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|  | Tarikh kuatkuasa1 Januari 2022ICC023 |
| **BORANG PENGESAHAN TECHNOLOGY READINESS LEVEL (TRL)** |

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| Nama Ketua Penyelidik | z |
| Nama Ahli Penyelidik | 1. |
| 2. |
| 3. |
| 4 |
| 5. |
| Jenis Geran |  |
| Tajuk Penyelidikan |  |
| Tarikh Mula-Tarikh Jangkaan Tamat Geran |  |
| No. Pendaftaran IP | 1. |
| 2. |
| 3. |
| Jenis Output Penyelidikan Yang Telah Dihasilkan *(prototaip/harta intelek /pengkomersialan)* |  |
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**PENGESAHAN TRL OLEH PENYELIDIK:**

Saya,\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_iaitu Ketua Kumpulan untuk projek penyelidikan bertajuk \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mengesahkan bahawa output penyelidikan yang dihasilkan melalui penyelidikan ini telah mencapai fasa \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Oleh itu, bersama-sama ini saya sertakan dokumen-dokumen berkaitan pencapaian TRL ini untuk semakan dan perhatian pihak Pusat Inovasi dan Pengkomersialan (ICC), Universiti Utara Malaysia.

Pengesahan ini adalah berdasarkan kepada jadual yang disertakan oleh ICC di Lampiran 1 untuk dinilai oleh penyelidik. ICC UUM akan mengesahkan pencapaian TRL berdasarkan kepada penilaian yang dilakukan oleh penyelidik.

Tandatangan Ketua Penyelidik:

Cap Rasmi:

Tarikh:

Borang pengesahan TRL/fizhoah/26.5.2022

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|  **PHASE** | **INDICATOR**  |  **PLEASE TICK****(one only)** | **LINK TO EVIDENCE** | **EXTRA INFORMATION**  |
| **DEVELOPMENT**  | * Identification of and observation of basic properties
 |   |   |  |
| * Outcomes of the theoretical research are specified.
 |   |   |  |
| * Theorizing of potential practical applications
 |   |   |  |
| * Analytical research or experiments towards potential application (s).
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| * Initial testing of proposed solutions.
 |   |   |  |
| * Identification of potential stakeholders
 |   |   |  |
| **PRE-COMMERCIALISATION**  | * Proof of concept that is based upon the integration of applications and components to demonstrate viability.
 |   |   |  |
| * Concept is validated through pilot testing to substantiate the proposed solution(s).
 |   |   |  |
| * Identification of relevant stakeholders
 |   |   |  |
| * Refined integration of components to confirm validity.
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| * Proposed solution (s) are validated by relevant stakeholders
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| * Demonstration of near-end state solutions and testing in a relevant environment in cooperation with relevant stakeholders to gain initial feedback.
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| * Parts of relevant documentation has been drafted
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| **COMMERCIALISATION**  | * Refinement of solutions and, if needed, retesting in a relevant environment with relevant stakeholders.
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| * Drafts of relevant documentation are available.
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| * Proposed solutions, as well as a plan for their application/adaptation, are refined through testing, completion and qualification.
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| * Relevant documentation is almost completed.
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| * Relevant documentation is completed and available for stakeholders. A sustainable set of support measures for applying the solutions has been worked out.
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**LAMPIRAN 1**