

# CASE STUDY



+ Building view

**ATKINS**  
Doha, QATAR



Building view



Building view

**Brief:**

Atkins is one of the world's leading providers of professional, technology-based consultancy and support services. Operating in Europe, Middle East, Asia Pacific and the Americas, Atkins has a broad range of skills and resources and provides clients with a comprehensive service throughout the entire life cycle of the projects in the built environment. Atkins has been awarded the Engineering Consultancy Services for the design of the National Convention Centre Public Car Park and National Data Centre for Qatar Foundation – Education City.

**Location:**

Qatar

**Area:**

38,089 Sq.M

**Concept:**

Concept was to design a fully redundant, fault tolerant and concurrent maintainable support infrastructure for the Data Centre and incorporate a car park with dedicated secure access/ egress that are separated from all other parking facilities.

**Atkin's Outlook:**

Atkins wanted Sankalpan to master plan and design a high quality Tier IV standard National Data Centre having a nett usable space of 6,050 sq.m. with flexibility for future expansion, at a future date with no disruption to operations. The nett usable space includes data centre, offices, storage, control room, living quarters for up to 10 persons and similar occupied and utilized spaces and excluding circulation, ancillary areas, plant rooms, loading docks, car parking, etc. Atkins also wanted Sankalpan to incorporate Scalability, Flexibility and High level of Uptime in the designs.

**Challenges:**

The major challenge was to integrate the services and fit in the requirement within the set parameters.





Building view



**Design Analysis:**

The National Data Centre (NDC) will comprise four data halls in a purpose built building. The main site entrance, located on the north-east corner has a security control point, and the layout is planned so that rejected vehicles can return to the highway without entering the site. Road barriers and gates are provided to prevent tail-gating. Due to the site restrictions it is necessary for the data halls to sit above a machine level that houses the critical support equipment, such as the UPS, diesel generators, cooling, ventilation, etc. To protect against this risk and enable the ground floor room to be considered a different use of industrial it will be separated from the data halls by a 2 hour compartment floor. The non-mission critical staff accommodation areas to support the data hall will be in a separate adjacent building. Access to the mission critical data halls, from the support building, will be via a security controlled link bridge. The level of fire and life safety risk will generally be low, but given that the data halls will be storing mission critical data ensuring business continuity is critical and the Client requires an exemplary standard of fire safety.

**Uniqueness:**

Uniqueness of the design is that soft landscape areas will be provided via a local break tank and a network of distribution pipe work. The designs proposed will facilitate to achieve the availability level of 99.999% for the Data Centre by incorporating duplicate and sectional pipe work strategies and by the provision of stand by components.