

## IT-as-a-Service for Small and Medium Businesses

The demand for IT from the SMB segment is growing. The SMB segment is characteristically different from large enterprises in that it is an attractive market for niche solutions in hardware and software. Yet, the business needs of the SMBs require a holistic partnership. With too many options and very little in house knowledge, the needs of SMBs are far from being met. This calls for a different service model, a model that makes IT available as a remotely managed and hosted service. TCS, with more than 42 years of IT solutions experience and expertise in various verticals, is enabling this feature by bringing IT-as-a-Service that caters to the needs of SMBs.

## About the Author

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In his previous role, Swamy was the Director of TCS' Global Consulting Practice (GCP) and was instrumental in the structural formation, development, and positioning of TCS' consulting offerings. He was listed amongst the top 25 consultants in Consulting Magazine in 2007.

During his 18 year tenure at TCS, Swamy has held several strategic positions that have included managing key customer relationships, building and heading the Process Consulting Group, managing the Corporate Resource Management function, leading numerous Centers of Excellence, as well as launching TCS' first steps in geographies such as Hungary and China.

Swamy is a firm believer in the power of IT to create business value and is known for his interest in Innovation & Quality and expertise in Six Sigma. He is also recognized as a champion of many digitization drives within TCS, including deploying digital platforms for Six Sigma, creativity, and talent acquisition.

## Table of Contents

1. Introduction	4
2. Characteristics of an SMB	4
3. Building Blocks for a New Service Model	6
4. IT-as-Service	8
5. TCS – Innovating a New Service Model for SMBs in India	10
6. Conclusion	10

## Introduction

SMB is a burgeoning economic segment that is capable of driving economic growth in its own right. In Germany, 46% of the GDP is contributed by SMBs. German SMB customers such as Siemens, BMW, and SAP are setting standards to drive the economy. In India, while the contribution of SMBs to exports is 46%, the sophistication of IT in Indian SMBs is poor.

The general notion is that it is easy for large IT vendors, given their experience in servicing global enterprises, to service the growing SMB market. On the contrary, products and services that have traditionally served large enterprises well, cannot be applied to an SMB. Products need to be rebuilt, and traditional service models need to be unlearned to address the characteristic needs of this segment.

In order to expand and compete, SMBs need a regular infusion of capital in their core business. They also need working capital for operations. Capital investment in IT is hence unplanned and tends to be deferred. Coupled with the fact that an IT project could take several months to go-live and could fail too, upfront IT investment is rightly seen as risky.

Probably, the most important IT issue plaguing SMBs is a talent crunch. With a huge demand for IT professionals in India's booming IT industry, SMBs find that IT talent is expensive and volatile.

In the midst of this, SMBs are confused by too many vendors espousing new technologies and standalone products. Very few vendors have the capability to propose an integrated solution and a roadmap to meet the long-term business ambition of the organization.

Owner/ promoters of an SMB are forced to find time to deal with multiple IT vendors, and struggle to keep IT systems relevant and technologically up-to-date.

SMBs may not have standardized processes and may not be aware of best practices in their industry. An ERP often means moving to more rigorous but efficient processes that make information transparent, and employees more accountable.

These characteristics make the IT needs of an SMB very different, and demand of high sophistication. No single vendor today is experienced in solving all challenges that lie with IT adoption in this segment. The discussions in this paper lead to solutions that address the IT adoption challenges and guide towards an altogether new model to service this important segment.

## Characteristics of an SMB

### *A. Constrained working capital and low risk preference*

Small business financing falls broadly into three categories:

- Working capital is financed through overdraft accounts.
- Credits to customers are through bill discounting.
- Capital investments are funded by hypothecating the invested asset to the bank; with repayments planned as equated installments.

Software licenses and customized software generally cannot be hypothecated, and therefore, there is the need for collaterals, such as land or shares. IT projects, hence, need upfront investment using capital borrowed against collaterals.

Today, a liberal and professional banking sector is enthusiastic about funding the IT adoption projects. However, with interest rates being high and the need to provide collaterals, SMBs find such funding expensive. Instances of cost overrun or failures in ERP implementation are rife in large enterprises; a similar experience in an SMB can be costly. The capacity to take risks in large IT projects, for example an ERP implementation, is hence less in SMBs. An SMB would rather pilot simple solutions and scale up as they reap benefits. This however, leads to a business compromise, where SMBs must implement lesser solutions that do not scale up to meet their future needs. The IT solution and services offered to an SMB then have to mitigate the risk of adopting feature-rich solutions that demand upfront investment.

#### *B. IT talent – too expensive and volatile for SMBs*

SMBs need a small internal IT organization that maintains and administers the solutions that are running. With more sophisticated and integrated IT solutions, there is more dependency on the talent that manages them. SMBs specially need a functional expert who understands its business processes and helps the organization in using software applications. In order to retain organizational knowledge, such experts need to be retained with the organization for a reasonably long period of time.

With the IT outsourcing boom in many countries, IT talent is hugely attracted to large enterprises and to IT service organizations. A depleting talent resource is leading to rising salaries and higher attrition. SMBs thus find it difficult to attract and retain IT talent. While adopting IT for efficiency and innovation is an imperative, the fear of scarce and volatile IT talent is no less a deterrent.

The cost of hiring IT talent, dependency on such talent, and the fear of losing such talent in the midst of an IT project makes SMBs postpone IT adoption. IT services for an SMB should be designed to eliminate dependency on local IT experts.

#### *C. Islands of data point to an absence of IT roadmap*

SMBs invest in IT, an application at a time, often from different vendors. They may start with a popular desktop accounting package with new locations investing in additional desktop copies and entering transactions locally. Email services may be provided by the Internet provider. Payroll may have been outsourced. The sales unit may start using a CRM in a SaaS model, while applications on the shop floor may have been acquired as part of technology transfer from a foreign collaborator. All the standalone systems are connected by tasks that are performed manually. As a result, data becomes duplicated; time is spent in transferring and reconciling data. Creating an MIS report becomes a complex task of correlating information from multiple data sources.

In such a diverse technology landscape, promoters find it difficult to receive accurate and timely answers to questions such as:

- How much ready and work-in-progress inventory do I have for this urgent sales inquiry?
- How would the shop-floor system send an email notification triggered because of falling raw material inventory?

A reimbursement claim filed by a sales executive will take weeks for financial approval and subsequent credit into the executive's payroll. Data backup of multiple systems will be unreliable.

SMBs then need a trusted adviser who understands their long-term business goals, and helps create an IT roadmap that enables their business. Such a roadmap would contain a family of applications that

individually scale-up and seamlessly integrate to provide on-demand information for better decision-making.

#### *D. Multiple IT vendors and imminent technology obsolescence*

When faced with an IT issue, multiple providers of different applications and services indulge in indictment and allegations on each other. SMBs need a partner who can assume end-to-end IT accountability.

In this era of aggressive media promotions, SMBs need someone to turn to when faced with a plethora of technologies and buzzwords. The partner must be accountable for keeping all solutions relevant to the changing needs of the growing organization, while insuring the SMB against technology obsolescence.

#### *E. Traditional practices and resistance to change*

SMBs are often family owned and follow traditional practices. For instance, in accounting, it is not uncommon to find book-keeping practices that follow an archaic system of governance, and thereby are impediments to better integrated processes. In manufacturing, the work-in-progress stock is heuristically estimated and it takes radical rationalization to transition to better practices.

A medium-scale fabric manufacturer in India selected an ERP package but wound up making extensive modifications. The package could not handle the scenario where the company could price the same bolt of cloth in two different ways. Unfortunately, in that ERP, there was no way to assign two prices to the same unit of the item, while keeping inventory counts accurate. "One unit, two prices", said the manufacturer. "Two prices, two units", said the ERP Vendor.

Such instances are not rare and, in fact, characterize the SMB segment. Yet, SMBs have made little attempt to standardize processes from an end-to-end perspective. SMBs rarely make investments in business process reengineering. This does not mean that such interventions are an overkill. Rather, process re-engineering is more pertinent to SMBs who strive to be participants in global supply chains. They are forced to adopt standard interfaces and benchmarks that their enterprise customers demand. SMBs hence need a helping hand to cross this bridge and manage change in their journey to become a competitive business.

## **Building Blocks for a New Service Model**

### *A. Software-as-a-Service (SaaS)*

An interesting evolution has happened in the software industry in the past decade. Instead of installing a software application on the desktop, or on the local server, the idea was to access the application, hosted by an external agency, over a network, usually the Internet. The agency was an "Applications Service Provider (ASP)" and the model was initially christened as ASP. ASP, however, did not find wide acceptance. The problems were many. Internet was still evolving, though very rapidly. Bandwidth explosion that we see today was then a pipedream. Faced with a low immediate realization, software vendors deferred their plans to provide software in an Internet-hosted model. In fact, many software vendors considered the ASP model to be a threat to their well-entrenched and profitable software licensing model. The industry became more cautious and realistic after the dotcom bubble burst. While Internet became popular for email, collaboration and portals, business applications remained in the domain of local networks; hosted within the organization.

In 1999, Mark Beinoff of Oracle saw an opportunity to offer a Customer Relationship Management (CRM) solution over the net. CRM was a buzzword and the industry was skeptical of its utility. CRM practices varied from enterprise to enterprise. Beinoff decided to make CRM adoption capital friendly by offering it as a service accessed over the

internet. Salesforce.com was born. Many organizations, large and small, had striking customer gains from using Salesforce. It was an eye-opener for the entire IT industry. One of the insights was that, more than the large enterprises the model was better suited for SMBs who could experiment with new software with little investment. The paradigm got re-christened as SaaS – Software-as-a-Service. SaaS is now a paradigm shift; SaaS products are mushrooming. Fortunately, Internet bandwidth is increasing three times, year on year. Google, with office suites on the net, and ERP vendors with re-engineered SaaS solutions, have jumped on the bandwagon. SaaS is here to stay.

Some of the perennial problems that lie in the way of IT adoption in SMBs are solved by the SaaS model. Capital investments are low. Software and infrastructure are remotely managed, with lesser dependency on in-house talent. New features in the periodically upgraded software address the changing needs of a growing business. While all this sounds to be a winning model, is SaaS a panacea for all IT challenges faced by SMBs? Impersonal services such as a standard CRM can be successfully offered as a SaaS application. However, for ERP systems, the software needs to be flexible and integrated with other applications. A business process that best meets an organization's requirement still needs to be configured. The necessity for in-house functional experts remains. Moreover, a good part of the infrastructure, such as network routers and client PCs, remains in-house. How would the SaaS provider provide system integration services for an organization?

### *B. Cloud Computing*

For 2010 as well as 2011, Gartner Research has identified Cloud Computing as the topmost technology in its annual list of top 10 strategic technology areas<sup>[1],[2]</sup>. Gartner defines Cloud Computing as a style of computing where scalable and elastic IT-related capabilities are provided 'as a service' to external customers using Internet technologies. To clarify, here IT is offered as a defined service to consumers and consumed over the Internet, with service resources being either added or removed, as needed, from a pool of shared resources for economies of scale, and with consumers paying for these services as per their individually metered usage<sup>[3]</sup>.

There is now a consensus that Cloud Computing services be categorized into three broad types. A service that primarily offers computing resources such as CPU, RAM, and data storage is termed Infrastructure-as-a-Service (IaaS). Amazon is the pioneer and the industry leader in offering inexpensive computing resources in an innovative pay-as-much-as-you-use model. A service that targets software developers and offers them platform and tools to build and host their applications falls under the category of Platform-as-a-Service (PaaS). Google, Microsoft, Force.com are some of the players in this yet-emerging category. And lastly, Cloud Computing encompasses the well-understood category of ready-for-use SaaS applications that are web-based and offered in a subscription model.

So is Cloud Computing, with software applications as well as computing resources available on the Internet, the answer for an SMB's IT challenges?

The answer is a qualified no. Not all IT systems can work on the Internet. For instance, a point-of-sale system (typically the billing software used in retail outlets) needs to be locally installed so that it can interface with local devices such as the bar code scanner, the bill printer, the credit card reader, and the cash till. Moreover, retail

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[1] Gartner Identifies the Top 10 Strategic Technologies for 2010  
– Gartner Press Release dated 20-Oct-2009.  
<http://www.gartner.com/it/page.jsp?id=1210613>

[2] Gartner Identifies the Top 10 Strategic Technologies for 2011  
– Gartner Press Release dated 19-Oct-2010.  
<http://www.gartner.com/it/page.jsp?id=1454221>

[3] Gartner Highlights Five Attributes of Cloud Computing  
– Gartner Press Release dated 23-June-2009.  
<http://www.gartner.com/it/page.jsp?id=1035013>

systems cannot stop working due to network unavailability; the retailer risks losing business from an irate shopper waiting in a growing check-out line.

For the next few years, affordable broadband connectivity will remain unreliable in parts of urban India. In the interiors of India, there are towns where connectivity is not readily available. A local telecommunication company needs to lay the proverbial last mile, a process that takes several weeks. Power outages too affect network equipment that have limited battery backup.

A holistic IT solutions model for the SMB would then include a few applications residing within the organization. There would be offline modules that enable a business to continue to perform critical transactions even when the network is unavailable. Legacy applications too would be local. While Cloud Computing is an appropriate way of delivering IT to SMBs, it needs to be supported by offline, legacy, and local services.

#### *C. SaaS and Cloud Computing - building blocks for a new service*

SaaS and Cloud Computing though critical, are but one part of a larger service model in the making – a new model that mitigates the hassles in last mile integration, provides much-needed advisory services, and brings multiple solutions to the basket. How can an ecosystem of a software service provider, a hardware vendor, a network service provider and professional process consultants be brought together? Tapping the promising SMB market needs a service provider, who will drive such an ecosystem.

## **IT-as-a-Service**

If we connect the dots, the need of the hour is Managed Services: a vendor who provides all IT components, and relieves the business by taking the ownership for IT management. The vendor must drive an ecosystem of hardware vendors, network service providers, support partners, niche software vendors, and financiers. These, in turn, would complement its software solutions and consulting capabilities. We call this IT-as-a-Service.

Figure 1 depicts the elements of IT-as-a-Service. There are six layers of IT Services in this model, with each layer becoming specialized and sophisticated as it ascends. In addition, there is the L5P layer between L5 and L6, which covers platforms such as Assessments, Professional Virtual Community (PVC) and Reward & Recognition.

Access devices such as client PCs, laptops and Point-of-Sales systems require efficient vendor management to get the best value for money. Effective vendor management would also include considerations such as logistical convenience, support availability, and management of support contracts. Financing the investment would need partnerships with financing institutions.

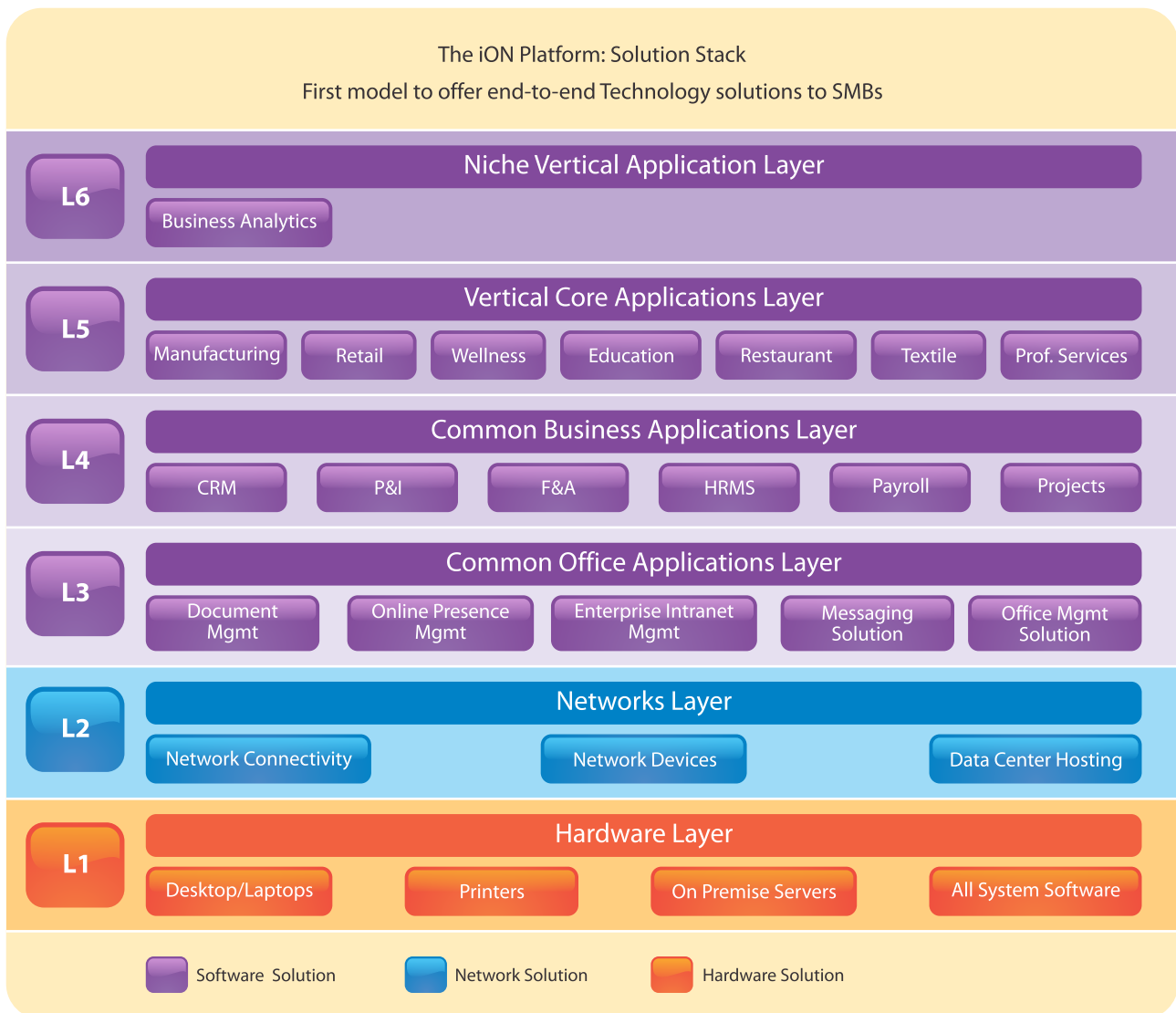
A similar set of services would be needed for network solutions. Network solution would also include system integration services and security setup in the last mile.

To start with, an SMB needs office applications, email (messaging), and a website (online presence). An internal system to collaborate and a system to manage important documents are needed as the organization grows. Many of these applications are web-based. To dramatically reduce costs, open source is an attractive option.

In case of business solutions, transition to a web-based service depends on a few factors. Understanding the business requirement and developing the IT roadmap is important. The service model requires standardizing the functionalities of these solutions. Functional support is needed to help the business find opportunities to rationalize their process to standard and best practices. At the same time, these applications must be natively designed to provide specific flexibilities. The IT service provider would need to support the business to configure these applications and to make them work as per the organization's requirement.

An SMB would have concerns about the security of their data that resides in remote datacenters owned by the service provider. The service provider then must comply with and implement a comprehensive and foolproof security policy that maintains data privacy and preserves data integrity. Technology has, indeed, evolved to provide high data security in managed services models. Sophisticated intrusion prevention and detection systems alert the service provider when web-attacks are attempted. Formal certification of compliance to security process standards indicates a service provider's maturity in protecting customer data.

When data is located remotely, one would also be concerned about business continuity when faced with an unforeseen event such as a natural disaster. Technology is available to replicate data in real time and continue operations from an alternate data center. Hosting applications in robust, secure and certified data centers that adopt such technologies is important.



**Figure 1 – Layers and Offerings in IT-as-a-Service**

## TCS – Innovating a New Service Model for SMBs in India

TCS provides IT solutions in each area (Figure 1), in a concerted way. TCS offers one shop IT solutions that are rendered on demand. The demand may be either in terms of scalability with business growth, or in terms of new solutions as the business adopts new operating models to evolve and compete.

TCS' managed services relieve SMBs from the complexities of IT. SMBs receive maximum benefit from solutions they adopt, with TCS innovating on it and managing them on their behalf. By centralizing and standardizing solutions for multiple SMBs, TCS is able to achieve economies of scale and pass on the cost benefits to SMBs. TCS converts IT investment into an operational expense. Scarce capital can now be invested to grow the core business. Quarterly IT expenses are offset by benefits that the SMB immediately gets from automation.

TCS has been serving large enterprises for over 40 years now. Rich expertise, diverse talent pool, and technology capabilities have brought TCS to a threshold where it can redefine the way SMBs leverage IT.

## Conclusion

SMBs are tech-savvy and are often quick to leverage new technologies for a competitive advantage. However, of all the industry segments, SMBs lag behind in IT adoption and sophistication. A multitude of IT vendors, with enterprise service capability, have jumped the bandwagon to tap the now-very-attractive SMB market. While the IT market for SMBs has come of age, the vendors are yet to innovate! Their conventional service models do not work for this segment at all. The question that then needs to be answered is, "What should be the elements of a new service model for SMBs?" Clearly, we cannot have only one breed of vendors to cater to this unique market. Rather, we need an ecosystem. TCS is strongly inclined to the vision that a service player, who drives an ecosystem of service providers and provides a basket of services, will see better acceptance in this segment.

## Why iON

iON provides comprehensive solutions that address varied IT requirements. From network to ERP, iON is offered as a single service, in a pay-per-use model, allowing you to leverage the solution's true potential. iON ensures integration of all processes along with ease of use.

### **iON promises:**

- **High performance in normal broadband;**
- **Stringent security and data privacy ;**
- **Guaranteed availability (99 per cent uptime);**
- **Disaster recovery;**
- **Reduced need for IT staff.**

iON, therefore, manages your processes while you use the software. You gain from:

### **Integrated solutions**

We ensure that all your solutions are connected. For example, if you are using a CRM along with an ERP, and have a document management system to organize your files, we ensure that these solutions are connected and work as one. So for you, it is simply IT and not applications.

### **Increased agility**

We bring in the agility to keep pace with changing processes or a new line of business. We help you configure the processes to work differently or simply choose new practices recommended by the software. Our activation system flags on best practices while the system is running. As you pick and choose, we give you more options to choose from.

### **A pay-as-you-use model**

This model eliminates capital investment as we provide the IT infrastructure and software on rent. You pay as you use and only for the number of users who actually use the software. The rent is charged monthly. Typically, the cumulative rental for three years is equal to the capital cost of acquiring similar or lesser software with one-time payment. Usually, the ROI exceeds rental within three months, when best practices are well followed. The rental includes maintenance and training, with no hidden costs.

### **Personalized solutions**

Although this is a cloud service, the software is configurable to each business. You will always get the flavor of your own business by picking and choosing what processes you would need.

### **Automatic upgrades**

We continuously invest in our solutions to ensure best practices. We enrich the software based on user feedback and business and statutory changes. We ensure the upgrade without disrupting the user.



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### About iON

iON is Tata Consultancy Services' strategic unit for Small and Medium Business. iON provides end - to - end business solutions to the SMB segment, the growth engine of the economy. iON caters to the needs of multiple industry segments with best practices gained through TCS' global experience, domestic market reach, skills, know-how and delivery capabilities.

For more information, visit us at [www.tcsion.com](http://www.tcsion.com)

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### About Tata Consultancy Services (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match.

TCS offers a consulting-led, integrated portfolio of IT and IT-enabled infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development. A part of the Tata Group, India's largest industrial conglomerate, TCS has a global footprint and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

For more information, visit us at [www.tcs.com](http://www.tcs.com)

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