



TAKLIMAT GARIS PANDUAN SKIM GERAN PENYELIDIKAN TRANSDISIPLINARI (TRGS) (PINDAAN TAHUN 2022)

**PROF DATO' DR ABU BAKAR ABDUL MAJEED
PENGARAH
PUSAT PENGURUSAN PENYELIDIKAN (RMC)
UNIVERSITI TEKNOLOGI MARA**

08 FEBRUARI 2022

Dokumen Garis Panduan TRGS 2022

Program Dana Penyelidikan, Kementerian Pengajian Tinggi



Pejabat
Timbalan Naib Canselor
(Penyelidikan dan Inovasi)



Garis Panduan dan Takwim:
<https://tinyurl.com/TRGSGuideline>

Surat Makluman Pembukaan Permohonan Geran
Penyelidikan bertarikh 24 Januari 2022 dan Garis Panduan
TRGS (Pindaan 2022)



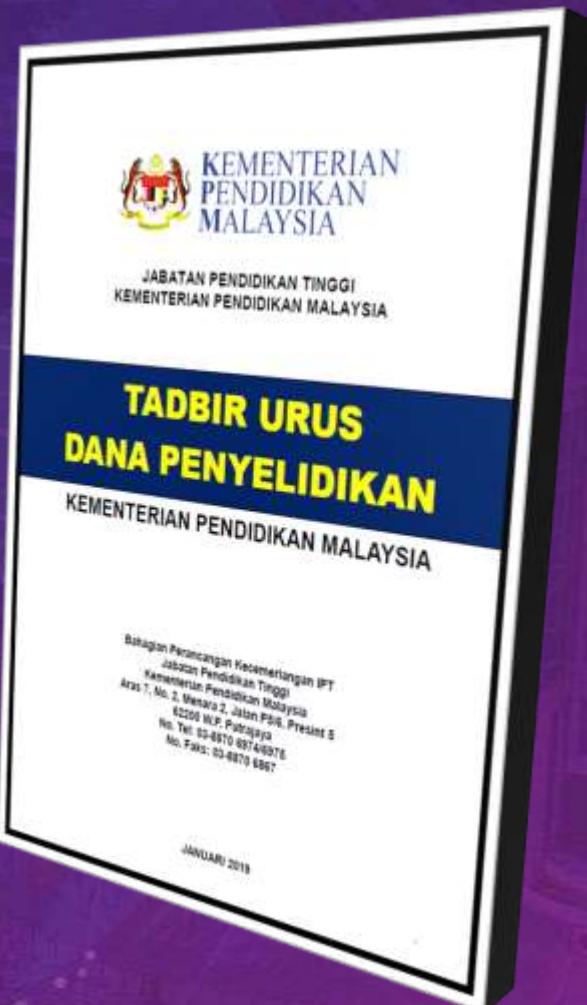
Dokumen Tadbir Urus DP KPM & MCRCR



Pejabat
Timbalan Naib Canselor
(Penyelidikan dan Inovasi)

Pihak institusi dan penyelidik juga perlu mematuhi perkara-perkara dalam :

- 1. Dokumen Tadbir Urus Dana Penyelidikan KPM; dan**
- 2. Malaysia Code of Responsible Conduct in Research (MCRCR)**





UiTM TRGS 2022 DRIVE

Transforming Research-entities to Global Status

Date	Activity
31/01/22 – 20/02/22	TRGS opening, Update of Researcher's Profile in MyGRANTS and Preparation of TRGS proposals
21/02/22	Final Submission of TRGS proposals in MyGRANTS
28/02/22 – 02/03/22	TRGS Pitching Session
03/03/22 – 22/03/22	Internal Assessor Evaluation, Enhancement by Applicants and Final Evaluation of TRGS Proposals
23/03/22 – 25/03/22	Inspection and Finalization of Internal TRGS Evaluation
28/03/22	Submission of UiTM's TRGS Proposals to MOHE

STAY TUNED FOR

Guide to TRGS Application Webinars
Sharing Session with Successful TRGS Recipients
TRGS Proposal Enhancement Workshop



Pejabat
Timbalan Naib Canselor
(Penyelidikan dan Inovasi)

SYARAT PERMOHONAN, BIDANG KEUTAMAAN & JANGKAAN HASIL PENYELIDIKAN

**GERAN TRGS TAHUN 2022
DANA PENYELIDIKAN KEMENTERIAN PENGAJIAN TINGGI (DP
KPT)**

PENGENALAN, SKOP PENYELIDIKAN & SYARAT PERMOHONAN

TRGS TAHUN 2022

TRGS (Skim Geran Penyelidikan Transdisiplinari)



TRGS dapat membina kerjasama keserakahan **merentasi pelbagai domain penyelidikan (sekurang-kurangnya 3 domain berbeza)** dan bersifat transdisiplin bagi meletakkan Malaysia setaraf dengan negara maju dari segi penyelidikan fundamental dalam domain tertentu.

Tempoh perkhidmatan Ketua Program/Ketua Projek mestilah berbaki sekurang-kurangnya dua (2) tahun di universiti masing-masing



Tempoh Penyelidikan
3 TAHUN
Siling Peruntukan
RM1,500,000.00 /
Program

TRGS

SKIM GERAN PENYELIDIKAN TRANSDISIPLINARI (TRGS) TAHUN 2022

Berdasarkan Empat (4) Tema (*Call for Proposals*)



KEMENTERIAN PENGAJIAN TINGGI

JABATAN PENDIDIKAN TINGGI
KEMENTERIAN PENGAJIAN TINGGI

GARIS PANDUAN SKIM GERAN PENYELIDIKAN TRANSDISIPLINARI (TRGS) (PINDAAN TAHUN 2022)

BAHAGIAN KECEMERLANGAN PENYELIDIKAN IPT
JABATAN PENDIDIKAN TINGGI
KEMENTERIAN PENGAJIAN TINGGI
ARAS 7, NO. 2, MENARA 2
JALAN P5/6, PRESINT 5
62000 PUTRAJAYA
No. Tel. : 03-8870 6974/6975
No. Faks : 03-8870 6867



Energy, Climate Change & Environment



Pandemic Mitigation,
Preparedness, Response & Recovery



National Resilience to Security Threats



Artificial Intelligence (AI) and Internet
of Everything (IOE) Technology

BIDANG KEUTAMAAN PENYELIDIKAN TRGS TAHUN 2022

4 TEMA (CFP)



Energy, Climate Change & Environment



Pandemic Mitigation,
Preparedness, Response
& Recovery



National Resilience
to Security Threats



Artificial Intelligence (AI) and
Internet
of Everything (IOE)
Technology

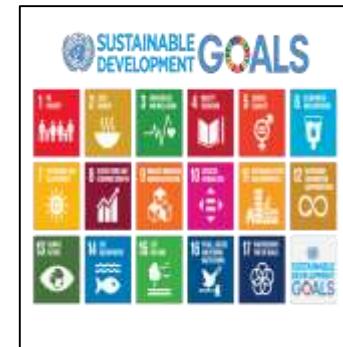
8 KLUSTER



10-10 MySTIE



SDG



15 KEGA



Penyelidik dimestikan untuk memilih salah satu daripada Tema (CFP), Kluster Penyelidikan, Domain Penyelidikan, 10-10 MySTIE, SDG dan WKB 2030 bagi setiap permohonan geran penyelidikan. Penilaian permohonan TRGS Tahun 2022 adalah berdasarkan empat (4) Tema (CFP) dan lapan (8) Kluster DP KPT.

RMKE-12 SEBAGAI DOKUMEN RUJUKAN



Penyelidik digalakkan untuk mengemukakan kertas cadangan penyelidikan yang menjurus kepada salah satu daripada **SEMBILAN (9) FOKUS** dalam **RANCANGAN MALAYSIA KEDUA BELAS (RMKE-12)**



SYARAT AM PERMOHONAN TRGS TAHUN 2022

01

Permohonan baharu (sebagai Ketua Program dan Ketua Projek) bagi mereka yang telah diluluskan TRGS (sebagai Ketua Program dan Ketua Projek) pada fasa yang terdahulu atau permohonan akan diberi pertimbangan dengan bukti projek tersebut **telah selesai sepenuhnya (100%)** di dalam Modul Pemantauan Sistem MyGRANTS dan disahkan oleh RMC serta telah selesai membentangkan Laporan Akhir kepada jawatankuasa yang dilantik.

02

Permohonan Ketua Projek bagi menggantikan Ketua Projek di bawah program lain adalah tidak dibenarkan sekiranya masih mempunyai projek aktif dan belum **mencapai prestasi 100%** yang disahkan oleh RMC serta KPT di dalam Modul Pemantauan Sistem MyGRANTS.

SYARAT TAMBAHAN PERMOHONAN TRGS TAHUN 2022

TEMPOH PERKHIDMATAN

Ketua Program/Ketua Projek mestilah berbaki sekurang-kurangnya dua (2) tahun di Institusi masing-masing

01

CUTI BELAJAR / SABATIKAL

Melebihi tempoh enam (6) bulan tidak dibenarkan mengemukakan permohonan. Maklumat cuti perlu dikemaskini oleh Ketua Projek

02

PENYELIDIK BERSAMA

Ketua Projek dimestikan mempunyai seorang (1) penyelidik bersama Warganegara Malaysia (tetap) yang mempunyai kepakaran yang sama dan dari Institusi yang sama

03

BUKTI CARIAN PATEN

Penyelidik perlu kemukakan bukti carian paten bagi setiap permohonan projek

04

KOLABORASI INDUSTRI / AGENSI

Penyelidik perlu membuat kolaborasi dengan Industri/Agenси yang berkaitan dan relevan bagi melaksanakan penyelidikan (sekurang-kurangnya surat niat (*letter of intent*) dan lain-lain dokumen berkaitan).

05

PENGURUSAN RISIKO

Penyelidik perlu mengenalpasti sebarang kemungkinan / peluang yang akan berlaku sebelum, semasa dan selepas pelaksanaan penyelidikan

06

WAJIB

WAJIB

WAJIB

JANGKAAN HASIL PENYELIDIKAN TRGS TAHUN 2022



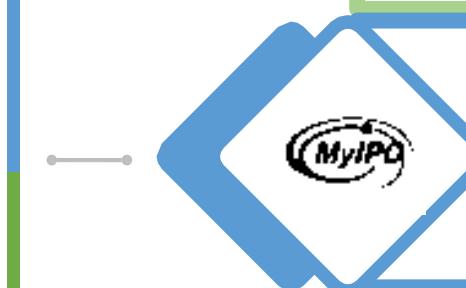
BAKAT (FULL RESEARCH MODE)

- ✓ Seorang (1) pelajar Ph.D atau dua (2) pelajar Sarjana atau gabungan keduanya bagi setiap projek



PENERBITAN JURNAL TERINDEKS

- ✓ Sekurang-kurangnya lapan (8) penerbitan dalam jurnal terindeks WoS/SCOPUS bagi setiap program
 - Untuk Bidang Sains & Teknologi, dua (2) daripada artikel tersebut mestilah dalam jurnal terindeks **Q1 WoS**
 - Untuk Bidang Sains Sosial, dua (2) daripada artikel tersebut mestilah dalam jurnal terindeks **Q1/Q2 WoS**



HARTA INTELEK (IP)

- ✓ Sekurang-kurangnya satu (1) harta intelek bagi setiap Projek
- ✓ Keutamaan pemfailan harta intelek adalah **Paten**



SERAHAN HASIL PENYELIDIKAN

- ✓ *Research deliverables* mestilah berpandukan dokumen pembukaan permohonan yang berkaitan (Dokumen "Call for Proposals")



Pejabat
Timbalan Naib Canselor
(Penyelidikan dan Inovasi)

PENILAIAN PERMOHONAN GERAN GERAN TRGS TAHUN 2022

DANA PENYELIDIKAN KEMENTERIAN PENGAJIAN TINGGI
(DP KPT)

CARTA ALIR PERMOHONAN, PENILAIAN DAN PERAKUAN TRGS TAHUN 2022



TRGS

(Skim Geran Penyelidikan Pembangunan Transdisiplinari)

1. Penilaian Dalaman di Peringkat Institusi
2. Penilaian (secara atas talian – MyGRANTS) di Peringkat JPT, KPT
3. Pembentangan di Peringkat JPT, KPT

PENILAIAN DAN PEMARKAHAN BAGI GERAN TRGS TAHUN 2022

(Melibatkan kriteria Carian Paten, Kolaborasi, dan Pengurusan Risiko)

	TRGS
01	DIWAJIBKAN
02	DIWAJIBKAN
03	DIWAJIBKAN

BUKTI CARIAN PATEN
Penyelidik perlu kemukakan bukti carian paten bagi setiap permohonan.

KOLABORASI INDUSTRI / AGENSI
Penyelidik perlu membuat kolaborasi dengan Industri/Agenzi yang berkaitan bagi melaksanakan penyelidikan.

PENGURUSAN RISIKO
Penyelidik perlu mengenalpasti sebarang kemungkinan / peluang yang akan berlaku sebelum, semasa dan selepas pelaksanaan penyelidikan.

SYARAT PERMOHONAN GERAN TRGS TAHUN 2022

Program Dana Penyelidikan, Kementerian Pengajian Tinggi

BUKTI CARIAN PATEN (PATENT SEARCH)

Menggunakan website <http://lens.org/> bagi tujuan carian paten.



Bukti Carian Paten (Patent Search) perlu dikemukakan bagi setiap permohonan geran penyelidikan.

Objektif Utama:

- ◊ Memberikan kesedaran “awareness” mengenai keperluan dan kepentingan menghasilkan penyelidikan yang unik dan inovatif

Pada tahun 2021, KPT telah membuat penambahbaikan terhadap “Borang Carian Paten”.



Syarat Permohonan:

- ◊ TRGS : DIWAJIBKAN

SYARAT PERMOHONAN GERAN TRGS TAHUN 2022

Program Dana Penyelidikan, Kementerian Pengajian Tinggi

BUKTI CARIAN PATEN (PATENT SEARCH)

Modul Permohonan MyGRANTS > “ADDITIONAL INFORMATION”

The screenshot shows the 'MyGRANTS' application interface for grant proposals. At the top, there's a navigation bar with links like 'Utama', 'Profil Korporat', 'Info MyGRANTS', 'Geran Penyelidikan', 'Output', 'Carian MyGRANTS', 'Kerjaya', and 'Hubungi Kami'. Below this is a sub-navigation bar with tabs: 'Application Details', 'Project Leader', 'Research Info.', 'Equipment & Material', 'Budget', 'Add. Info.' (which is highlighted in green), 'Declaration', 'Appendix', and 'Form Submission'. A large text area is labeled 'F(i). Patent Search (describe how your research output shall produce an innovative idea or technology that has the potential to be a solution for stakeholders (community, industry, government etc.) and offers a unique proposition)'. It includes explanatory text about identifying research advantages and limitations, and a note to download a simplified patent search report. A text input field below contains the placeholder 'Rumusan daripada hasil carian paten dinyatakan dalam ruangan ini'. At the bottom of this field, it says '500 words left' and has 'Attach File' and 'Delete File' buttons.

SYARAT PERMOHONAN GERAN TRGS TAHUN 2022

Program Dana Penyelidikan, Kementerian Pengajian Tinggi

BUKTI CARIAN PATEN (PATENT SEARCH)

PENAMBAHBAIKAN TAHUN 2021:

Pada tahun 2021, KPT telah membuat penambahbaikan terhadap “Borang Carian Paten” dengan mewujudkan tiga (3) seksyen seperti berikut:

- ◊ Compulsory Section (Soalan 1 – 2)
- ◊ Social Sciences Section (Soalan 3 – 4)
- ◊ STEM Section (Soalan 5 – 8)

JPT JABATAN PENDIDIKAN TINGGI

SIMPLIFIED PATENT SEARCH REPORT
(using Lens.org (<http://lens.org/>))
Version 1/2021

Keywords Used	Type in the keywords used in your search(s)	The Number of Patents Found using Keywords Used	(copy and paste the number)

Answer these questions using 'YES' or 'NO'

NO.	QUESTIONS	(YES/NO)	REMARKS (IF ANY)
COMPULSORY SECTION			
1.	Has the number of patents published shown an UPWARD trend? If YES, it highlights an increasing interest to protect ideas associated with the keywords used. Increasing interest may indicate developing or sunrise sector showing future potential with substantial growth.		
2.	Has the number of patent published shown a DOWNWARD trend? If YES, it highlights a decreasing interest in sectors associated with keywords used. It may indicate a declining or sunset sector showing diminishing interest to protect ideas or absence of innovation.		
SOCIAL SCIENCES SECTION Please answer Questions 3 and 4. If the research proposal is categorised under the Research Domain of Social Sciences (SS); or Arts and Applied Arts (AA); or Natural and Cultural Heritage (NCH)			
3.	Does the proposed research output (dataset, knowledge, information) have the POTENTIAL TO BE USED by any of the past patent applicants in the search results?		
4.	Does the proposed research output (dataset, knowledge, information) have the POTENTIAL TO BE USED by any Malaysian Government Ministry/Agency? If YES, please state the name of the Ministry/Agency. If NONE, the research output may not be of use to the national agenda.		

Answer these questions using 'YES' or 'NO'

NO.	QUESTIONS	(YES / NO)	REMARKS (IF ANY)
SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM) SECTION Please answer Questions 5, 6, 7 and 8. If the research proposal is categorised under the Research Domain of Technology and Engineering (TK); or Clinical and Health Sciences (SH); or Pure and Applied Sciences (STG); or Information and Communication Technology (ICT)			
5.	Does the list of previous patent applicants include potential COLLABORATOR(S) that are interested in the research output? If YES, it shows that the research output is potentially aligned with the requirements of existing collaborator(s) that have entered the sector earlier.		
6.	Does the list of previous patent applicants include potential COMPETITOR(S) when applying the research output? If YES, please state the name of the COMPETITOR(S).		
7.	Does the patent search yield similar patents that would prevent the commercialisation of the research?		
8.	Does the patent search yield similar patents already filed in Thailand, Indonesia and Singapore?		

*Collaborators are past patent applicants listed in the patent search result who have the potential to collaborate with the grant applicants during or after the research project has been completed.

**Competitors are past patent applicants listed in the patent search result that would compete against the grant applicants and prevent the research output from being utilised or commercialised after the research project has been completed.

Program Dana Penyelidikan, Kementerian Pengajian Tinggi

KOLABORASI PENYELIDIKAN BERSAMA PIHAK INDUSTRI / AGENSI

Penyelidik perlu berkolaborasi dengan pihak Industri/Agenzi yang berkaitan bagi melaksanakan projek penyelidikan (bukti dokumen adalah sekurang-kurangnya surat niat (*letter of intent*) dan lain-lain dokumen yang berkaitan).

Syarat Permohonan:

◊ TRGS : DIWAJIBKAN



SYARAT PERMOHONAN GERAN TRGS TAHUN 2022

Program Dana Penyelidikan, Kementerian Pengajian Tinggi

(5) KOLABORASI PENYELIDIKAN BERSAMA PIHAK INDUSTRI / AGENSI

Modul Permohonan MyGRANTS > “ADDITIONAL INFORMATION”

The screenshot shows the MyGRANTS application interface. At the top, there is a header with the logo of the Ministry of Higher Education Malaysia, the text "KEMENTERIAN PENGAJIAN TINGGI MALAYSIA" and "MINISTRY OF HIGHER EDUCATION MALAYSIA", and the "MyGRANTS" logo with the subtitle "MALAYSIA GREATER RESEARCH NETWORK SYSTEM". The header also includes links for "Portal Rasmi", "Carian Portal", "Log Masuk", and navigation tabs like "Utama", "Profil Korporat", "Info MyGRANTS", "Geran Penyelidikan", "Output", "Carian MyGRANTS", "Kerjaya", and "Hubungi Kami". Below the header, a navigation bar contains buttons for "Application Details", "Project Leader", "Research Info.", "Equipment & Material", "Budget", "Add. Info.", "Declaration", "Appendix", and "Form Submission". The "Add. Info." button is highlighted with a green border. The main content area is titled "F(ii). Research Collaborator" and contains two large text input fields. The first field has the instruction "Industrial Linkages (Please identify any industry or end-user group involved in the project, and describe its role/contribution to the project)" and a note "500 words left". The second field has the instruction "Agency/Organisation (Please identify all agencies/organisations collaborating in the project, and describe their role/contribution to the project)" and a note "500 words left". Both fields include "Attach File" and "Delete File" buttons.

SYARAT PERMOHONAN GERAN TRGS TAHUN 2022

Program Dana Penyelidikan, Kementerian Pengajian Tinggi

KEPERLUAN PENGURUSAN / PENILAIAN RISIKO

Penyelidik perlu mengenalpasti sebarang risiko (kekuatan/kelemahan/peluang/ancaman/lain-lain yang berkaitan) yang berpotensi berlaku sebelum, semasa dan selepas penyelidikan dilaksanakan.

Penyelidik juga perlu menentukan tahap risiko (rendah – sederhana – tinggi) bagi tiga perkara seperti berikut:

- ① Risiko - Teknikal
- ② Risiko - Masa
- ③ Risiko – Kewangan / Bajet

Syarat Permohonan:

- ◊ TRGS : Diwajibkan



SYARAT PERMOHONAN GERAN TRGS TAHUN 2022

Program Dana Penyelidikan, Kementerian Pengajian Tinggi

KEPERLUAN PENGURUSAN / PENILAIAN RISIKO

Modul Permohonan MyGRANTS > “ADDITIONAL INFORMATION”

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Risk	Low	Medium	High
1. Technical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Timing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Budget	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

KRITERIA PENILAIAN BAGI GERAN TRGS TAHUN 2022

EVALUATION FORM TRANSDISCIPLINARY RESEARCH GRANT SCHEME (TRGS) FULL PROPOSAL (VER. 1/2022)				
SUMMARY OF ASSESSMENT				
Very Poor	Poor	Acceptable	Good	Very Good
1 - 2	3 - 4	5 - 6	7 - 8	9 - 10
NO.	ASSESSMENT CRITERIA	SCORE (1-10)	ACTUAL SCORE	(COMPULSORY IF SCORE GIVEN ARE LOWER THAN 5 FROM EACH ASSESSMENT CRITERIA)
1. Scientific Merit* (40%)				
Importance (Specific, Measurable, Achievable, Realistic and within <u>Time-frame</u> (SMART) objectives)	8%			
Fundamental element (<u>A-fundamental-research</u> that can be generate a new theory or new findings/knowledge)	8%			
Feasibility (e.g.: Evidence of relevant preliminary work by the research team)	4%			
Currency of knowledge (up to date literature, <u>clear iteration</u> of knowledge gap)	6%			
Methodology	6%			
Connectivity of project – framework	4%			
Ethical and social responsibility considerations	4%			
2. Project Impact* (20%)				
Magnitude of the <u>impact</u> :				
(a) Scale (Reach and Depth)	10%			
(b) Visibility (Communication Plan)	2%			
Talent Development (clear plan to support the training and development of relevant talent)	5%			
Data sharing plan (management)	3%			

KRITERIA PENILAIAN PERMOHONAN

-  **40%**
Scientific Merit
-  **20%**
Project Impact
-  **20%**
Competency of Research Team
-  **10%**
Research & Innovation Ecosystem
-  **10%**
Translational Potential

KRITERIA & SKALA PEMARKAHAN BAGI GERAN TRGS TAHUN 2022

Rating	Kriteria Pemarkahan	Keputusan
1	Markah 59% dan ke bawah	
2	Markah diperolehi 60% – 64%	
3	Markah diperolehi 65% – 69%	
4	Markah diperolehi 70% – 74%	
5	Markah diperolehi 75% – 79%	
6	Markah diperolehi 80% – 84%	Not Recommended (NR) (79% dan ke bawah)
7	Markah diperolehi 85% – 89%	Recommended (R) 80% - 84%
8	Markah diperolehi 90% – 94%	Highly Recommended (HR) (85% – 100%)
9	Markah diperolehi 95% – 99%	
10	Markah diperolehi 100%	

SKALA PEMARKAHAN ini melibatkan setiap kriteria penilaian yang telah ditetapkan



Sekiranya markah yang diberikan bagi salah satu kriteria penilaian
< DARIPADA 5,
perakuan projek secara automatik akan menjadi “Not Recommended”



Pejabat
Timbalan Naib Canselor
(Penyelidikan dan Inovasi)

PEMATUHAN KEPADA PERATURAN KEWANGAN

**DANA PENYELIDIKAN KEMENTERIAN PENGAJIAN TINGGI
(DP KPT)**

PERATURAN KEWANGAN BAGI GERAN TRGS TAHUN 2022



Penggunaan vot yang bersesuaian adalah tertakluk kepada Garis Panduan TRGS (Pindaan Tahun 2022) dan Dokumen Tadbir Urus Dana Penyelidikan KPT yang berkuatkuasa.

PERATURAN KEWANGAN BAGI BAGI PENGGUNAAN VOT

Penambahbaikan Peraturan Kewangan Tahun 2022

TRGS

Elaun GRA mod penyelidikan
sepenuh :

- ❖ Ph.D: **RM2,500.00**
- ❖ Sarjana : **RM2,000.00**

Pemotongan elaun bagi bayaran caruman KWSP dan PERKESO adalah tidak dibenarkan.



PERATURAN KEWANGAN BAGI PENGGUNAAN VOT TRGS TAHUN 2022



Penyelidik **TIDAK DIBENARKAN** untuk menggunakan peruntukan geran bagi membuat pembelian yang tidak berkaitan secara langsung dengan projek penyelidikan seperti berikut:-

1. Pembayaran sebarang bentuk yuran keahlian badan profesional/badan ikhtisas dan seumpamanya;
2. Pembelian bahan rujukan dan seumpamanya;
3. Pembelian peralatan ICT dan komunikasi (seperti telefon bimbit/komputer riba/mesin pencetak/katrij dan seumpamanya);
4. Pembayaran bil utiliti/telekomunikasi;
5. Pembelian peralatan pejabat (seperti alat tulis/kertas/meja/kerusi dan seumpamanya);
6. Pembelian peralatan storan (seperti external hardisk/pendrive/CD dan seumpamanya);
7. Pembayaran sewaan ruang/fasiliti di Institusi masing-masing;
8. Pembayaran pemfailan harta intelek dan seumpamanya (kecuali PRGS); dan
9. Lain-lain pembelian yang tidak berkaitan secara langsung dengan projek penyelidikan.

ATRIBUT PULANGAN PELABURAN (ROI) RDCI

ROI

Quantifiable products of the RDCI activities
that can be converted in monetary value

IMPACT

Quantifiable products of the RDCI activities that cannot be
converted in monetary value

Tangible



Facilities



Talent (Fees)



External Funding



Spin-off



Consultancies



Invention



Commercialization



Attachment



Publication

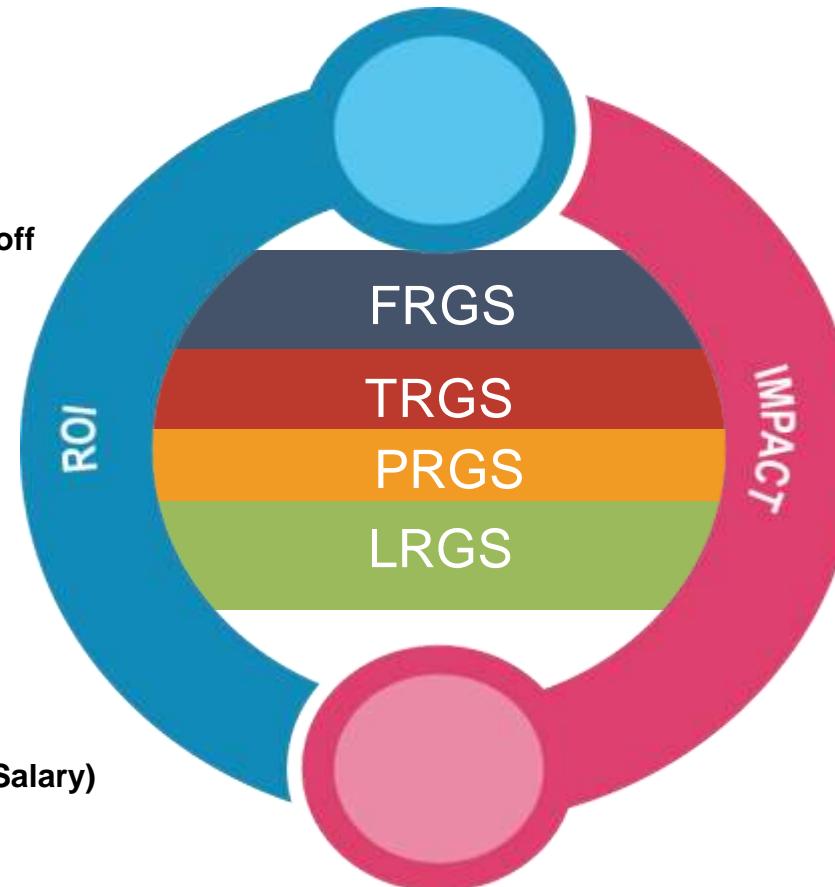


Talent (Annual Salary)

Intangible



Knowledge Transfer Program



Awards



Knowledge Transfer Program



Policy paper



Collaboration



Invention

Ketua Program/Projek yang berjaya dalam permohonan geran di bawah DP KPT hendaklah melaporkan
data ROI dan impak projek di dalam Sistem MyGRANTS

KUMPULAN SASARAN PEMOHON TRGS 1/2022

Kumpulan Sasaran

- 1) RG (28)
- 2) RIG (52 combination of 3 RIGs)

Call for Proposals

- 1) Energy, Climate Change and Environment
- 2) Pandemic Mitigation, Preparedness, Response & Recovery
- 3) National Resilience to Security Threats
- 4) Artificial Intelligence (Ai) And Internet of Everything (IoE) Technology

1) *Energy, Climate Change and Environment*

Research Scope:

The research that is required to address this Call for Proposal should be multidiscipline, holistic, and translational, requiring critical aspects from the physical sciences and biological sciences to the socio-economic discipline that address:

- (a) Deforestation;
- (b) Greenhouse gases inventory;
- (c) Coal;
- (d) Methane;
- (e) Transportation; and
- (f) Sustainable agriculture system.

2) *Pandemic Mitigation, Preparedness, Response & Recovery*

Research Scope:

The proposal should be multidisciplinary and comprehensive in nature that can include the following:

- (a) Health issues (for example: development of vaccines, diagnostics and therapeutics, mental health, non-communicable diseases, public health provision).
- (b) Economic growth and sustainability (for example: employment, fiscal and monetary policies, poverty).
- (c) Social well-being (for example: social equalities/inequalities, social unrest, and civic liberties, violence against women and children, orphaned children).
- (d) Leadership, governance and political volatility.
- (e) Future Transformation (for example digitisation, automation, resilience of industries and businesses, pandemic-resilient infrastructure).
- (f) Education (for example: primary, secondary, tertiary, The Lost Learning Generation, educational equity and access)
- (g) Communication effectiveness

3) National Resilience to Security Threats



Research Scope:

We are looking to fund proposals that are targeted towards research concerning national resilience against security threats that will encompass any of the following or an integrated combination thereof:

(a) Resilience towards direct threats to national security that encompass areas of concern such as:

1. Internal security and threats covering, but not limited to, subversive activities, terrorism, racial sentiment, foreign workers and immigrants (legal and illegal).
2. Information security and cybercrime covering, but not limited to, artificial intelligence, data analytics, and profiling.
3. Cyber security covering, but not limited to, securing cyberspace from cyber threats, maintaining cyber security best practices, awareness and the ability to predict and prevent cyber security breaches.
4. Regional stability covering external threats and interventions.
5. Policy and strategic studies in defence and security related to national resilience.
6. Defence and security technology covering but not limited to, weapon systems, mobility and protection (active and passive).
7. Emerging technologies for defence and security covering but not limited to,
8. Fourth Industrial Revolution (IR4.0), IoT, unmanned platforms and automated systems.

(b) Resilience towards indirect threats to national security that encompass areas of concern such as:

1. Food security, covering but not limited to availability, accessibility, utilisation, stability and sustainability.
2. Water security covering but limited to, secure and sustainable water reliance.
3. Energy security covering but limited to, secure and sustainable energy resilience.

4) Artificial Intelligence (AI) And Internet of Everything (IOE) Technology

Research Scope:

We are looking to fund proposals that address issues and promote advancements in the **digital economy, aerospace industry, transport industry (specifically electric vehicle (EV)), and support services** for the Fourth Industrial Revolution (IR4.0) via any or combination of the following:

- (a) Augmented Reality;
- (b) Autonomous Systems;
- (c) Big Data and Analytics;
- (d) Data and Network Security;
- (e) Machine Learning;
- (f) System Integration;
- (g) Artificial Intelligence.



Thank You
