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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.

E-Xcellent Form (Excel)

Nur Batrisyia Balqis binti Maslukang¹, Nur Adriana binti Muhammad Farhan², Nur Afiqa Atasha binti Anuar³, Hani Izzaty binti Kamalullail⁴, Nur Hidayah binti Zaini⁵

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Abstract

Traditional method in doing performance appraisal has been a very complex procedures that lead to lots of problems such as high spending on paper which is a lot of appraisal form needed to be printed to evaluate each employee and it is very time-consuming since the appraisal form needed to be distributed to every department compared to our E-xcellent Form that can be uploaded in the company's intranet where all departments can easily download and use it. Our perspective on making E-xcellent Form is to make the evaluation process more cost-saving and efficient. Other than that, we aimed for a system where it is user friendly as well as eco-friendly; meaning the evaluation process are not tricky, easy to use, time-saving and at the same time reducing the paper usage. For the new appraisal form, we make it less crowded and more organized by dividing it into **THREE (3)** different sheets for **THREE (3)** sections rather than in **ONE (1)** spreadsheet. E-xcellent Form contains a unique system where it will give "Warning" instruction if evaluator forgot to fill in any component during their process in evaluating employees. This appraisal form can be used by most departments in an organization.

Keyword: Performance, Appraisal, Employee, Effectiveness, Organization

1. INTRODUCTION

The process of analyzing and documenting on how successful an individual in performing his or her job is known as performance appraisal. It's one of the components of a company's performance management system. Performance evaluations are based on the employee's success toward goals that was set before. Employees and managers usually have check-ins throughout the year and the manager assigns an overall rating at the end of the year. The appraisal process provides employees with feedbacks on their work, assists managers in making pay raise and bonus decisions, and highlights areas for development. Reprimands or termination may be issued if bad performance continues. According to the subject of Performance Management (HRM544) there is one chapter which is Chapter 6 that focus on how to gather performance information. This chapter talks about on how we can create or establish the best appraisal form in order to evaluate the performance of the employees.

2. OBJECTIVES

Our objectives on making E-xcellent Form is to make the evaluation process more cost-saving and efficient. Other than that, we aimed for a system where it is user friendly as well as eco-friendly; meaning the evaluation process are not tricky, easy to use, time-saving and at the same time reducing the paper usage.

3. NOVELTY AND INVENTIVENESS

This appraisal form was built based on past appraisal form that was widely used in the industry. For the new appraisal form, we make it less crowded and more organized. Rather than putting all of supposed elements of appraisal form in **ONE (1)** spreadsheet, we divided it into **THREE (3)** main spreadsheets each containing **THREE (3)** sections which are guidelines and instructions that only focused on how to fill in the form, performance review and rating that especially made for more efficient employee evaluation; also training, comments & agreements where employees, manager/supervisor and other important entities giving their thoughts and agreeing on the performance appraisal process.

The uniqueness of our appraisal form is that when the evaluator forgot to tick any of the box required, the evaluator will be notified and will not able to move on to the next section if there is incomplete section. This appraisal form was created to save on the paper cost and time as it only took less than 30 minutes to complete it.

4. PRACTICALITY AND USEFULLNESS

This E-xcellent form is an appraisal form that help to evaluate the performance of employee online because the employee and manager just fill in the form to rate and also review the performance of the employee. Another function of E-xcellent form is a manager or supervisor can keep track of their workers' accomplishments and contributions at work. Other than that, it helps deliver both positive and negative criticism while also identifying areas for improvement. Our innovation of appraisal form has its own uniqueness and functional which is simple and easy to use by parties involved because it does not have a many section that is difficult to understand. Next is, it also easy to fill in and understandable also efficient to use it because did not contain a column that need to be filled with unimportant things. Just tick in the columns to rate and review the performance. This E-xcellent form can be used to review performance of employee in any position in the company and did not contains a specific scope of work to be evaluated.

5. CONCLUSION

Our goal in creating E-xcellent Form is to make the assessment process more cost-effective and efficient. Aside from that, we strived for a system that is both user and eco-friendly, which means that the assessment process is simple, easy to use, time-saving, and reduces paper consumption. This assessment form was designed to be less congested and more ordered than previous appraisal forms that were commonly utilized in the business. This assessment form was designed to save paper and time, since it took less than 30 minutes to complete.

REFERENCES

- Aguinis, Herman. *Performance Management*. Harlow, England, Pearson, 2016.
- Bayo-Moriones, Alberto, et al. "Performance Appraisal: Dimensions and Determinants." *The International Journal of Human Resource Management*, vol. 31, no. 15, 14 Feb. 2019, pp. 1–32, 10.1080/09585192.2018.1500387.
- Levinson, Harry. "Appraisal of What Performance?" *Harvard Business Review*, Aug. 2014, hbr.org/1976/07/appraisal-of-what-performance.