services: 3D visualisation

3D artistic drawings and animation help to bring facilities and operations to life. They enable clients to visualise land use, new facilities and new processes prior to development or implementation, and redesign existing facilities and processes.

Our team has produced 3D drawings and animations both as part of a broader aviation project and as a stand-alone deliverable for masterplanning and facility developments, detailed operations designs and process demonstrations. Clients are able to experience and improve new developments and operational change in advance of making physical changes. They are able to follow entire processes, understanding even the finest detail: from vehicle flows within a cargo city, to baggage movements in a baggage operation, to passport scanning during self check-in. Our international aviation clients have included BAA, bmi, Budapest Airport, Dublin Airport, Qantas Airways and Qatar Airways.

benefits of 3D visualisation

- An effective and visually stimulating presentation tool for stakeholders
- Improves understanding of processes by allowing the audience to ‘experience’ animation
- Accurately scaled drawings for planning of future land use and development
- A decision making tool, particularly for high investment projects
- The ability to improve the passenger experience when used as a communications tool
- A powerful and engaging promotional tool for internal and external marketing
masterplanning

3D visuals and animations help to bring 2D CAD drawings to life and are an effective and impressive tool for high-level design. Our team creates accurate and realistic 3D drawings to help illustrate new developments and land use for international aviation and distribution clients. With our broad experience in designing operations, clients can be confident that they are receiving designs that are practical as well as visually stimulating.

facility planning and concept design

Our team produces plans and concept designs that take strategic development projects beyond the masterplanning process. 3D drawings enable clients to visualise options and phases for airport land use, vehicle flows, and individual facility concepts. They provide support in determining space requirements and building dimensions, maximising land use, and ensuring the most effective layout.

detailed design work

o&i consulting has experience in modelling detailed exterior and interior spaces. Our 3D drawings provide clients with a clear impression of their aspired design, therefore enabling clients to more confidently make detailed design changes and approve final layouts.

operations redesign, optimisation and layout options

At an operational level, our team designs new aviation operations and improves the performance of existing operations. 3D visuals can effectively illustrate how a new or redesigned airport process will look or function. Clients can see, for example, the precise location of individual facilities and equipment, planned queue structures, individual processes and end-to-end departure and arrival processes.

process animation

o&i consulting models processes into seamless and visually stimulating 3D animation. When clients see their process step-by-step as a realistic walkthrough or flythrough animation it allows them to ‘experience’ the process and helps to identify possible issues and changes. Animation also serves as a useful communications tool to stakeholders, customers and users of new processes and technologies.

baggage system planning

3D modelling can also be employed in the development of new baggage systems to determine design options, and the most appropriate layout and flows based on capacity requirements. Through animation it is even possible to illustrate a bag’s journey through the system from the perspective of the moving item.
3D models can serve as a decision making aid, a means of communication, and a promotional tool to support many types of project.

O&I consulting’s visualisation skills have helped clients to demonstrate plans and solutions, and to illustrate their specifications and requirements.

O&I consulting has modelled layouts for land use and individual facilities for cargo cities at European and Middle Eastern airports.

We have developed 3D visuals to demonstrate the use of airport land, new facility developments, and internal layouts.

Our detailed design work has ranged from complex airport terminals to bespoke executive airline lounges.

O&I consulting has modelled check-in, passenger security screening, baggage, boarding, and distribution operations.

We have animated end-to-end airport processes, as well as the detailed steps of individual processes and equipment use.

Our team has broad experience in designing and improving baggage operations.
Examples of our work include:

**BAA**

o&i consulting created a 3D animated walkthrough to demonstrate the future passenger journey through the new Terminal 2 at Heathrow Airport. This required producing a comprehensive and detailed model of the terminal facilities, including all of the new equipment in its planned location. We animated each stage of the individual processes as well as end-to-end processes. 3D drawings of the model were also used to showcase the facility and processes for presentation purposes.

**Budapest Airport**

Members of our team determined the best airport master plan location for a Cargo City at Budapest Airport. We developed the operating concept and the conceptual design for the entire area, as well as interim cargo facility and capacity solutions. We applied our 3D visualisation skills throughout the project to plan area and facility layouts, communicate design options to stakeholders and further develop preferred designs.

**George Best Belfast City Airport**

o&i consulting completed a review of the existing passenger security screening area design and made recommendations to improve use of space and achieve service levels at Belfast City Airport. To enable the client to visualise our layout and process design solutions, we delivered 2D CAD layouts and 3D artistic renderings of the screening area. We developed designs for the boarding card control area, queuing structure, screening lanes, and entrance and exit locations.