A Simulation Work Package
for your R&D project
V5.0 *3-minutes-read*

Note: We also have expertise in other Software areas:
https://jimp.co/Collaboration

We are experts in providing a **RICH-INTERACTIVE APPLICATION SIMULATION,** even
before the project is approved/funded or the consortium is completed. And
this applies to any kind of software application: Web, Mobile, Desktop, IoT
(= wearables, robotic, embedded or medical devices), etc.

If you or your team are thinking/working on a project/proposal, **Justinmind**
would be pleased to collaborate from the very beginning, whatever the ICT
project is about, **as long as the project:**

1. involves a software application of any kind:
   mobile/web/desktop/wearable/Kiosk/TV/digital transformation/… and **also
   applications in Virtual and Augmented Reality (VR/AR/XR):
   https://www.justinmind.com/vr-ar-design-experiences**
2. with at least one UI (User Interface), Human-Machine or
   Human-Robot/Cobot Interface (HCI/HMI/HRCI). 'Machine' in the broad
   sense: control panels, car dashboards, Medical Devices in the operation
   room, etc.

One or more ***Human-(Computer/Machine/Robot/Building/...) User Interfaces***
(HCI/HRI/HMI/HBI...) can be easily found in any project in these areas:

- Requirements Visualization and Communication for Pilots, Demonstrators,
  Proof-of-Concept (POC), Lighthouse projects, Living Labs, User Co-Creation and
  Large-scale Demonstrators
- Rapid Prototyping of any kind of Web/Mobile/Desktop Software Application
- Digital Transformation.
- Big Data and Data Visualization
- E-Government and Citizens' participation. Co-creation/Co-design of Digital City
  Services
- Smart Cities and Mobility, Transportation, Autonomous Vehicle
- EduTech. Real-time collaborative platforms for Education.
- Robotics, Mechatronics, Haptic Interfaces, and Digital Twin
- Assistive Technologies

- Internet of Things (IoT), Embedded Systems, Wearables
- Healthcare and Medical Devices - e-Health. m-Health, MedTech, online patient platforms. Patient participation and Co-creation/Co-design (PROM/PREM).
- Advanced Manufacturing, Industry 4.0 and Smart Factory (FoF - Factories of the Future)
- Cyber-Physical Systems (CPS, CPSoS)
- Avionics and Aerospace
- Chemical Processes (Process Visualization Interfaces)
- Civil Infrastructure and Zero-Energy Buildings
- Energy, Renewable and Environment
- Entertainment and Consumer Appliances
- Real-Time collaboration Platforms

A rich interactive prototype can be useful for any software application and also to simulate physical interfaces. For instance, Mercedes-Benz R&D Center North America http://mbrdna.com/ design car dashboards in Sunnyvale (California) for the Connected Car. Using **Justinmind** to ideate, discover, improve and try all UIs and interactions in our Simulation platform before building the real car dashboard.

And interfaces in the broad sense: screens, multimodal UIs, conversational and voice interfaces, and interfaces in VR and AR immersive scenarios.

We will create for your project a **RICH-INTERACTIVE APPLICATION SIMULATION** (kind of early demonstrator) as part of the initial definition proposal. We will use *initial project requirements,* and it may be beneficial to facilitate **the project to be explained (communicated) and approved** by the evaluation team.

When a **Rich Interactive Simulation** is included, a proposal may be approved quickly because evaluators/stakeholders can better understand the project's goal by looking at and playing with the simulation that feels like the actual application involved in the proposal. Briefly, a **simulation** works as a *powerful communication tool* to explain the project's idea from the user's perspective. We always find human beings behind the technology: those who should benefit from the project. The simulation can be created within **Justinmind** effortlessly as Justinmind is a 100% code-free and AI-powered Software Rapid-Prototyping Platform.

We have actually in our platform https://www.justinmind.com/customers **+3 Million users.** To move **Justinmind** to the edge, we want to explore new Use

Cases and new means of human-machine interaction like Context-Aware applications or multimodal interfaces. For example, a UI to manage a drone swarm formation.

Simulating new Interfaces and advanced HCI/HMI Interaction Scenarios, which are *more likely to be found inside Research/Innovation Projects,* we can push our existing simulation technology limits. Our user base can benefit from all improvements required by the project and incorporate them into our platform to get a more accurate, code-free, and easy-to-use *Simulation Experience*. For instance, that's why we are expanding **Justinmind** to simulate *Spatial Computing Applications*, considering applications partially or fully immersed in XR (VR/AR/MR).

Later on, when the proposal is approved, we'd also like to improve the simulation for the ongoing project, being in charge of a **Simulation Task** inside the project, ideally located inside or after the initial **Definition and Requirements Gathering (Specification) task/WP** and before the main **Dev Implementation Task/WP.** The simulation task can also be distributed along with the project in an 'Agile Development Methodology' approach.
This **Simulation Task** will use more detailed project requirements (from the preceding Specification effort), and it may be essential for the project success for the following reasons:

- The project can be validated early on with real users before starting the development stage.
- The simulation process is a **discovery instrument** for hidden project requirements (i.e., new use cases and applications) and to identify masked issues that can be fixed early on *before writing a line of code*, reducing or altogether avoiding Re-Work in the project. Most of the problems can be devised and evaluated before starting the Development Work Package because *iterate on a prototype simulation is much cheaper and more efficient* than applying changes in an actual software application (on-going development).
- Creating a simulation is a way to involve targeted users and **co-create** with them from the very beginning in a very cost-effective way.
- We can iterate several times on the simulation to clarify **User Interfaces** and **Business Logic** behavior to fine-tune the **User Flow** inside the application.
- We can **check Usability before coding** for the first time because Justinmind is fully compatible with most User Testing online services.

www.justinmind.com - **Contact**: Xavier Renom (CEO & Co-Founder) xavi@justinmind.com
Software Simulation Platform. +3 Million Users and selling online in +180 countries.
Europe Headquarter: Avinguda Meridiana, 350. Planta 11-C. 08027 Barcelona (Spain)
US Office: 44 Tehama St, San Francisco, CA 94105 (United States)
Permalink: https://jimp.co/SimulationTask

- Essential for **partner collaboration** within the consortium: it is easier to agree and discuss on a visual and fully functional simulation than on a text-only requirement document. The simulations and prototypes allow all partners to agree more easily on the work packages and tasks to be performed in the project. They can smoothly work together because **Justinmind** also generates the Requirements Specification Document automatically from the simulation incorporated with the simulation as deliverables in the project.
- The simulation can also be used along the Development Workpackage as a Demonstrator or blueprint/reference to guide the coding stage. And Justinmind also integrates with the most widespread RMS (Requirement Management Systems), such as Atlassian JIRA, IBM Doors, and Microsoft TFS (Team Foundation Server).
- In the age of Big Data, the way Data is visualized and consumed is becoming more critical.
- Important aspects like *compliance* and *implementation feasibility* can be checked early on before coding, such as **Accessibility**, **Safety**, **Security**, **Privacy/GDPR,** or even ethical and socio-economic aspects of technology developments, exposed by the *User Interface, Business logic, or User Flow* of the application.

Briefly and as a conclusion, **Early Validation** is crucial for any potential users of technologies. Most especially people with entirely different needs, such as senior citizens and educationally disadvantaged youth, users of all age groups and genders, different groups of migrants, and people with handicaps/disabilities (physical and mental disabilities or perception disorders).

This article explains a little more the benefits of prototyping:
The collaborative Prototyping Process with Justinmind

https://medium.com/justinmind/the-collaborative-prototyping-process-with-justinmind-4c05da8b3d01

Justinmind can participate as a subcontractor or partner in European research/innovation projects because our R&D center and headquarters are based in Europe (Barcelona). Justinmind also has an office in San Francisco (California), established in 2012 to support our customers in the US. Due to this, we can offer vast experience in Europe and US markets, selling online in +180 countries.

*   *   *