100	116.5	- OK -	139.9

Research Culture: Increased Number of R&D Grant and Principal Investigators

Research Grants for Academic staff (in millions)



Principal Investigators with Research Grants



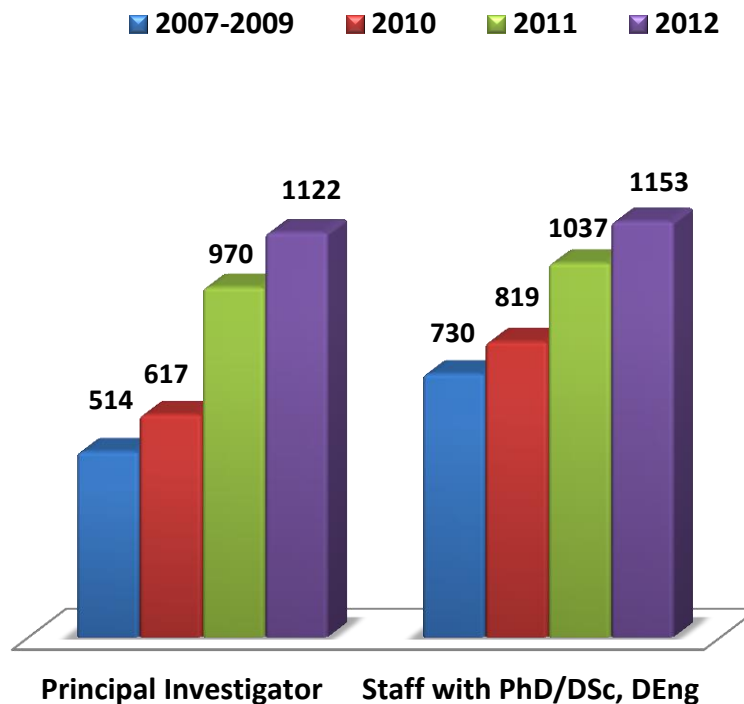
UTM has increased the number and amount of research funding acquired from public and private sources at national and international level. Various programmes have been initiated to increase the number of principal investigators such as the New Academic Staff (NAS) Grant, Tiered University Grants and Flagship Grants. Training and roadshows have been conducted to guide and assist new academic staff on grant opportunities, writing grant proposals and acquiring feedbacks in improving the governance and management of research grants.

Research Culture: Increased PhD Qualifications

UTM has successfully increased the number of staff with a minimum of PhD qualification. This is an important benchmark to surpass as possessing at least 75% of the staff with PhD would mark the existence of critical mass in human capital that is geared towards sustaining a research culture.

UTM achieved this using several approaches such as retaining talented staff after their retirements, conducting recruitment roadshows abroad, recruitment of foreign staff and wooing our PhD postgraduates to join the university upon graduation.

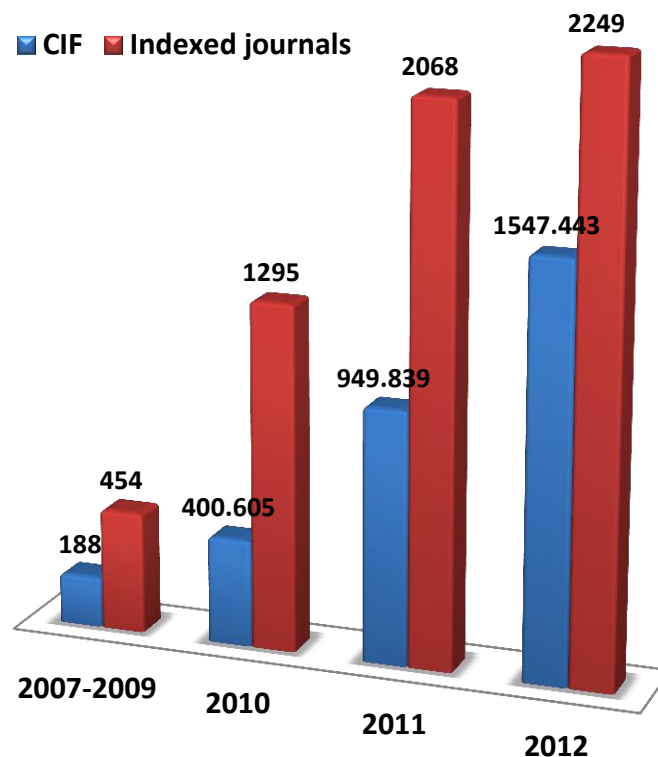
Principal Investigators and Qualifications



Quality of Research Output Increased in CIF and Publications

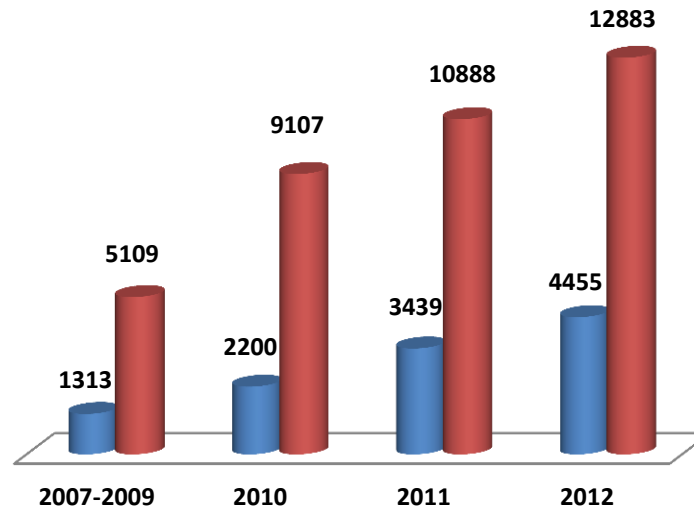
UTM has initiated several short and long term strategies to increase the Cumulative Impact Factor (CIF) and the number of total publications.

These includes establishing the Research Publication Centre to enhance publication quantity and quality, elevating the status of UTM's Jurnal Teknologi to a SCOPUS indexed journal and launching the publication and citation incentive system.



Increased Human Capital Development – Post Graduate

■ No. of PhDs Enrolled ■ No. of PG Students



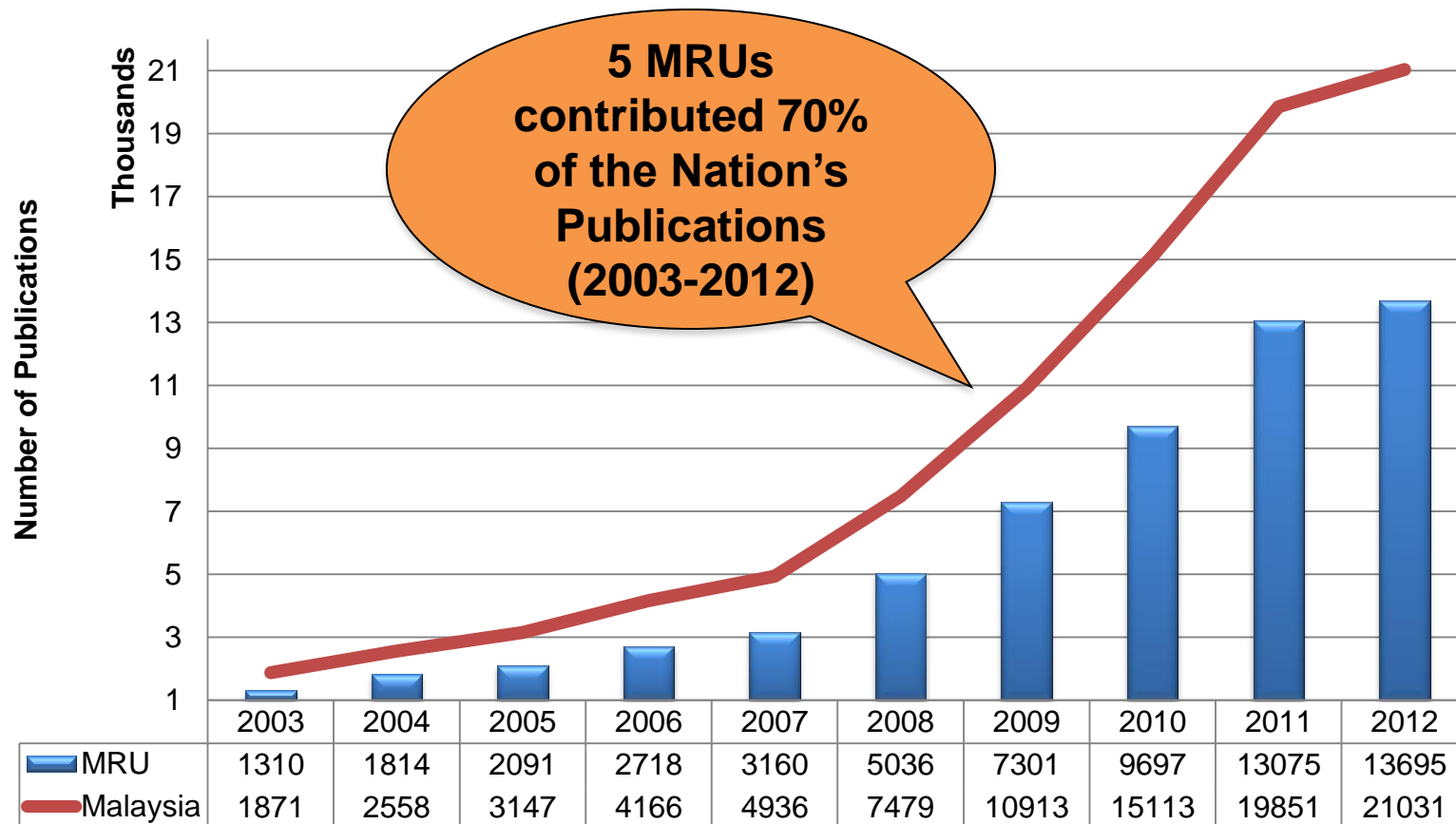
From **12883** Post Graduate Students in 2012, **9429** (73.2%) are in **Science & Technology**

UTM has embarked on various schemes such as Zamalah, International Doctoral Fellowship (IDF), Graduate Assistantship (GA), Industrial PhD and Doctoral Research Grant to boost post-graduate

No	Criteria	Unit for KPI	2007-2009	2010	2011	2012
1	Number of PhDs Enrolled	a. Total number in the year	1313	2200	3439	4455
		b. Ratio of PhDs enrolled to academic staff (Including staff on study leave)	0.90	1.40	2.13	2.70
		c. Percentage of PhD enrolled in S&T	84%	77%	78%	77%
2	Postgraduates Enrolment	a. Ratio of postgraduates to academic staff	3.00	5.79	6.74	7.82
		b. Ratio of postgraduates (based on research and mixed modes only) to undergraduates, PG/UG	0.13	0.40	0.46	0.53
3	Percentage of International Postgraduates students	Percentage of international postgraduates students	28%	28%	34%	35%
4	Number of PhDs Graduated	a. Total number in the year	89	91	121	214
		b. Ratio of PhDs graduated to academic staff (NOT Including staff on study leave)-PhD graduates/staff	0.10	0.07	0.08	0.14
		c. Percentage of PhD graduated in S&T	93%	90%	88%	95%

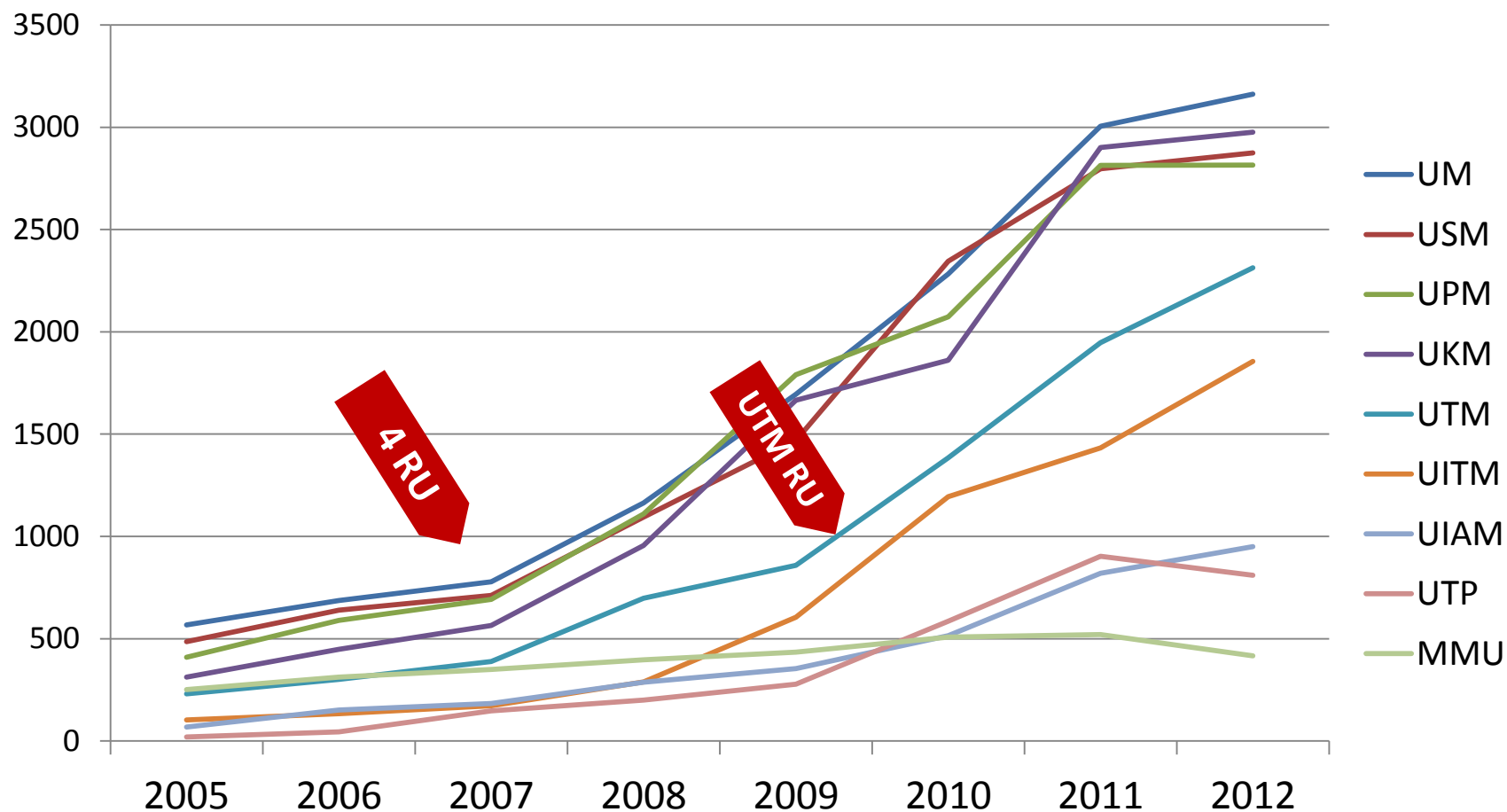
Note : For MyRA I 2012, the num. of PG is adjusted to ratio of PhD Student : 3 Part Time= 1 Full Time and Master Student : 1 Full Time = 2 Part Time. For the purpose of continuity and clarity the figures on the table above are not adjusted.

Research Publications of MRU and Malaysia (2003-2012)

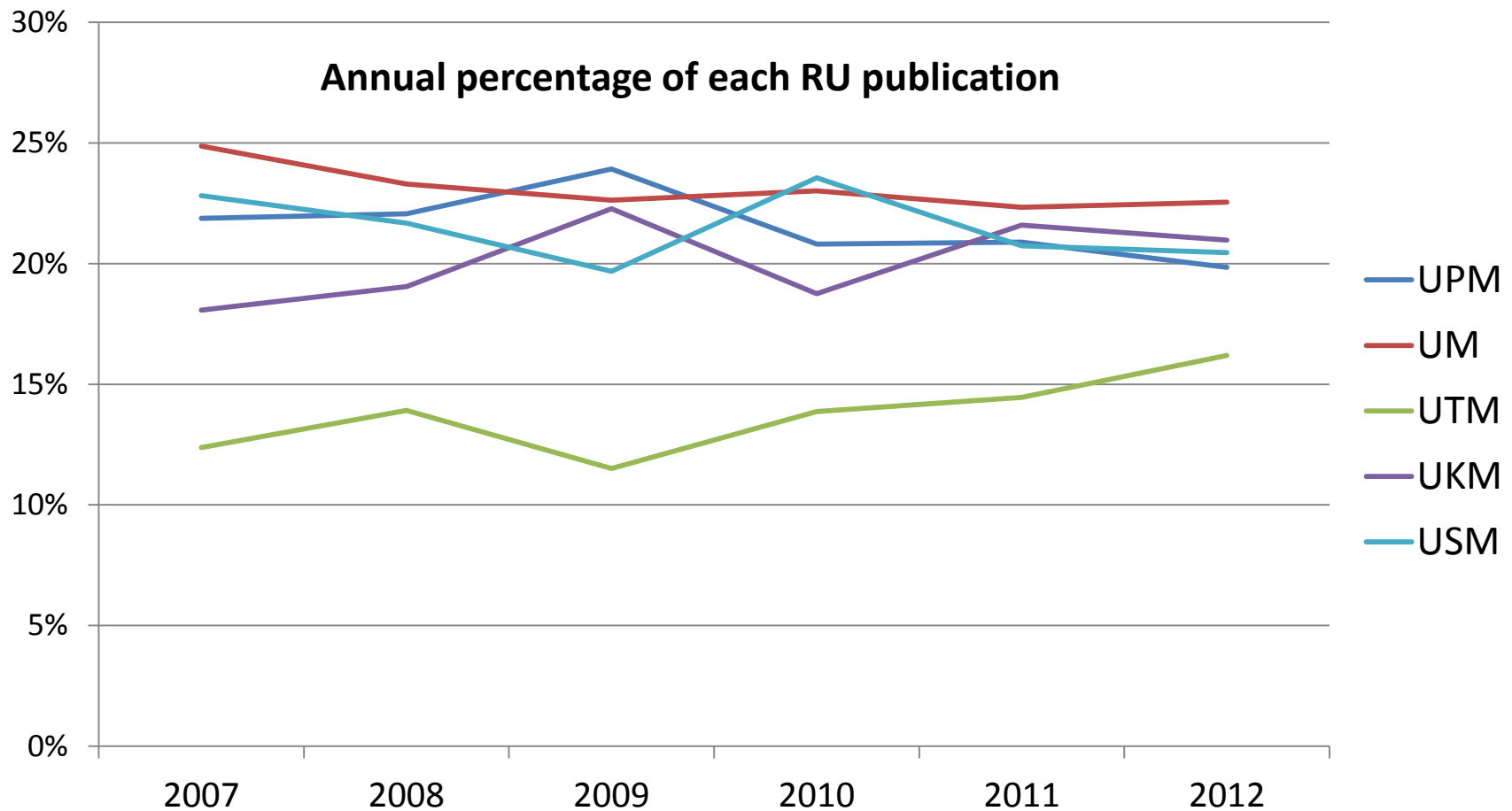


Source: Scopus , July 2013

Overall publication trends of 5 RUs and 4 highest Non RU 2005-2013



Relative Contribution among RU



Overall performance of 5 RUs 2005-2013

- Green denotes MYRA I and purple denotes MYRA II
- The bottom table shows the cumulative publication in each phase MYRA I and II
- Overall, UTM in 2010-2013 performed better than other 4 Research Universities during their First RU Inception Phase (2007-2009)
- Increasing productivity is visible in 2nd year of RU Inception Phase
- UTM attained between 67%-73% output of other MYRA II RU

YEAR	UM	USM	UPM	UKM	UTM
2005	568	485	409	313	230
2006	687	640	590	448	301
2007	778	711	692	564	388
2008	1,164	1,094	1,109	955	698
2009	1,694	1,468	1,790	1,666	858
2010	2,282	2,345	2,073	1,861	1,384
2011	3,005	2,797	2,814	2,901	1,947
2012	3,162	2,875	2,815	2,976	2,313
2013	2819	2,251	2,347	2,233	2,043

	UM	USM	UPM	UKM	UTM
MYRA I	3,636	3,273	3,591	3,185	5,644
MYRA II	8,449	8,017	7,702	7,738	
%	67%	70%	73%	73%	



Thank you