Optimizing Innovation for Global Commercialization



Optimizing Innovation for Global Commercialization



Copyright © 2013
Division of Research,
Industrial Linkages & Alumni (PJI&A)
Universiti Teknologi MARA Melaka

Email: riid2013@melaka.uitm.edu.my
Web: www.riidmelaka2013.com

Optimizing Innovation for Global Commercialization

Research, Invention, Innovation Design

Published by

Division of Research, Industrial Linkages & Alumni (PJI&A) Universiti Teknologi MARA Melaka

Tel 606 - 5582313

Email riid2013@melaka.uitm.edu.my Website www.riidmelaka2013.com

Chairman

Assoc. Prof. Dr Roaimah Hj Omar

Chief Editor

Shafezah Abdul Wahab

Writers

Siti Najah Raihan Sakrani Shahril Anuar Abd Ghalim

Abstracts

Sulaiman Mahzan Mohd Ab Malek Md Shah Nur Syuhada Mohamad Mohd Fajil Abdul Batau Khalilah Ibrahim

Design

Anith Liyana Amin Nudin Norsharina Samsuri

Copyright 2013

Division of Research, Industrial Linkages & Alumni (PJI&A) Universiti Teknologi MARA Melaka, Km 26 Jalan Lendu, 78000 Alor Gajah, Melaka

All Rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without permission of the copyright holder.

ISBN 978-967-0637-02-0



		4	BACKGROUND of Research, Industrial Linkages & Alumni
		5	RIID 2013 objectives
12	Invention: Student Category Innovation: Staff Category Innovation: Student Category Design: Staff Category 17	5	CHRONOLOGY of RIID
		6	FOREWORD message by Chief Minister Melaka
174 184		7	FOREWORD by Rector of UiTM Melaka
193	LIST OF acknowledgement	8	FOREWORD by Director of AKEPT
194	SPONSORS	9	PROGRAMME Tentattive
		10	RIID COMMITTEE

member



background of RESEARCH, INDUSTRIAL LINKAGES & ALUMNI

Objectives

- To promote word-class research.
- To administer, coordinate and provide service for research development, consultation and research publication.
- To provide assistance in exploring new subjects and identify niche area of interest.
- To disseminate information and provide ample training in research, consultation and publication of research.
- To ensure innovation, quality research, consultation and publication are maintained.
- To assist in research publication for high impact journals.

Vision

To become the leading administrative centre for research, development, consultation and world-class research publication.

Mision

To enrich the academia, creative ability and innovation through quality service.

Division of Research, Industrial Linkages and Alumni or known as PJI&A started as the Research Management Unit (RMU) or IRDC and was formerly known as Planning, Research and Development Centre which was established in April 1980. However in September 1987, IRDC was restructured with its heightened importance in research and consultation in UiTM and was divided into two units, Research and Consultancy Centre (RACC) and Planning and Evaluation Unit. This centre was then renamed to Research and Consultancy Bureau in 1994 and went through another name change to become Institute of Research, Development and Commercialisation (IRDC) on 15 July 2003.

With the mooting of the post of Deputy Vice Chancellor in March 2008 to take over the intellectual property and commercialisation portfolio, IRDC was given the responsibility to maximise innovation and increase the number of research which will later be published in high impact journals. Ensuing this, on 31 July 2008 IRDC was changed to Research Management Institute (RMI) to synchronise with UiTM's aspiration to become a Research University that will develop innovation activities and new research. It was only in 2011, that RMI became the Research, Industrial Linkages and Alumni Division (PJI&A), headed by its Deputy Rector, Associate Professor Dr. Roaimah Omar. Under her tutelage, Invention, Innovation and Design (IID) was born in 2009.

The different divisions or units in PJI&A are responsible to manage, monitor and conduct research in science and technology, management and social sciences, consultation, financial assistance for consultation, innovation, publication and Information for Research and Consultancy (INFORAC). PJI&A also conducts seminars, workshops and roadshows to encourage, motivate and train the academic and non-academic staffs in research and consultation, securing research grants and projects, to manage good financing and publish research in a responsible and ethical manner.

RIID2013 OBJECTIVES

General Objective

To display research, invention, and design from various institutions (IPTA/IPTS) that can be commercialised for global benefit

To culturalise research and innovation through the sharing of expertise and commercialised, creative and innovative ideas

To instill interest and encouragement to the public towards research, invention and innovation that poses as a medium for the nation's development.

Specific Objective

To identify and promote new and inventive discoveries that are commercialised, creative, and innovative from various institutions (IPTA/IPTS) all over Malaysia.

To select discoveries and new invention to be contested in the national and international level.

To uphold the reputation and image of UiTM as a well-known pioneer in innovation and invention in the national and international level.

CHRONOLOGY OF RIID

RIID Showcase

7 August 2009, Dewan Kuliah 2, UiTM Melaka.



1 IID LET'S IID

13 August 2009, Dewan Bendahara, UiTM Melaka.



2 IID Enculturation Of Research & Innovation

5 October 2010, Dewan Bendahara, UiTM Melaka.

RIID 2013 Optimizing Innovation For Global Commercialization

16 - 17 December 2013, Dewan Taming Sari, UiTM Melaka.



RIID 2012 Innovation for Sustainable Growth

7 - 8 November 2012, Dewan Taming Sari, UiTM Melaka



DERIA 2011 Sound, Image & Object

21 - 22 July 2011, Mini Stadium Bistari, Ayer Keroh, Melaka. foreword message by

CHIEF MINISTER MELAKA



YAB Datuk Seri Ir. Haji Idris Haron

Chief Minister Melaka December 2013

amualaikum wbk and est greetings Salam 1Malaysia,

nd foremost, I would like to congratulate Research, Industrial ges and Alumni Centre (PJIA), Universiti Teknologi MARA

I) Melaka for yet another successful organisation of this rch, Invention, Innovation and Design Exhibition 2013 (RIID

era of globalisation, the Malaysian government is stepping efforts in developing the country and its people, be ucing a holistic socioeconomic development programme. our Prime Minister Datuk Seri Mohd Najib Tun Abdul Razak uced a massive transformation agenda in implementing the amme its approach and philosophy. The Prime Minister has outlined five-key strategic thrusts under the 10th Malaysia Plan (10MP) to enable Malaysia to become a high-income and developed nation by 2020.

Therefore, the National Key Results Area (NKRA) and the Key Performance Index (KPI) were introduced towards achieving vision 2020. While moving towards achieving a developed country status, Malaysia needs to draw up a new approach which emphasises on quality human capital, innovation and creativity. The government in addition has to operate as competitive corporation.

I would like to congratulate UiTM Melaka for supporting the country's vision by hosting RIID2013 competition and exhibition. With its theme Innovation for Sustainable Growth, this event is a positive initiative to encourage professionals and academicians alike to enhance their knowledge and practical skills and these are parts of their contribution for the nation's building.

When research activities are conducted continuously, it is expected that more innovations will be generated. UiTM Melaka's initiative is highly commendable as it manages to attract. It 340 products to be displayed and competed at this event. It is hoped that this event will serve as a catalyst in enhancing the roles of professionals in various industries.

foreword by RECTOR



Associate Professor Dr. Adnan bin Hashim

Rector Universiti Teknologi MARA Melaka December 2013

Assalamualaikum wbkt, Salam 1Malaysia and Salam UiTM Sentiasa Di Hatiku..

I would like to welcome our honourable guests, professionals, and academicians from schools, colleges and universities to the 5th Research, Invention, Innovation and Design 2013 (RIID 2013) competition proudly organised by the Research, Industry Linkage and Alumni Division (PJI A) Centre Universiti Teknologi MARA (UiTM) Melaka.

In line with the government's aspiration to nurture and cultivate innovation, UiTM Melaka has taken the initiative to organise RIID 2013 Melaka Innovation Festival. One of the main objectives of the event is to raise the status of local universities globally. To achieve the status of a Research University (RU), one of the criteria is to emphasise on high impact innovation research which leads to invention of new business models, or innovative processes. This would result in an improved efficiency of the organisation and contributes towards better quality of life.

Since innovation is a vital catalyst to attain the status of developed nation in the year 2020, UiTM Melaka is heading the nation's call to attain aspiration through innovative programmes with staff and students. These creative and innovative abilities could be brought to greater heights through competitions and innovation exhibitions held annually. During this two-day event, a talk on innovation will also be held. Innovation is one of the key factors that could push the economy forward. In line with the strategic thrusts, the RIID 2013 competition will serve as a platform for researchers to expand their researches into innovations while becoming a venue for them to showcase their products, prototypes and new ideas.

This competition also serves as a platform for students, lecturer's administrative officers and the public to demonstrate their products or prototypes as well as sharing new ideas for commercial value. Therefore, PJIA decided the Optimizing Innovation for Global Commercialization as our theme for this year 5th Research, Invention, Innovation and Design 2013.

I am proud to announce that the number of participants in this event has increased to more than 300 participants compared to the previous year event. I would like to extend my sincere thanks and gratitude to the committee members who have persistently given their full commitment to this event.

I wish all the participants all the best in the competition.

V-OMS: Video As A Teaching **Aids In Operations Management** Subject

Lina Mazwein Binti Ibrahim; Norazamimah Binti Bogal

Universiti Teknologi MARA Melaka

Operations management refers to activities that related to the creation of goods and services by transforming inputs into output through a series of value added process (Heizer and Render, 2011). The video will show the whole operations in Kek Lapis Sarawak production and service of TABUNG HAJI : Opening a Saving Account . It focuses on the three basic components in operations management system. They are inputs, transformation process and output. It can be used as a teaching aid in operations management subject. It can enhance understanding of viewers towards operations management by synchronizing the theories and applications in real practices. This video uses visual and auditory instruments in maximizing the learning impact to viewers. It is beneficial to all educators and students in higher learning institutions by providing comprehension about operations management system.

Sulaiman Mahzan: Juan Rizal Saari: Mohd Abd Malek Md Shah; Siti Fairuz Nurr Sadikan; Norazlin Abd Aziz

Unit Komunikasi Korporat, Kampus Bandaraya Melaka, Universiti Teknologi MARA Melaka

i-Event Pictures Shared

Arkib gambar aktiviti merupakan salah satu perkara penting dalam memastikan segala maklumat mengenai sesuatu aktiviti dapat disalurkan. Arkib gambar amat signifikan kepada beberapa keperluan penting lain yang melibatkan pelaporan dan pemberitaan. Namun demikian, kaedah pengurusan arkib gambar yang dilaksanakan masih lagi bersifat tanggungjawab iaitu hanya diperolehi dan diuruskan oleh seseorang individu yang dilantik untuk tujuan berkenaan. Terdapat beberapa kelemahan yang wujud akibat daripada kaedah lama ini. Antaranya pemerolehan gambar untuk tujuan arkib. Secara lazimnya, sumber pemerolehan gambar hanya didapati oleh seseorang individu yang telah dipertanggungjawabkan untuk mengambil gambar bagi sesuatu aktiviti dan bilangan gambar serta klasifikasi gambar pula amat terhad. Lantaran itu, melalui aplikasi web ini ia diharapkan dapat membuka peluang kepada sesiapa individu yang terlibat dengan aktiviti untuk samasama menyumbang gambar yang diperoleh masing-masing. Pada masa yang sama pihak pengurusan boleh mengenalpasti mana-mana gambar yang sesuai untuk diarkibkan dan untuk kegunaan pada masa hadapan. Ini tidak langsung membantu pihak pengurusan untuk mempelbagaikan sumber arkib untuk apa-apa jua keperluan pada masa-masa akan datang. Aplikasi web ini memberikan nilai tambah kepada mana-mana organisasi dalam menguruskan sesuatu sumber untuk tujuan diarkibkan.