

Introducing Cognizant 2.0: The Future of Global Services Delivered Today

The practice of offshoring information technology projects has become standard operating procedure on the global business stage. For more than a decade, companies large and small have sought the significant cost advantages of outsourcing development and maintenance of information systems to firms in India and other countries where labor is a fraction of the cost of the Western world. Indian firms alone delivered \$31 billion in IT software and services in 2007 for companies outside its borders (largely the U.S. and Europe)¹. That is triple the revenue that Indian firms generated in 2004 and nearly 2.7% of India's GDP. China, Eastern Europe and Latin America are also becoming attractive destinations for outsourcing IT work.

The success of large, complex projects depends upon applying the right knowledge at the right time.

However, this growth obscures an issue that has been little discussed in the marketplace: The innovation and business value generated from work conducted offshore. Customer concerns about the ability of offshoring to generate new levels of business effectiveness have shown up in several surveys in recent years and in our conversations with potential clients.

While such concerns are valid, we believe they are directed largely at an obsolete offshoring business model, one in which an IT services firm sets up a development center in a low-cost

locale and essentially leaves its personnel to their own devices to satisfy customer needs. Each development center is an island unto itself, responsible for gathering all the expertise necessary to do the job while managing on-premises staff according to the schedule and service level agreement (SLA) negotiated with the client.

This model was appropriate for the IT projects offshored years ago -- largely, the maintenance of software applications or development of new applications with well-defined specifications. But it is suboptimal for the increasingly complex IT projects offshored today. These projects are far more likely aimed at transforming core information systems and service delivery that can significantly reduce operational costs and increase efficiency.

But these projects introduce complexities for global services companies, including uncertain specifications that can change dramatically over the course of an engagement. The need can also arise for deep industry expertise and skills that span the technology stack -- from desktop, server and network infrastructure, through the entire application value management chain -- cutting across disciplines

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Cognizant
Passion for building stronger businesses

in areas such as business intelligence and analytical software, as well as enterprise resource planning. Such complexities present major challenges to any delivery center, no matter how large or well-staffed. Inevitably, resolving them requires the contributions of domain experts residing in many offices around the world. However, the challenge of managing people living in different time zones and originating from different cultures to bring the best knowledge a company has to bear on a problem increases the project's complexities geometrically. In short, the global services industry needs a whole new model for this kind of work, and it needs it now.

In this paper we will examine the evolution of IT work that has been offshored and the ways in which global services providers have managed it. We will show how the model used by most other global services providers has become inadequate to meet the demands of the higher-stakes, higher value, more complex IT work that companies worldwide are offshoring now and will continue to offshore in the future. This model relies on largely autonomous centers in low-cost locales to manage projects and share insights via e-mail, fax or regularly scheduled meetings. We will then describe how Cognizant is transforming the way it manages projects through a new platform we refer to as

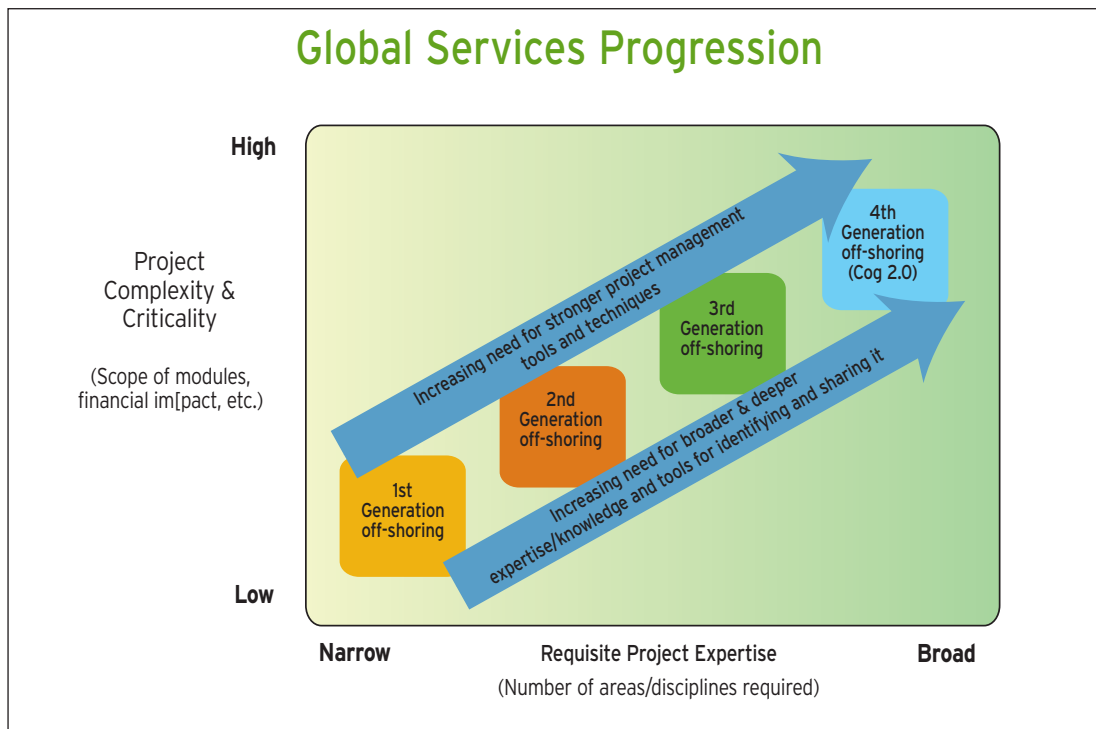
Cognizant 2.0. We will explain how Cognizant 2.0 enables us to dramatically improve and accelerate the way we share knowledge and manage large IT projects, resulting in global services that are delivered faster, more efficiently and with higher quality.

The Evolution of Offshore Outsourcing

While offshoring of IT work originated about 20 years ago, it accelerated in the late 1990s when U.S. and European companies began searching for inexpensive programming labor to fix the anticipated Y2K software bug². This first generation of offshore outsourcing essentially was a tactical solution to a specific technology problem and confined itself to the augmentation of in-house staff with imported programmers possessing specific skills. These professionals were brought on-site to work on highly defined (and in many cases already ongoing) projects.

Once the Y2K crisis passed (relatively uneventfully), the second generation of offshoring kicked in. This focused on applications maintenance and infrastructure

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In managing the much more complex IT projects, companies now need global services partners that can consistently deliver cost savings, mitigate risk, elevate delivery quality, speed time to value and manage complexity.

software that the IT function needed to enhance corporate systems. Global services providers established small marketing offices near their major U.S. and European clients to facilitate business relationships while sending the work to their own offshore centers. Although shipping the project overseas was more cost-effective than bringing the workers to the U.S. or Europe, this approach separated the onshore office from offshore workers, creating project and personnel management difficulties. This model, therefore, was best suited to projects with well-defined functional specifications that did not require significant oversight or project management.

The third generation of the offshoring business model emerged in the middle of this decade. It built upon the previous generation by enhancing the capabilities of the onsite office, adding project management and liaison staff. This improved day-to-day project coordination and problem resolution, and allowed for offshoring more complex projects such as applications to improve marketing, sales, R&D, finance, supply chain and other functions. Because business managers, not IT departments, were the end users of these applications, there were more customers to please and more complex systems to build. Changes in system specifications were more frequent, and the business impact of the systems was more substantial. This model, however, was still vulnerable to mounting complexity, dispersed expertise and challenges in personnel management, delivery and quality.

Cognizant 2.0 gives Cognizant a strong and innovative approach to improving the overall productivity of its workforce."

Over the last decade, offshoring has matured, with many outsourcers now meeting worldwide standards for quality (e.g., ISO 9001-certified) and systems development methods (e.g., CMMI ML 5 Assessed). These achievements represent a significant step forward for the entire systems integration and outsourcing industry, as (according to many third-party sources) on-time and on-budget delivery rates have increased significantly across the industry in the past decade. However, these improved capabilities today are merely table stakes. In the last few years, many multinational outsourcing

companies, such as IBM, Hewlett-Packard and Accenture, have sought to remain competitive by setting up their own captive IT/BPO centers in India, Eastern Europe, South America and other lower-cost locations. They, too, have had to confront difficult and expensive growing pains: managing people from other cultures, recruiting talent and dealing with financial risks that can threaten their profit margins with one big slip of a major project.

Physical Barriers to Project Success

Today's global services engagements often revolve around building critical applications and systems that increase the efficiency of a company's information systems, mitigate risk, enhance operational efficiency and organizational agility and infuse IT departments with new skills and talents to revitalize IT infrastructure in preparation for the next growth cycle. Achieving this kind of IT transformation requires companies to revamp their business processes, not just automate old ones. For a global services provider, this kind of work requires deep expertise in a variety of technology and industry domains, as well as in numerous functional areas.

Building business-critical systems and managing foundational infrastructure and business processes requires intimate insight and knowledge into the strategies, operations, user needs and unique cultural attributes of clients at a local level. The potential rewards are significant: the achievement of competitive differentiation through finely honed technology; the liberation of an IT staff to focus on product and technology innovation; and the ability to grow a company's capabilities and product lines once IT is freed from the duties of maintenance and "keeping the lights on" (which typically consumes more than 80% of the IT budget).

Such projects require close coordination and cooperation of smart people, both on the customer side and at the global services provider. They also demand a wide assortment of strong technical and business domain skills that typically cannot be found in any one location. The expertise required to build a new information system exists in many locations, and a global services company must be able to break up such a system into its sub-components and farm them out to employees residing in many offices. As a result, the company's "DNA"

shifts from managing people in a single office, to managing discrete tasks carried out in multiple offices.

But substantial barriers remain:

- **The vision barrier.** As a project's scope broadens, very few members of a globally dispersed team can see the big picture of what the project must accomplish. In addition, it is difficult for one team member (or even a discrete project sub-team) to track the project's progress effectively along all its dimensions. This can result in feature deficiencies, poor quality and missed targets.
- **The people barrier.** The project's broader scope and the greater dispersion of the team make it difficult to collaborate. This produces a sense of dislocation from the team and its goals, especially when the project is widely distributed among various geographic locations. E-mails and faxes are a poor substitute for face-to-face communication and spontaneous team huddles. They make it more difficult to establish the trust so necessary to open and effective collaboration.
- **The program management barrier.** Management is always a key factor in project success, and successful managers must have a) visibility into project progress to ensure that key measures are being met and b) strong relationships with the people they are managing. Both requirements are challenged when a project is progressing on many fronts simultaneously and a manager's reports are geographically dispersed. In this environment, management-by-walking-around becomes impossible, and managers can lose control of the development and delivery process. Consequently, both the project and the manager's effectiveness suffer.
- **The resource barrier.** The success of large, complex projects depends upon applying the right knowledge at the right time. In a project that is broad in scope and in which the experts are widely distributed (and where the demand for expertise changes dynamically as the project progresses), finding the right knowledge and information becomes a Herculean task itself.

In managing today's more complex IT projects, companies now need global services partners that can consistently deliver significant cost savings, mitigate risk, elevate delivery quality, speed time to value and manage complexity.

Cognizant 2.0: A New Way to Manage Global Delivery of Complex Projects

In 2007, we recognized the need for a new way of managing the increasingly complex projects that our clients were asking us to deliver. Complex outsourced IT projects fail when the provider does not understand what clients really want, how things might have changed for the client and how the client makes decisions. Several years ago, we addressed these deficits with our "Two-in-a-Box" (TiB) client relationship model. Specifically, we identified two defective practices in offshore outsourcing models:

- "Pass the baton," in which project management responsibility is handed off from one person to another as the project progresses.
- "Thrown over the wall," which describes the arm's-length relationship that evolves between provider and client as decisions are made offshore for customers with limited visibility into a project's progress.

Each practice contributes to cost overruns, challenged outcomes, hard feelings on both sides and the premature end of engagements and relationships.

In our TiB model, we assign an onsite relationship management team, led by a Client Partner (CP), to work at the client's place of business and gain a deep understanding of the client's business needs and decision-making processes to avoid the depredations of "thrown over the wall."³ We also dedicate an offshore Delivery Manager (DM), who coordinates the project delivery team, thereby avoiding the pitfalls of "pass the baton." The CP and DM work hand in glove to ensure that service delivery meets or exceeds established SLAs and client expectations.

TiB has consistently delivered very high levels of project quality and customer satisfaction. (Our client satisfaction scores have held steady at 90% over the last few years.) Yet the increasing complexity of client projects (at both a business and technical level), the widening

With Cognizant 2.0, we now get important expertise just-in-time -- that is, when we need it to complete a project task.

Two years ago, we began to design and build a project and knowledge management platform that would supercharge TIB, providing greater visibility into project progress and fostering much stronger collaboration of Cognizant personnel around the world.

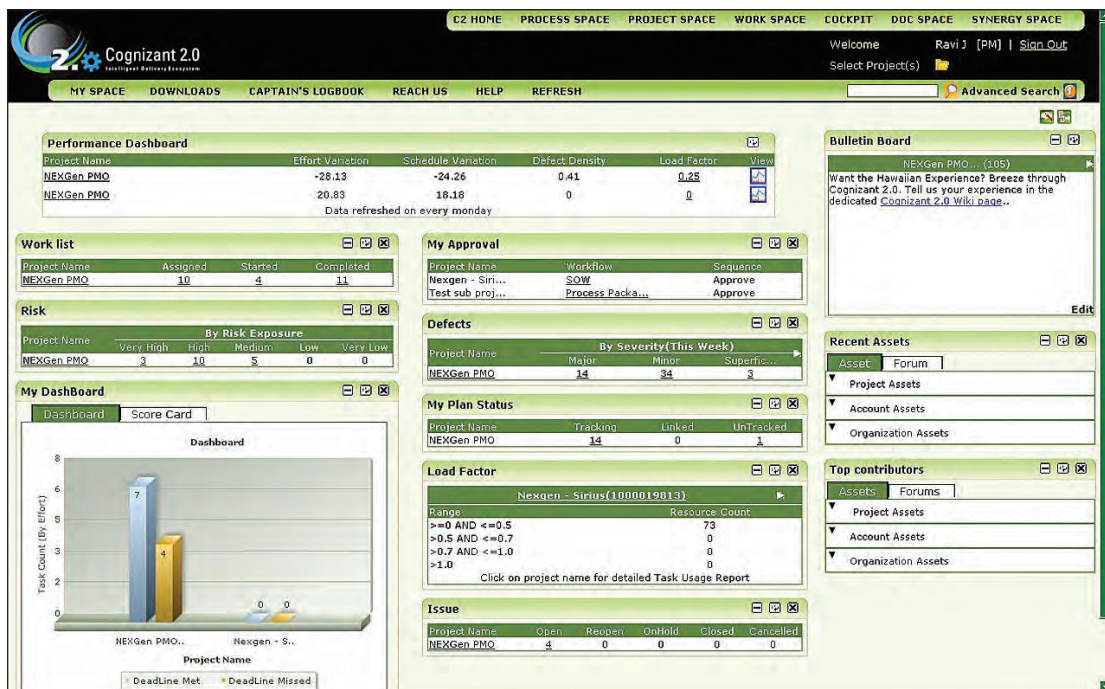
global footprint of solutions (from both a rollout and delivery perspective) and the advent of Web 2.0 technologies provided an opportunity to create a platform that further improved the way we manage projects and deliver superior outcomes. Thus, two years ago, we began to design and build a project and knowledge management platform that would supercharge TiB: providing greater visibility into project progress, fostering much stronger collaboration of Cognizant personnel around the world, and making sure that the broad and deep knowledge necessary for these complex projects was available just in time to all project members.

We refer to this new platform internally as Cognizant 2.0. This platform shifts the global services model from one designed largely to take advantage of labor arbitrage to one that can leverage “intellectual arbitrage” -- i.e., the ability to bring all the expertise a global services firm has around the world to bear on a client’s critical business requirements. Cognizant 2.0 is

a Web 2.0-based platform that enables Cognizant associates (and eventually business partners and clients) worldwide to collaborate virtually and deliver significant time-to-market, cost and IT transformational value to clients.

Cognizant 2.0 has two fundamental components:

- A high-powered knowledge management system made possible by new “Web 2.0” technologies, such as blogs, wikis, instant messaging and search engines that can comb both structured data (e.g., information in formatted databases) and unstructured data (e.g., words used in emails, audio and video clips). This enables us to tap into our firm’s best thinking about how to handle a specific aspect of a project, to capitalize on 15 years of “best practices” and the know-how of our domain experts across the globe.
- A standardized project and workflow management system that facilitates collaboration and automatically coordinates complex, dynamicaly changing global projects.



Cognizant 2.0's homepage enables users to see project management tasks on the left side and access Web 2.0 collaboration features on the right side of the screen.

As business IT guru Thomas H. Davenport says, while another knowledge management system is nothing new, one based on Web 2.0 technologies and combined with an elaborate project management system is unusual. "It takes the typical chatter that you get in blogs, wikis and other Web 2.0 technologies and puts them to work -- i.e., to amass knowledge that is required to transform a business process and its underlying system," Davenport says. (Click [here](#) to view a Cognizant 2.0 flash demo.)

Taking Knowledge Management to a New Level: From Encyclopedia Britannica to Wikipedia

Over the last two decades, knowledge management systems have essentially been online repositories of information that geographically dispersed teams could tap into. However, most knowledge management systems have followed an Encyclopedia Britannica model: providing relatively static information, periodically edited by a centralized group. Much has changed in technology since the days of Lotus Notes and other "groupware" systems -- most of all, the World Wide Web and, more recently, so-called Web 2.0 technologies: blogs, wikis, instant messaging and others.

Recognizing that only a small portion of an organization's total intellectual capital is aggregated, codified and made accessible through centralized databases, we wanted to find a way to tap into every bit of our company's collective knowledge -- the information in our local databases, on our employees' laptops and in their heads. Cognizant -- and the industry -- needed to move to a knowledge management approach based upon Google and Wikipedia principles. Cognizant 2.0 is that mechanism for us. It lets us use social networking technologies to tap the expertise and experiences of our 60,000-plus associates around the world as easily as it is for co-workers to trade stories at the water cooler.

"If you have the ability to identify quickly where in the world you have deep expertise, it's a very powerful thing," said Robert Eccles, a Harvard Business School professor who studied Cognizant in 2007 and published a case study on the company in early 2008⁴. "Labor rates are going up in India, and clients can always go to another company with lower-cost locations. But being able to get the right person quickly with the right expertise that you need is a big deal." In other words, Cognizant 2.0 enables Cognizant to fight lower-

cost competitors with better expertise, now summoned easily at the time of need.

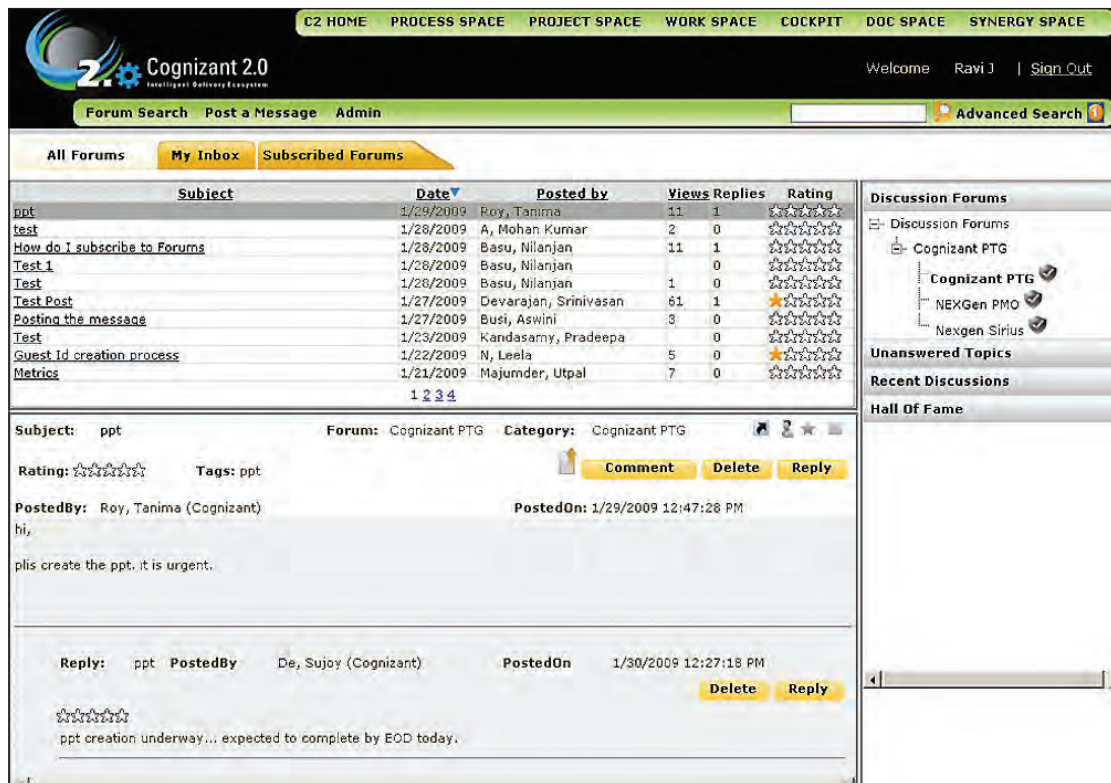
We use Web 2.0 tools such as instant messaging, blogs and wikis to foster collaboration at speeds that were heretofore impossible. In the past, our project teams would often have to search multiple online libraries, send out blind e-mails or participate in late-night or early-morning conference calls to accommodate co-workers and clients in multiple time zones in order (hopefully) to unearth and share the information cached within the organization. Now, with over 10,000 internal bloggers (about 20% of the company, including Cognizant President and CEO Francisco D'Souza), an online Cognizant virtual town square that receives two million page views a month, and a repository of over 1,750 reusable software assets (with over 100 added every month),⁵ knowledge is available to Cognizant associates in a constant stream. It has helped knit the organization together, essentially making distance and geography a non-issue.

"Blogging has reinforced bonding among employees and helped us create an environment of honesty, openness and progressiveness," D'Souza says. "Blogs are used as a platform for innovation, knowledge management, competitive insights and communication."⁶

The development of this blogging culture occurred almost organically. "Blogs started appearing not only to share business information, but also to discuss common causes, such as helping the needy and giving back to society. The topics eventually evolved to cover professional interests. People posted queries regarding their client projects,"⁷ says Cognizant Senior Vice President and Chief Knowledge Officer Sukumar Rajagopal, the co-architect of Cognizant 2.0 with Rajashree Natarajan, AVP Process & Tools Group.

With Cognizant 2.0, we now get important expertise just-in-time -- that is, in the context of the project task on which we are working. The ability to apply knowledge that exists in another project at Cognizant is now a major advantage. The "wisdom" that a company the size of Cognizant can bring to any client is the collective wisdom of all 60,000-plus of us -- not just the expertise of the project team on the job. The bigger we get, the smarter we get -- if we can capture our knowledge and summon it in the moment of need. Now we can.

"I think the power of Cognizant 2.0 is using the technology to create modules so that you are not always recreating the wheel." - Robert Eccles, Professor Harvard Business School



Cognizant 2.0 users can at a glance see which online forums they subscribe to post comments and respond to queries from a single screen.

The Project Management System: A Workflow System on Steroids

The second fundamental piece of Cognizant 2.0 is a whole new project management system. Today's larger, more complex projects require a project management system that is up to the job. Every large project has numerous tasks, with multiple dependencies that require an underlying system to manage workflow. With Cognizant 2.0's embedded project management system, all necessary process templates, samples and best practices are pushed to the project manager when he initiates a program in an industry-specific or technology-specific area.

Cognizant 2.0 is beginning to let us capture the collective wisdom of our very talented people and apply it to a client's problem rapidly and wherever we operate.

This ensures a predictable, repeatable and reliable way to produce the project's master plan, guaranteeing that best practices are followed with each new engagement. And by not asking the project manager to reinvent the wheel with each new project, master plans can now be produced in 70% less time than with our previous project management tool. Also, as a project manager develops the master plan using Cognizant

2.0's templates, resources (people, budget, research data, etc.) are automatically allocated to the project through Cognizant 2.0's integration with our ERP system. Furthermore, project team members now get detailed, real-time access to workflow activities, information and sources, as well as project targets, deliverables and timetables. And all this can be done through familiar tools: Cognizant 2.0 is built on our existing integrated development environment and is tightly integrated with Microsoft Outlook and Project.

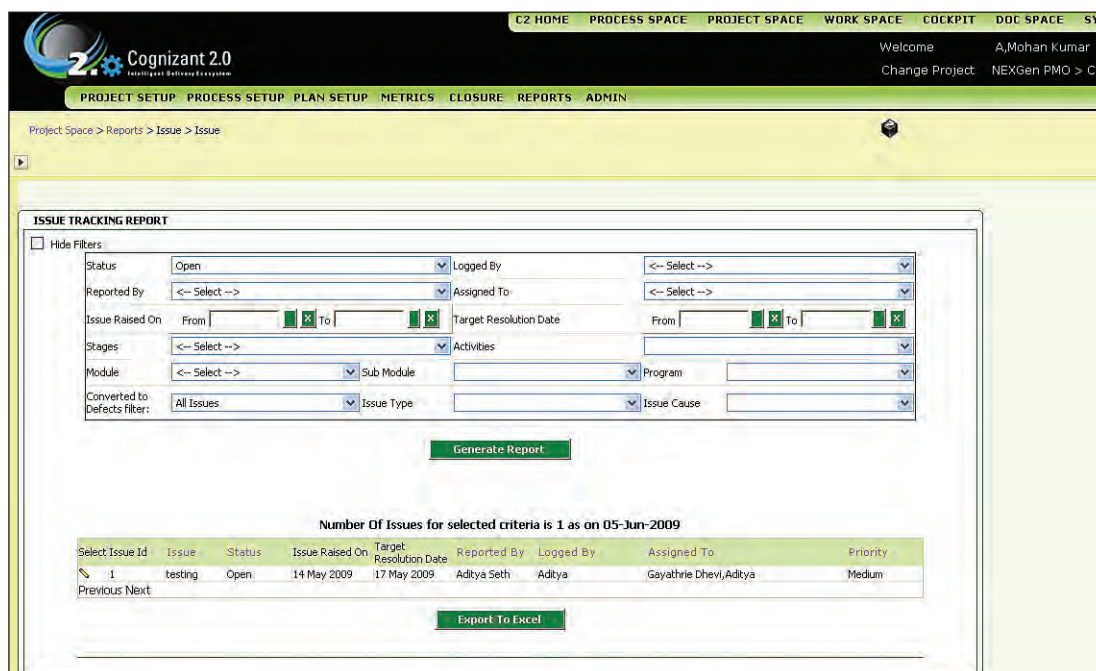
Dashboards show project managers which tasks are on schedule and which are lagging. In the past, project progress was analyzed, collected and reported on in a manual and periodic basis. Much could go astray in just a couple of days: A deadline missed by one day might set back the next project phase by a week. Now project team members do not have to wait for the next report that may or may not include the data they need; they can track project progress on Cognizant 2.0's dashboards, just like an airline pilot checks his instruments. These dashboards have eliminated 90% of the work involved in manual project tracking.

Only about 18 months after it was launched, the number of client projects that we have managed (or

are managing) through Cognizant 2.0 totals over 3,000 (as of April 2009). We are actively engaging Cognizant 2.0 at more than 600 customers, spanning every project type and industry we serve. More than a third (37%) of the company's application development projects today are run through Cognizant 2.0. The productivity impact has been substantial. Our average project cycle times have fallen nearly 20%. In a recent report on North American applications outsourcing, Gartner commented on the role Cognizant 2.0 plays in elevating Cognizant's workforce productivity. (You can download the full report [here](#)).

With Cognizant 2.0, essential information is easily available to our senior managers, such as a project's operational progress and issues raised by clients and customer communications. That means our project managers do not have to spend their time keeping senior management abreast of project health. No more frequent meetings just to update senior management and account managers, both onshore and off-shore, about project progress.

All this has reduced the time senior managers and project managers need to troubleshoot a project that has fallen off schedule. They no longer needed



Using Cognizant 2.0, project managers can track and share program status with colleagues across Cognizant's global delivery network.

to sit in on lengthy meetings or listen in on conference calls conducted across multiple time zones.

From Labor to Intellectual Arbitrage

Perhaps the most impressive technology development of the 21st century has been the rapid evolution of technology for consumers, particularly with the explosion of mobile devices, broadband and social networking websites. In many ways, consumer technology is more sophisticated than the gear that has been built for organizations this decade. Massive

computing demand for consumer websites such as Yahoo!, eBay, Google, Facebook, MySpace, Skype, et al have been the major driver behind technological innovation, not enterprise needs. As Doug Merrill, Google's former CIO, stated: "Fifteen years ago, enterprise technology was higher-quality than consumer technology. That's not true anymore. It used to be that you used enterprise technology because you wanted uptime, security and speed. None of those things are as good in enterprise software anymore (as they are in some consumer software)."⁸

Many of our 60,000-plus employees are devoted users of Web 2.0 tools. They are writing blogs, engaging in wikis and providing other expertise in digital form. This information is part of the 80% of knowledge that is said to reside in a large organization but outside its knowledge management system, which may capture only 20%. As a consequence, Cognizant 2.0 is enabling us to capture the collective wisdom of our very talented people and bring it to bear on a client's problem rapidly and wherever we operate. In other words, we're now able to bring 21st-century tools to help solve our clients' 21st-century challenges. Eventually, Cognizant 2.0 will provide our customers and business partners with access to a true cross-industry IT

ecosystem, which can collectively create software solutions in ways much faster than traditional methods allow.

With Cognizant 2.0 powering our global delivery network, we are leveraging just-in-time project management and knowledge artifacts in ways that elevate intellectual arbitrage from high concept to tangible reality, allowing us to deliver higher quality, more consistent and more timely services that continuously strengthen our clients' businesses.

By not asking the project manager to reinvent the wheel with each new project, master plans can now be produced in 70% less time than with our previous project management tool.

1. According to Nasscom, India's National Association of Software and Service Companies. See www.nasscom.org.
2. "Cognizant Technology Solutions: Case Study," Harvard Business School Publications, <http://www.hbsp.harvard.edu/educators>.
3. More on the TIB model can be found a Cognizant white paper, "Two-in-a-Box: Relationship Model: Cognizant's Global IT Services Delivery Edge," www.cognizant.com.
4. Robert G. Eccles, Harvard Business School Case Study, "Cognizant Technology Solutions," Jan. 17, 2008, case number N9-408-099.
5. "The Next Step: The Wisdom of Clouds," by Malcolm Frank.
6. "KM @ Cognizant," <http://www.lisps-india.org/sangoshthi/papers/rajashree-natarajan.pdf>.
7. Op. cit., "Cognizant Technology Solutions"
8. Vauhini Vara, "Pleasing Google's Tech-Savvy Staff," The Wall Street Journal, March 18, 2008.

About Cognizant

Cognizant (NASDAQ: CTSH) is a leading provider of information technology, consulting, and business process outsourcing services. Cognizant's single-minded passion is to dedicate our global technology and innovation know-how, our industry expertise and worldwide resources to working together with clients to make their businesses stronger. With over 50 global delivery centers and more than 64,000 employees as of June 30, 2009, we combine a unique onsite/offshore delivery model infused by a distinct culture of customer satisfaction. A member of the NASDAQ-100 Index and S&P 500 Index, Cognizant is a Forbes Global 2000 company and a member of the Fortune 1000 and is ranked among the top information technology companies in BusinessWeek's Hot Growth and Top 50 Performers listings.

Start Today

For more information on how to drive your business results with Cognizant, contact us at inquiry@cognizant.com or visit our website at www.cognizant.com.



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