



Case Study: Data Centre- Asia

delivering new state-of-the data centre facilities

Industry: Finance

Business Challenge

Our client is one of the leading integrated securities and derivatives exchanges in Asia. They had two legacy data centres and a DR site which they wished to consolidate, relocate, and modernize. Their need was for a new data centre to be built. One prime design goal for the new data centre was the requirement to host the fastest low latency High Frequency Trading (HFT) network in the world. A final requirement was for the new data centre to be built in parallel with other initiatives - namely the de-commission of an existing DR site and the development of a co-location platform.

Client Requirement

Our client required ITPM to manage the data centre projects to build and commission the new data centre, transition the production services to the new data centre, de-commission legacy backup data centre, re-tool existing data centre to act as part of an active-active pair, develop co-location services, build-out co-lo low latency network backbone, build 2 business recovery centres.

Scope

- Designs and build out of 32,000 sq ft of data centre white space
- Build out of a Disaster Recovery site to house 195 users
- Migration of 2,500 pieces of active equipment
- Migration of 1,000 listed trading partners
- Decommission of legacy Disaster Recovery site
- Retool of 2 data centres (hot aisle / cold aisle)
- Design and build of 2 purpose-built Business Recovery sites

Results

- ITPM worked with worked with internal teams (BAU Applications teams, Help Desk, Facilities, Marketing Communications, Finance and Procurement) and external teams (structured cabling vendors, telcos, interior designers, media companies, hardware vendors, and technical teams from offshore trading institutions) to deliver the design and deliver the low latency backbone, data centre design and the entire BRC (Business Recovery Centre) layout.
- Completed a full review of existing build design, proposed modifications and took the design through to final sign-off. Subsequently moved the baseline design through transition and transformation through to implementation (procurement cycles, installation, layout planning, structure cabling design, novation of existing contracts) resulting in a 32,000 sq ft of showpiece, start-of-the-art data centre facility.
- ITPM took full responsibility for the move of 195 Disaster Recovery user seats. Arranged for the physical move of 195 DR desktops over 2 weekends with no loss of service. Also accommodated some significant last minute operational changes to scope during the actual migration period (such as a change from 'warm standby' to 'split operations'). These changes were embraced and delivered seamlessly.

- During the programme migrated over 2,500 pieces of active IT equipment, addressing many issues on the way such as equipment incompatibilities between the 2 data centres, physical racking constraints and moving telco delivery dates).
- Similarly, migrated over 1,000 listed trading partners to the new infrastructure which necessitated extremely detailed planning for the co-ordination of the move of 'last mile' connectivity links and racking of telco equipment in 'meet-me' racks.
- The legacy Disaster Recovery site was de-commissioned on time and without any issues.
- As part of the overall programme, addressed issues with 2 existing data centres which had both power and cooling constraints. Implemented best-of-breed solutions for rack layout and power monitoring designs and overcame performance issues on the trading systems by de-commissioning legacy gear early.
- Produced special one-off structure cabling design to account for unique client requirements, namely to account for equi-distant cabling whilst not impacting and obstructing the overhead delivery of the network. ITPM's creative design placed excess cabling into the design without being a visual distraction to the overall appearance, while guaranteeing every customer was running on cabling that was no shorter or longer than any other customer on the floor regardless of rack position.
- Risks and issues were monitored constantly and if necessary, escalated to the client in a timely fashion. The register used is still in use with the client today.
- All of the timelines in this build, and transition and transformation have had less than 10 days of allowed scope creep over a 12 month project. The ITPM team has met or exceeded the timelines on every project stream, including streams which were not forecasted at the outset.
- As further recognition of the success of this Programme one of ITPM's DC SMEs was asked to host a site visit from a foreign advisory board that was visiting Singapore to view best-of-breed data centre designs in low latency HFT networks (currently the fastest in the world today).

Services

- DC Engineering - design & build.
- Project Management – end-to-end project management.