**E1 Budget Justification**

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| **Description** | **Cash** | **Justification** |
| **Personnel** |  |  |
| Research Associate – Computer Science (Level B3, 1.0 FTE) | 139,595 | This Computer Science Research Associate will need to have overall technical oversight of this project. It needs to be a relatively senior postdoctoral appointment because of the range of interdisciplinary research expertise in software engineering, human computer interaction and mathematics required. In particular, prior expertise in the Extempore programming language and environment would be valued for this position and would warrant the higher level appointment. |
| Research Associate – Mathmatics (Level B1, 1.0 FTE) | 122,573 | This Mathematics Research Associate will need to have specialist expertise in the area of sparse grids and uncertainty quantification. Research experience in the engineering of substantial modelling software will also be expected. |
| PhD/HDR stipend – Computer Science | 25,861 | The Computer Science PhD project will be primarily concerned with methodological aspects of live-coding in the software engineering process. The project will start by building mock disaster response game scenarios and then conducting experiments with prototype software and humans playing these game scenarios. As the main software suite comes together these scenarios will become more realistic. |
| PhD/HDR stipend – Computer Science | 25,861 | The Mathematics PhD project will be primarily concerned with flood-surge modelling. At present our major expertise is in upstream tsumami modelling with bathymetry data. This project will focus on down-stream surge modelling and will model forcing functions from disaster swell phenomena. |
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**Year 1**