



SITUATION

One of the world's largest global engineering and construction companies was challenged with delays on some of its biggest, multi-billion dollar, multi-year projects. The company had commissioned 60 continuous improvement projects to address the problem. Three years later, with no solution, frustration had settled in.

They recognized that previous projects all had one thing in common: They focused on improving control of the design and procurement process. With a 10-year history of success using Six Sigma, improving process control to reduce variation was in the company's blood. Thinking differently was going to be hard.

Teams find innovation inspiration from a variety of sources including biomimicry. Biomimicry is the translation of nature's proven solutions and processes to your organization's innovation challenges.



WHAT WE DID

Process Innovation was launched, involving more than 50 people from engineering, program management, procurement, construction, vendors and others. Together the team embarked on an extensive effort to define the needs of the business, its customers and its vendor, ultimately identifying 150 unique, solution-neutral needs.

The needs were analyzed and prioritized. For the highest priority needs, over 1,300 unique ideas were generated and categorized using advanced ideation and collaboration techniques. To evaluate the viability of the ideas, a large-scale benchmarking program was initiated to look at the process abstractly and compare it to similar processes outside the industry and in nature.

WHAT WE UNCOVERED

The team discovered that unmanaged systems like Wikipedia, a herd of lions, and a forest-like ecosystem provided great insight and helped them identify breakthrough solutions beyond what was expected. The team also built their collective intelligence through understanding how each person is creative in different ways. Together they began

to see interdependencies between each other and how each person fit into the larger organizational picture.

RESULTS

The ultimate solution was a five-year, multigenerational plan for improvement, including cloud-based design; an engineer exchange program; and co-location of design teams. With an approach based on trust and respect, the company was able to reach its ultimate breakthrough—the decision to impose far less, rather than more, control on its vendors. As a result of the process innovation approach, the company was able to establish a new process for collaboration with value creation partners resulting in significant reduction of cycle time and design iteration.

"Challenging the assumptions of conventional wisdom is rarely effective when approached from the vantage point of incremental improvement. Starting instead with the ideal solution, and then working backwards from it, can break through accepted practice and lead to brand new novel solutions."

Riaan Brits, Principal, Lean Methods Group