



UNIVERSITI  
MALAYA



# IMPLEMENTING RESEARCH IMPACT ASSESSMENT IN MALAYSIA

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# Background

- In Malaysia, there are 109 HEIs comprising 20 public universities (including 5 RUs), 63 private universities, and 26 public university colleges.
- In addition to HEIs, there are 73 public research institutes (PRIs) from various ministries which were established since 1900.

# Research Funders

- R&D funders in Malaysia are **(i) federal, state, and local governments, (ii) business enterprises including government-linked companies (GLCs) and corporations (iii) private sectors and NGOs, and (iv) international agencies.**
- The **Ministry of Science, Technology and Innovation (MOSTI)** is the main agency for government research grants disbursement to public and private institutions and industry partners.
- The **Ministry of Higher Education (MOHE)** is the major funder for HEIs, particularly for fundamental research and research universities block grants, as well as some pre-commercialisation, prototype grants.
- **Other ministries** also award grants, focusing on applied topics in agriculture, health, environment and others

# Research Funds

- In 2022, Malaysia's Finance Minister announced RM423 million allocation to the MOSTI and MOHE to intensify research and development (R&D) activities including RM295 million for public universities to continue their roles in the research ecosystem while encouraging collaborations with industry

# Levels of Research Assessment



## International

- Quacquarelli Symonds (QS) World University Rankings
- Times Higher Education (THE) World University Rankings



## National

- Malaysia Research Assessment (MyRA)
- SETARA Rating

## Institutional

- Standard Academic Performance Target (SAPT)
  - Key Performance Index (KPI)



## Project

Key Performance Indicator (KPI) Requirements

- Human Capital Development
- Publications
- Intellectual Property
- Prototype



# Project-level Deliverables (KPI)



## 1. Human Capital Development

Master and PhD students and graduates, post-doc fellows, training of funders' employees

## 2. Publication

Research article in refereed journals, proceedings, journal quartile, books, chapters in books

## 3. Intellectual Property (register at National or International level)

Patents, copyrights, industrial design, trademarks, product license, training modules

## 4. Prototype

Minimum Viable Product (MVP)

## 5. Others

Projects that address specific needs (eg. priority areas), reports and collaboration with certain target groups

# Inception of Malaysian Research Universities (RU)



V

## VISION

A Research University seeks to actively participate in new adventure of ideas, experiment with innovative methods, and take intellectual initiative to **further discover and extend the frontiers of knowledge**

M

## MISSION

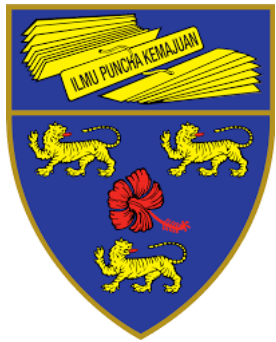
**To be engine of growth to the nation** where scholars and students exchange ideas as well as conduct research in a conducive environment that nurture exploration and creativity **to discover knowledge and create wealth, leading towards quality of life**

O

## OBJECTIVES

- 1) To be a **leader in innovation**
- 2) **Nobel Prize**
- 3) To produce **world class research output**
- 4) To be **centre of excellence in prioritized area** in the nation
- 5) To generate **high impact research publications**
- 6) To secure **research funds from industry**
- 7) To **attract and to graduate students of high standards**
- 8) To **attract the best brains for teaching and research**
- 9) To provide a **conducive environment** for all the above

# 5 Malaysian Research Universities (RU)



**Universiti  
Malaya**



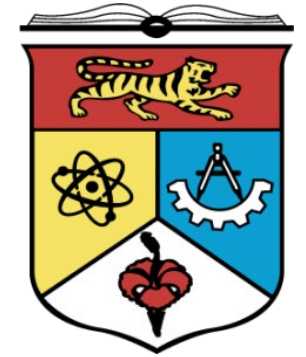
**Universiti  
Putra  
Malaysia**



**Universiti  
Teknologi  
Malaysia**



**Universiti  
Sains  
Malaysia**



**Universiti  
Kebangsaan  
Malaysia**

## **FOUR PILLARS OF RESEARCH UNIVERSITIES**

Research Prominence

Talent Development

Bridging the Grand Challenge

Wealth Creation



# Malaysia Research Assessment (MyRA®)



- MyRA® is a yearly assessment (1 Jan – 31 Dec)
- Submission of data (Mac/April); subject to announcement by the Dept of Higher Education, MOHE.
- Upon submission, data goes through self-assessment & internal audit process.
- Internal Auditor appointed by Dept of Higher Education, MOHE
- Research University need to complete both MyRA® I & MyRA® II assessments.



# Malaysia Research Assessment (MyRA)



- The instrument **quantitatively** measures input and output, and some outcome and impact of Research, Development, Commercialization & Innovation (RDCI)
- Comprehensive RDCI data from each HEI is important for the authorities to develop and create the Ministry framework and National Higher Education policy.
- Research University block grants are determined by their MyRA score each year
- Other universities are required to be audited by MyRA in order to qualify to apply for various grants schemes under MOHE
- University colleges use MyRA to benchmark themselves for future upgrade

# MyRA over the years



2009

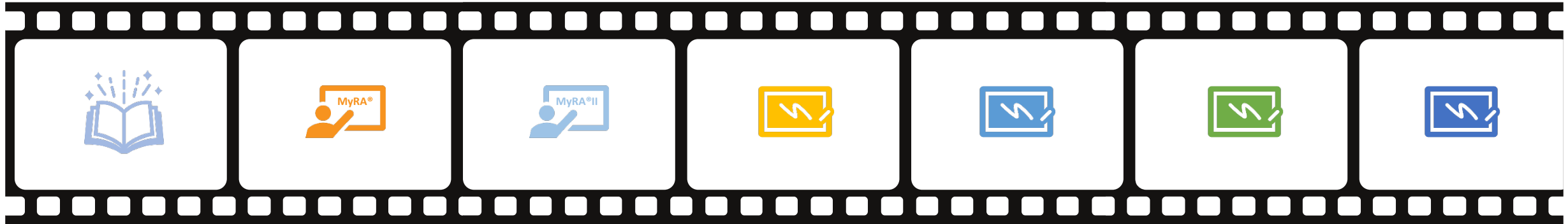
Introduction of MyRA®

2013

Glossary MyRA®  
(Amendment 2013)

2016

Glossary MyRA®  
(Amendment 2016)



2005/2006

Development of Guideline/  
Instrument for Assessment/  
Establishment of RU

2012

Introduction of MyRA®II

2014

Glossary MyRA®  
(Amendment 2014)

2018

Glossary MyRA®  
(Amendment 2018)

# Malaysian Research Assessment (MyRA)



- measures quantitatively
- input, output, outcome and impact
- Research, Development, Commercialization, Innovation (RDCI)
  - research and innovation value chain

## The advantages:-

- easily scored based on numbers
- gives a broad overview of the institution's achievement
- comprehensive data of parameters for the entire institution / makes good enterprise data
- can be audited annually

# *Research Assessment*

## **1. Quantitative**

- Comprehensive, covering the P&I value chain horizontally (breadth)

## **2. Qualitative**

- Selected case reports, tracking underpinning studies that produce impact on beneficiaries

## **3. Research quality and integrity**

- Quality of raw data sets (raw datasets), openness, transparency and sharing of data obtained, data integrity and data validity

# Qualitative Impact Assessment

- beyond academic impact (h-index, citations), real impact, socio-economic impact
- narrative assessment - qualitative in nature
- requires the deliberation of several evaluators
- confirmation (corroboration) from the beneficiary (third party)
- evidence of relevance to scientific research

## **Advantage:-**

- only selected cases are submitted for evaluation
- small institutions have the opportunity to highlight strengths in certain areas
- evaluation based on long-term impact

# Why Measure Research Impact?

1. Benefits and beneficiaries of research are tangible
2. Gives a sense of purpose to researchers
3. Every institution has the opportunity to excel in core areas

# Proposed method for Impact measurement



- REF model (scaled down)
- Pilot – report first – not evaluated
- Starting the practice and culture



# Looking at REF elements

1. REF does Not look at 100% researchers
2. Qualitative than quantitative
3. University can choose the cases to be submitted, based on "unit of assessment", i.e. the area of research
4. Impact – based on the journey/story/narrative of a particular research (project/programme/topic), Not lumpsum report
5. Evaluation requires a deliberative process by more than 1 evaluator for each case report
6. Rubric for star rating

# Thoughts for MyRA Impact Assessment

1. Based on WoS areas Natural Sciences, Life Sciences, Medical Sciences, Social Sciences, Arts and Humanities, Engineering & Technology, OR
2. Based on STIE national economic areas
3. Universities to submit impact case reports based on the above areas
4. Format based on REF to start with

# Proposed Definition of Impact for MyRA



The proposed 'Impact' definition for MyRA is as follows:

- a) Impact includes, but is not limited to, an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia.
- b) These may include changes in:-
  - **the activity, attitude, awareness, behaviour, capacity, opportunity, performance, policy, practice, process or understanding of an audience, beneficiary, community, constituency, organisation or individuals in any geographic location whether locally, regionally, nationally or internationally.**
- c) Impact includes the reduction or prevention of harm, risk, cost or other negative effects.
- d) Impacts on research or the advancement of academic knowledge within the higher education sector (whether in the Malaysia or internationally) is assessed within category A – F of MyRA.
- e) Impacts on students, teaching or other activities within the submitting HEI are excluded.
- f) Other impacts within the higher education sector, including on teaching or students, are included where they extend significantly beyond the submitting HEI.

# Examples from REF 2014

## Sciences

## Medical Health

## Engineering

### Impact case study (REF3b)



<b>Institution:</b> University of Cambridge
<b>Unit of Assessment:</b> UoA6
<b>Title of case study:</b> A new MRSA emerging in human and bovine populations
<b>1. Summary of the Impact</b> (Indicative maximum 100 words) Research led by Dr Holmes has identified a novel variant of methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) in livestock. This represents a previously unidentified reservoir of infection which has had impact on the epidemiology of MRSA and its management. This research also impacts on antibiotic use in agriculture and its role in the emergence of antibiotic resistance. As a consequence of these research findings commercial tests and testing protocols have been developed to detect the new MRSA variant, which are now used widely in clinical settings throughout Europe. The discovery has also been used to inform policy decisions at a governmental level in the USA and Europe.
<b>2. Underpinning research</b> (Indicative maximum 500 words) <i>Staphylococcus aureus</i> causes a wide range of diseases in humans and other animals, including bovine mastitis, a very common and economically significant disease of dairy herds. MRSA was first identified in 1961 and is distinguished by the fact that it contains a <i>mecA</i> gene, which encodes a penicillin-binding protein (PBP2a) with low affinity for $\beta$ -lactam antibiotics and thus confers resistance to these antibiotics, which include methicillin. The <i>mecA</i> gene is located on a mobile staphylococcal cassette chromosome (SCC) forming SCCmec. MRSA can be sub-classified as hospital acquired (HA-MRSA), community acquired (CA-MRSA) or livestock associated (LA-MRSA); the last emerged in the early 2000s and provides a reservoir of infection for both farm animals and humans.  From 2006 to 2010 Dr Mark Holmes (Senior Lecturer, Department of Veterinary Medicine from 1991 to the present) conducted a project, jointly funded by Defra and HEFCE, investigating the epidemiology of bovine mastitis. This research identified a novel isolate of <i>S. aureus</i> , which was phenotypically resistant to $\beta$ -lactam antibiotics at levels that would normally identify it as MRSA despite testing negative for <i>mecA</i> or PBP2a using established tests <sup>1</sup> .  Further research, led by Dr Holmes, culminated in whole genome sequencing of this isolate (in collaboration with the Wellcome Trust Sanger Institute) which found that the genetic basis for the $\beta$ -lactam resistant phenotype was a novel <i>mecA</i> gene <sup>1</sup> , provisionally named <i>mecA</i> <sub>UGA291</sub> but since reclassified as <i>mecC</i> . <i>mecC</i> was located on a novel SCCmec (type XI). The failure to detect <i>mecC</i> using PCR was due to the low sequence conservation between <i>mecA</i> and <i>mecC</i> , with only 60% identity at the DNA level and 63% similarity at the amino acid level. PCR primers were designed by Holmes in 2010 to enable detection of this new MRSA.  Following the design of these new primers, a further 13 <i>mecC</i> MRSA isolates were found in a collection of 940 <i>S. aureus</i> isolates from 465 UK cattle herds which had submitted mastitic milk samples to the UK Animal Health Veterinary Laboratories Agency (AHVLA) <sup>1</sup> . The AHVLA had already identified 24 of these isolates that had high levels of antibiotic resistance consistent with MRSA status, but were not identified as MRSA using established PCR assays (using specific primers for <i>mecA</i> ) and a standard slide latex agglutination test (using a monoclonal antibody specific for the <i>mecA</i> -encoded PBP2a) <sup>1</sup> . These two tests were being used by the Health Protection Agency and other MRSA testing laboratories as 'gold standard' tests for MRSA at the time but they did not identify the <i>mecC</i> allele.  Screening of <i>mecA</i> -negative MRSA isolated from humans from clinical disease and from MRSA screening, and from Scotland, England and Denmark, undertaken in 2010-11, in collaboration with national MRSA reference laboratories, identified a further 51 <i>mecC</i> isolates (still called <i>mecA</i> <sub>UGA291</sub> in the literature at this time) <sup>1</sup> . Strain typing of human and bovine isolates revealed an apparent spatial clustering, where isolates from the same geographical region were likely to share the same multi-locus sequence type (ST) or spa-type. All the isolates obtained from human samples had animal-associated STs, or were part of a clonal complex whose founder was animal-associated

### Impact case study (REF3b)



<b>Institution:</b> Aston University
<b>Unit of Assessment:</b> 15: General Engineering
<b>Title of case study:</b> Advanced fluid flow modelling improves the efficiency of industrial burners
<b>1. Summary of the Impact</b> (Indicative maximum 100 words) Using advanced mathematics and numerical modelling we have demonstrated how fundamental understanding of laminar-turbulent transitions in fluid flows can save energy. From 2008 we helped the cleantech company, Maxsys Fuel Systems Ltd, to understand and improve their technology and demonstrate to customers how it can reduce fuel use by 5-8%. Customers including Ford Motor, Dow Chemical and Findus testify to the impact from financial savings and reduced carbon emissions obtained by installing Maxsys products on industrial burners used widely in many industrial sectors including automotive, bulk chemicals and food. In 2010, Selas Heat Technology Company bought the Maxsys brand to invest in this success.
<b>2. Underpinning research</b> (Indicative maximum 500 words)  <i>Nature of research insights</i> Since the early 2000's, we (Generalis and the team at Aston University) have used a variety of cutting-edge techniques to analyse the effects of turbulence on fluid mixing and energy transfer. In-house deterministic modelling tools can pinpoint the transition between uniform laminar and irregular turbulent flow (key references 3.1-3.2). In our unique approach, we separate the flow into basic uniform laminar flow and the infinitesimal disturbances that promote the descent of the flow into turbulence. We then solve for the disturbances by expanding orthogonal polynomials as harmonic expressions. This allows us to identify rapidly the nature of the different states as the flow bifurcates sequentially from the laminar state (3.1-3.3).  Flows subject to internal forces, which occur in a number of industrial applications, present an especially complex challenge in fluid dynamics. We modelled the interplay between buoyant forces driven by volumetric heating, inertial forces driven by either a constant flux (closed system) or a constant pressure gradient (open system), and the viscous forces which destabilise the flow as it bifurcates (3.1, 3.2). These models have contributed fundamental knowledge regarding the transition to turbulence of volumetrically-heated flows, allowing us to address a variety of industrial problems.  Models for Poiseuille flow were essential to the success of the R&D project for Maxsys Fuel Systems Ltd (3.1, 3.2). We extended the work on volumetric heating to include magnetic forces in Hagen-Poiseuille flow in pipes. This enabled us to specify the optimal orientation of the magnets and the influence they had on the flow, thus allowing significant improvements in the fuel efficiency of industrial burners to be realised.  This breakthrough in energy saving was the direct outcome of an EPSRC Industrial CASE award with Maxsys, in which PhD student Ben Tocher (2007-11) developed numerical models to tackle the influence of the magnetic field on the flow in the pre-combustion treator of the Maxsys burner. The development built on several years of international collaboration focussed on understanding elusive structures at the heart of turbulence. Working with Prof Fujimura of Tottori University, Japan, Generalis had assessed the limits of modelling techniques used to characterise transitions to turbulence (3.1-3.3). Generalis and Itano (Visiting Scholar) later confirmed the existence of a hairpin vortex structure using the models and techniques thus developed (3.4, 3.5). These fundamental insights were essential to the modelling for Maxsys because they contributed to the extent that Generalis' code could be applied and the appropriate techniques used in the search of the transition region of turbulent flow in pipes. Following these pioneering works, Generalis was awarded eight grants including two Marie-Curie Fellowships (Nos. 274367 & 298891, ~550k€), a Leverhulme Trust project grant (RPG-410, ~£175k with PI Dr Yassir Makkawi), a Visiting Professorship (No. 22195, £72k) and a RAEng Distinguished Visiting Fellow. All these initiatives have expanded the scope of turbulence that Dr Generalis' codes can model. Funding won since

# Examples from REF 2014

## Impact case study (REF3b)

<b>Institution:</b> The Royal Central School of Speech and Drama, University of London
<b>Unit of Assessment:</b> 35: Music, Dance, Drama, and Performing Arts
<b>Title of case study:</b> The Professional Development of Theatre Sound
<b>1. Summary of the impact</b> (Indicative maximum 100 words) Ross Brown's research has been instrumental in shaping theatre sound into a specialist discipline in its own right. It has influenced the practices, organisation and status of sound within professional theatre. Constructing a dialogue with a potentially hostile theatre industry over two decades, Brown's central formulation of a 'dramaturgy of sound' has changed the ways in which theatre professionals, independent artists, academics and specialist students think about and work with sound. In doing so it has helped make sound design a more central artistic consideration of theatre production and thus raised its profile in the industry.
<b>2. Underpinning research</b> (Indicative maximum 500 words) Brown began as lecturer in sound design at Central in 1994 and his research has three main phases. <b>Phase 1, 1998-2001</b> , saw research done as creative practice in professional settings. Noting the impact of emerging technologies in the early 90s it explored the potential erasure of category distinctions between music and sound effect. Conceiving of theatre sound as composition, Brown sought to establish the terms on which the auditory experience of theatre may be modelled as a coherent designed whole, as in scenography. This was noted in Susannah Clapp's <i>Observer</i> review of an early piece of his creative practice as research: 'One of the distinctive features of <i>I Am Yours</i> [at the Royal Court Upstairs] ... is the creation of a <b>scenery of noise</b> ' (output 1). This led to the formulation of the concept of a 'dramaturgy of sound'. In order for this to make a difference to industry practice it had to be comprehensible by that industry, so it was initially tested in specifically industry-based contexts and publications: presentations for Tonmeister Association conference (Germany 1998), professional sound seminar at the Theatre Academy of Finland (Helsinki and Stockholm 1998) and publications in trade journals. This testing in industry settings was to continue.  <b>Phase 2, 2001-2006</b> , began with a colloquium which drew industry professionals together with academics. It saw a concentration on the research's theoretical implications, with more dissemination in specifically academic contexts. Drawing on discourses from dramaturgy, musicology and aural phenomenology (outputs 1 and 2), the concept of 'dramaturgy of sound' questioned both the dominance of visuality in design and the compartmentalising of sound as purely 'technical' practice. At the same time there was focus on shaping the appropriate mode of articulating and documenting the concept. Brown was one of the earliest academics to develop new forms of artefact-based reflective documentation. These were described by the RAE 2001 report as 'a model for practice for the unit of assessment'. From here research <b>experiments in documentation of process</b> were aligned with the industry's interest in presenting artefacts of sound design within the format of the design exhibition. The results were offered for commentary in 2005 at the academic PARIP conference (Leeds) (output 3) and the Industry-run World Stage Design Exhibition (Toronto), where Brown's documentary artefact won a bronze medal. This work of documentation was collected by the British Library's Sheffield Theatre Archive project and paved the way for sound's arrival as a scenographic element on equal terms with the visual, a moment

## Social Sciences

### Music & Arts

### Languages



## Impact case study (REF3b)

<b>Institution:</b> Kingston University
<b>Unit of Assessment:</b> 29, English Language and Literature
<b>Title of case study:</b> Cultural and economic impact on Hampton Court Palace from research-based visitor experience
<b>1. Summary of the impact</b> Research at Kingston University into the socio-political and cultural milieu of the court of Henry VIII led into a Knowledge Transfer Partnership between the University and Historic Royal Palaces. This resulted in a new visitor experience at Hampton Court Palace, 'Henry VIII: Heads and Hearts', which significantly increased visitor numbers and income at the attraction. The KTP also caused a change in practice at Historic Royal Palaces, with increased incorporation of research into commercial heritage activities. The project received the AHRC award for the most effective use of Humanities for the Creative Economy in 2011.
<b>2. Underpinning research</b> The research for this project was undertaken by Thomas Betteridge (Lecturer 1998-2000, Senior Lecturer 2000-2003; Reader 2003 - 2006) and the KTP Associate Suzannah Lipscomb (2007-2010), and exploited by Erica Longfellow (Lecturer 2000-2004; Senior Lecturer 2004-2011). From 1998 to 2004 Betteridge undertook pioneering research on the cultural milieu of Henry VIII's court, disseminated in the monographs <i>Tudor Histories of the English Reformation</i> (1999) [1] and <i>Literature and Politics in the English Reformation</i> (2004) [2]. Betteridge's work is part of a new wave of court studies that has aimed to recast the debate about Henry VIII beyond the question of whether Henry was a good or bad king. Instead, Betteridge and others have investigated the socio-political and cultural milieu of the court as a group of political individuals with Henry at its centre. 'The Henrician court of the 1530s was a new institution' ([2], p.68), composed of influential 'new' men empowered by a king who insisted on his ultimate and absolute authority. Betteridge focused particularly on how this new model of the court affected the strategies of writers aiming to influence the king's policies for religious change.  Longfellow and Lipscomb carried this research forward, further investigating the stories of individuals at the court as well as considering how this political model is reflected in material culture. Lipscomb and Betteridge have edited <i>Henry VIII and the Court: Art, Politics and Performance</i> (Ashgate, 2013) [3], a collection of essays drawn from the 'Henry VIII and the Tudor Court' conference at HCP in summer 2009, organised by Longfellow. The collection drew together contributions from leading academics from history, art history, material culture, and literature. Together the essays moved the study of Henry VIII beyond moralising about the king's actions, towards a wider assessment of the impact of Henry and his courtiers on politics, culture and religious change in the period. Lipscomb's essay in this collection furthered the study of influential individuals at the court by reconsidering the fall of Anne Boleyn as a crisis in Henry VIII's masculinity, an argument she also promulgated in a popular study, <i>1536: The Year that Changed Henry VIII</i> (2009) [4].  'Henry VIII: Heads and Hearts', the visitor experience at HCP, drew directly on Betteridge's, Lipscomb's and Longfellow's findings, and thus in itself provided a new research model for how the humanities can inform public engagement with heritage institutions. As described in section 4 below, Lipscomb acted as a research advisor for every aspect of 'Henry VIII: Heads and Hearts'. This project also generated new research findings. Most significantly, Lipscomb's cultural research revealed how the Privy Council of Henry's closest advisors worked in practice. Lipscomb recounted the research findings of this experiment in translating cultural research into public engagement in an article in <i>The Public Historian</i> [4].
<b>3. References to the research</b> [1] Thomas Betteridge, <i>Tudor Histories of the English Reformation</i> (Ashgate, 1999) (peer-reviewed and published by a highly-regarded independent academic press) [2] Thomas Betteridge, <i>Literature and Politics in the English Reformation</i> (Manchester UP, 2004) (peer-reviewed and published by a highly-regarded university press)

Section B2.

## **Underpinning research**

This section with indicative maximum of 500 words should outline the key research insights or findings that underpinned the impact, and provide details of what research was undertaken, when, and by whom.

This research may be a body of work produced over a number of years or may be the output(s) of a particular project.

References to specific research outputs that embody the research described in this section, and evidence of its quality, should be provided in the next section.

Details of the following should be provided in this section:

- The nature of the research insights or findings which relate to the impact claimed in the case study.
- An outline of what the underpinning research produced by the submitted unit was (this may relate to one or more research outputs, projects or programmes).
- Any relevant key contextual information about this area of research.

Section B3.

## References to the research



This section with indicative maximum of six references should provide references to key outputs and evidence about the quality of the research. Underpinning research outputs may include various range of types and are not limited to printed academic work.

All forms of output cited as underpinning research will be considered equitably, with no one type of output being preferred over others.

Include the following details for each cited output:

- author(s)
- title
- year of publication
- type of output and other relevant details required to identify the output (eg. DOI, journal title and issue)

Evidence of the quality of the research must also be provided in this section. Details of key research grants or end of grant reports, the following should be provided:

- who the grant was awarded to
- the grant title
- sponsor
- period of the grant (with dates)
- value of the grant.

## Section B4.

### Details of the impact



- This section with indicative maximum of 750 words should provide a narrative, with supporting evidence, to explain:
- how the research underpinned (made a distinct and material contribution to) the impact;
  - the nature and extent of the impact. The following should be provided:
    - A clear explanation of the process or means through which the research led to, underpinned or made a contribution to the impact (for example, how it was disseminated, how it came to influence users or beneficiaries, or how it came to be exploited, taken up or applied).
    - Where the submitted unit's research was part of a wider body of research that contributed to the impact (for example, where there has been research collaboration with other institutions), the case study should specify the particular contribution of the submitted unit's research and acknowledge other key research contributions.
    - Details of the beneficiaries – who or what community, constituency or organisation has benefitted, been affected or impacted on.
    - Details of the nature of the impact – how they have benefitted, been affected or impacted on.
    - Evidence or indicators of the extent of the impact described, as appropriate to the case being made.
    - Dates of when these impacts occurred.



Section B5.

## **Sources to corroborate the impact**

This section with indicative maximum of ten references should list sources of external, provide corroboration of specific claims made in the case study.

This section should list sufficient sources that could corroborate key claims made about the impact of the unit's research.

These could include, as appropriate to the case study, the following external sources of corroboration (stating which claim each source provides corroboration for):

- Reports, reviews, web links or other documented sources of information in the public domain.
- Confidential reports or documents.
- Individual users/beneficiaries.
- Factual statements already provided to the higher education institution system by key users/beneficiaries, that corroborate specific claims made in the case study.

# **Proposed incorporation of impact in MyRA**

## 11. Institution's Readiness and Commitment to Realizing and Supporting Impact

Investment on programmes that promote research translation beyond academia

Eg.:

- (i) research grants that emphasize on impact,
- (ii) research communication,
- (iii) programmes to track past research if more support is needed to realize impact
- (iv) programmes to engage with stakeholders
- (v) training on pathway to impact

## 12. Breadth of researchers engaged in realizing impact beyond academia

- (1) bilangan penyelidik yang menjadi PI untuk geran yang menekankan impak secara explicit (indirectly checking if the university has any initiative to create such grants)
- (2) bilangan penyelidik yang berjaya menterjemahkan (translate) penyelidikan ke dunia luar
- (3) taburan penyelidik dalam (2) dari segi tahap kerjaya awal, pertengahan, akhir (early, mid- and later career levels)

## 13. Selected Impact Case Reports

University to select projects/programmes to be submitted as case reports (format TBD) - emphasize on testimony by beneficiaries (Capped at 3 reports per year max)

# Advantages

- Benefits to the society can be seen
- Instil the culture of seeing the research through to the next stage
- Universities can highlight their areas of strength
- Small institutions have the opportunities to show their niche and expertise
- Funders can see research performance across the board

# Steps in implementation

Some questions:-

- Who to evaluate?
- How long will it take?
- How far back do we go?

Capacity building – evaluators, institutions, researchers, **RMA**s

# How about assessing research quality?

# Research Quality

- The value of research depends on the quality of the research
- Quality research produces quality data
- Refers to raw data (raw datasets)
  
- Research data sets - quality, validity, integrity
- How do we measure?
- Starts with data sharing – open science

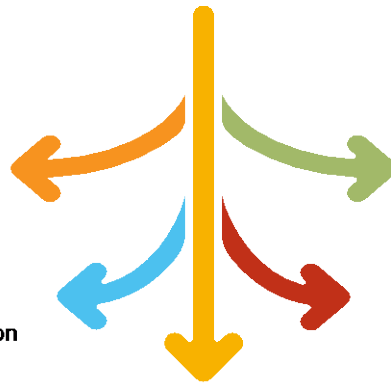
## GOAL

To collect and consolidate Malaysia's research data in a platform that would enable accessibility and sharing of these research data in accordance to the FAIR principle

## PRIMARY OBJECTIVES

**To study the landscape and awareness of Open Science based on selected indicators** (Available Policies, Number of Repositories, Skill Capacity and Infrastructure Capacity).

**Draft National Policy & Guideline on Open Science in Malaysia.**



**Develop one technical specification document and to establish and deploy the MOSP Pilot Platform** involving five research universities in Malaysia.

**Create awareness** about Open Science among local communities.

**Develop a localized training module on Open Science for data stewards, which will be the guideline to train and upscale trainers (especially librarians) into Data Stewards.**

## MOSP FOCUS AREAS



## INTERNATIONAL GUIDING PRINCIPLES

-  **FINDABLE**
-  **ACCESSIBLE**
-  **INTEROPERABLE**
-  **REUSABLE**

## 5 RESEARCH UNIVERSITIES

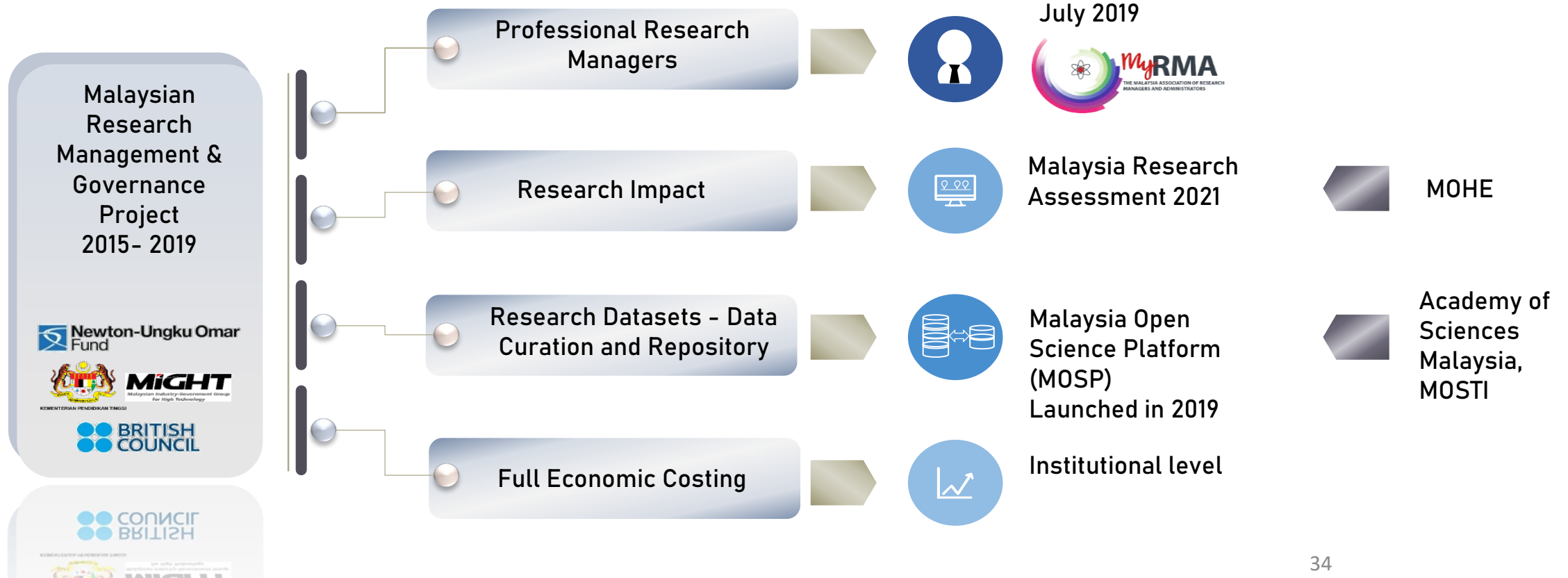




# Moving forward

- The need to balance metrics with qualitative assessment
- Impact is important but how to measure impact and how to implement?
- Early stage of Open Science – advocating sharing of datasets, FAIR principle, data quality, interoperability

# Malaysia Association of Research Managers and Administrators (MyRMA)



# THANK YOU



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