

24 – 25 Ogos 2015
Bustani Hotel, Jitra



Prof. Dr Kalsom Kayat
RIMC

Bengkel penerangan dan penjanaan proposal

PRGS

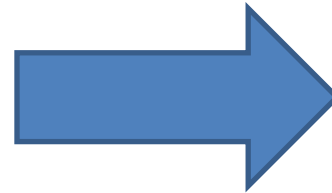
Let's talk about the purpose of your presence in this workshop.



Why would you want to undertake a research?

Why would you want to undertake a PRGS research?

Research

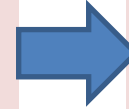


?????

**Penyelidikan
terdahulu (dari
FRGS atau lain2)**



**Hasil penemuan
yang memerlukan
pembangunan
prototype**



**Pre-
commercializati
on**

PRGS Research

**A research bears benefit only
if it can fill up knowledge
gap AND solve
problems...real problem**

Solving real problem through development of a PROTOTYPE

PRGS Research

PROTOTYPE: One of the first units manufactured of a product, which is tested so that the design can be changed if necessary before the product is manufactured commercially

**Is there PROTOTYPEs in
Social Science?**

- **Prototype of a procedure to treat textile waste water**
- **Prototype of a procedure to harvest rain in budget hotels**
- **Curriculum for productive learning in language**
- **Prototype of business models for SME – in the form of module**
- **Prototype of successful business model for rural tourism– in the form of module**
- **Prototype in customer development – in the form of module**
- **Prototype of an app that can be used by homestay operators in pricing homestay packages**
- **Prototype of an app that can be used in inventorying fresh supplies for restaurant operators**
- **Prototyping projects, programmes and policies - towards achieving societal change and collective outcomes**

Examples

Whatever it is, Prototype research begins with knowing the PROBLEM, suggesting a possible answer to the problem, PROOFING THE CONCEPT, PRE-FIELD TESTING and FIELD TESTING.

A WINNING PROTOTYPE PROPOSALS:

- **Coming up with SOLUTION to a PROBLEM**
- **Able to give positive impacts to humanities and society thus IMPROVING QUALITY OF LIVES**
- **Able to develop an industry based on knowledge**
- **Contribute to national strategic agenda**

EXAMPLE

Treatment of Textile Wastewater using Hybrid Biogranular System

Contact:

Assoc. Prof. Dr. Azmi Aris / Dr. Khalida Muda

Department of Environmental Engineering

Faculty of Civil Engineering

Universiti Teknologi Malaysia

The Problem



- Highly **colored** wastewater from textile industry
- High concentration of **non-biodegradable organics**, suspended solids, conductivity, turbidity and **intense color**

Our Solution

Hybrid Biogranular System

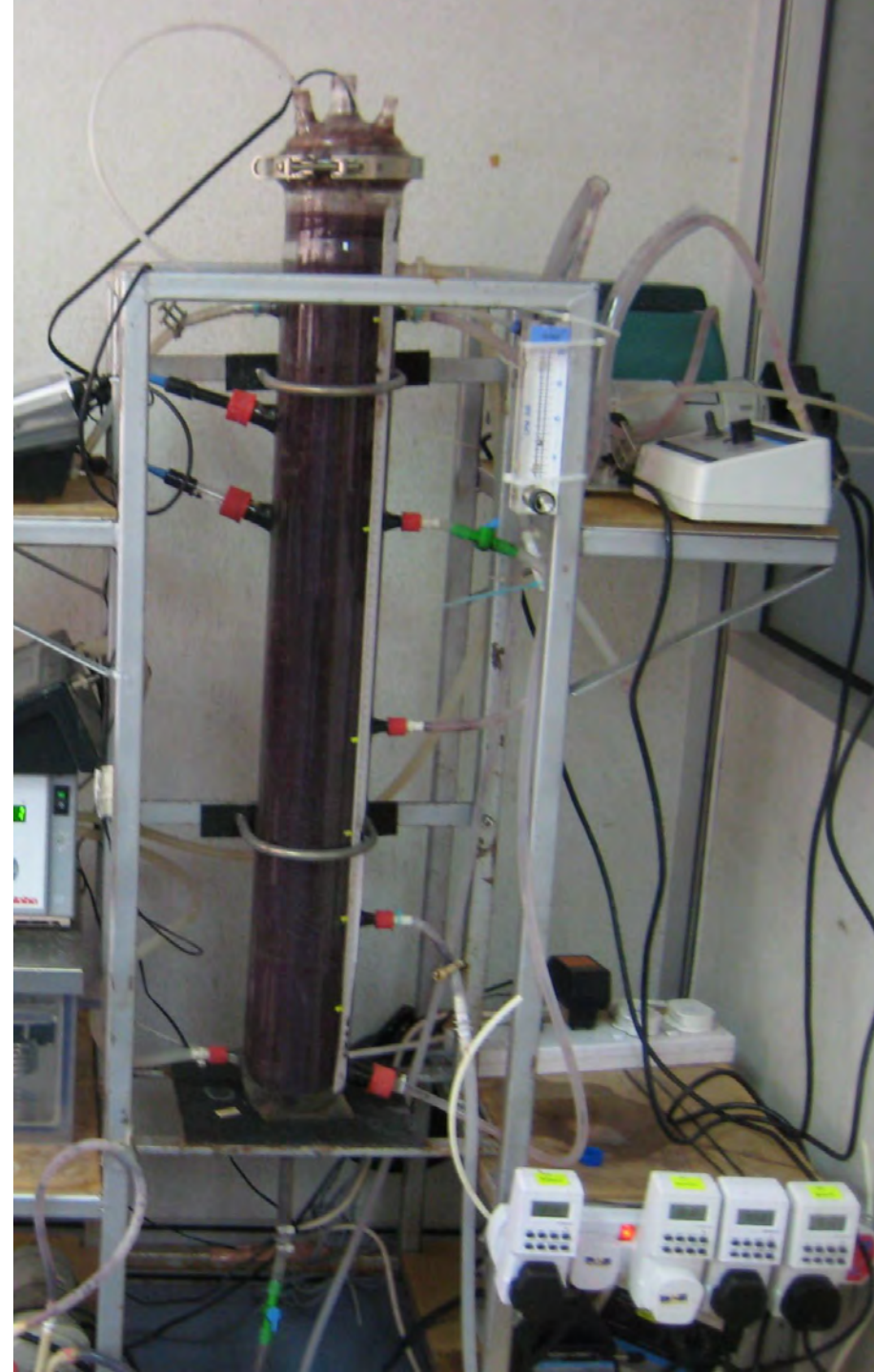
Features

- Treat textile wastewater within **relatively short period** of time
- **Simple** yet **reliable** and **proven effective** (90% COD and color removal)
- Use **microorganisms** rather than **chemicals**
 - **no chemical sludge, environmentally sustainable**

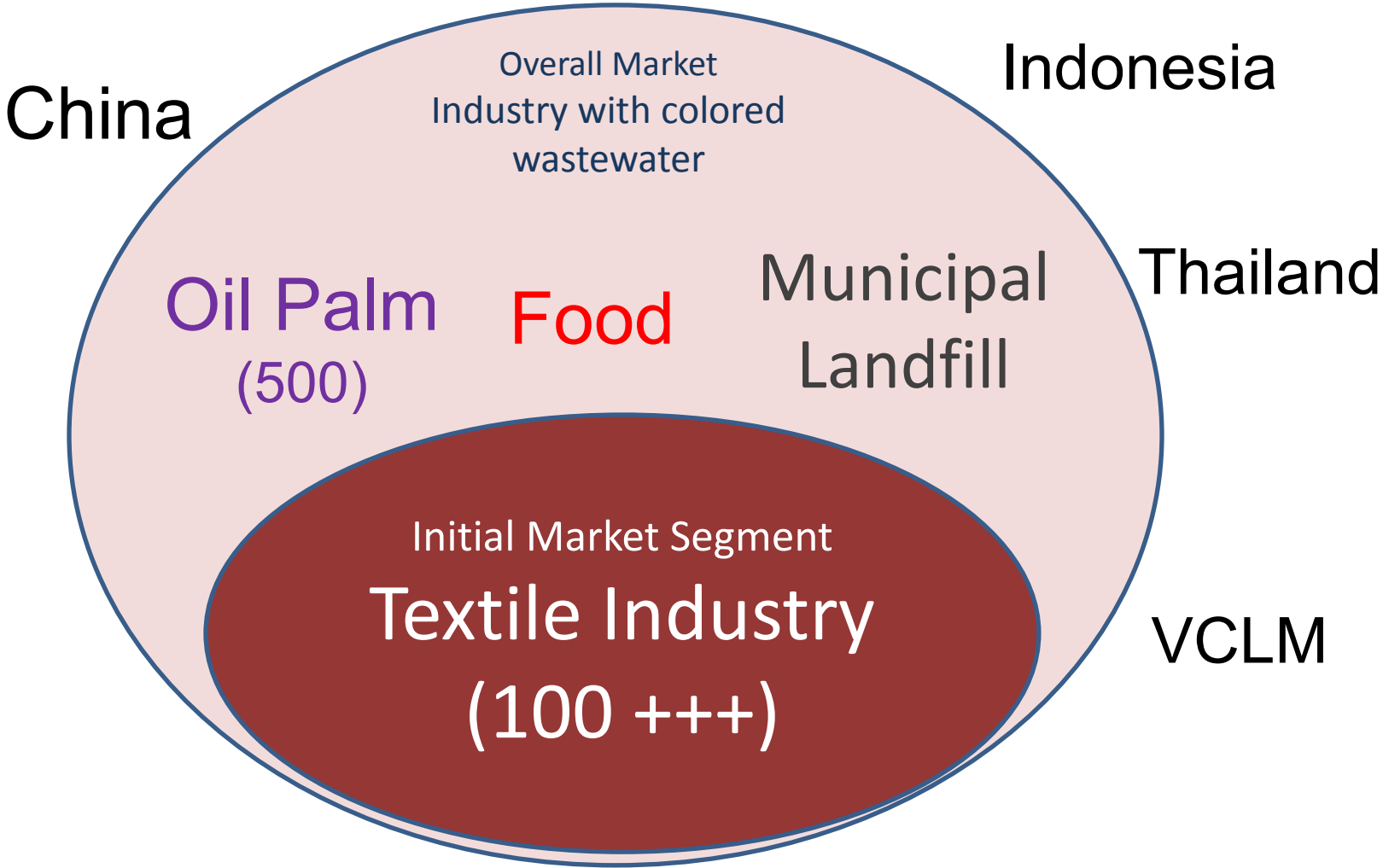
Basis of Technology

- Anaerobic followed by
Aerobic stage

- **Single** reactor in sequencing batch-mode
- feed → anaerobic (9 hr) → aerobic (3 hr) → anaerobic (9 hr) → aerobic (3 hr) → settling (5 min)
- Treatment can be completed within **24 hours**



Market Opportunity

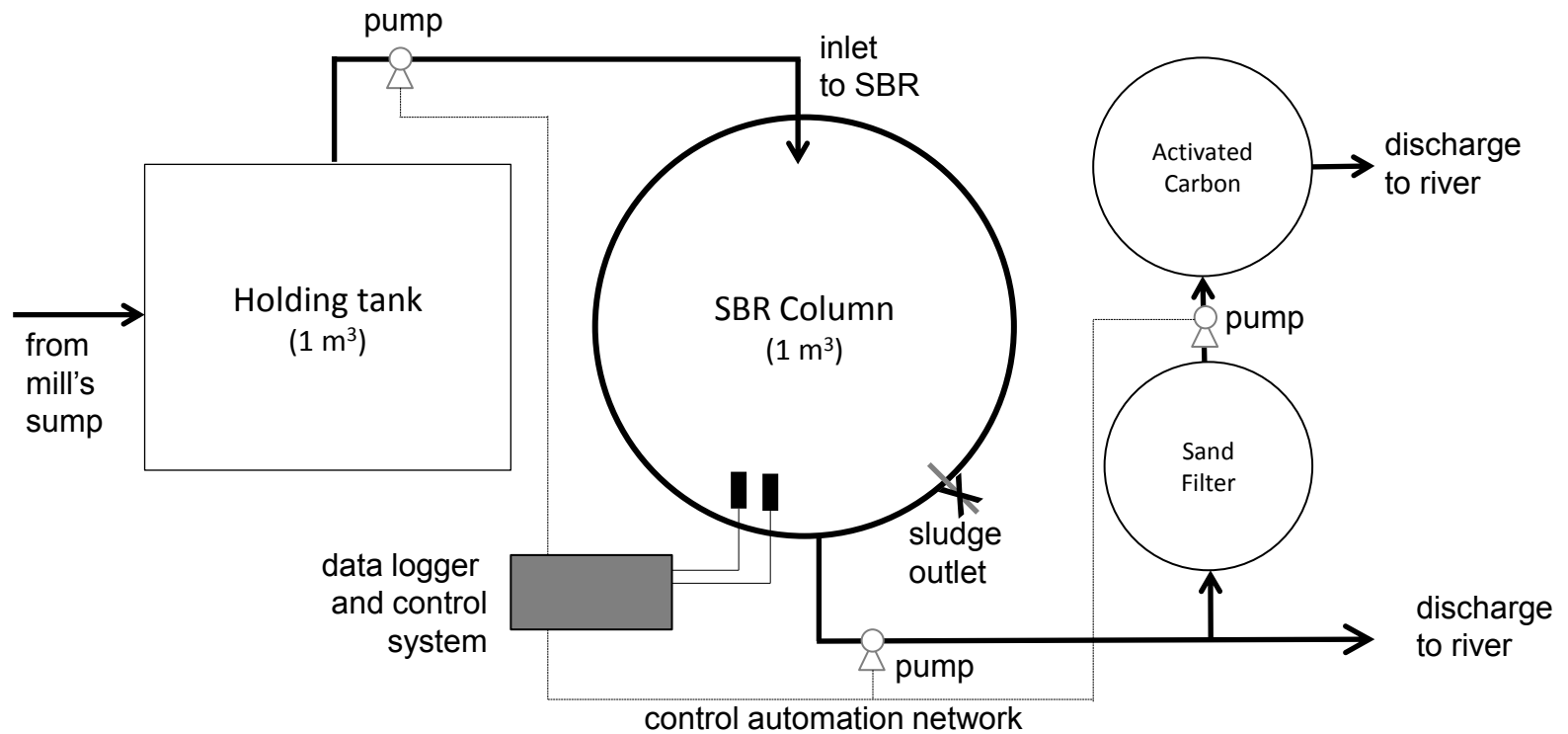


Objectives

1. To **design** and **fabricate a prototype hybrid biogranule system** for treating textile wastewater
2. To **further enhance the characteristics of the biogranules** developed in the bioreactor taking into consideration the size of the prototype plant
3. To **evaluate the performance** of the system in terms of pollutants removal under **different textile wastewater pollutant loads and characteristics**

Layout

Hybrid Biogranule System



Research Methodology Framework

Budget

Budget Details	Year 1 (RM)	Year 2 (RM)	Total (RM)
Salary and wages (V11000)	24,000	24,000	48,000
Travelling and transport (V21000)	12,500	17,500	30,000
Rental (V24000)	15,000	15,000	30,000
Research materials & supplies (V27000)	83,500	58,500	142,000
Maintenance and Minor repair services (V28000)	15,000	15,000	30,000
Professional services (V29000)	-	20,000	20,000
Accessories and equipment (V35000)	200,000	-	200,000
TOTAL	350,000	150,000	500,000

SPECIFIC GUIDELINES

Project leader eligibility	Permanent Academic Staff Contract Academic Staff – eligible but with two (2) permanent co-researchers <u>from the same institution</u>
Maximum amount to ask for	RM500,000
Duration of project	TWO (2) YEARS
Restrictions	PRGS funds CANNOT BE USED FOR: a. Business plans b. Market surveys c. IP filing and registrations d. Product exhibitions and promotions e. Conference presentations

**PRIORITY IS GIVEN TO
APPLICANTS WHO HAVE
RESEARCH FINDINGS FROM
FRGS WHICH ARE
COMPLETED OR AT LEAST
75% COMPLETED**

**ON STUDY LEAVE? CANNOT
LEAD PRGS BUT CAN BE A
MEMBER OF A PRGS
PROJECT**

**YOU ARE A PROJECT LEADER
AND YOU LEAVING THE
UNIVERSITY? YOU CANNOT
LEAD ANYMORE, BUT YOU
CAN BE MAINTAINED AS A
MEMBER**

Budget Guideline

11000	RO/RA – Not more than 10% total amount
21000	Domestic & Overseas Traveling Max 15% of total amount NO ALLOCATION FOR PAPER PRESENTATION, ATTENDING CONFERENCE, WORKSHOP, COLLOQUIUM
24000	No capping
27000	No capping
28000	No capping
29000	Professional fees - No capping Consumables – max 5%
35000	Max 40%

Research Output

Human Capital	-
Publications	-
Prototype	Prototype (Technical drawing, process, model, apps, etc)
IP	1 IP (filed)

HOW TO APPLY?

Profile registration by researchers in MYGRANTS online system



Activation of profile by RIMC



Preparation of proposal in MYGRANTS online system



Verification by panels (school level) before submission to RIMC



Endorsement by assessors (University level)



Audit by MoE panel



Submission to MoE

RESEARCHERS' RESPONSIBILITIES

RIMC'S RESPONSIBILITIES