

Overview of Discipline Architect

An architect's role is to initially establish the client's wants, needs, expectations, project requirements and budget and then collate this information into a design brief.

The architect can provide professional services in connection with town planning as well as the design, construction, enlargement, conservation, restoration or alteration of a building or group of buildings. These professional services include, but are not limited to:

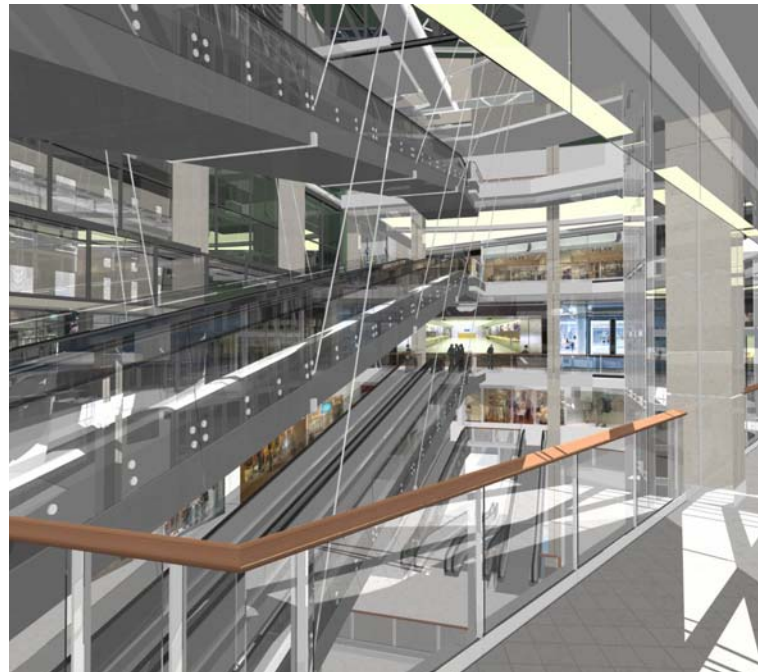
- planning and land-use planning
- urban design
- provision of preliminary studies, designs, models, drawings, specifications and technical documentation
- coordination of technical documentation prepared by others (consulting engineers, urban planners, landscape architects, and other specialist consultants) as appropriate and without limitation
- construction economics
- contract administration
- monitoring of construction / supervision
- project management

To ensure consistency across all forms of the project documentation, three dimensional (3D) software is widely used and accepted, which can ultimately create a Building Information Model (BIM).

Benefits of BIM that have been achieved are:

- Ability to rapidly design and model more complex buildings
- More time gained to evaluate more design options
- The provision of immediate visual feedback
- Significant time savings in the design development phase

The created model is based on the design brief, to produce and compare the technical detail for the project with other members of the project design team. These members can then import the information they require into their own 3D model, which effectively enhances communication among project participants to realise design intent and ultimately meet the client's expectations.



The models that are produced can range in detail from very simple outline models, through basic interior/exterior spatial walkthrough models, up to fully detailed interior/exterior models complete with furnishings and landscaping.

The central database generated within the 3D model allows the design team to have control over the design, while maintaining accuracy and efficiency in documentation. Because all items remain linked to the model, any subsequent variations to any part of the project are automatically updated.

All of the project information needed to completely describe the design can be extracted from the 3D model and used to document the project in a complete set of working drawings, plans, site plans, elevations, sections, perspectives, architectural and construction details. It can also be used to produce detailed lists of materials for window/door/finish schedules etc. along with generating renderings, animations and virtual reality scenes.

Providing construction workers and project managers access to the architect's 3D model, gives them the means to present and communicate ideas to the client and trades, through being able to create unlimited views of the detailed 3D model which was generated around information contained within the structure. This can aid transparency and enable a faster and more complete understanding of the architect's vision.

Some architectural 3D software currently available has the capability to export model information in STP-format to facilitate rapid prototyping with laser cutters, 3D printers, and stereo lithography machines.

All of these capabilities are revolutionising the way things are being done in building construction, and will continue to do so in the future.