



SPECIAL REPORT: THE CLOUD

Managing the technology for a large multinational construction company is a huge challenge. John Bailey, CIO of Bechtel, explains how cloud computing has helped him

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CASE STUDY

John Bailey has spent much of his career at Bechtel delivering the information systems needed to ensure the successful running of complex projects around the globe – such as Eurostar’s high speed rail connection to the Channel Tunnel.

“Our industry is extremely competitive, not only must we deliver to cost and schedule but we have to continuously find ways to reduce our costs and improve the service to our customers,” says Bailey.

While the projects are complex, the array of interfaces driven by the joint venture partnerships, supply chains and sub-contractors requires robust yet flexible IT systems that deliver multi-billion pound projects on time and on budget.

Bailey’s team had noticed in recent years that the complexity of running so many projects involving so many people in so many places around the world meant that the approach to IT needed to change in order to remain cost effective for the company and its clients.

“For each project, we used to put a group of servers at the location and run those servers. Once the project had finished, the group then had to be dismantled and sent to the next location,” explains Bailey.

Data storage costs were becoming hard to keep under control as more and more design and construction data was captured electronically and, for legal reasons, had to be kept online for several years.

Bechtel’s management team wanted a lasting solution to these issues. So they turned to contacts in the venture capital industry to see where they were investing and where the industry was headed.

“What surprised me,” says Bailey, “was that venture capitalists we spoke with were investing the majority of their funds in consumer-facing products services and very little in business related tools.

“Benchmarking ourselves against Google, Amazon, Salesforce.com and YouTube was next,” says Bailey.

“We knew we didn’t operate systems on the same scale as them, but wanted to understand what they did differently to deliver services at such a low cost.

“By talking to all four of these companies we gained insights into how we could reduce costs and improve our performance in the areas of server management (Google), storage (Amazon), application management (SalesForce.com) and network costs (YouTube).”

To get closer to the Google and Amazon models, Bechtel has moved all the new projects into three co-location centres around the world. “Another benefit was having access to more than 25 telecommunication companies in the same building as our servers. This enabled us to create competition for our network bandwidth that we just couldn’t get from the normal carriers,” says Bailey.

The company also virtualised and standardised its servers, which has significantly reduced the rack space the company requires, and pushed down administration costs. “The application side is next on the agenda,” Bailey adds.

Bailey says he is confident that moving to a cloud computing model has laid the foundation for Bechtel to continue to reduce IT costs by a very significant amount in the next five years, adding: “I look forward to seeing the results.” ●