

PREFACE

MyRA® is an instrument that measures *input*, *output*, *outcome* and *impact* of Development, Research, Commercialization & Innovation (RDCI). Data declared by Higher Education Institutions (HEIs) are relevant only to RDCI.

The declared data should include/take into account all *outputs* from all active academic staff despite having reached the maximum score (exceeding the *benchmark* or exceeding twice the *set benchmark*) in a particular section or subsection.

Complete and comprehensive RDCI data from each Higher Education Institution (HEI) is important in assisting the Top Management to make decisions and formulate the direction of the Ministry and the National Higher Education policy.

GLOSSARY**MALAYSIA RESEARCH ASSESSMENT INSTRUMENT I (MyRA® I)****NOTE:**

The data required shall be data for the year of assessment up to 31 December and not cumulatively **UNLESS** otherwise stated

DEFINITION

SUBJECT MATTER	DESCRIPTION
Research Book	Research book means a scholarly book written systematically based on facts and research results that are critically analyzed through rational argumentation.
Non-Governmental Organization (NGO)	<ul style="list-style-type: none"> • A voluntary body or organization established, by a private party or organization that does not have any relationship with any government and is active in the social, economic, cultural and other fields with its specific goals and functions. • Local NGOs must be registered under Section 2, Societies Act 1966 or the Companies Commission of Malaysia (SSM) Act or the United Nations Educational, Scientific and Cultural Organization (UNESCO)

Study Leave of Academic Staff	Study Leave of Academic staff means study for Higher Degree (Postgraduate) purposes.
Student Enrolment (First Degree & Higher Degree)	Student enrolment includes active, graduated, terminated, withdrawn, failed and deferred.
<i>Full-Time Equivalent</i> (FTE) Academic Staff	FTE Academic Staff - Two (2) part-time academic staff involved in research is equivalent to one (1) full-time academic staff involved in Research.
<i>Full-Time Equivalent</i> (FTE) S & T Active Academic Staff	FTE Active S&T Academic Staff - Two (2) part-time active S&T academic staff is equivalent to one (1) full-time academic staff.
<i>Full-Time Equivalent</i> (FTE) Student	<ul style="list-style-type: none"> • Master Student - Two (2) part-time students is equivalent to one (1) full-time student. • PhD Student - Three (3) part-time students is equivalent to one (1) full-time student.
Competitive Grant	Grants that go through a screening or invitation process based on expertise.
First Degree	Bachelor's degree or its equivalent.
Higher Degree	Postgraduate i.e. Masters, PhD or its equivalent.

<p>Research Mode Higher Degree (Postgraduate)</p>	<ul style="list-style-type: none"> • Research Mode Higher Degree (postgraduate) include mixed modes that contain at least 70% research components. • Higher degree that contains less than 70% research components is categorized as degree with coursework (<i>course mode</i>).
<p>Original work</p>	<ul style="list-style-type: none"> • Original work means a work produced by the author himself or jointly with another author, and not the result of a translation of another person's work or adaptation; and • Original work includes book and any form of publication that has an ISBN/ISSN.
<p>Cohort</p>	<p>This section measures the sustainability of academic staff which are classified into three (3) cohorts as follows:</p> <ul style="list-style-type: none"> - Cohort A : > 50 years - Cohort B : 40 - 50 years - Cohort C : <40 years
<p>Community</p>	<ul style="list-style-type: none"> • Community is defined as a community group for example school/resident/village/housing area/NGO level; and • The definition of “community” in this MyRA® Glossary applies to community projects only.

Postdoctoral	<ul style="list-style-type: none"> • Postdoctoral are those who are appointed on a contract basis and not more than five (5) years after receiving a PhD qualification from a recognized University. • Postdoctoral who have retired/stopped working in the year of assessment but work less than six (6) months can be considered.
Active Student	The definition of active student refers to the definition outlined by MyMohes.
Active Research Project	<ul style="list-style-type: none"> • Newly commenced projects in the year of assessment that have research and allocation accounts; • Projects that started before the year of assessment and are still active in the year of assessment; or • Projects that are closed in the year of assessment
Academic Staff	<ul style="list-style-type: none"> • Academic staff appointed by the university. • Academic staff who have retired/resigned in the year of assessment but work less than six (6) months may be taken into account.

Active AcademicStaff	<ul style="list-style-type: none">• Academic staff including seconded, sabbatical leave, postdoctoral leave and leave for training/attachment;• Includes Professors, Visiting Professors, Associate Professors, Senior Lecturers, Lecturers and Research Fellows paid (non-honorarium) by HEIs (including all branches) who carry out teaching/research duties and/or services excluding teachers and teaching fellows;• Possess at least a master's degree (<i>Master</i>); and• Newly appointed staff must serve at least six (6) months.
----------------------	--

SECTION A: GENERAL INFORMATION

1. Total number of academic staff

General Notes:

- All output from academic staff that are not listed in the master list of HEI academic staff during the year of assessment are **not considered**.
- New staff in the year of assessment **shall not be considered** if they have served less than six (6) months. (Subsection A1 (b)).
- Staff who are on study leave are **not considered** as **Active Staff**.(Subsection A1 (b)).
- Number of academic staff according to the grade of the position is as follows:
 - i. Professor
 - ii. Associate Professor
 - iii. Senior lecturer
 - iv. Lecturer
 - v. Research Fellow
- Examples of Science and Technology (S&T) field by faculty (**not limited to**):
 - Pure and Applied Science
 - Technology and Engineering
 - Health and Clinical Sciences
 - Information and Communication Technology
 - Science, Mathematics and Computers
 - Engineering, Manufacturing and Construction

a) Number of academic staff (including staff on study leave)

The number of academic staff according to the grade of the position is as follows:

- > Professor
- > Associate Professor
- > Senior Lecturer
- > Lecturer
- > Research Fellow

b) Number of active academic staff

The number of active academic staff according to the grade of the position is as follows:

- > Professor
- > Associate Professor
- > Senior Lecturer
- > Lecturer
- > Research Fellow

General Notes:

- Trainee lecturers such as Trainee Medical Lecturers (DU51P) cannot be considered as active staff as they do not have a *National Specialist Register* certificate of expertise.
- The position of Assistant Professor is equivalent to the position of Senior Lecturer if one has a PhD degree.

- i. Professor
 - *Full-time*
 - *Part-time*

- ii. Associate Professor
 - *Full-time*
 - *Part-time*

- iii. Senior Lecturer
 - *Full-time*
 - *Part-time*

- iv. Lecturer
 - *Full-time*
 - *Part-time*

- v. Research Fellow
 - *Full-time*
 - *Part-time*

c) Total number of active S&T academic staff

d) Total number of active Non-S&T academic staff

e) Percent of active S&T academic staff

f) Total number of active foreign academic staff

2. Total number of full-time students

General Notes

- Permanent residents are equivalent to citizens.

a) Number of local and foreign Undergraduate students

Number of only full-time Undergraduate students who are registered (enrolment) is as follows:

- Bachelor (Local)
- Bachelor (Foreign)

b) Number of local and foreign Postgraduate students

Number of Postgraduate students according to the registered mode of study (enrolment) is as follows:

- Masters - Research (Local)
- Masters - Research (Foreign)
- Masters - Coursework (Local)
- Masters - Coursework (Foreign)
- PhDs (Local)
- PhDs (Foreign)
- Doctoral Level Coursework (Local)
- Doctoral Level Coursework (Foreign)

i. Masters – Research (Local)

- Full-time
- Part-time

ii. Masters – Research (Foreign)

- Full-time
- Part-time

iii. Masters – Coursework (Local)

- Full-time
- Part-time

iv. Masters – Coursework (Foreign)

- Full-time
- Part-time

v. PhDs (Local)

- Full-time
- Part-time

vi. PhDs (Foreign)

- Full-time
- Part-time

vii. Doctoral Level Coursework (Local)

- Full-time
- Part-time

viii. Doctoral Level Coursework (Foreign)

- Full-time
- Part-time

SECTION B: QUANTITY AND QUALITY OF RESEARCHERS

1. *Critical mass*

Total number of active academic staff involved as Principal Investigators of research projects

Number of active academic staff involved as Principal Investigator/Project Leader/ Individual for research projects is as follows and not cumulatively.

Type of Grant	S&T	Non S&T
National	RM20,000	RM5,000
International/Industrial/ Private/NGO	RM10,000	RM5,000

General Notes:

- Taking into account the number of Principal Investigators alone and not the number of research projects involved.
- A Principal Investigator can be considered only once in the category of university, national, industrial/private/NGO or international grant funding.
- Calculation of the Principal Investigator is based on the date of account was opened as well as the distributed allocation.

a) University Grants

Projects funded through research funds and the Research University Fund. The project must be competitive in nature.

- Full-time
- Part-time

General Notes:

Grants from foreign parent universities to branch universities in Malaysia are considered as projects funded through the University Fund.

b) National Grants

Competitive National Grants such as FRGS, ERGS, MARDI, TRGS, PRGS, LRGS, HiCoE etc. are considered

- Full-time
- Part-time

General Notes:

The Principal Investigator must be the Project Leader or Sub-Project Leader and have control over the funds.

c) Industrial/Private/NGO Grants

Only competitive Industrial/Private/NGO grants are considered, including contract research such as clinical trials involving research.

Examples (not limited to): PPRN grant, Cess fund, Crest fund

- Full-time
- Part-time

d) International Grants

Only competitive International Grants are considered.

- Full-time
- Part-time

General Notes:

- Research grants that make direct payments to Principal Investigators may be accepted if there is evidence of receipt of funds, expenses or financial transactions.
- Evidence includes financial statements, letters of appointment, telegraphic transfers and others.

Examples (not limited to): MyPAIR Grants, JICA, United Nations, WHO, World Bank, Newton-Ungku Omar Fund

2. Total number of active academic staff with PhD or Professional Qualification

General Notes:

- Professional qualification for the medical field are based on the official JPA list.
- Other professional fields need to be supported by the Malaysian Parliament Act.

a) Total number of active academic staff with PhD/DSc./D.Eng., etc.

Number of active academic staff with the highest Doctoral Degree including PhD/DSc., D.Eng., Etc.

- Full-time
- Part-time

General Notes:

- PhD Equivalent - A doctoral level is one that is based on at least 70% research.

b) Total number of active academic staff with Professional Qualifications

Number of active academic staff with the highest Professional qualification.

Examples (not limited to): Ir., Ar., FRCP, Sr., Ts., C.Eng, ACCA, MICPA, ICAS, ICAEW, ICAI, NZICA, CICA, CIMA, MMed etc.

- Full-time
- Part-time

General notes:

- Academic staff who possess both PhD and Professional qualifications **are considered in one category only**.
- Professional qualifications should be governed by an act and council that oversees professional practice.
- Academic staff who are qualified as legal practitioners under the Parliament of Malaysia Act may be considered.
- Sr. for Building Surveyor is not considered as it is not under the Parliament of Malaysia Act.
- There must be a professional body membership registration number.

3. Research experience (3 cohorts)

Total number of active and full-time academic staff based on research experience in each age group

Age category:

1. Cohort A: > 50 years
2. Cohort B: 40 - 50 years
3. Cohort C: <40 years

General notes:

- Only full -time active academic staff need to be declared.
- Scores are given based on a linear scale calculation within $\pm 15\%$ of the ideal percentage target for each cohort as follows:
 - Cohort A = 30% of active academic staff
 - Cohort B = 40% of active academic staff
 - Cohort C = 30% of active academic staff

4. Awards/stewardships conferred by national and international Academic and Professional Bodies for research excellence

General Notes:

Examples of awards/ recognition/ stewardship (not limited to the list below) that are considered:

- research
 - Personage (Example: *Merdeka Awards*)
 - *Fellowship* (Example: *Fulbright Fellowship*)
 - Creativity (Examples: *Aga Khan Award for Architecture*, *Royal Institute of British Architect Award*, *The International Architecture Awards*, *Seri Endon Cup*, *National Craft Personage*, *Malaysian Architects Association Award*)
 - Stewardship means the appointment as Chairman of a Committee or 'Task Force' at the national and international level.
 - Appointment as Head of contract research or consultancy
 - Project is not considered.
 - Editor-In-Chief for journals listed in JCR only.
 - *Editorial board member* or *Advisory Editorial Board member* for prestigious journals (top 10% in journals listed in JCR)
- Examples of awards/ recognitions/ stewardships that are **NOT** considered for Subsections B4(a) - B4(e) (not limited to the list below):
 - *Best Paper Award*
 - *Best Poster Award*
 - *Journal Reviewer Award*
 - *Best Reviewer Award*
 - *Top Cited Researcher*
 - It should be considered if, awards are received from international bodies, for example *Thomson Reuters*, *Quacquarelli Symonds (QS)*, *Shanghai Jiao Tong (ARWU)*.

- Fellows and senior members in a professional organization for which there is a paid membership at the national or international level **cannot** be said to be stewardship but can be considered for the recognition in Section G.
- Proof of award is like a certificate while proof of recognition is like a letter of appointment.
- Awards and recognitions from IPT that are evaluated (internal) **are not considered.**

a) Total number of awards conferred by International Academic and Professional Bodies for research excellence

Number of awards given by Academic and Professional Bodies at the **international level** to academic staff.

b) Total number of recognition/ stewardship conferred by International Academic and Professional Bodies for research excellence

Number of recognitions given by Academic and Professional Bodies at the **international level** to academic staff.

c) Total number of awards conferred by National Academic and Professional Bodies for research excellence

Number of awards given by Academic and Professional Bodies at the **national level** to academic staff.

d) Total number of recognition/stewardship conferred by National Academic and Professional Bodies for research excellence

Number of recognition/ stewardship given by Academic and Professional Bodies at the **national level** to academic staff.

General Notes:

- Panel of evaluators for grants/awards/academic programs or their equivalent are not considered in this category.

e) Research exhibition awards (gold medal/ special awards)

Gold medals or special medals in research exhibitions organized by Government Agencies, Academic and Professional Bodies.

General Notes:

- Gold medals or special medals won at research exhibitions at the National and International levels.
- The list of accepted research exhibitions is available in the MyRA® website.
 - *Conference and International Institution of Higher Learning Creation Expo (PECIPTA)*
 - *Korea Seoul International Invention Fair (SIIF)* British Invention Show (BIS)
 - *United States – Pittsburgh Remodeling Expo, Invention and New Product Exposition (INPEX)*
 - *German International Trade Fair Ideas – Inventions – New Products (IENA), Nuremberg*
 - *Malaysia Technology Expo (MTE)*
 - *International Invention, Innovation and Technology Exhibition (ITEX)*
 - *BioMalaysia & Asia Pacific Bioeconomy*

f) Other research awards

Other prestigious research awards other than those declared in Subsections B4(a)-B4(e) may be considered in this Subsection.

SECTION C: QUANTITY AND QUALITY OF RESEARCH

1. Publications

a) i) *Number of publications in SCOPUS/ WOS/ ERA indexed journals*

Number of publications in SCOPUS/ WOS/ ERA indexed journals produced by active academic staff from institutions (name of the institution as an affiliate is in the publication).

General Notes:

- All publications that are not in the form of articles such as *abstracts, book reviews, editorials, meeting abstracts, letters to editors* and *eratum* are not considered.

ii) *Number of publications in indexed SCOPUS/WOS/ ERA post conference proceedings*

Number of publications in indexed SCOPUS/ WOS/ ERA post conference proceedings.

(iii) **Joined publications**

- Industrial Collaboration
- International Collaboration
- National Collaboration (UA-UA, UA-US, US-US, ResearchAgencies/Institutes)

b) Publication Impact

i) Total citation of publications

Total citations (in *SCOPUS/WOS*) in the last 5 years for **5 YEARS OF PUBLICATION** produced by the institution up to the year of assessment.

For journals listed in ERA (but not listed in *SCOPUS/WOS*), calculation of citations were performed using Google Scholar guided citations.

c) Total number of publications in MyCite indexed journals

General Notes:

- The number of publications in MyCite indexed journals produced by active academic staff from the assessed institutions is also considered [including those declared in Subsections C1(a)(i) & C1(a)(ii)].

d) Research books and chapters in research books**i) Number of research books****1. Number of research books indexed in (SCOPUS/WOS)****2. Number of non-indexed research books**

Number of scholarly books published as a result of research during the year of assessment.

General Notes:

- Published books must comply with research book standards such as refereed and edited.
- Books must have standardization such as front page, content, preface, ISBN, index and copyright.
- Publishers registered with a recognized body such as MAPIM are considered.

ii) Number of chapters in research books

1. Number of chapters in research books indexed in SCOPUS/WOS

2. Number of chapters in non-indexed research books

Number of chapters in the research book other than the chapters considered in the book in Subsection C1 (d)(i) published in the year of assessment.

General Notes:

- Publishers registered with a recognized body such as MAPIM are considered.
- Chapters in research books must have an ISBN.
- The results of publications with ISSN/ISBN are considered as post-conference publications.

iii) Number of case studies/technical reports published

Case studies/technical reports published during the year of assessment

General Notes:

- Technical reports/case reports should be made available to stakeholders other than the institutions being evaluated, **OR** published in an indexed database.

e) Policy papers

Policy papers that contribute to formation/improvement/ repeal policies/fatwas/acts and their equivalent published by stakeholders either Government Agencies (State and Federal Levels only) or International (other than the evaluated institutions).

General Notes:

- The evidence required is as follows: ➤ Policy paper,
 - Blueprint, master plan, study paper etc .;
 - Existing evidence of correlation that states appreciation to the center, a working paper that is reference to policy paper and have university affiliation;
 - Evidence that shows the results of the study are used; and.
 - Letter of appointment of staff as head/member of the research project.
- If the policy owner has listed the name of the contributor in the policy paper then the above evidences are not required.

f) Other publications (Publications in other journals, articles in magazines, newsletters, original writings and publications from conferences, digital or print media)

Number of publications in non-indexed journals, articles in magazines, newspapers, original works, publications from conferences, digital or print media and others.

2. Research grant for academic staff (RM)

General Notes:

- The total amount of allocation approved for a new project in the year of assessment.
- Total allocation received for only active research projects in the year under of assessment.
- Clinical trials are categorized as contract research.
- Clinical trials in the form of services such as Bioequivalence are not considered as contract research and are placed under Consultancies in Section F.
- Values of all grants are accepted even if they do not meet the minimum value as Principal Investigator in Section B1.

a) Total amount of public research grants from Government agencies/Parent bodies/Home Universities/Main campus of the country of origin

General Notes:

- This also includes funds channeled to owned subsidiaries.
- Grants funded through research funds and Research University funds are considered.
- Source of grant obtained from HEI Parent Bodies /Home Universities/Main campus of the country of origin that is evaluated can be considered.
- Each HICoE program is regarded as one project and led by a Principal Investigator. The total allocation of the HICoE program can be considered.

i) Total amount approved (pledged) for new projects from Government/Statutory Bodies in the year of assessment

ii) Total amount received (in bursary) for active projects from Government/Statutory Bodies in the year of assessment

b) Total amount of Industries/Private/NGOs (including contract research)

General Notes:

- This also includes funds channeled to subsidiaries that are majority owned by the institution.
- Grants are obtained from private external sources that are not related to the HEIs being evaluated.

i) Total amount approved (pledged) for new projects from Industries/Private/NGOs in the year of assessment

ii) Total amount received (in bursary) for active projects from Industries/Private/NGOs in the year of assessment

c) Total amount of research grants from international Bodies/Agencies/NGOs

Total allocation received/sponsored by international Bodies/Agencies/NGOs in the year of assessment.

General Notes:

- Total allocation received by the HEI Project Leader that is evaluated.
- Only grants whose funds are located abroad and have nothing to do with the HEIs being evaluated are considered
- Grants from foreign companies based in Malaysia are not considered unless approval is received from the country of origin.

i) Total amount approved (pledged) for new projects from international Bodies/Agencies/NGOs in the year of assessment

ii) Total amount received (in bursary) for active projects from international Bodies/Agencies/NGOs in the year of assessment

d) Total amount of research grants received

The amount of funds received during the year of assessment for all active research grants.

3. Monitoring of research project performance/progress

The number of active research projects completed without extension compared with the number of active research projects completed in the year of assessment.

a) Number of completed research projects without extension in the year of assessment

The completed project should have a final research project report.

b) Total number of completed research projects with extension in the year of assessment

Projects completed with an extension should have a final research project report.

d) Percentage of research projects completed according to schedule

Percentage of research projects completed on time

$$\frac{C3(a)}{[C3(a)+C3(b)]} \times 100$$

(Auto

calculated)

SECTION D: QUANTITY AND QUALITY OF POSTGRADUATES

1. Number of PhDs graduates

a) Total number of PhD graduates in the year of assessment

Total number of PhD graduates **approved by the Senate** in the year of assessment.

i) Total number of local PhDs (Research Mode) graduated in the year of assessment

ii) Total number of international PhD (Research Mode) graduates in the year of assessment

b) Ratio of PhD graduates to active academic staff

Ratio of PhD graduates compared to active academic staff.

Calculation Method:

$$= \frac{\text{No of PhD students}}{\text{Total number of active academic staff}}$$

2. Number of Masters graduated

a) Total number of Master (Research Mode) graduated in the year of assessment.

Number of Masters students (Research Mode) approved by the Senate in the year of assessment.

3. Number of registered PhD students in the year of assessment

a) Total number of enrolled PhD students

Number of enrolled PhD students

b) Ratio of registered PhD students to active academic staff

Calculation Method:

$$= \frac{\text{Number of registered PhD students}}{\text{Total number of active academic staff}}$$

c) Total number of PhD students registered in S&T

4. Postgraduate Enrollment

a) Ratio of registered Postgraduate students compared to active academic staff

Calculation Method:

$$= \frac{\text{Total number of registered Postgraduate students}}{\text{Total number of active academic staff}}$$

b) Ratio of registered Postgraduates (based on Research and Mixed Modes) compared to Undergraduates

Calculation Method:

$$= \frac{\text{Total number of registered Postgraduate students (research and mixed mode)}}{\text{Undergraduate students}}$$

5. Total number of international Postgraduate students

a) Number of enrolled international Postgraduate students

b) Percentage of international Postgraduate students compared to total number of Postgraduate students

(Auto calculated)

6. Eligibility for admission to postgraduate degree

a) Total number of Postgraduate students with CGPA ≥ 3.0 or its equivalent for the first degree

Meaning of equivalent:

- Need to obtain more than 70% for first degree systems that use percentage; or
- Passed medical/dental degree; or
- Master's Degree

General Notes:

- Data is based on registered students.

b) Percentage of Postgraduate students with CGPA ≥ 3.0 or its equivalent for the first degree

(Auto calculated)

7. Total number of fellowships/grants awarded to Postgraduate students via Research Mode

a) Number of Postgraduate enrolled via Research Modes with fellowships/grants

Total number of Postgraduate students via research mode awarded fellowships/grants from evaluated bodies or non-university institutions.

Examples (not limited to):

- *National Science Fellowship (NSF)*
- *Toray*
- *IDB*
- *MyBrain15*

General Notes:

- Not inclusive of *Science Fund, FRGS, SLAB* and any projects that do not involve selection etc. Only *fellowships/grants* that are received by students.
- Criteria for award must be transparent.
- Any form of loan **is not considered**.
- International students who receive sponsorships/scholarships from the government of the country of origin are accepted.
- Sponsorships/scholarships from other employers/companies/universities are considered. (other than the university being assessed)

b) Percentage of Postgraduates students via research modes awarded *fellowships/grants*

(Auto calculated)

8. Postdoctoral appointments

General Notes:

- Newly appointed staff must have served at least six (6) months in the year of assessment.

a) Number of local Postdoctoral

Number of active local Postdoctoral in the year of assessment.

b) Number of foreign Postdoctoral

Number of active international Postdoctoral in the year of assessment.

SECTION E: INNOVATION

1. Patents

a) Total number of new certificates of patents obtained

Total number of new certificates of patents obtained in the year of assessment

General Notes:

- **Not inclusive** of renewed certificates.

b) Total number of new certificates of patents filed

Total number of new certificates of patents filed in the year of assessment.

c) Total number of new inventions (technology/innovations) granted patent

Total number of new inventions (technology/innovations) patented and obtained in the year of assessment.

General Notes:

- Only first time obtained or new patents are considered in the year of assessment.
- The same invention (technology/innovation) is regarded once only if patented in different countries.
- Patents are considered if the inventor was still serving at the university when the invention was filed.

- The university must have rights (jointly/wholly) to the patent.

d) Total number of new inventions (technology/innovation) filed for patent

Total number of new inventions (technology/innovation) filed in the year of assessment.

General Notes:

- Only new inventions (technology/innovation) that are filed for the first time are considered in the year of assessment.
- The same invention (technology/innovation) is considered once only if patented in a different country.
- The University must have rights (jointly/fully) on the filed invention (technology/innovation).

2. Commercialized products

a) Total number of innovations from technology know-how licensing that are successfully developed into commercialized products for the market

Total number of new products that have been commercialized.

General Notes:

- Products commercialized by registered companies (including holdings/spin-offs/start-ups from evaluated HEIs) must be supported by a previously licensed technology know-how agreement.
-
- Internal sales that are not considered such as:
 - IPT <-> holdings/spin offs/start-ups
- Products commercialized/marketed by spin-off companies registered with the authorities can be accepted and supported by gross sales statement.
- Commercialized smartphone applications (mobile apps) must show payment from a Digital Distribution Platform such as GooglePlay or the Apple App Store.
- The accumulated gross sales based on the sales report can be carried forward to the next year if the amount is less than RM20,000 in the year of assessment.

- The commercialization period can exceed a period of one (1) year or until the accumulated amount reaches RM20,000 and above.
- Licensing fees cannot be counted as part of sales revenue to reach the limit of RM20,000 from commercialization revenue.
- Determination of the number of products based on application is different even though from the same IP.

3. Technology or know-how licensing/sold outright

Total number of licensed/ directly sold technology or know-how with a licensing agreement that owns intellectual property (including trade secrets).

General Notes:

- Licensing or transfer of intellectual property rights from the owner institution to any party.
- The cumulative transaction value of the licensing must be RM10,000 and above and can be licensed to more than one (1) party.
- The time period for licensing process transactions can exceed one (1) year and can be considered after the process is completed.

- Technology or know-how can be licensed exclusively and non-exclusively where both can be considered.
- Technology licensed to Holdings/Companies under HEI/evaluated spin-off companies that are registered with the authorities is acceptable.
- The number of licensed technology or know-how is based on the number of items clearly stated (details and value of each item) in an agreement. Only one licensed technology or know-how is counted if the value of each item is not clearly stated in the agreement.

a) Total number of technology or *know-how* licensed/sold outright

4. Other IPRs

a) Other than patents, commercialized products, technology or know-how and books declared in Section C

Intellectual property other than patents and technology know-how licensing is a recognized intellectual property including *trademarks, copyrights, industrial designs, circuits, building plans, software, song lyrics, poetry, architectural drawing, Geographical Indication (example: Bangi Chilli), Layout Design, Utility Innovation, New Plant Variety (NPV) and New Microbial Species* produced by academics.

General Notes:

- All copyrights must be registered with MyIPO or an equivalent International Body as it is the authority for intellectual property.
- Fragmented copyrights are regarded as one entry.
- Have proof of use of intellectual property other than patents even if registered/obtained before the year of assessment.
- **Refer to MyIPO for definition.**

5. Start-up/Spin-off Companies

General Notes:

- Among the indicators of the progress of start-ups include the percentage (%) of payment for licensing fee, precomm fundraising and investment, paid up capital, unit sales and gross sales.

a) Number of active companies that commercialized university innovations in the year of assessment

b) Number of new companies that commercialized university innovations in the year of assessment

Total number of new companies that commercialize university innovations (**refer to company registration and technology *know-how* agreement**).

SECTION F: PROFESSIONAL SERVICES AND GIFTS

General Notes:

- Total gross income that can be considered must involve research and gross income (along with evidence of financial transactions) directly to the university/holdings.
- For companies under HEI/spin-off companies, only the part (along with proof of financial transactions) channeled to the university can be taken into account be considered.

1. **Gross income from training courses (non-Degree programs) and Postgraduate fees from R&D (RM)**

Total gross income from R&D activities received through courses/training (non-Degree programs) and Research Mode and Mixed Mode Postgraduate fee.

General Notes:

- Income from courses/training/fees and teaching and learning activities not related to research **are not considered**.
- The amount of money channeled into the treasurer's statement only is considered.

a) Training courses from Non-Degree Programmes

b) Postgraduates fees from Research Programmes

General Notes:

- Accommodation fees must be issued for universities that charge tuition fees in packages.

2. Gross income from organizing conferences, seminars and knowledge-sharing programmes in the field of expertise (RM)

General Notes:

- Total gross income from conferences, seminars and knowledge sharing programs from the results of research organized in areas of expertise.

a) Total amount of gross income

3. Gross income from product commercialization/technology know-how licensing/outright sale (RM)

Total gross income based on financial transactions from commercialization/ technology know-how licensing activities/direct selling during the year of assessment.

Includes book publishing rights, artworks and royalties from research projects channeled to university or subsidiary accounts.

General Notes:

- Including the sale of books from research projects that are channeled to the university or a subsidiary of the university accounts.

a) Product commercialization

b) Technology know-how licensing or outright sale

4. Gross income from based on financial transactions of that year from consultancies (except contract research) / hospital recoupable fees / lab services fees in the year of assessment (RM)

Total gross income received in the year assessed is through:

- Consultancy projects conducted individually or in groups.
- Fees received by the hospital (recoupable fees) including private wing owned by the university; and ➤ Laboratory service fees

General Notes:

- The amount received is for the year of assessment and not cumulatively.
- Fees received by the hospital (recoupable fees) including private owned by the university; is the payment of services to medical specialists. Income from health clinics **is not considered.**
- Evidence of consultation can be obtained through documents such as consultation agreement, appointment of consultant, financial statements and their equivalent.

a) Consultancies (excluding contract research)

b) Hospital Recoupable Fees

c) Lab Services Fees

5. Endowment (including professorial chairs) (RM)

The total value of the endowment is based on financial transactions awarded by external parties to the university/educational centre to promote an aspect of knowledge through research in the year of assessment.

General Notes:

- The total amount of endowments received by the university from any endowment provider during the year and is not cumulative.

- Profits/dividends generated from endowments are only considered for Subsection F5(b) and cannot be considered for Subsection F5 (a).
- Endowments in the form of assets used for R&D purposes are accepted. A review of asset ownership and usage of income or proceeds for research needs to be done.
- Crowd Funding approved by the university is considered.
- Not inclusive of all gifts for non-research purposes.
- Proof of agreement/letter as endowment must be submitted during the assessment.
- Proof of Terms of Reference (TOR) containing the purpose and percentage of distribution during the approval of the establishment of the endowment fund which has been agreed by the management of the university must be submitted.

a) Total amount of new endowment received in the year of assessment

b) Income/Dividends from existing endowment

6. Gifts/Donation (money, equipment, research materials, etc.) worth \geq RM3,000 (RM)

The total value of gifts/donations from external parties to the university including in the form of money, equipment, research materials, travel per diem, stipends and facilities (infrastructure and services) worth RM3,000 and above in the year of assessment and not cumulatively for research purposes.

General notes:

- Gifts/Donations given by direct payment to researchers for research purposes can be considered and there is proof of receipt of funds or financial transactions such as receipts, financial statements or proof of *Electronic Fund Transfer* (EFT).
- Winning prizes from contests **are not considered**.

a) Total amount received

7. Percentage of Operational Expenditure for R&D development

The total expenditure used for research development is as follows:

- Post Doctoral Employment/ Research Officer/ Research Fellow/ Research Assistant/ Research Management can be considered. Other positions such as Lecturer are not considered.
- Purchase of research equipment.
- Development of research laboratories.

a) Total Operational Expenditure (OE) (RM)

b) Total expenditure for R&D development (RM)

SECTION G: NETWORKING AND LINKAGES

1. Participation in International Inter-Institution research related activities under MoA/active agreement

a) Total number of MoA signed and stamped

The number of MoA jointly signed and stamped with institutions/agencies at the **international level**.

General Notes:

- The MoA must be within the valid period of the year of assessment.
- The MoA needs to be signed by the CEO/President/Vice Chancellor/Rector unless there is evidence of devolution (delegation of power to a lower level).
- Letter of Agreement (LoA) and Research Agreement can be considered.
- For agreements with foreign institutions, a Memorandum of Understanding (MoU) can be considered where evidence of research activity needs to be attached.
- Stamping requirements are in accordance with the requirements of the country of the foreign institution.
- Meanwhile Non-Disclosure Agreement (NDA), Service Agreement and Letter of Intent (LOI) **are not considered**

b) Total number of academic staff involved in research projects under MoA

The number of academic staff involved as researchers in research at the international level.

General Notes:

- Involvement of staff must be from the LoA, MoU, MoA and Research Agreement stated in Subsection G1(a).
- For MoUs that do not list names of staff, only active research project allocation sources are considered.
- Sources of research project allocation can be from university, national and international levels.
- Evidence of the involvement of researchers from international institutions is required such as research documents (proposal papers) or letters of appointment and their equivalent.

2. Total number of staff sent abroad for research activities

The number of academic staff on sabbatical/ research leave /courses/ short term training (at least 5 days (excluding travel and co-sponsored by external parties) abroad (cumulative in the year of assessment).

General Notes:

- Academic staff on study leave for postgraduate purposes are not considered as these staff are regarded as inactive staff (not listed in Subsection A (b)).
- Staff attending seminars or conferences are not considered.

3. Membership in international Academic/Professional bodies/Associations/NGOs

a) Total number of academic staff as members in international Academic/Professional Bodies/Associations/NGOs

General Notes:

- Characteristics of Academic/Professional Bodies/Associations/NGOs:
 - Registered
 - Related to expertise and professionalism

b) Total number of staff appointed as Committee Members in international Academic/Professional Bodies/Associations/NGOs

4. Participation in national Inter-Institution research related activities under MoA

Number of research activities with **national level** institutions under the *MoA*.

a) Total number of *MoA* signed and stamped

Number of *MoA* signed and stamped together with institutions/agencies at the **national level**.

General Notes:

- The *MoA* must be within the valid period of the year of assessment.
- The *MoA* needs to be signed by the CEO/President/Vice Chancellor/Rector unless there is evidence of devolution.
- *LoA* and *Research Agreement* can be considered. While *NDA*, *LOI* and *MoU* are not considered.

b) Total number of staff involved in joint research projects under *MoA*

Number of academic staff involved as Researchers in research at the **national level**.

General Notes:

- Sources of active research project allocation include university, national and international levels.
- Staff involvement must be from LoA, *MoA* and *Research Agreement* specified in Subsection G4(a) - **MyRA I** and Subsection G3(a) - **MyRA II**.
- Evidence of researcher involvement from National institutions is required such as research documents (proposal papers) or letters of appointment and their equivalent.

5. Membership in National Academic/Professional bodies/Associations/NGOs

General Notes:

- Automatic membership based on portfolio or position/field is **not considered**.

a) Total number of staff as members of national Academic/Professionalbodies/Associations/NGOs

b) Total number of academic staff appointed as Chairman/ Committee Members in national Academic/Professional Bodies/Associations/NGOs

General Notes:

- Characteristics of Academic/Professional Bodies/Associations/NGOs:
 - Registered
 - Related to expertise and professionalism

6. Knowledge/Technology Diffusion Project/Assimilation (Social Innovation)

a) Total number of new community-related research projects

The number of new knowledge and technology transfer projects in collaboration with industry/community.

b) Total number of communities receiving benefits from knowledge/technology diffusion projects

The number of communities receiving knowledge and technology transfer projects.

General Notes:

- Number of communities/industries that receive/benefit from knowledge/technology dissemination projects.
- Community programs show positive changes in terms of knowledge/skills/behaviors or aspirations.
- Communities that use mobilized resources programs and

expertise with universities.

- Communities that collaborate with other agencies and universities in the implementation of the program.
- Program funding is collectively preferable between universities/public sectors/private sectors.
- The community network star rating is based on the following criteria: **APPENDIX A**
- Only projects with a rating of three (3) stars and above can be considered as a community that has benefitted from the program.
- The impact of each new project in collaboration with the community (Community Network Star Rating) needs to be reported through the **Masterlist** and **Community Impact Reporting Template**.

APPENDIX A: Community Network Star Ratings

RATING	DESCRIPTION	IMPACT	INDICATOR
5 ★ ★ ★ ★ ★	Empowerment	Community prosperity and improved environment quality Sustainable innovation practices Empowering innovation practices	Communities/ participants handle changes independently without involvement of institutions being assessed
4 ★ ★ ★ ★	Changes in Practice	Direct benefit from innovation practices such as improvements in quality and income, cost reduction	Community/ participants use innovation in the business field
3 ★ ★ ★	Changes in Knowledge, Attitude, Skills and Aspirations (PSKA)	Community action programs bring improvements in knowledge, attitudes, skills and aspirations in the community	Community/participants show improvements in knowledge, skills as well as changes in attitudes and aspirations <i>*Evidence measured through result of analysis and others</i>

<p>2 ★ ★</p>	<p>Support and Involvement</p>	<p>Community forms awareness on the importance of community action Strategic Community/ Organizational relationships</p>	<p>Institutions that are assessed implement joint programs with community/ participants</p>
<p>1 ★</p>	<p>Intertwined Relationship</p>	<p>Community responses positively towards institutions that are assessed and community action programs</p>	<p>Strengthening of institutions that are assessed- community /participants through visits, letters, emails and etc</p>

7. Joint research projects between institution assessed and Research Universities/Public Universities/Private Universities/ Industries/ Agencies in each project

General Notes:

- Active projects that are considered must be involved collaboratively with the institution that is assessed and at least 3 Research Universities/Public Universities/Private Universities/ Industries/ Agencies for each project.
- All collaborative partners must contribute funds for the project. The value of the contribution must be clearly stated in the agreement document and supported with evidence of the financial statements.
 - a) **Number of collaborative research projects between Institution assessed and a minimum of 3 Research Universities/Public Universities/Private Universities/Industries/Agencies in each project**

SECTION H: SUPPORTING FACILITIES

1. Laboratory/Research facilities that are accredited based on their core competencies

a) Total number of laboratories/research facilities accredited to Good Manufacturing Practice (GMP), Good Regulatory Practice (GRP), Good Clinical Practice (GCP), Good Laboratory Practice (GLP), ISO17025, ISO15189, etc. which is fully operational

➤ Laboratories/ Research facilities that are accredited to function or provide services.

➤ Possess a certificate of recognition for *Good Manufacturing Practice (GMP)*, *Good Regulatory Practice (GRP)*, *Good Clinical Practice (GCP)*, *Good Laboratory Practice (GLP)*, ISO17025, ISO15189 from an accredited body/accreditation body. Accreditation Recognition certificates given by the industry **are not accepted**.

➤ Malaysian Laboratory Accreditation Scheme (SAMM) such as ISO17025, ISO/TS 16949, ISO 13485, ISO15189.

General Notes:

- Examples of the list of accreditation certificates adopted (not limited to) are certificates from the *OECD*, *FDA*, Malaysian Laboratory Accreditation Scheme (SAMM), *Department of Standards*, Ministry of Health.
- Specific accreditation for expertise means obtaining accreditation for the specific area of expertise of the laboratory.
- Accreditation certification is for research needs or fields only.
- Accredited foreign recognition bodies for areas of specialization of laboratory expertise such as TUV, API, World Bank partner, UNESCO Partner, NATA, *Department of Veterinary Services* are considered.
- Possess accreditation from a certification body recognized by Standards Malaysia (SAMM) or International Accreditation Body such as NATA and Australian/New Zealand Standards.
- Accredited laboratories must have an organization chart that is audited and recognized by an accredited body.

- Example of list of accreditation certificate that are **NOT** accepted(**not limited to**):
 - Board of Engineers Malaysia
 - Accreditation from the *Occupational Health and Safety Assessment Series (OHSAS)*
 - *BioNexus* from *BioEconomy*
 - ISO 9001
 - ISO 14000

- ISO 18000 For ISO 27000 certification to Communication Information Technology centers/laboratories. The Center/Laboratory must show evidence of research activities being carried out.

- If there is more than one laboratory in a certificate and the specific test is clearly stated in the certificate then the number of laboratories declared is acceptable.

- If there is more than one laboratory in a certificate and each certificate represents a specific test then each such certificate can be considered.

- Only research laboratories/facilities owned by spin-off companies registered with the authorities are acceptable.

2. Library facilities

a) Total titles of books (hardcopy)

b) Total number of online titles of books (digital copy)

Number of titles of book/multimedia material (eg CD & VCD)

General Notes:

- No *double counting* for books in hardcopy and online form.

c) Total number of titles of journals subscribed

Number of titles of journal in the subscribed database.

**Strategy and Development Division (BSP),
Research Management Centre (RMC),
University Tun Hussien Onn Malaysia.**