Offsite Construction is the tried and tested concept of improving the construction process by making elements of a building in a factory. The term “offsite construction” means that the work is done in a factory, away from the construction site, as opposed to traditional construction methods which occur “on-site”.

This type of construction benefits the building process as it can be started in the factory (off-site) while the ground is being prepared on-site. This leads to a faster over-all construction time. Additionally, the building elements which are manufactured in the factory are made in a controlled environment which means better quality, improved safety and less problems caused by the weather compared to erecting the building using traditional methods.

How can a Building be “Manufactured”?

There are four different types of systems used to create parts of a building in a factory and these are shown in the table on the left and also described below:

Component Systems (Sub-Assemblies):
Component systems and sub-assemblies are small parts of the building which are made in a factory for use on-site to help improve the construction process. For example; door locks, pre-engineered roof trusses, and pre-assembled door frames complete with the door (known as door sets).

Panelised Systems:
Wall, floor or ceiling elements which are manufactured in a factory to be assembled into a building on-site are referred to as panelised systems. These panels can be pre-fitted with all electrical and mechanical services such as water feed pipes or light switch fittings. They are rapidly assembled on-site by an experienced construction team to form the completed building.

Volumetric Systems:
These systems are pre-engineered and pre-assembled units which can be transported to site and fitted into an existing building or incorporated into a traditional construction project. The most common volumetric system is a bathroom pod. The bathroom pod contains all the sanitary ware, electrical and plumbing fittings and even the finished tiles. This entire unit can then be transported to the construction site, installed and can be made instantly ready for use.

Modular Systems:
Modular products actually become the building itself. Almost like a very big, highly engineered Lego brick, the “modules” are stacked side-by-side and on-top of each other until an entire building is complete. Modules can be pre-fitted with all services such as air-conditioning systems, plumbing and electrical systems. They can be also pre-fitted with windows and doors. The use of modular systems will drastically reduce the time taken on-site to construct and finish an entire building.