**­­Faculty of Engineering Health and Safety: Risk Assessment Form**

**Name of Person Carrying Out Assessment: Shona Allman, Joe Matthews, Callum Fawcett, Miklos Borsi, Michael Rollins.**

**Title of Work: Interactive Devices 2019 - PuzzleLink**

**Risk Assessment Number Assigned (where applicable):** Click here to enter text.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Activity** (State: job, procedure, equipment, substances, hazard phrases, exposure, etc.)  Brief Procedure  Using the interactive device “PuzzleLink”.  Detailed Procedure  The following activities will be occur when using “PuzzleLink”:   * Attachment of device to wall using suction cups. * Joining and detachment of jigsaw pieces. * Tapping device while device is attached to a wall. * Tapping device while not attached to wall. | | | | | | |
| **Location(s) of Activity:**  **L.050 , MVB hackspace, public locations.** | | **Activity owner: N/A various owners/activities**  **Room Supervisor** (where appropriate)**: Greg Richards** | | | | |
| **Who will be doing the activity?** (State: competency level (any training required?), ability level (any accessibility issues/allergies where additional controls are needed? See page 4, section 7 for prompts)  The main participants using the device will be students in attendance at the device demo in the MVB atrium. However, member of the general public will also be asked to test the device in a variety of public locations.  **Who else could be affected by the activity?** (e.g. other students in the vicinity, public)  All of the above. | | | | | | |
| **Hazards Identified**  (refer to Hazard Identification list and note main hazards here, including exposure limits etc. Also included risk level of High, medium or low) | | | | **Precautions to be taken**  (Note protective clothing, safety screens, procedures, control, containment, venting, waste disposal, health monitoring etc.) | | |
| 1. Slip/Trip hazards from student bags/coats | | | | * Students will be instructed to keep personal belongings away from the test area at all times. | | |
| 1. Sharp Edges | | | | * All sharp edges will be filed down before being given to users | | |
| 1. Puzzle pieces falling from wall | | | | * Care will be taken to ensure that the puzzle pieces are sufficiently attached to the wall before the game begins | | |
| 1. Crowding | | | | * A test zone will be marked out to avoid the device becoming overcrowded | | |
| **Emergency procedures in case of accident** (Note any special procedures, consider Human Factors page 4, section 7)  First aid kits in MVB – the situation will be escalated to the nearest 1st aider in the event of an emergency | | | | | | |
| **Special training requirements** (e.g. by advisor or another competent person, video, course etc.)  The tester will be briefed by a member of the team before use | | | | | | |
| **Other Documents** (e.g. Manuals, MSDS, procedure documents, etc. If any chemicals are used, a MSDS must be provided)  N/A | | | | | | |
| **Access restrictions** (Note out-of-hours working rules, supervision requirements etc.)  The device will only be used with a supervisor (member of the team) present | | | | | | |
| **Waste Disposal**  Waste disposed of via recommended streams. | | | | | | |
|  | Name(s) | | Status | | Signature | Date |
| **All personnel involved in activity at the time of the assessment** | **Shona Allman, Joe Matthews, Callum Fawcett, Miklos Borsi, Michael Rollins.** | |  | |  |  |
| **Advisor**  (competent member of staff) |  | |  | |  |  |
| **Safety Advisor** |  | | Choose an item. | |  |  |
| **Technical Services**  **(If lab based)** |  | |  | |  |  |

At least 2 signatories required, 3 signatories preferred, if a laboratory or workshop-based activity then one of the signatories must be from Technical Services.

If carrying out this activity after the initial assessment has been completed, please sign the additional signature sheet at the end of this form.

**All Risk assessments must be reviewed at regular intervals or after a significant change/event.**

Issue Date:

|  |  |  |
| --- | --- | --- |
| Review Due | Completed Date | Completed By: |
| 4.12.19 |  |  |
|  |  |  |
|  |  |  |

**Health and Safety: Hazard Identification**

**The check list is guidance to help you but remember this does not cover all possible hazards.**

|  |  |
| --- | --- |
| **Location / Job –** L.050 Interactive Devices workshop | **Date:** 22 / 10 / 19 |
| **Name of Assessor:** Peter Bennett |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **1. Mechanical Hazards** | **Yes** | **No** | **Hazard Description** |
| 1.1. Crushing | ☐ | ☑ |  |
| 1.2. Cutting / shearing | ☐ | ☑ |  |
| 1.3. Entanglement | ☐ | ☑ |  |
| 1.4. Drawing-in, trapping | ☐ | ☑ |  |
| 1.5. Impact | ☐ | ☑ |  |
| 1.6. Stabbing | ☐ | ☐ |  |
| 1.7. Slips, trips, falls | ☑ | ☐ | Bags will be stored away from the device |
| 1.8. Abrasion | ☐ | ☑ |  |
| 1.9. High pressure injection | ☐ | ☑ |  |
| 1.10. Other mechanical hazards | ☐ | ☑ |  |
| **2. Electrical Hazards** | **Yes** | **No** |  |
| 2.1. Direct Contact | ☐ | ☑ |  |
| 2.2. Indirect Contact | ☐ | ☑ |  |
| 2.3. Short circuit / overload | ☐ | ☑ |  |
| 2.4. Source of ignition | ☐ | ☑ |  |
| 2.5. Other electrical hazards | ☐ | ☑ |  |
| **3. Radiation Hazards** | **Yes** | **No** |  |
| 3.1. Lasers | ☐ | ☑ |  |
| 3.2. Ionising radiation | ☐ | ☑ |  |
| 3.3. Other electro-magnetic spectrum | ☐ | ☑ |  |
| 3.4. Other radiation hazards | ☐ | ☑ |  |
| **4. Work practice Hazards** | **Yes** | **No** |  |
| 4.1. Highly repetitive actions | ☑ | ☐ | Ensure that breaks are taken between playing games |
| 4.2. Stressed postures | ☐ | ☑ |  |
| 4.3. Lifting / Handling | ☐ | ☑ |  |
| 4.4. Working at heights | ☐ | ☑ |  |
| 4.5. Visual fatigue | ☐ | ☑ |  |
| 4.6. Mental overload, stress | ☐ | ☑ |  |
| 4.7 Driving vehicles | ☐ | ☑ |  |
| 4.8 Other work practice hazards | ☐ | ☑ |  |
| **5. Chemical risks (GHS hazard symbols)** | **Yes** | **No** |  |
| 5.1. (GHS01) Explosive chemicals | ☐ | ☑ |  |
| 5.2. (GHS02) Flammable chemicals | ☐ | ☑ |  |
| 5.3. (GHS03) Oxidisers | ☐ | ☑ |  |
| 5.4. (GHS04) Pressurised gases | ☐ | ☑ |  |
| 5.5. (GHS05) Corrosive chemicals | ☐ | ☑ |  |
| 5.6. (GHS06) Toxic chemicals | ☐ | ☑ |  |
| 5.7. (GHS07) Irritants/sensitisers | ☐ | ☑ |  |
| 5.8. (GHS08) Carcinogens/mutagens | ☐ | ☑ |  |
| 5.9. (GHS09) Ecological hazards | ☐ | ☑ |  |
| 5.10. Biological hazards | ☐ | ☑ |  |
| 5.11. Other chemical hazards | ☐ | ☑ |  |
| **6. Environmental Hazards** | **Yes** | **No** |  |
| 6.1. Localised hot surface(s) | ☐ | ☑ |  |
| 6.2. Localised cold surface(s) | ☐ | ☑ |  |
| 6.3. High ambient temperature | ☐ | ☑ |  |
| 6.4. Cold ambient temperature | ☐ | ☑ |  |
| 6.5. Poor ventilation | ☐ | ☑ |  |
| 6.6. Significant noise | ☐ | ☑ |  |
| 6.7 Significant vibration | ☐ | ☑ |  |
| 6.8 Poor lighting | ☐ | ☑ |  |
| 6.9 Working outside | ☐ | ☑ |  |
| 6.10 Other environmental hazards | ☐ | ☑ |  |
| **7. Human Factor Considerations** | **Yes** | **No** |  |
| 7.1. Accessibility issues | ☐ | ☑ |  |
| 7.2. Allergies | ☐ | ☑ |  |
| 7.3. Autism | ☐ | ☑ |  |
| 7.4. Anxiety/Depression | ☐ | ☑ |  |
| 7.5. Dyslexia | ☐ | ☑ |  |
| 7.6. Deafness/Blindness | ☐ | ☑ |  |
| 7.7. Colour blindness | ☐ | ☑ |  |
| 7.8. Language barriers | ☐ | ☑ |  |
| 7.9. Age | ☐ | ☑ |  |
| 7.10. Behavioural issues | ☐ | ☑ |  |
| 7.11. New/expectant mothers | ☐ | ☑ |  |
| 7.11. Other medical conditions (skin conditions, respiratory problems etc.) | ☐ | ☑ | *Assess whether the activity would be more hazardous for those with certain medical conditions* |
| 7.11. Other, please state | ☐ | ☑ |  |

**Faculty of Engineering RISK ASSESSMENT**

**ADDITIONAL SIGNATURE SHEET**

**TITLE: Interactive Devices 2019 - PuzzleLink**

**Risk Assessment Number:***(If applicable)*

**THIS SIGNATURE SHEET ACCOMPANIES THE RISK ASSESSMENT REFERED TO ABOVE.**

All workers involved in work covered by the risk assessment must sign below before commencing work. By signing below, you confirm that you have read the risk assessment and you agree to abide by the protocols and guidelines contained therein.

|  |  |  |
| --- | --- | --- |
| **Name (in block letters)** | **Signature** | **Date** |
| **Shona Allman** |  |  |
| **Michael Rollins** |  |  |
| **Callum Fawcett** |  |  |
| **Joe Matthews** |  |  |
| **Miklos Borsi** |  |  |
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# Guidance for Writing Risk Assessments

Risk assessments should be about practical steps to protect people from real harm and suffering - not bureaucratic back covering. We need to establish that risk assessments are suitable and sufficient to ensure that:

* Staff, students and the public are properly protected
* innovation and learning are enabled not stifled
* those who create risks manage them responsibly
* individuals understand that as well as the right to protection, they also must exercise responsibility

## How to assess the risks in your work

Follow the six steps:

|  |  |  |
| --- | --- | --- |
| *Step 1* | List the work tasks/activities | Included the location of the work, activity planned, equipment and chemicals that may be in use |
| *Step 2* | Identify the hazards | Use the check list on the form to help you but remember this does not cover all hazards. |
| *Step 3* | Decide who might be harmed and how, so estimate the risks | Think about yourself, others around you, technicians, cleaners etc |
| *Step 4* | Evaluate the risks and decide on precautions | Be sensible - do you need signs to warn other people, protective equipment, work in a different location etc |
| *Step 5* | Record your findings and implement them | Use this form and follow the precautions you have identified as being required. Have a copy of this form in the location where you are working. |
| *Step 6* | Review your assessment and update if necessary | This should be done regularly or when you notice something is not working correctly |

When thinking about your risk assessment, remember:

* a **hazard** is anything that may cause harm, such as chemicals, electricity, working from ladders/step stools, an open drawer etc;
* the **risk** is the chance, high or low, that somebody could be harmed by these and other hazards, together with an indication of how serious the harm could be.

***RISK = Likelihood x Consequence***

Additional information for chemical hazards - GHS Chemical hazard symbols

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| GHS01 | GHS02 | GHS03 | GHS04 | GHS05 | GHS06 | GHS07 | GHS08 | GHS09 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

**This form must be completed electronically; no handwritten forms will be accepted as handwriting can make it difficult to understand information in an emergency.**

A copy of the final risk assessment should be available to you and others around you when you are working.

For off-site activities please follow the guidance available at <http://www.bristol.ac.uk/safety/guidance/#offsite>

And if necessary use the “Working off site risk assessment template” available on that webpage.