|  |
| --- |
| **CONFIDENTIAL**    Version : 05  Revision : 01  Date : 01-01-2019  **RESEARCH MANAGEMENT CENTRE (RMC)**  **INNOVATION AND COMMERCIALIZATION UNIT**  Email: INC\_RMC@iium.edu.my Fax: 03- 6196 4862 |
| **INTELECTUAL PROPERTY DISCLOSURE FORM**  **FOR PATENT / UTILITY INNOVATION / INDUSTRIAL DESIGN / LAYOUT DESIGN /**  **TRADEMARK / GEOGRAPHICAL INDICATION** |

*Kindly disclose your invention through this IP Disclosure Form for IP Protection and Registration.*

# PART 1: IDENTIFICATION

1. **Principal Inventor Identification**

1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NAME OF PRINCIPAL INVENTOR & STAFF ID** | *Click or tap here to enter text.* | | | |
| **IC / PASSPORT NO.** | *Click or tap here to enter text.* | | | |
| **DEPARTMENT** | *Click or tap here to enter text.* | | | |
| **KULLIYYAH/ CENTRE/ INSTITUTE** | *Choose an item.* | | | |
| **CORRESPONDENCE ADDRESS** | *Click or tap here to enter text.* | | | |
| **EMAIL** | *Click or tap here to enter text.* | | | |
| **TELEPHONE NO.** | **OFFICE** | *Click or tap here to enter text.* | **H/P NO** | *Click or tap here to enter text.* |

|  |  |
| --- | --- |
|  | ***I have stated the details of the inventor / originator and the co-inventor(s) (if any) in Attachment 1 and I have ensure that the inventor and co-inventor(s) have signed the column of initial agreeing on the IP right share.*** |

1. **Intellectual Property (IP) Type *(Please Tick one IP & one Sub Type)***

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | | | | | **Intellectual Property** | | | | | | | |  | **Sub Type** | | | | | | | | | | | | | | | | | | | | |
|  | |  | | | | |  | | | | | | |  | |  | | | | |  | | |  | | |  | | |  | | |  | | |
|  | |  | | | | | Patent | | |  | | Trade Secret | |  | |  | | | | | Product | | |  | | | Invention | | |  | | | Method | | |
|  | |  | | | | |  | | |  | |  | |  | |  | | | | |  | | |  | | |  | | |  | | |  | | |
|  | |  | | | | | Utility Innovation | | | | | | |  | |  | | | | | Process | | |  | | | Solution | | |  | | | Others | | |
|  | |  | | | | |  | | |  | |  | |  | |  | | | | |  | | |  | | |  | | |  | | |  | | |
|  | |  | | | | |  | | |  | |  | |  | |  | | | | |  | | |  | | |  | | |  | | |  | | |
|  | |  | | | | | Layout Design | | |  | | Industrial Design | |  | |  | | | | |  | | |  | | |  | | |  | | |  | | |
|  | |  | | | | |  | | |  | |  | |  | |  | | | | |  | | |  | | |  | | |  | | |  | | |
|  | |  | | | | |  | | |  | |  | |  | |  | | | | |  | | |  | | |  | | |  | | |  | | |
|  | |  | | | | | Trademark | | |  | | Geographical Indication | | | | | | | | |  | | |  | | | Others | | |  | | |  | | |
|  | |  | | | | |  | | | | | | |  | |  | | | | |  | | |  | | |  | | |  | | |  | | |
|  | |  | | | |  | | | | | | | | |  | |  | | |  | | |  | | |  | | |  | | |  |
|  |  | | | |  | | |  | |  | | | |  | |  | | |  | | |  | | |  | | |  | | |  | | |

***Please refer to APPENDIX I for the guidelines of IPR protection***

**PART 2: DESCRIPTION OF DISCLOSURE**

1. **Title of disclosure**

|  |
| --- |
| *Click or tap here to enter text.* |

1. **Brief Description of the Disclosure**

|  |
| --- |
| *Click or tap here to enter text.* |

1. **Declaration of Submission of the Supporting Documents**

|  |  |
| --- | --- |
|  | *I attached herewith the details on background, description and the supporting document(s) both in softcopy and hardcopy.* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. **Status of Publication** |  | Published |  | Unpublished |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| If published |  | *Click or tap to enter a date.* |  | *Click or tap to enter a date.* |  | *Choose an item.* |
|  |  | Year of Compilation |  | Date of first publication |  | Country |
|  |  |  |  |  |  |  |
| If published in periodical or serial |  | *Click or tap here to enter text.* |  | *Click or tap to enter a date.* |  | *Click or tap here to enter text.* |
|  | (Volume / Number) |  | (Issue Date) |  | On Pages |

***Important Note on One (1) year rule/ 1-year grace period: -***

***Under Patent Act, an invention that has been published for more than 1 year (after 1-year period of the first publication) becomes public domain and it is NOT eligible for patent protection as it is considered to be prior art.***

# PART 3: SOURCE OF RESEARCH PROJECT(S) RESULTING TO THIS DISCLOSURE

1. **Funded Project**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Fund Type** | **Project**  **Code** | **Project**  **Title** | **Project Start Date** | **Project End Date** | **Amount (RM)** |
| *Sample : IRPA / FRGS / SF/ TF/ RIGS /* | *01-03-06-SF1001* | *Project Title* | *31/07/2015* | *30/06/2017* | *254,000* |
| *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap to enter a date.* | *Click or tap to enter a date.* | *Click or tap here to enter text.* |
| *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap to enter a date.* | *Click or tap to enter a date.* | *Click or tap here to enter text.* |
| *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap to enter a date.* | *Click or tap to enter a date.* | *Click or tap here to enter text.* |
| *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap to enter a date.* | *Click or tap to enter a date.* | *Click or tap here to enter text.* |

1. **Obligation to Funded Project**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Do you have any obligation to the funded project e.g. Disclosure of IP, commercial grant of rights (option/license) ? | |  | Yes |  | No |
| If Yes, Please specify any obligation to the funder. | |  |  |  |  |
| *Click or tap here to enter text.* | | | | | |

1. **Allocation of fund for the IP registration**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Is there any allocation to fund the registration of the IP? | | | |  | Yes |  | No |
|  | | | |  |  |  |  |
| Is the RMC allowed to use the allocation from the fund to fund the IP registration? | | | |  | Yes |  | No |
|  | | | |  |  |  |  |
| If Yes, please state the project number, vote number and the allocation given. | | | | | | | |
| **Project No** | **Vote No** | **Allocation** | | | | | |
| *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | | | | | |
| *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | | | | | |
| *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | | | | | |

1. **Project Cost Estimation**

*Please estimate the cost leading to the invention.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Vote** | **Items Details** | **Estimated Cost (RM)** | **Source of Fund** | **Notes** |
| **Wages / Cost of RA** | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* |
| **Travel and Transportation** | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* |
| **Rentals** | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* |
| **Research Materials Supplies** | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* |
| **Modifications and Repairs** | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* |
| **Special Services** | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* |
| **Equipment and Accessories** | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* |
| **Total** | | *Click or tap here to enter text.* |  |  |

# *Please refer to APPENDIX II for the Cost Estimation Sample*

# PART 4: NOVELTY / INVENTIVENESS / INDUSTRIAL APPLICATION

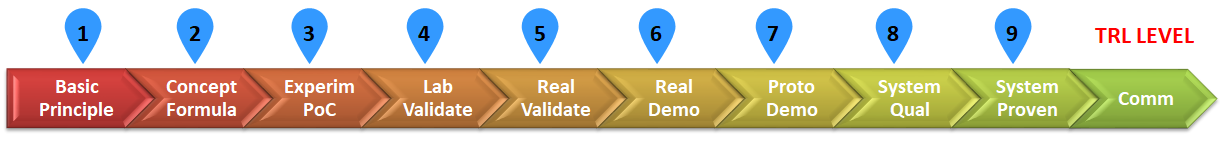
1. **Novelty Prior Art and Claim**

|  |  |
| --- | --- |
|  | *Please list all the related national and international patents related to the invention and the differences or novelty of the invention as compared to the existing patents in* ***Attachment 2****.* |
|  |  |
|  | *Please attach the searched related patents document / prior art search .* |

|  |  |
| --- | --- |
|  | *Please submit detail claims, experimental methodology and experimental result to show the inventive steps, drawings with its description.* |

1. **Technology Readiness Level (TRL Level)**

|  |  |
| --- | --- |
| **TRL Level** | *Choose an item.* |

****

***Please refer to APPENDIX III for TRL Level description***

# PART 5: COMMERCIAL POTENTIAL

1. **Stage of Commercialization**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Question** |  |  |  |  |  |  |  | **If Yes, please state remarks** |
| Is there any commercialization potential on the invention ? | |  | **Yes** | |  | **No** | | *Click or tap here to enter text.* |
| Is there already industrial partner who has collaborated during the research period ? | |  | **Yes** | |  | **No** | | *Click or tap here to enter text.* |
| Is there any potential industrial partner on the invention ? | |  | **Yes** | |  | **No** | | *Click or tap here to enter text.* |
| Is there any industrial partner who are willing to commercialize the invention ? | |  | **Yes** | |  | **No** | | *Click or tap here to enter text.* |

1. **Stage of Incubator**

|  |  |
| --- | --- |
| **Incubator Level** | *Choose an item.* |



***Please refer to APPENDIX IV for Incubator Level Description***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Incubator** | **TRL Level** | **Potential Commercial** | **Potential Partner** | **Partner Collaborate** | **Commercial Partner** | **Royalty Income** | **Business Ramp Up** |
| **INCB00** | 4-9 | N | N | N | N | N | N |
| **INCB01** | 4-9 | Y | N | N | N | N | N |
| **INCB02** | 4-9 | Y | Y | N | N | N | N |
| **INCB03** | 4-9 | Y | Y | Y | N | N | N |
| **INCB10** | 4-9 | Y | Y | Y | Y | N | N |
| **INCB20** | 9 | Y | Y | Y | Y | N | N |
| **INCB30** | 9 | Y | Y | Y | Y | Y | N |
| **INCB40** | 9 | Y | Y | Y | Y | Y | Y |

**PART 6: DECLARATION AND RECOMMENDATION**

|  |
| --- |
| **DECLARATION BY**  **PRINCIPLE INVENTOR** |
| |  |  | | --- | --- | |  | *I have discussed this Intellectual Property (IP) with the Head of Research representing for my Kulliyyah/Centre/Institute.* | |  |  | |  | *I have discussed the content of this IP disclosure and obtained consent for its submission with my co-inventor/s and co-contributor/s as per Attachment I.* | |  |  | |  | *I understand that the assignment of the IP Right to the International Islamic University (IIUM) shall follow IIUM Policies and Guidelines for IP Rights and Commercialization.* | |  |  | |  | *I promise to work with Research Management Centre (RMC) / assigned expert / agents to complete the full registration of my IP.* | |  |  | |  | *I declare that this disclosure is* ***an original work*** *and belongs to the undersign and the listed inventor and co-inventor/s and co-contributor/s, and I / We will be responsible for any infringement.* |       \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Signature of the Principle Inventor Date |

|  |
| --- |
| **RECOMMENDATION OF THE DEPARTMENT**  **(HEAD OF RESEARCH)** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Signature and Official Stamp of the approving authority Date |
| **RECOMMENDATION OF THE KULLIYYAH/ CENTRE/INSTITUTE**  **(DEAN/ DIRECTOR)** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Signature and Official Stamp of the approving authority Date |
| **RECOMMENDATION OF THE OFFICE FOR COMMUNICATION, ADVOCACY AND**  **PROMOTION (OCAP) \*FOR TRADEMARK PURPOSES ONLY**  **(DIRECTOR)** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Signature and Official Stamp of the approving authority Date |

**ATTACHMENT 1:**

**LIST OF INVENTOR AND CO-INVENTORS**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **Department / KCI** | **Type** | **No. of Man Hour Spent** | **IP Rights Share (%)** | **IC /**  **Passport No.** | **Address** | **H/P . No.** | **Initial / Consent** |
| ***\_*** | ***Sample/Details:***  *Name of Inventor / Co-Inventor / Investigator / Co Investigator / Contributor* | ***Sample/Details:***  *Department /*  *KCI* | ***Sample/Details:***   * *IIUM Staff (Post & Grade)* * *Student / Former Student / (UG /PG/ Post Doc)* * *Non IIUM*   *(Uni. / Industry)* | ***Sample/***  ***Details:***  *Total man-hours spent on the invention* | ***Sample/***  ***Details:***    *% Share of the IP, and % of financial distribution if the IP is commercialized* |  | ***Sample/Details:***  *Office Address for academic staff / Home address for others* |  | ***Sample/Details:***  *Signature of each Inventor / Co-inventor agreeing to the man hour spent / IP Right share* |
| 1 | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* |  |
| 2 | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* |  |
| 3 | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* |  |
| **Total** | | | |  | **100%** |  |  |  |  |

**ATTACHMENT 2:**

**PRIOR ART SEARCH**

*Specific for application of Patent, Utility Invention, Trade Secret, Layout Design, Industrial Design, and Geographical Indication*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Patent No.** | **Title of**  **Patent** | **Filing Date / Award Date** | **Inventor** | **Patent**  **Description** | **Novelty**  **Difference** |
| *Sample:*  *US 4978110-A* | *Fire Protection umbrella* | *18 Dec 1990*  *14 May 1990* | *Muh Q. Lin, Pi F. Lin, Yih J. Lin, Cheng H. Lin, Ming J. Lin* | *A fire protection umbrella, which comprises a fire-proof umbrella cover coated with fire retarding paint and fully covered with ceramic elements or ceramic wafers. A flash light is attached to the handle of the umbrella to produce light. A hood is attached to the bottom of the umbrella cover to cover one's head on an emergency. The umbrella ribs may be bound up with the shaft of the umbrella frame by a cord to prevent the umbrella cover from collapse in counter direction so that the umbrella may be used as a parachute to help one escape from a high-raised building.* | *US4978110 claims the use of ceramic elements and asbestos cloth as the main elements to protect from fire and the use of lamp bulb and flash light as the light. Our invention is using totally different fire resistance materials, different way of folding and unfolding the umbrella, and using glow in the dark concept without the requirement of battery powered light.* |
| *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* |
| *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* |
| *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* | *Click or tap here to enter text.* |

**APPENDIX I:**

**DEFINITION OF INTELLECTUAL PROPERTY**

| **Type of IPR** | **Definition** | **Duration of Protection** | **Notes** |
| --- | --- | --- | --- |
| **Patent** | A patent is an exclusive right granted for an invention, which is a product or a process that provides a new way of doing something, or offers a new technical solution to a problem | A patent is protected 20 years from the date of filing | **Patentable Inventions**   * New, which means that the invention has not been publicly disclosed in any form, anywhere in the world; * Involve an inventive step, that is to say the invention must not be obvious to someone with knowledge and experience in the technological field of the invention; and * Industrially applicable, meaning it can be mass produced.   **Non-Patentable Invention**   * Discoveries, scientific theories and mathematical methods; * Plant or animal varieties or essentially biological processes for the production of plants or animals, other than man-made living micro- organisms, micro-biological processes and the products of such micro-organism processes; * Schemes, rules or methods for doing business, performing purely mental acts or playing games; * Methods for the treatment of human or animal body by surgery or therapy, and diagnostic methods practiced on the human or animal body. |
| **Utility Innovation** | A utility innovation is an exclusive right granted for a “minor” invention which does not require to satisfy the test of inventiveness as required of a patent. | A utility innovation is protected 10 + 5 + 5 years from the date of filing subject to use. |
| **Industrial Design** | An industrial design means features of shape, configuration, pattern or ornament applied to an article by any industrial process which in the finished article appeal to the eye and are judged by the eyes. | A registered industrial design is given an initial protection period of 5 years from the date of filing  Extendable for a further four consecutive terms.  The maximum protection period is 25 years. | **Registrable Industrial Design**   * Fulfils the interpretation of Industrial design * New in Malaysia or elsewhere * Not contrary to public order or morality   **Non-Registrable Industrial Design**   * A method or principle of construction * The designs of articles depend upon the appearance of another article which forms an integral part of the article * It differs only in immaterial details or features * The features of the article are dictated solely by function |
| **Layout-Design of an Integrated Circuit** | A layout-design of an integrated circuit is the three-dimensional disposition of the elements of an integrated circuit and some or all of the interconnections of the integrated circuit or such three-dimensional disposition prepared for an integrated circuit intended for manufacture. | Valid for ten years from the date of exploitation and protection to the maximum of 15 years after invention | **Qualification for Protection of Layout-Design**   * It is original, i.e. the result of its creator’s own intellectual effort and not commonplace among creators and manufacturers of integrated circuit; * It has been fixed in a material form or incorporated into an integrated circuit; * The right holder of the layout-design is a qualified person. |
| **Copyright** | Copyright is the exclusive right to control creative works created by the author, copyright owner and performer for a specific period governed under the Copyright Act 1987. | Literary, Musical or Artistic Works  Generally: -  50 years after the death.  Film, Sound Recordings and Performer  50 years from the work was published.  Broadcasts  50 from the which the broadcasts was first made. | **Works Eligible for Copyright**   * literary works; * musical works; * artistic works; * films; * sound recordings; * broadcasts; and * derivative works |
| **Trademark** | Trade mark is a sign which distinguishes the goods and services of one trader from those of another. A mark includes a device, brand, heading, label, ticket, name, signature, word, letter, numeral or any combination of these. | Trade mark registration is valid for ten years from the date of application and may be renewed every 10 years. |  |
| **Geographical Design** | A geographical indication (GI) is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. | A registered geographical indication is given 10 years of protection from the date of filling and is renewable for every ten years. | **Protection of Geographical Indications**   * Regardless whether or not the geographical indication is registered as against another geographical indication which, although literally true as to the country, territory, region or locality in which the goods originate, falsely represents to the public that the goods originate in another country, territory, region or locality.   **Exclusion from Protection of Geographical Indications**   * Geographical indications which are contrary to public order or morality or territory of origin; or * Geographical indications which are not or have ceased to be protected in their country. * Geographical indications which have fallen into disuse in their country or territory of origin. |

**APPENDIX II:**

**SAMPLE PROJECT COST ESTIMATION**

Sample for the cost leading to the invention: -

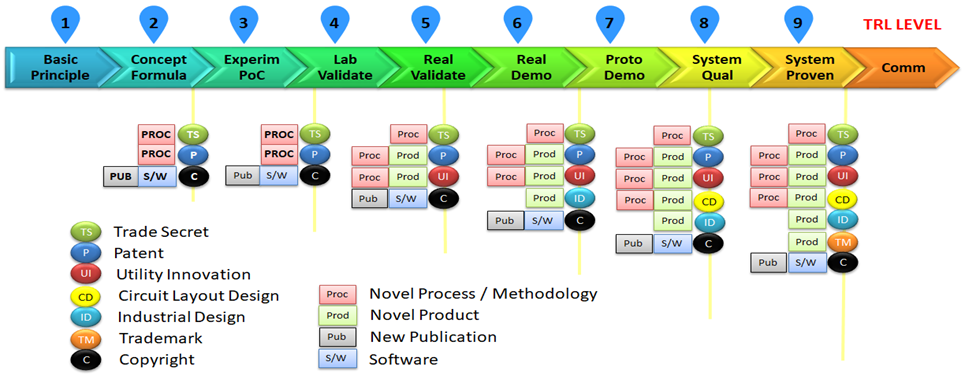
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Vote** | **Items Details** | **Estimated Cost**  **(RM)** | **Source of**  **Fund** | **Notes** |
| ***V11000 Wages*** | *Research Assistant* | *32,200* | *FRGS* | *NA* |
| ***V21000 Travel and Transportation*** | *Local and Overseas Travel* | *19,000* | *FRGS* | *NA* |
| ***V24000 Rentals*** | *Usage of EE Lab* | *15,000* | *IIUM Operating Expense* | *The use of Lab for 6 months* |
| ***V26000 Research Materials and Supplies*** | *Raw materials* | *20,000* | *FRGS,*  *IIUM Operating Expense* | *Chemical and electronic parts* |
| ***V28000 Modifications and Repairs*** | *Spare parts replacement / Calibration* | *5,020* | *IIUM Operating Expense* | *NA* |
| ***V29000 Special Services*** | *External Lab charges / Outsourcing / External consultant* | *16,000* | *FRGS,*  *IIUM Operating Expense* | *NA* |
| ***V35000 Equipment and Accessories*** | *New equipment* | *115,002* | *FRGS* | *NA* |
| **Total** | | ***RM 222,222*** |  |  |

*Note: NA – Not Applicable*

**APPENDIX III:**

**TECHNOLOGY READINESS LEVEL (TRL)**

*Please take note that the graphical diagram is only a guideline of the stage to disclose Intellectual Property at IIUM. Actual disclosures and filing of intellectual properties can occur at any of the stage.*

**

|  |  |  |  |
| --- | --- | --- | --- |
| **TRL** | | **Description** | **NASA Definition of TRL** |
| 1 | Ideation | Basic Principles are observed and reported | When a technology is at **TRL 1**, scientific research is beginning and those results are being translated into future research and development. |
| 2 | Innovation begins | Basic principles observed so practical applications can be formulated | **TRL 2** occurs once the basic principles have been studied and practical applications can be applied to those initial findings. TRL 2 technology is very speculative, as there is little to no experimental proof of concept for the technology. |
| 3 | Proof of Concept | Analytical and laboratory studies are required to see if the technology is viable | When active research and design begin, a technology is elevated to **TRL 3.** Generally, both analytical and laboratory studies are required at this level to see if a technology is viable and ready to proceed further through the development process. Often during TRL 3, a proof-of-concept model is constructed. |
| 4 | Component Test | Laboratory testing of the prototype component | Once the proof-of-concept technology is ready, the technology advances to **TRL 4.** During TRL 4, multiple component pieces are tested with one another. **TRL 5** is a continuation of TRL 4, however, a technology that is at 5 is identified as a breadboard technology and must undergo more rigorous testing than technology that is only at TRL 4. Simulations should be run in environments that are as close to realistic as possible. |
| 5 | Prototype construction | Laboratory testing of the integrated system | Once the testing of TRL 5 is complete, a technology may advance to TRL 6. |
| 6 | Alpha Testing | Prototype system demonstrated in an operational environment | A TRL 6 technology has a fully functional prototype or representational model. |
| 7 | Beta Testing | Completed design tested in real environment | TRL 7 technology requires that the working model or prototype be demonstrated in a space environment. |
| 8 | Certification | Proven to work under its expected conditions and certified to be used | TRL 8 technology has been tested and "flight qualified" and it's ready for implementation into an already existing technology or technology system. |
| 9 | System Proven to be successfully function | Ready for commercial deployment | Once a technology has been "flight proven" during a successful mission, it can be called TRL 9. |
| 9+ | Product is launched commercially | | *Source:* [*www.nasa.gov/directorates/heo/scan/engineering/technology/txt\_accordion1.html*](http://www.nasa.gov/directorates/heo/scan/engineering/technology/txt_accordion1.html) |

**TPM Definition of TRL**

[*https://www.youtube.com/watch?v=in4TnQZGYj4*](https://www.youtube.com/watch?v=in4TnQZGYj4)

**APPENDIX IV:**

**COMMERCIALIZATION INCUBATOR LEVEL**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Incubator** | **TRL Level** | **Potential Commercial** | **Potential Partner** | **Partner Collaborate** | **Commercial Partner** | **Royalty Income** | **Business Ramp Up** |
| **INCB00** | 4-9 | N | N | N | N | N | N |
| **INCB01** | 4-9 | Y | N | N | N | N | N |
| **INCB02** | 4-9 | Y | Y | N | N | N | N |
| **INCB03** | 4-9 | Y | Y | Y | N | N | N |
| **INCB10** | 4-9 | Y | Y | Y | Y | N | N |
| **INCB20** | 9 | Y | Y | Y | Y | N | N |
| **INCB30** | 9 | Y | Y | Y | Y | Y | N |
| **INCB40** | 9 | Y | Y | Y | Y | Y | Y |

|  |  |
| --- | --- |
| **Item** | **Definition** |
| **TRL** | Technology Readiness Level – Please see APPENDIX III for TRL definition. |
| **Potential Commercial** | There is a **potential of immediate commercialization** of the disclosure (there are indication of demand on the invention). |
| **Potential Partner** | There is a **potential industrial partner** that registers interests to commercialize the invention. |
| **Partner Collaborate** | There is **an industrial partner who has collaborated** in the creation of invention at any TRL stage of the invention, but has not yet committed to any commercialization agreement. |
| **Partner Licensing** | There is **an industrial partner that has already signed a commercial agreement** on the invention but invention has **yet to be sold** as a product to consumer. |
| **Royalty Income** | There is **an industrial partner that has already signed a commercial agreement** on the invention and the product from the invention **is already sold** to consumer. |
| **Business Ramp Up** | There is an industrial partner that has already signed a commercial agreement on the invention, the product already sold to consumer, there is already positive revenue, and **the business is expanding**. |



