APC Forum: Leveraging Emerging Digital Technology at BP

Executive Summary

This APC Forum is the first in a series of columns from the Advanced Practices Council (APC) of the Society for Information Management (SIM). SIM’s APC is an exclusive forum for senior IT executives who value directing and applying pragmatic research, exploring emerging IT issues in depth, and learning different, global perspectives from colleagues in other industries.

This APC Forum presents the thoughts of P. P. Darukhanavala (Daru), CTO of BP. He shared his company’s digital technology scanning practices with his fellow APC members at a recent APC meeting. In particular, this Forum describes the work of the digital technology scanning team that Daru created at BP.

### Phiroz Darukhanavala (Daru), VP and Chief Technology Officer, BP

- Heads a team responsible for matching external technology innovations to BP’s business requirements.
- Received his Ph.D. and M.S. in Operations Research from Case Western, Cleveland, and B. Tech from the Indian Institute of Technology, Mumbai.

### BP

- One of the world’s largest energy companies, providing customers with fuel for transportation, energy for heat and light, retail services, and petrochemicals products for everyday items.
- Founded: 1909
- Headquarters: London, United Kingdom
- 2006 revenues: $274 billion
- 97,000 employees

At BP, IT is not seen as just a service or function. It is seen as an activity that can transform the business. As BP’s CTO, Daru recognized his role in helping his business colleagues use digital innovation to gain and sustain competitive advantage.

Daru created a digital technology scanning team in IT and charged it with identifying the best sources of relevant and cost-effective digital technology to meet the needs of BP’s business units, which are in over 100 countries across six continents. The team’s goal is to identify truly significant opportunities for BP.

### HOW THE DIGITAL TECHNOLOGY SCANNING TEAM WORKS

From the outset, Daru realized that his small team could not possibly keep up with rapidly changing technology developments on its own. Therefore he adopted a “venture capital” model of digital scanning, whereby the team, with its deep knowledge of BP’s diverse businesses and broad appreciation of technology, links to an ecosystem of external knowledge sources.

Team members meet regularly with business executives to ferret out opportunities in which digital technology could provide competitive advantage. They seek answers...
to the question, “What do you wish you could do in your business if technology could be found or created to enable it?” To find possible solutions, the team then reaches out to a global network of leading suppliers, consultants, venture capitalists, academics, business practitioners, and industry associations. Originally, this network was U.S. centric, but the team soon realized that leading-edge innovations can be found around the world.

The team uses a technology transfer process based on a model used by venture capitalists to filter the many thousands of proposals they receive each year. The process begins with BP continually broadcasting its needs to its global ecosystem. In response, BP receives innovative ideas and technology offering from this ecosystem.

The team uses three filters to find the most promising ideas.

The first filter is relevance. The innovation must make sense for either a function or a segment of BP’s business. Daru has found that using external venture capitalists to pre-screen and filter proposals on promising new technologies is highly effective. About twice a year, he visits a number of venture capitalists around the world. Before these meetings, he provides them with information about BP’s business needs so that they can select the most relevant technologies to present. At the half-day meetings, five to six ideas are presented and decisions are made on their relevance. Following these meetings, a member of the scanning team follows up on those technologies that pass through this filter.

The second filter is technical readiness.

The third filter is economic viability.

The team is brutal in removing all technologies from consideration that don’t pass through the filters. Some 40 to 50 technologies per year do survive. These are then considered by BP business executive sponsors for development as pilots. From these pilots, between 5 and 10 are selected for broader adoption each year.

Daru’s team handles the background work of scanning and assessing the innovations and helping BP executives envision the possibilities. But, ultimately, BP’s business executives decide which technologies to adopt. “We go with the energy,” explains Daru. “We don’t fight battles.”

The screening process is designed to work quickly. Each opportunity is assessed and a decision is reached within three months’ time. The process also contains a feedback loop to BP’s ecosystem partners, so that they can continue to hone their understanding of BP’s needs.

THE BENEFITS OF THE TEAM TO BP

Daru believes his team has two primary objectives. The first is to change mindsets within the company. The second is to generate business impact through innovative technology.

“Our first job is to evangelize about the possibilities and help the business envision what could be done,” says Daru. To do this, his team makes some 100 presentations to business executives every year by holding executive briefings, facilitating vendor site visits, and organizing “Blue Chalk” events. At Blue Chalk events, senior BP executives meet with technology thought leaders and business practitioners. Topics at recent sessions included security, sensory networks, global sourcing, the workplace of the future, and collaboration and social networking.

Daru’s team has facilitated significant business transformation at BP. Some of the innovative programs—called “game changer initiatives” within BP—have generated business impacts up to $100 million. One a year for the past five years have been: global sourcing (2002), moving from proprietary to commodity platforms (2003), using wireless sensing to solve business problems (2004), field force automation (2005), and predictive analytics (2006).

A key to success for both BP and its partners has been the innovative partnerships that Daru’s team has formed within its global ecosystem of technology suppliers, consultants, venture capitalists, academics, business practitioners, and industry associations. In some cases, BP provides the business milieu for the technology partners to hold large-scale, real-life field trials.

BP benefits by influencing the direction of the pilot tests and receiving discounts on cutting-edge technology. Partners benefit from having a living laboratory for improving their products. BP generally does not seek to own the results of these pilots. Rather, it believes that the more it can encourage commoditization, the lower its costs will be. In particular, BP benefits from its CTO team learning from other industries and then acting as a broker to introduce technologies to its business people.