

## Role summary

The Applied Research + Development team produces cutting-edge technologies, including eXtended Reality (XR) applications, to support Architecture, Engineering, Construction and Operations for the built environment. We take these technologies through all stages of the innovation lifecycle, from R+D prototypes through to robust production applications. We are looking for XR developers to support this mission and deliver industry-leading solutions.

XR Developers will create applications and experiences to promote virtual collaboration, high fidelity real-time interactivity and spatial awareness.

## Role Definition

Job title: Software Developer (XR & Games Engine Specialist)  
Reporting to: Head of Applied Research and Development

## Responsibilities

- Develop and maintain eXtended Reality and interactive applications for use in Architecture, Engineering, Construction and Operations for the built environment
- Maintain and advance state of the art knowledge of Augmented Reality and Virtual Reality software and hardware, Game Engine Technologies, and Computer Graphics
- Conduct applied research and development in support of the Company's objectives
- Liaise with other support groups to ensure effective development, integration and application of wider company design systems and processes
- Delivering in support of all stages of application development lifecycle, including tests, CI/CD pipelines and documentation
- Contribute, or otherwise assist, as required
- Equity, diversity & inclusion (EDI) is a core priority. To support and champion the embedding of this focus as a collective workforce responsibility, EDI should be integrated, where relevant, into all workstreams.
- Thorough knowledge of and compliance with F+P procedures and standards

## Qualities and Skills Required

- Able to demonstrate ability to undertake the above responsibilities
- Legally able to work in the country in which the position is based
- Degree in computer science, software development, or equivalent experience
- Expert knowledge and awareness of XR/Games Engines and its potential application within our design practice
- Strong programming skills in C++ and/or C#
- In-depth knowledge of Unreal and/or Unity game engines
- Experience developing for a variety of XR hardware devices
- Experience developing apps for iOS
- Familiarity with common risks – digital and physical – associated with XR and mitigation of these. Ability to liaise with relevant colleagues and consultants to ensure best practices are implemented
- Excellent organisational skills
- Able to manage sensitive and sometimes confidential information
- A keen eye for detail
- Good problem-solving skills
- Self motivated and able to take responsibility

- Able to demonstrate initiative and a proactive approach to daily tasks
- Good interpersonal skills and able to work independently and as part of an effective team
- Flexible attitude
- Able to build good relationships at all levels, internally and externally
- Resilient to cope with conflicting demands, able to prioritise duties and work effectively under pressure.
- Able to work as part of an effective team assisting and supporting team members

### Desirable

- Familiarity with the following CAD applications: Rhino, Grasshopper, Revit, Dynamo, CATIA
- Experience of GPU and GPGPU programming, including Vulkan, CUDA, OptiX
- Experience in one or more of the following areas: architecture, structural engineering, building physics, simulation, design and data visualisation, human-computer interaction, computer graphics, interactive application development
- Understanding and experience of the processes of design and construction
- Experience of web development using HTML, CSS, JavaScript
- Experience working with virtual machines and web-based streaming technologies (eg AWS, Azure, WebRTC, CloudXR etc)
- Experience of continuous integration and deployment (CI/CD), DevOps and Git.
- Demonstrate an understanding of UI/UX best practices, interaction design and how these apply in virtual environments.

This description reflects the core activities of the role but is not intended to be all-inclusive and other duties within the group/department may be required in addition to changes in the emphasis of duties as required from time to time. There is a requirement for the post holder to recognise this and adopt a flexible approach to work. Job descriptions will be reviewed regularly and where necessary revised in accordance with organisational needs. Any major changes will be discussed with the post holder.