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V-MIEX

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VIRTUAL-MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION

ROAD TO COMMERCIALISATION

V-MIEX BOOK



V - MIIEX BOOK

'ROAD TO COMMERCIALISATION'

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FOREWORD

ASSOC. PROF TS. DR MOHD RASDI ZAINI
Rector
Universiti Teknologi MARA (UiTM) Cawangan Melaka



Welcome to Virtual-Melaka International Intellectual Exposition 2022 (V-MIIEEX 2022). It is an honour for me on behalf of UiTM Melaka Branch to thank all of you for joining the programme and we are proud to inform you that this is the 12th year consecutively, UiTM Melaka Branch is organizing this exposition.

V-MIIEEX 2022 is a platform to improve the commercialization collaboration among industries and communities and at the same time, we also give the opportunity to academicians and students to share ideas and increase their potential innovation products with the industries and communities through their projects. This exposition also serves as a platform to cultivate and upload the nation's innovation culture by presenting new ideas and research by young people, especially from academia, universities, college, high schools, and primary school students.

The economy and development of the country faced a challenging phase in 2021 due to the Covid-19 pandemic. We faced changes in business, education, society, and lifestyle. However, the pandemic proved to be a blessing in disguise as it somehow gave people ideas which would be beneficial to improve their lifestyle and solve problems that might occur in the future. Besides, the new digital landscape also inspires more innovation and new ideas that contribute to various activities such as business and industries. As a university that encourages the "Research, Innovation and Commercialization", this exhibition is organized to encourage more commercialization of products that are beneficial to scholars, industries, and communities to tackle such issues to improve our present and future life.

Since 2009, UiTM Melaka Branch has successfully become the organizer for this innovation exposition. We are not only successful in organizing the exposition, but I would proudly say that we have also successfully embarked on commercialized products. With the number of participants for this year's exhibition, we believe that more commercialized products will be produced in line with the theme for this year, "Road to Commercialisation".

This exposition would never happen without dedication, teamwork, and commitment. A round of applause should be given to the committee teams as the backbone of this exposition. Their hard work, effort, and time made this exposition possible.

Finally, I would like to conclude this brief remark by thanking all the participants and stakeholders for joining the exposition, we hope that this collaboration never ends here.

Thank you.



DR. NUR HAYATI BINTI ABD RAHMAN
Deputy Rector Research & Industrial Linkages
Universiti Teknologi MARA (UiTM) Cawangan Melaka

It is a great pleasure to welcome all the participants and presenters to the Virtual Melaka International Intellectual Exposition (VMIIEX 22). I am delighted that through this periodic event, we managed to bring together scholars and professionals from various fields to engage through this virtual platform where ideas and breakthrough are discovered and leveraged for commercialization potential.

Since 2009 UiTM Cawangan Melaka has held twelve Invention and Innovation Design competitions and this year we are very honoured to have the second year of VMIIEX organized in digital platform. This has proven that despite the global challenges due to the recent pandemic, it is never an issue for UiTM Melaka to continuously organize this yearly prestigious event and to support the ministry's aspiration in leveraging creativity and innovation in the new norm.

VMIIEX 22 is organized with no sole objectives of accomplishing the University's KPI but instead we are determined to make this programme as the place to help heighten commercialization collaboration in research and innovation with the industry and community through joint exhibitions from various external organizations.

Our aspiration is to also provide exposure and opportunities to academic staff as well as students from public and private universities to engage in direct excellent scholarly activities with the industry and community through activities that can be measured and assessed. As for the Research and Industrial Linkages Office of UiTM Melaka, this exhibition is seen as the platform that can encourage active collaboration and knowledge transfer with industries; objectively to support various activities that will benefit all stakeholders from the various government agencies, local and international universities, industries and communities.

Through the theme of "Road to Commercialization" this year, V-MIIEX 22 is committed to have this event as a boulevard to inspire and cultivate creativity and innovation to the numerous levels of inventors through exposure on latest technologies, astonishing ideas and creative designs with great potential to be commercialized. For this year, we proudly introduce a special category which is the "Endemic Challenge" as the provision to the government of Malaysia's goal of moving towards the endemic.

To ensure that the competing products in this exhibition is not exclusively for the purpose of competition, V-MIIEX 22 is dedicated for the commercialization of highly potential innovation products, which is attained through its active collaboration with tailored needs industries. The commercialization effort was not for income generation purpose only but it aimed to spearhead the development of quality products in line with industrial needs and community benefit.

Therefore, it is a great honour for me on behalf of the Research and Industrial Linkages Office as well as the organizing committee to have all participants in this competition and I would like to express my highest gratitude especially to the Rector of UiTM Melaka and all strategic partners and sponsors for supporting the event.

To finish, I sincerely wish VMIIEX 22 a remarkable success. I believe that this will not be the only collaboration between UiTM Melaka and the respective partners and linkages, but a beginning of a long and fruitful cooperation in future.

Thank you very much.

road to commercialisation...

WAN HASMAT WAN HASAN
Project Director V-MIIEEX 2022
Universiti Teknologi MARA (UiTM) Cawangan Melaka



Assalamualaikum and Warmest Greetings.

It gives me an enormous pleasure, on behalf of the organizing committee to welcome all participants and presenters to the Virtual -Melaka International Intellectual Exposition 2022 (VMIIEX '22) with the theme "Road to Commercialisation". We are honoured and glad to welcome all participants to this biennial event.

This is the second time that we have organized this biennial event virtually. V-MIIEEX 22 is an innovation competition, in which, innovation products, ideas and systems related to various science and technological fields are exhibited as a solution for the presented problems.

V-MIIEEX22 expectantly will be a platform that gathers experts from academies, scientists, and researchers, locally and internationally, to contribute towards the growth of scientific and technological knowledge in each participant's specialisation and expertise.

The competition also serves as a platform to give fresh exposure to the various level of inventors, as well as to encourage the culture of innovation design focused on latest technologies and related to new norms technologies and inventions due to COVID-19.

V-MIIEEX 22 is also hoped to be an avenue for gathering and disseminating the latest knowledge on ideas and acquisition of innovation among the participants. It is hoped that the competition will be able to open the mind of the participants towards latest technologies and design. It is also in line with the government's aspiration to encourage innovation activities in Malaysia.

As a final note, I would like to congratulate my fellow committee members for their tremendous effort, which have been critical to the event's success. In addition, I would like to thank our co-organizer, event sponsors and supporters. Optimistically, we wish that all new knowledge that is discovered, invented, or innovated will drive towards our future sustainability.

Thank you.

ABOUT V-MIIEEX

The world after COVID-19 is unlikely to return to the world that was. Despite the challenging pace during the pandemic, the strong rebound is expecting in this exciting year 2022. Malaysia is welcoming the great prospects ahead with positive impact on the country's economy and development. Hence, the hope for greater opportunities motivates for more creative thinkers to come up with innovative ideas that can be put forward to be harnessed to overcome similar problems in the future. V-MIIEEx 2022 is one of these platforms which contribute relevant ideas that could help communities of all walks of life cope with this pandemic.

UiTM has identified research, innovation, and commercialization to be among the core components and strategic effort towards becoming a well-known and prominent university. Aside from realizing this goal, with these components and efforts, fostering the development of knowledge, generating financial stability of the university, and producing knowledgeable academicians are also potentially achievable.

By having invention and innovation competition yearly, UiTM Cawangan Melaka is confident that it could further enhance creative and innovative abilities among staff and students. In support of the government notion which upholds the importance of innovation, UiTM Cawangan Melaka has taken the initiative of organising the Virtual Melaka International Intellectual Exposition (V-MIIEEx).

In instigating and nurturing the continuous culture of inventing and innovating, this event is an ideal platform for lecturers, administrative staff, students, and the public to showcase and commercialize their products or prototypes as well as novel ideas. The first IID which was held nationally in UiTM Cawangan Melaka in 2009, has successfully gathered and displayed more than 37 inventions and innovations. Accordingly, to continue this strong passion towards inventing and innovating, the IID competition should be continued and celebrated.

With that, the Division of Research and Industrial Linkages will be organising its 12th IID competition, the Virtual - Melaka International Intellectual Exposition (V-MIIEEx 2022) with the theme, 'Road To Commercialisation'. V-MIIEEx 2022 hopes to welcome 200 competing products to be showcased and commercialized, at the same time, attract attention of related and matching industry.

Objectives

1. Encourage and instill passion towards inventing and innovating among UiTM Cawangan Melaka staff, students and academicians of local and international higher education institutions;
2. Highlight distinguished talents of skillful inventors and exhibit intellectual products, inventions and innovations among local and private tertiary institutions, government and private agencies, including international participants;
3. Become an effective Business Matching platform for participating research products, matching industries and partnering government agencies;
4. Recognise, inspire and promote invention and innovation products to be patented and commercialized;
5. Increase passion towards inventing and innovating through research and boost interests of government and non-government agencies to obtain consultancy services from a line up experts of higher education institutions and UiTM Cawangan Melaka.

Production Specialist Performance Appraisal Form

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Abstract

Performance appraisal forms which also known as performance review forms is a tool used by manager and human resources staffs to evaluate the employee's performance in work organizations. Many work organizations still using manual performance appraisal forms and there are no sufficient information included in their performance appraisal forms. Due to this reason we propose an e-appraisal form which will include all important information needed to make a fair performance rating score for employees. This e-appraisal form was created electronically using the Microsoft Excel platform which is easier for the organization since the forms can make employees' performance rating calculations automatically. Additionally this e-appraisal form also has included many aspects that need to be taken into account in employee appraisal such as the workers competencies and personality criteria. This e-appraisal form is expected to improve the effectiveness of supervisors in conducting their subordinate's performance. On the other hand employees also expected to benefits as they can monitor their performance level and respond to the comments as well as recommendations given by their supervisors.

Keywords: performance appraisal, e-appraisal form, employee performance

1.0 INTRODUCTION

In every company and work organization, managers and supervisors involved in the performance appraisal of their subordinates as an important activity in their performance management system. Many work organizations still collect various employee job information through manual forms. In order to improve the effectiveness of the performance appraisal of employees we have created an appraisal form electronically to collect these employee information. Appraisal form is a document that managers and human resource department's staff use to evaluate the performance of employees. Performance appraisal is important as the organization can know the achievements, and weaknesses of employees and guide them better in the career advancement. There are a few advantages from an e-appraisal forms which are the information can be well-stored, easily shared, and help in subsequent analyses such as making comparisons. It includes the combination components like basic employee information, competencies, employee comments. Hence, the organization can measure the employee performances by using this e-appraisal forms in order to improve their workers and organization's performance.

2.0 OBJECTIVES

The objective of this project is to improve the existing manual performance appraisal form that

is used to evaluate the performance of production specialists in manufacturing organization so that every employer is able to evaluate their employees more efficiently. In order to achieve this objective, an electronic appraisal form was developed using Microsoft Excel platform. This e-appraisal form can be used by manufacturing supervisors to make performance rating calculations of their subordinates quickly and accurately.

3.0 NOVELTY /INVENTIVENESS

This e-appraisal form has four unique features which are as follows:

Efficient form with automated process

This e-appraisal form is designed with an excel automation system in calculating the overall total performance rating which will make the process of evaluation become more convenient. This automation form can assist the evaluator to make the process of evaluation better. For instance, it renders complex tasks simple and enables supervisors or evaluators to quickly and accurately repeat processes that conserve time, and effort.

Using mechanical procedure instead of judgmental method

Mechanical procedure consists of first considering the score assigned to each section and then adding them up to obtain an overall score. We use a weightage system to make performance evaluation more meaningful and less biased. Most of the typical performance forms are too general to help employees understand their performance growth. Hence, the use of weights allows the evaluator to come to an objective and clear overall performance for each employee so that they know in what area they should improve.

Establishing key results

Key results is a short list of overall goals that guide how employees perform their job, or general achievement and progress goals for an organization. It is an important item to identify the optimum outcomes and results of work. Therefore, employees will know whether they have achieved the targeted goals.

Developmental goals

We provide one section where the supervisor or the evaluator can list down plans or needs like training based on the employee overall rating. This section is necessary to help employees develop their performance growth in what they are lacking in which will help them to perform better in the future.

4.0 PRACTICALITY/USEFULNESS

Finding out the need for training and development

By using this e-appraisal form, during an appraisal meeting the employer can highlight areas in which the employee needs to improve. The employee can review the data, reach an agreement with

the employer and then devise a training as well as a development plan. The recommended training will improve the employee's performance and pave the way for future advancement.

Creates career growth

Employees can advance in their careers with the help of performance appraisals, especially if they want to advance to a higher position with the company. A regular evaluation can assist

employees in developing a professional development plan.

Improves performance

Providing timely feedback helps motivate employees to do well. Employees can work harder when their manager provides positive feedback. Because performance appraisals are frequently used to determine how to award bonuses, they can aid in providing employees with an incentive and reward for their efforts.

Provides documentations

Managers can track an employee's development journey and performance by keeping a record of their work over a specific period of time using a performance appraisal form. Organizations can keep employee documentation in a personal folder for later review. This helps superiors in upper management learn about employees with whom they may not have regular contact.

5.0 CONCLUSION

To summarize, this electronic performance appraisal forms will assist all manufacturing organizations in evaluating and determining if their employee met the key performance indicator (KPI) and the firm's goals. Besides, it can also help employees to improve themselves to become a better employee. Thus, this e-appraisal form will be useful to any manufacturing company in order to evaluate their production specialist employees' job performance. We believe this e

appraisal form will improve over time, becoming more versatile and easier for employers to obtain and analyze the performance of their employees.