**Schedule A**

Use this document to provide relevant project details about your organization and your project and send it back to the faculty Capstone Projects Coordinator (email provided at the end of this document).  
Please use simple text formatting as the data within this document is exported into our Projects database and formatting is lost during the export process. **NOTE: One Project per Form please**

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| **1** | **Client/Organisation Name:** | Swinburne-Royal Children’s Hospital rehab team: Mr Felip Marti Carrillo  (Swinburne) and Jo Butchart (Senior physiotherapist, RCH) |
| **2** | **Organisation Description:  *Brief description of your business*** | Royal Children’s Hospital is Melbourne’s largest paediatric hospital.  The Swinburne-RCH rehab robot team is a multi-disciplinary team of researchers and clinicians |
| **3** | **Address:** | Swinburne Hawthorn Campus |
| **4** | **Website:** |  |
| **5** | **Direct Contact:** | Dr Chris McCarthy |
| **6** | **Contact Title:** | Senior Lecturer |
| **7** | **Telephone:** |  |
| **8** | **Email:** | cdmccarthy@swin.edu.au |
| **9** | **Host Supervisor: *Who, from your Organisation, will be supervising the Project?*** |  |
| **10** | **Supervisor Title:** |  |
| **11** | **Department:** |  |
| **12** | **Telephone(s):** |  |
| **13** | **Email:** |  |
| **14** | **Project Title:** | **Interactive patient engagement modules for a humanoid rehabilitation robot** |
| **15** | **Referred by: *Who referred the Client/Organisation to Swinburne?*** |  |
| **16** | **Estimated Project Length:  *e.g. 1 or 2 semesters*** | 2 semesters |
| **17** | **Project Description:**  ***Brief description of project being undertaken.  (One Project per Pro-forma please)*** | Background: In partnership with Melbourne’s Royal Children’s Hospital, Swinburne have been developing the humanoid robot NAO as a therapeutic aid for paediatric rehabilitation.  This system leads patients through approximately 30 minutes of rehabilitation exercises and activities providing demonstrations of exercises as well as encouragement and entertainment during the session.  After nearly 3 years of development, the system is now undergoing testing and evaluation with patients at the hospital, with encouraging results being achieved.    Project: To compliment the therapy delivery component of the system, we seek to develop additional modules providing interactive activities to facilitate rapport building, entertainment and  education outcomes for patients at the hospital, and for patients who may eventually use the system at home.   In this project you will develop new interactive modules for the robot to engage children.  As part of this, you will utilise a Microsoft Kinect camera (also known as an RGB-D camera), and mobile device voice recognition to support the development of highly interactive activities.  A mobile deployable user interface will also be developed to configure the system.  The software engineering team will need to pro-actively  elicit requirements and research possible solutions.     The project will also involve evaluation of the system with patients, aiming to compare patients’ overall experiences with the system when these modules are included, versus when they are not.  Project team may be split across different focus areas. |
| **18** | **Project Specialisations Area:   *e.g. Research, Mobile Application Design(Android & IOS); Database Design; Network Design & Security; Robotics; Application Development; Systems Analysis & Design; Web Development & Design etc.*** | Strong software development and research skills |
| **19** | **Project Skills:   *Brief description of any specific skills students will require undertaking this project. e.g. Business Analysis; Systems Analysis; Project Management; Software Programming; OIS; Android; Business Intelligence etc.*** | Requiments elicitation and analysis  Human-Computer interaction research |
| **20** | **Project Environment:   *Hardware/Software/ Programming Languages e.g.***  ***Android; IOS; C++; HTML; CCS3; Java; SQL; Visual Basic Script; Visual C++; XML, UNIX, Windows etc.*** | Languages/tools likely to be used: C/C++, mobile/web dev, image processing (opencv), Robot Operating System (ROS) |
| **21** | **Research Component:**  ***(Where applicable use this section to state topic of research relevant to this project. This may be part of the project or the entire project)*** | Team will need to apply HCI research methodologies to design and evaluate the interactive modules, and look to collect data for a research paper publication.  Computer vision research to develop vision-based monitoring. |

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| **Overview of this Proposal** | |
| 1. The purpose of this exercise is to provide an educational opportunity for the Student(s) to obtain real-world experience as part of their course of study. 2. The Contracting Party or Host Organisation wishes to support the skills development of the Students by providing details of their project to Swinburne and agrees to provide the Students with the opportunity to undertake the Project. 3. All parties acknowledge that Project details may vary as the skills of the Student(s) are assessed or the Project requirements change. 4. Neither Swinburne nor the Student(s) provides any guarantee in relation to the quality, originality, operability, delivery or any other aspect of any work undertaken or material produced by the Student(s) as part of the Project. 5. The relationship between the parties is voluntary and involves no payment or only nominal work experience payments within regulatory requirements. 6. Swinburne will arrange for the Students to assign any Intellectual Property in the Projects to Swinburne. Swinburne will then assign the Project IP to the Contracting Party or Host Organisation. 7. The Contracting Party, or Host Organisation, and Swinburne agree to perform their obligations in accordance with the terms and conditions of the STUDENT PROJECT AGREEMENT. 8. The STUDENT PROJECT AGREEMENT will be issued to the Contracting Party or Host Organisation once their Project has been accepted by Swinburne and students have been assigned to the project. | |
| **Permission to market the Proposal to Students** | |
| *Swinburne University seeks permission to market an overview of your project to prospective students, as an example of the types of projects offered under the Internship Project unit.  NB: No company or personal details will be identified.* | |
| I Agree to allow details of the project to be marketed to prospective students. | |
| **Name:** | Chris McCarthy |
| **Date:** | 9/2/2018 |

**Send this completed Capstone Proposal to the Faculty of Science, Engineering and Technology, School of Software and Electrical Engineering, Capstone Projects Coordinator at: rbartels@swin.edu.au**