



Geran Penyelidikan VS Geran Komuniti (Penulisan Kertas Kerja Geran Pemindahan Ilmu)

Rudie Tajuddin @ Ta



Rudie Tajuddin @ Ta

- Managing Knowledge Transfer Grant (UPM) 2016-2020
- Evaluator- KTP Grant (National level) 2014- to date
- Monitoring- KTP Grant (National level) 2014- to date
- Technical Committee National Conference on Knowledge Transfer (NCKT) 2014- to date



PERBEZAAN:

GERAN PENYELIDIKAN VS GERAN KOMUNITI

	Geran Penyelidikan	Geran Komuniti
Tujuan	Penyelidikan yang baru hendak dijalankan (hasil belum diperolehi)	Terjemahan hasil penyelidikan yang diperolehi dipindahkan kepada komuniti sasaran
Objektif	Elemen penyelidikan	Pemindahan ilmu (dapatkan daripada hasil penyelidikan)
Perancangan	Perancangan berdasarkan <ul style="list-style-type: none"> - pelan strategi UPM - polisi penyelidikan universiti - program penyelidikan universiti / bidang tujuan university - Rancangan Malaysia (RMK), Economic Transformation Programme (ETP), National Key Result Areas (NKRA), National Key Economic Areas (NKEA), Pelan Pembangunan Pendidikan Malaysia 2015-2025 (Pendidikan Tinggi) - Garis panduan dan keperluan penaja geran. 	Penetapan pelaksanaan projek berdasarkan: Permasalahan yang hadir/wujud daripada komuniti itu sendiri. *fokus pelaksanaan projek berdasarkan kluster komuniti dan jenis program (rujuk GP Komuniti di ISO UPM)
Penglibatan	Penglibatan pembantu penyelidik, felo penyelidik, pembantu Pasca Doktoral	Ahli-ahli projek boleh terdiri daripada pegawai akademik dan bukan akademik (dalam bidang kepakaran ilmu yang ingin dipindahkan)

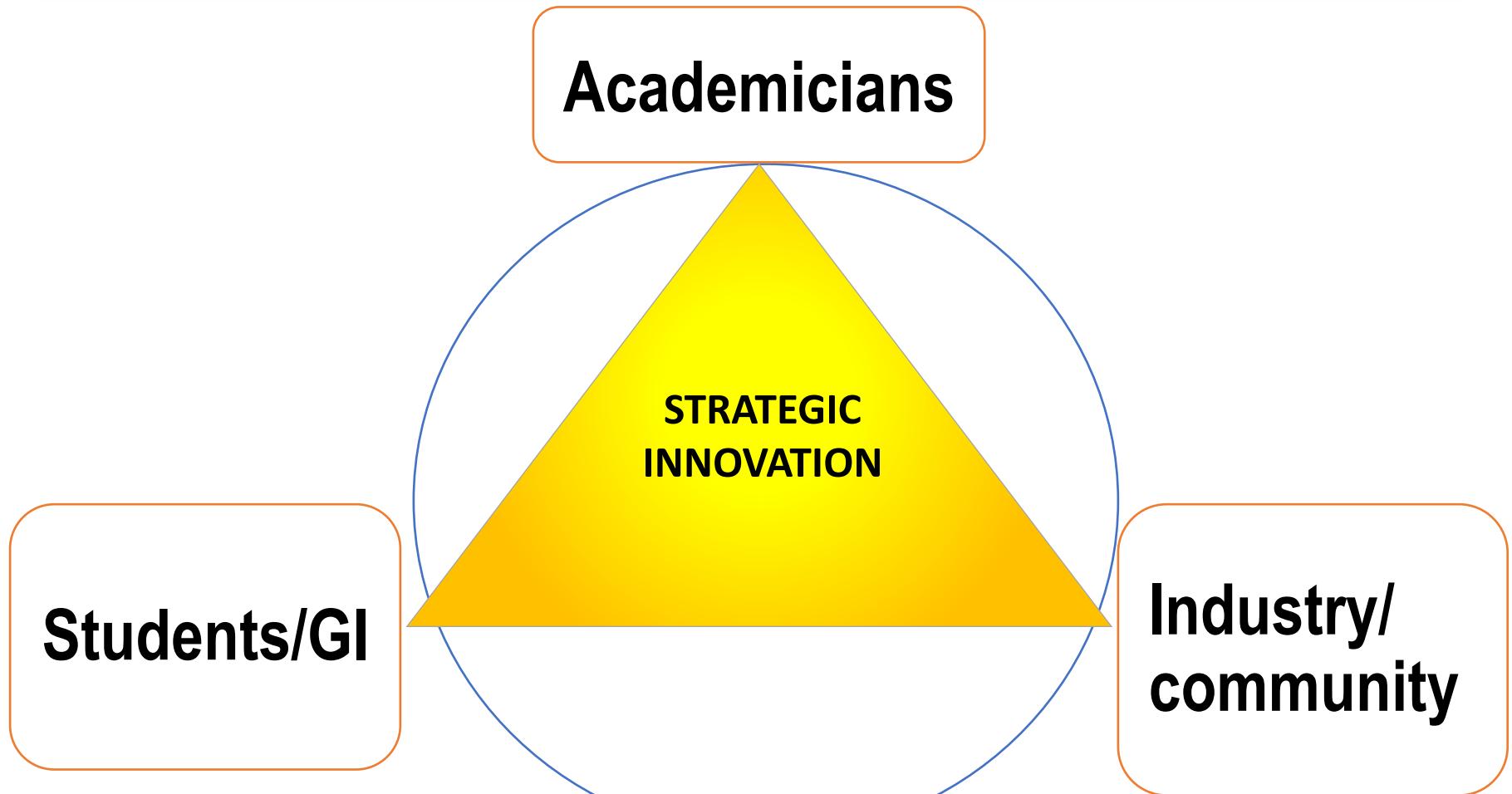
	Geran Penyelidikan	Geran Komuniti
Pembelian Aset Kekal	Pembelian aset dibenarkan	Pembelian aset tidak digalakkan
Contoh Geran	Cth: <ul style="list-style-type: none"> • Geran Fundamental Research Grant Scheme (FRGS), Exploratory Research Grant Scheme (ERGS) • Long Term Research Grant Scheme (LRGS) • Transdisciplinary Research Grant Scheme (TRGS) 	Cth: <ul style="list-style-type: none"> • Knowledge Transfer Programme • Knowledge Transfer Grant Scheme (KTGS) <ul style="list-style-type: none"> - KTGS@JINM (dana tabung RU RMC) - KTGS@PTJ (dana tabung JINM PTJ) • Geran lain-lain
Had Syiling Kewangan	Tiada had (bergantung pada kelulusan selepas penilaian)**	Had syiling KTP: RM80k (bergantung pada kelulusan akhir oleh penilai selepas penilaian) KTGS@JINM: 10k KTGS@PTJ: minima 5k
Hasil Projek (Output, Impak)	Output dan impak diukur berdasarkan hasil pencapaian penyelidikan tersebut (penghasilan produk, pembentangan bengkel/konferensi, penerbitan, anugerah, harta intelek, pengkomersilan	<ul style="list-style-type: none"> • Output yang jelas berdasarkan objektif yang ditetapkan • Impak menentukan pencapaian penarafan bintang projek tersebut

CONTOH GERAN PEMINDAHAN ILMU

- KNOWLEDGE TRANSFER PROGRAMME (KTP)
- KNOWLEDGE TRANSFER GRANT SCHEME (KTGS)
- KNOWLEDGE TRANSFER GRANT SCHEME @ PTJ (KTGS @PTJ)
- ANAK MALAYSIA SIHAT (KKM)
- GERAN B40- PERTUBUHAN MAWADDAH MALAYSIA(NGO)



COMMUNITY/INDUSTRY PROJECTS IMPLEMENTATION MODEL





15 PROGRAM KHIDMAT KOMUNITI

- Bandar Hijau Serdang (Projek Khas Universiti)
- Jaringan Antarabangsa
- Kesejahteraan Komuniti
- Pembangunan Modal Insan
- Penghayatan Alam dan Budaya
- Program Inkubasi
- Program Inovasi dan Rekacipta
- Program Kanser
- Program Pembangunan Halal
- Program Pembangunan Orang Asli
- Program Pembangunan Usahawan
- Khidmat Pengembangan dan Komuniti
- Program Warga Emas
- Program Universiti dan Kepakaran
- Sekolah Angkat



If you are organizing a new venture, remember that the most successful community projects include input from the community. Give the people who will benefit from your project a voice in identifying and implementing community needs. - Young African Leaders Initiative

KENALPASTI KOMUNITI/ PERMASALAHAN

- ▶ Pastikan masalah adalah daripada komuniti dan bukan direka-reka permasalahan
- ▶ Projek Komuniti- Universiti selesaikan masalah komuniti (*Community Driven*)

KELESTARIAN PROJEK



Program telah melahirkan ciri kelestarian

- JIKA PERNIAGAAN, BOLEHKAH HASIL DIJUAL?
-End Market/ Value Chain
- KOMUNITI SUDAH BERDIKARI
DAN AMALKAN ILMU
- APA MANFAAT KEPADA KOMUNITI?
- Peningkatan taraf hidup



IMPAK PROJEK



Program membawa hasil dan menunjukkan perubahan/ peningkatan terhadap komuniti yang boleh diukur (*Measureable*) dan bukan sekadar pendedahan (*Awareness*)



END IN MIND

"Your most important work is always ahead of you, never behind you."

-DR. STEPHEN R. COVEY

'Soal diri anda untuk tentukan objektif projek'



OUTPUT PROJEK



Beberapa aktiviti pemindahan ilmu (*Knowledge transfer*) dijalankan oleh kedua-dua belah pihak. (Komuniti- Universiti) dan bukan aktiviti penyelidikan sepenuhnya.



UNIVERSITI BERI ASPIRASI/ PEMINDAHAN ILMU

- *Komitmen*
- *Koordinasi*

- *Komunikasi*
- *Kongsi Misi*

4K

KESEDIAAN/ KEPERCAYAAN



Fundamental of Collaboration



Sumber: Prof Dr. Zakaria Abas, UUM

'BERI JORAN, BUKAN IKAN'



SOLUSI/ INTERVENSI

Pendekatan berstruktur dapat menyelesaikan permasalahan komuniti dan risiko

Sumber: Cronoco Phillips Creating Long Term Relationships in Canada



PERMOHONAN GERAN PROGRAM PEMINDAHAN ILMU (Knowledge Transfer Programme – KTP)

SKIM PEMBELAJARAN SEPANJANG HAYAT (Lifelong Learning Scheme)

Satu (1) salinan borang ini hendaklah dihantar melalui UA masing-masing dan dialamatkan kepada Urusetia KTP, Pusat **Pemindahan Ilmu, Aras 1, Bangunan C26 Toray-USM, Universiti Sains Malaysia, 11800 Pulau Pinang.**

* Dokumentasi sokongan bagi permohonan ini dipertrekuhan dalam bentuk perisian (softcopy).

MAKLUMAT PROJEK/Details of Project			
A	TAJUK PROJEK YANG DICADANGKAN: <i>Title of proposed project:</i> TEMPOH MASA PROJEK (MAKSIMUM 12 BULAN): <i>Duration of this project (Maximum 12 months):</i>		START-UP AND MONITORING OF BIOLOGICAL SYSTEM DURING TREATMENT OPERATION OF LEACHATE OF SUNGAI IKAN SANITARY LANDFILL Duration: <i>Tempoh:</i> 10 months DARI: <i>From:</i> 1 st January 2017 HINGGA: <i>To:</i> 30 th October 2017
MAKLUMAT UA/Details of PU			
B	NAMA UA: <i>PU name:</i> NAMA TIMBALAN NAIB CANSELOR/PENGARAH BERTANGGUNGJAWAB: <i>Name of responsible Deputy Vice Chancellor/Director:</i>		UNIVERSITI PUTRA MALAYSIA Prof. <i>[Signature]</i> MC JINW.
	NAMA PUSAT/UNIT/PEJABAT BERTANGGUNGJAWAB: <i>Department/Unit/Office Responsible:</i>		DEPARTMENT OF BIOPROCESS TECHNOLOGY FACULTY OF BIOTECHNOLOGY AND BIOMOLECULAR SCIENCES

JUMLAH SUMBANGAN KEWANGAN KEPADA PROJEK (RM): <i>Amount of monetary contribution to the project (RM):</i>	1500	
SUMBANGAN BUKAN KEWANGAN KEPADA PROJEK: <i>Non-monetary contribution to the project:</i>	Item: Staff professional and training, transportation	Nilai Setara dalam RM: <i>Equivalent value in RM:</i> 11,500.00
	Lab testing, instrumen	20,000.00
	Office facility	3,000.00
PERNYATAAN RINGKAS PERMASALAHAN ORGANISASI BERKAITAN DENGAN PROJEK KTP PEMBELAJARAN SEPANJANG HAYAT (tidak melebihi 200 patah perkataan): <i>Summary of organisation problem statement related to KTP Lifelong Learning project (should not exceed 200 words):</i> <p>Eralab (KT) Sdn. Bhd. has vast experience in water and wastewater laboratory analyses services. Therefore the current project on the startup operation of leachate treatment in Sungai Ikan landfill cannot be done without preliminary studies. Limited knowledge and experience in start up operation of wastewater treatment in landfill urged them to collaborate with UPM team to seek knowledge and expertise in how to make sure anaerobic and aerobic process working properly with minor deterioration during the startup operation system. Selection of appropriate and suitable microbial sources along with suitable activated sludges characteristics are substantial in determining of the successful of leachate treatment process. Fundamental knowledge in microbiology together with understanding system design and configuration may optimize the leachate treatment process.</p> <p>The new leachate treatment system in Sungai Ikan landfill was built in order to cater the solid waste management in Kuala Terengganu and to safely discharge the treated effluent into river. The ultimate aim is to achieve final wastewater discharge standard comply with Department of Environment (DOE) Malaysia standard. The collaboration opportunity also will expose the graduate and graduated intern to actual working condition and requirement.</p>		
G	CADANGAN PROJEK/Proposed Project	
RINGKASAN CADANGAN PROJEK (tidak melebihi 3 muka surat) <i>Summary of project proposal (maximum 3 pages)</i>		

concentrations above 0.2 mg/l can cause fatalities in several species of fish, while high nitrate could result in eutrophication and methemoglobinemia (Sawyer et al., 2003). Exposure to drinking water containing high nitrate and nitrite may cause serious methemoglobinemia, especially among young children (Fewtrell, 2004).

Based on the above-mentioned problems due to leachate disposal into watercourse, a treatment of leachate is necessary to preserve the river ecosystems. The most common treatment of leachate was aerobic treatment. The main benefits of aerobic biological processes are that many contaminants are actually degraded and treated, rather than concentrated to appear in another form (e.g. in sludge, or concentrated "brine"). During aerobic biological treatment, organic compounds can be largely oxidized to carbon dioxide and water, and ammoniacal nitrogen (ammoniacal-N) can be removed by oxidation (nitrification) to nitrate. Nitrification is a widely adopted biological treatment process for domestic and industrial effluents, although relatively high concentrations of ammoniacal-N (often greater than 1000 mg/l) in leachates can require specific process designs, if treatment efficiency is not to be inhibited by toxic effects. Aerobic biological treatment plants are therefore designed to be able to perform the following main treatment processes: 1) Denitrification of organic carbon compounds, 2) Nitrification of ammoniacal-N, 3) Full or partial denitrification of nitrate-N.

The most widely used aerobic biological processes for treatment of domestic wastewaters are based on the activated sludge process. The activated sludge system provides far more intensive treatment than achieved within an aerated lagoon, by operating with greatly increased populations of acclimated bacteria, and far more intensive and vigorous aeration.

3. Objektif :

Objectives:

The objectives of the proposed project are as follows:

- I. To select suitable activated sludge for treating leachate generated from Sungai Ikan landfill
- II. To determine physical, chemical and biological properties of both activated and leachate generated from Sungai Ikan landfill
- III. To determine the effectiveness of the leachate treatment and to meet the final discharge standard set by Department of Environment (DOE) Malaysia
- IV. To train graduate intern or jobless graduate to be a competent and skill workers that ready enter the job market

4. **Kaedah Perlaksanaan Projek Pembelajaran Sepanjang Hayat:**
Lifelong Learning Project methodology:

Based on my teaching philosophy

R.E.A.D

R: Read, refer, recite to improve the knowledge

E: Explore the technology and knowledge, experiment, experience

A: Achievement of data, attainment, award

D: Discussion, dissemination of the knowledge

See attachment.

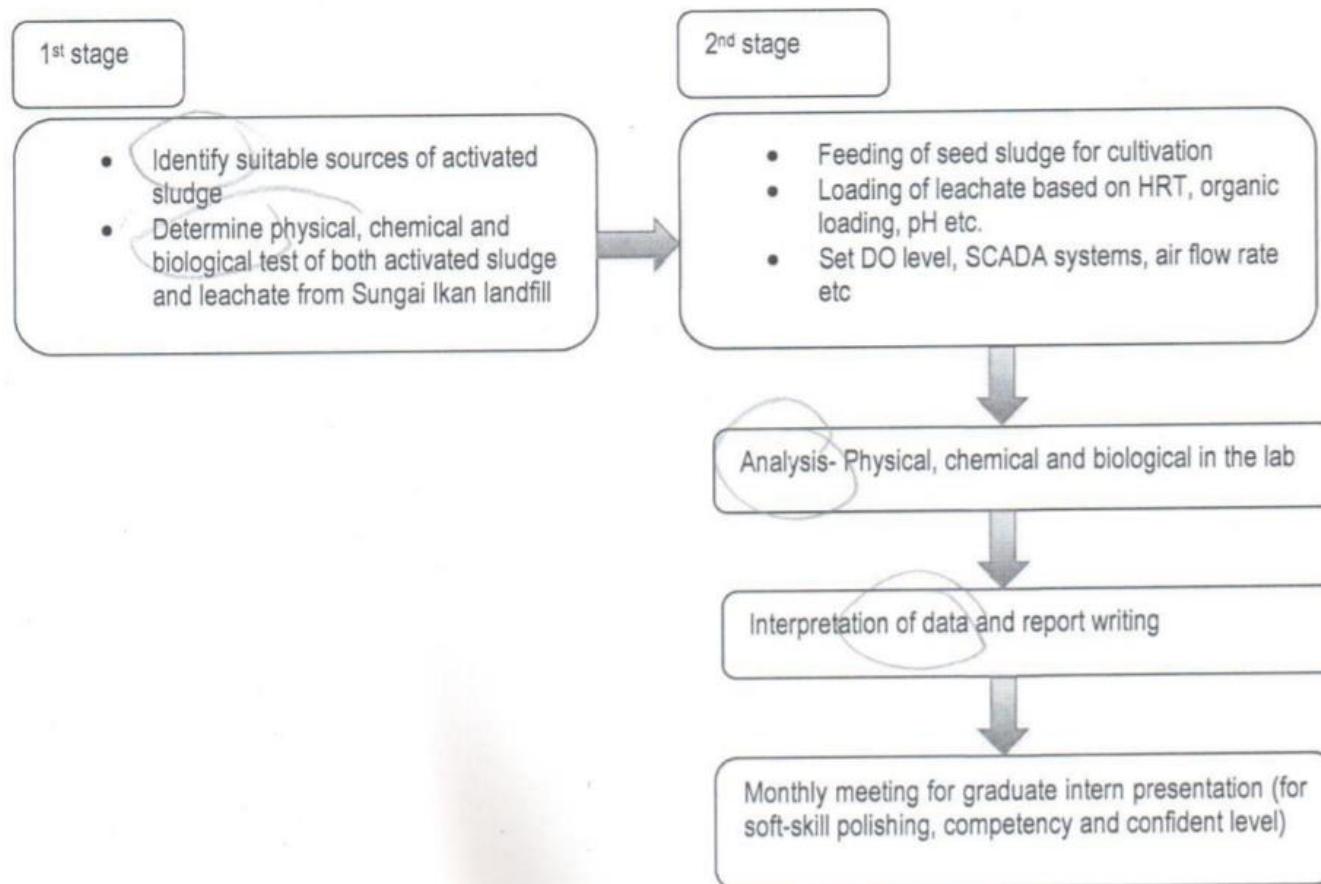
In general graduate intern will gain the knowledge and experience of wastewater treatment analysis by following below steps.

Steps to be taken in undertaking the study include the followings:

- Step 1: Identify of suitable source of activated sludge: This step involves determination of activated sludge properties namely Chemical Oxygen Demand (COD), Biochemical Oxygen Demand (BOD), pH Level, Settleable solids, Sludge Volume Index (SVI), Ammonical Nitrogen, Total Soild (TS), Total Dissolved Solid (TDS) and Mixed Liquor Suspended Solid (MLSS).
- Step 2: Conduct laboratory testing during bacteria seeding and cultivation: This step involves determination of physical, chemical and biological properties of the leachate. This involves daily and weekly sampling and analysis of the sample for the respective parameters.
- Step 3: Monitor the operation during bacteria seeding and cultivation off and at field: This step involves evaluation of the treatment system performance by the degree of COD, BOD and nitrogen removal
- Step 4: Report Preparation: This step involves tabulation of the test results, visual observation, interpretation of the data and conclusion of the findings.

Step 4: system performance by the degree of COD, BOD and nitrogen removal
Report Preparation: This step involves tabulation of the test results, visual observation, interpretation of the data and conclusion of the findings.

The proposed methodology is illustrated in **Figure 1** below:



J AKUAN PEMOHONI/Declaration by applicant

Saya dengan ini mengaku bahawa (Sila tanda ✓):
/ hereby declared that (Please tick ✓):

1. Semua maklumat yang dilihi adalah benar, KPT berhak menolak permohonan atau membatalkan tawaran pada bila-bila masa sekiranya keterangan yang dikemukakan adalah tidak benar.
All information stated here are accurate, KPT has the right to reject or to cancel the offer without prior notice if there is any inaccurate information given.

2. Permohonan projek ini dikemukakan untuk memohon peruntukan di bawah Skim Geran Program Pemindahan Ilmu (Pembelajaran Sepanjang Hayat).
Application of this programme is presented for the Knowledge Transfer Programme Grant Scheme (Lifelong Learning).

3. Permohonan projek ini juga dikemukakan untuk memohon peruntukan geran projek dari (nama geran dan jumlah dana).
Application of this programme is also presented for other research grant/s (grant's name and total amount) _____

Tarikh : 29/9/2016 Tandatangan Pemohon : Rafiz
Date : _____ Applicant's Signature : _____

K AKUAN RAKAN ORGANISASI/ Declaration by Organisation

Saya dengan ini mengaku bahawa (Sila tanda ✓):
/ hereby declared that (Please tick ✓):

1. Semua maklumat yang dinyatakan di sini adalah tepat berdasarkan pengetahuan kami dan kami menyampaikan komitmen dan kerjasama untuk permohonan skim geran di bawah KPT.
All information stated here are accurate to the best of our knowledge and we submit our commitment of cooperation for the application of a grant scheme under KPT.

2. Komitmen dinyatakan dalam permohonan ini akan disediakan apabila skim geran diluluskan. Jika selepas tawaran geran kami tidak dapat memberi komitmen, geran ini boleh ditarik balik.
Commitment stated in this application would be delivered when the grant scheme is approved. If upon the approval of the grant we are not able to fulfill the commitment, then the grant scheme can be withdrawn.

3. Kami membuktikan bahawa tidak ada projek yang serupa telah diajukan di bawah skim geran yang sama untuk UA lain.
We attest that no similar project has been submitted under the same grant scheme to other PU.

Tarikh : 29/9/2016 Tandatangan Rakan Organisasi : J. S. J.
Date : _____ Organisation Representative's Signature : _____

AKUAN TIMBALAN NAIB CANSELOR/PENGARAH BERTANGGUNGJAWAB
Declaration by responsible Deputy Vice Chancellor/Director

Sila tandakan (✓)
Please tick (✓)

Diperakuan:
Recommended:

A. Sangat Disokong
Highly Recommended

B. Disokong
Recommended

C. Tidak Disokong (Sila Nyatakan Sebab)
Not Recommended (Please specify reason)

Ulasan:
Comments:

.....
.....

Nama: _____ Tandatangan: _____
Name: _____ Signature: _____

Tarikh: _____
Date: _____

Nota: SEMUA PERMOHONAN DIANGGAP SULIT. KEPUTUSAN PANEL PENILAIAN SKIM GERAN PROGRAM PEMINDAHAN ILMU KTP ADALAH MUKTAMAD.
Applications submitted will be treated in full confidential. The decision by Knowledge Transfer Programme – KTP Evaluation Panel is final.

Sebarang pertanyaan/maklumat lanjut sila hubungi:
Any further inquiry/information please contact:

**URUSETIA PROGRAM PEMINDAHAN ILMU -
KTP**
Pusat Permintaan Ilmu
Aras 1, Bangunan C26 Toray-USM
Universiti Sains Malaysia, 11800 Pulau Pinang

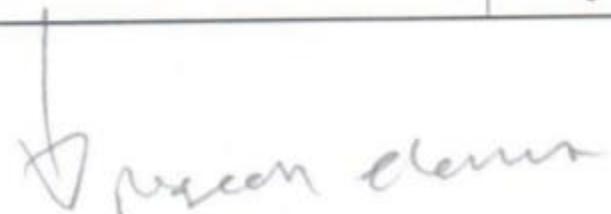
Tel: 04 - 653 6725
Faks: 04 - 653 6728
Emel: ktpsecretariat@gmail.com

**SECRETARIAT OF KNOWLEDGE
TRANSFER PROGRAMME (KTP)**
Knowledge Transfer Centre
Level 1, C26 Toray-USM Building
Universiti Sains Malaysia, 11800 Penang

Tel: 04 - 653 6725
Fax: 04 - 653 6728
Email: ktpsecretariat@gmail.com

ATTACHMENT A: MILESTONES & DATE

Milestones	Date
1. Determination of activated sludge properties such as COD, BOD, pH, settleable solids, SVI, ammonical nitrogen, TS, TSS and MLSS	1 st Jan- 28 th Feb 2017
2. Determination of properties of leachate from Sungai Ikan landfill (physical, chemical and biological)	1 st Jan- 30 th Apr 2017
3. Sampling and analysis should be done on daily and weekly basis depend on certain parameters selected	1 st Mar- 30 th Oct 2017
4. To monitor the operation during the bacteria seeding and cultivation.	1 st Jan- 30 th Oct 2017
5. Performance of treatment process based on COD, BOD and nitrogen removal.	1 st Mar- 30 th Oct 2017
6. Report writing.	1 st Aug- 30 th Oct 2017



ATTACHMENT B: CARTA GANTT

Proposed work schedule is given in the following table. It is anticipated the work can be completed within ten (10) months period.

Table 1.0: Proposed Work Schedule

Activities	2017									
	1	2	3	4	5	6	7	8	9	10
a) To identify suitable source of activated sludge as bacteria seeding and cultivation for treating leachate from Sungai Ikan landfill. - Determination of activated sludge properties such as COD, BOD, pH, settleable solids, SVI, ammonical nitrogen, TS, TSS and MLSS.		→								
b) Conduct a laboratory test during the bacteria seeding and cultivation. - Determination of properties of leachate from Sungai Ikan landfill (physical, chemical and biological)- see attachment for detail analysis. - Sampling and analysis should be done on daily and weekly basis depend on certain parameters selected.			→							→
c) Evaluation of Treatment System - To monitor the operation during the bacteria seeding and cultivation. - Performance of treatment process based on COD, BOD and nitrogen removal. - Report writing.					→				→	→

Kewajipan

Ruj. Kami : EKT/L/16-002
Tarikh : 25 September 2016
Bersamaan 23 Zul. 1437H

Kepada :

[REDACTED]
Pensyarah Kanan
Jabatan Teknologi [REDACTED]
Fakulti [REDACTED]
Universiti Putra Malaysia
43400 UPM Serdang
Selangor Darul Ehsan, Malaysia

Tuan,

**PER: JEMPUTAN MENJALINKAN KERJASAMA DENGAN ERALAB (KT) SDN BHD UNTUK TUJUAN
ANALISA RAWATAN AIR**

Dengan segala hormatnya saya merujuk kepada perkara seperti di atas.

2. Adalah dimaklumkan bahawa ERALAB (KT) SDN BHD akan menjalankan satu projek berkaitan dengan proses analisa rawatan air bertempat di Loji Rawatan Air Tapak Pelupusan Sungai Ikan, Kuala Nerus, Terengganu. Projek ini adalah bertujuan untuk memastikan operasi kerja dan sistem loji berjalan dengan baik supaya membolehkan effluent yang disalur keluar dari loji tersebut mematuhi standard piawaian Jabatan Alam Sekitar.

3. Dalam projek ini aktiviti persampelan, analisa dan terjemahan data akan dijalankan untuk mengenalpasti tahap kualiti air yang dilepaskan di tapak projek. Sehubungan dengan itu, kami amat berbesar hati menjemput pihak Dr Rafei untuk bekerjasama dalam proses rawatan air ini dengan memberikan khidmat nasihat dan kepakaran dalam setiap operasi sistem diloji tersebut.

4. Diharapkan jemputan ini dapat dipertimbangkan dan segala kerjasama serta sokongan dari pihak Dr Rafei dalam menjayakan projek ini amatlah kami hargai dan didahului dengan ucapan jutaan terima kasih.

Sekian,

Saya yang menjalankan tugas,



(Wan Mohd Serry Akhyr)

Pengarah

ERALAB (KT) SDN BHD

sk :

1. fail upm

