

## **WIRELESS SOLUTIONS FOR COOPERATIVE BANKS**

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### **Cooperative Sector Banks and E-banking**

Co-operative movement is quite well established in India. The first legislation on co-operation was passed in 1904. Gujarat's familiarity with cooperative banking is also scattered over more than a century. The first urban co-operative bank in India was formed nearly 100 years back in Baroda.

#### ***Co-operative Banking Movement***

Co-operative Institutions are engaged in all kinds of activities namely production, processing, marketing, distribution, servicing, and banking in India and have vast and powerful superstructure. Co-operative Banks are important cogs in this structure.

In the beginning of 20th century, availability of credit in India, more particularly in rural areas, was almost absent. The co-operative banks arrived in India in the beginning of 20th Century as an official effort to create a new type of institution based on the principles of co-operative organisation and management, suitable for problems peculiar to Indian conditions. These banks were conceived as substitutes for moneylenders, to provide timely and adequate short-term and long-term institutional credit at reasonable rates of interest.

In the formative stage Co-operative Banks were Urban Co-operative Societies run on community basis and their lending activities were restricted to meeting the credit requirements of their members. Mehta Bhansali Committee first spelt out the concept of Urban Co-operative Bank in 1939, which defined on Urban Co-operative Bank. Provisions of Section 5 (CCV) of Banking Regulation Act, 1949 (as applicable to

Co-operative Societies) defined an Urban Co-operative Bank, as a Primary Co-operative Bank other than a Primary Co-operative Society was made applicable in 1966.

Of late with gradual growth and also given flip with the economic boom, urban banking sector received tremendous boost and started diversifying its credit portfolio. Besides giving traditional lending activity meeting the credit requirements of their customers they started catering to various sorts of customers viz. self-employed, small businessmen / industries, house finance, consumer finance, personal finance etc.

### ***Cooperative Banking Computerisation***

Banking computerisation -- what is available and is it in right direction? Story so far.

What many cooperative banking organisations have decided is really very difficult to understand because it does not seem to achieve either the improvement of service nor setting up of environment of complete computerisation. With the various kinds of computerisation, we have observed the customer to note:

- ✓ Increase in service time even when the system is running
- ✓ Absolute chaos when the system is down temporarily when no service is offered even if the system is not needed to dispense the customer (mere acceptance of a cheque is also refused even when the entry is possible to be done later)
- ✓ Delay in receiving periodic statements.
- ✓ Confusion at each technical leap from ALPM to LAN to MINI to RTGS
- ✓ No answer for wrong balance being carried forward either at year-end or at the time of switchover to computers until expensive hue and cry is embarked upon.

As an IT Experts we note with concern that:

- ✓ Mismatch of transactions between the manual books and the computer generated report.
- ✓ Double entries creating time loss and error where the Back office is not integrated.
- ✓ Poor quality of system not checking for quality of inputs.
- ✓ Non-existing customer channels.
- ✓ Interconnectivity between branches and Intra-branches networking very unreliable.
- ✓ Software in each branch is not standardised even in the same Bank's network not permitting the advantages of experience or exposure to other branch software of the same Bank.

The use of computers to merely service the depositor customer does not constitute Bank branch computerisation. Of course some systems permit the preparation of 'Cash Book' and the General Ledger taking care of the daily Back office requirements. Noticeable in their absence is the department of advances and Inter-branch transactions.

### **Advances -- Earning department ignored**

Bills are one of the products of the advances department and most of the systems have ignored the important point that this is the profit-earning department of the Bank. Bills purchase and discount whether local or foreign is the mode encouraged by the RBI from time to time since the transaction financed is specifically identified. How many of the Banks have a system to cater to this? The calculations of each transaction are complex especially when the Bill is paid after due date. Taking care of this would ensure correctness of calculation of an important source.

Loans is one of the oldest methods of financing and I have yet to see in the nationalised Bank sector a single system that integrates the

documentation requirements of advances with the transaction recording of loans.

### **Inter-branch transactions**

Issuance of any of the remittance instruments like Bank draft, Telex transfers etc. is one of the major sources of creation of inter-Branch transactions. Reconciliation of these is one of the banes of the industry and few have managed to bring it into a manageable size.

Hiding in the reconciliation items is always a bomb in the form of a fraud, which is often discovered once the reconciliation items are analysed. The older the entry, the more remote the possibility to either recovery or catching the person responsible.

The recent fraud of deposit of fraudulent drafts, which were followed up by a fraudulent advice, is ample proof that the inter-branch reconciliation needs to be of a smaller age. The irony is that due to even the lowest level of computerisation, this is easily possible.

All the Bank has to do is obtain on a magnetic media say a floppy such inter-branch transactions and let the central computer list out the variances for the branches to respond. When the reconciliation last done is three years old and this is considered a normal affair, it is time for the task force to come in.

### **An idealistic view**

Let us take the liberty to define what we expect the mature branch computerisation to achieve. Graphically speaking, we would like the system to achieve basically:

Counter computerisation	Efficient counter computerisation	Daily branch efficient computerisation	Branch and inter branch computerisation	Total Computerisation
Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
Faster Service to existing customers, enhanced channels for interaction, 24X7 service offering. Anytime Anywhere, Any service offerings.	Controls integrated into the system. Responses to queries automated. Secured system for information aggregation and dissipation.	Back office load taken care of by the system. Real-time updated information .	Inter-branch transactions reported by system, Branch real-time integration and multi-branch banking.	Statistical information extracted by the system, intelligently .

To understand this difficulty all you have to do is walk into a cooperative sector bank anywhere in this country. It takes close to half an hour to fill out a demand draft, another half hour to withdraw cash and sometimes, more than twenty days to get an up-country cheque credited to your account. Add to this the irritation and sneers you get from harassed bank clerks and when you walk away they feel they are actually doing you a favour by keeping your money with them.

Look at the Bank branch you bank with and see how far from total computerisation is the branch. It is sad to note that even the first stage is achieved by so few that they are only the 'showcase' branches of the Bank.

- A. Emulation to the other branches is a far cry due to non-stabilisation of service of the system.
- B. All counter departments like savings, current, cash credit and cash all linked.
- C. Back-office also linked to daily transactions demanding only the minimum of input at the end of the day.
- D. Advances department with special modules to take care of each of the products of the Bank taking into the unique control and audit requirements of each.
- E. Advances department to have special link to documentation requirements and their follow-up to ensure the documents are not time barred.
- F. A proposal evaluation system to offer quicker answer to prospective borrowers instead of the world record of a quarter to answer a simple proposal requirement.
- G. Inter branch transactions linked via a modem to reduce reconciliation to not more than a week.
- H. Remittances of inter branch funds to take seconds instead of days.
- I. Head Office statistical requirements to be served by the system directly also via a modem or preferably by a 'dial-in-query' by the head office.

The idealist view just discussed is in reality very achievable to day provided the management has the will and the guidance to do so. Merely replacing the calculator by a computer does not mean computerisation. Unless we see a stark change in the quality of banking computerisation, we will have to consider their computers to merely be used as typewriters with heavy under - exploitation of computers and thus the entire Banking work force. In addition, the next Banking fraud is likely to be based on weak computerisation and armed with such knowledge of prevention; it will be a real pity if that

occurs. We can see some bold steps by a few Banks but these steps require being much more firm and advanced to achieve leapfrog.

### ***Internet Banking***

The Internet banking is changing the banking industry and is having the major effects on banking relationships. Research emphasised that Web is more important for retail financial services than for many other industries. Internet banking involves use of Internet for delivery of banking products & services.

It falls into four main categories, from

Level 1 - minimum functionality sites that offer only access to deposit account data - to Level 4 sites - highly sophisticated offerings enabling integrated sales of additional products and access to other financial services- such as investment and insurance.

In other words, a successful Internet banking solution offers

- ✓ Exceptional rates on Savings, CDs, and IRAs
- ✓ Checking with no monthly fee, free bill payment and rebates on ATM surcharges
- ✓ Credit with low rates
- ✓ Easy online applications for all accounts, including personal loans and mortgages
- ✓ Low transaction costs
- ✓ 24-hour account access
- ✓ Quality customer service with personal attention

### **DRIVERS OF CHANGE**

Advantages previously held by large financial institutions have shrunk considerably. The Internet has levelled the playing field and afforded open access to customers in the global marketplace. Internet banking is a cost-effective delivery channel for financial institutions. Consumers are embracing the many benefits of Internet banking.

Access to one's accounts at anytime and from any location via the World Wide Web is a convenience unknown a short time ago. Thus, a bank's Internet presence transforms from 'brochure-ware' status to 'Internet banking' status once the bank goes through a technology integration effort to enable the customer to access information about his or her specific account relationship.

The six primary drivers of Internet banking includes, in order of primacy are:

- ✓ Improve customer access
- ✓ Facilitate the offering of more services
- ✓ Increase customer loyalty
- ✓ Attract new customers
- ✓ Provide services offered by competitors
- ✓ Reduce customer attrition

## **INDIAN BANKS ON WEB**

The banking industry in India is facing unprecedented competition from non-traditional banking institutions, which now offer banking and financial services over the Internet. The deregulation of the banking industry coupled with the emergence of new technologies, are enabling new competitors to enter the financial services market quickly and efficiently.

Indian banks are going for the retail banking in a big way. However, much is still to be achieved.

- ✓ Throughout the country, the Internet Banking is in the nascent stage of development {only 50 banks are offering varied kind of Internet banking services}.
- ✓ In general, these Internet sites offer only the most basic services. 55% are so called 'entry level' sites, offering little more than company information and basic marketing materials. Only 8% offer 'advanced transactions' such as online funds transfer, transactions & cash management services.



- ✓ Foreign & Private banks are much advanced in terms of the number of sites & their level of development.
- ✓ Co-operative banks are totally out of race.

## **EMERGING CHALLENGES**

- ✓ Highly competitive Internet Banking Market will be driven by
- ✓ Demand side pressure due to increasing access to low cost electronic services.
- ✓ Emergence of open standards for banking functionality.
- ✓ Growing customer awareness and need of transparency.
- ✓ Global players in the fray.
- ✓ Close integration of bank services with web based E-commerce or even dis-intermediation of services through direct electronic payments (E- Cash).
- ✓ More convenient international transactions due to the fact that the Internet along with general deregulation trends eliminates geographic boundaries.
- ✓ Move from one stop shopping to 'Banking Portfolio' i.e. unbundled product purchases.

Certainly some existing brick and mortar banks will go out of business. But that's because they fail to respond to the challenge of the Internet.

The Internet and its underlying technologies will change and transform not just banking, but also all aspects of finance and commerce. It represents much more than a new distribution opportunity. It will enable nimble players to leverage their brick and mortar presence to improve customer satisfaction and gain share. It will force lethargic players who are struck with legacy cost basis, out of business-since they are unable to bring to play in the new context.

## **MAIN CONCERNS IN INTERNET BANKING**

There is a dual requirement to protect customers' privacy and protect against fraud.

Banking Securely: A multi-layered security architecture comprising firewalls, filtering routers, encryption and digital certification ensures that your account information is protected from unauthorised access:

- ✓ Firewalls and filtering routers ensure that only the legitimate Internet users are allowed to access the system.
- ✓ Encryption techniques used by the bank (including the sophisticated public key encryption) would ensure that privacy of data flowing between the browser and the Infinity system is protected.
- ✓ Digital certification procedures provide the assurance that the data you receive is from the Infinity system

### ***The future of cooperative banking.***

Driving technologies for customer

Real world issues have often driven the financial sector into a leadership position for the adoption of emerging technologies.

“Today the Internet is being harnessed extensively for maximizing transactional efficiency while integrating online banking and other newer customer channels.”

Today's challenges -- deregulation, mergers, higher customer expectations, demands for efficiency and security -- suggest that business analytics, virtual teaming and single sign-on will soon join wireless and natural language understanding used by the cutting edge of the Finance industry.

The financial sector has always had an appetite for advanced IT. Popular use of ATMs predated home computers by years, and today, we see strong moves by innovative firms into wireless, natural language and business analytics.

## **Why?**

The banking financial industry's key product is information, whose flow is often impeded only by the need for signatures and documents. Your competitors also know this. They often have both the money and the risk tolerance needed to take a chance on new technologies.

Over the long term, work in artificial intelligence, agent technology and visualization may combine with experimental economics and valuation of intellectual capital to create new wealth or disrupt the industry in unpredictable ways. In the medium term, however, current trends and issues suggest important contributions can be made by specific emerging technologies.

## **The challenges**

People increasingly want to take more and more control of their financial assets.

They want all their account data to be current and accessible and are looking for the freedom to execute virtually any transactions from any part of the world at any time.

A year ago, most financial executive dismissed the concept as technologically remote, inordinately expensive and even a little brash. But in recent months, many executives have been searching for and learning about technologies that can deliver a more seamless way for customers to manage their money instantly, flexibly and with sophistication.

More than three million people in the US alone, according to an estimate will use aggregation programs (aggregators gather data from customer's accounts regardless of which sites they originally posted them) by end of 2003, up from 5.5 lakhs two years ago. In fact, many banks are opting for such aggregator programs in India.

Any place, any time access to personal financial services is perceptive but limited. Yet collectively they point towards the emergence of an important market segment: the transactional customer increasingly seeks real-time access to his banks or brokerage accounts and looks for even more.

Banking & Financial services firms are faced with unprecedented challenges created by: Deregulation and mergers; more sophisticated, demanding customers; and pressure to work more efficiently. Let's explore each of these more closely.

Deregulation has created a climate of increased competition and changing business structures.

- ✓ New competitors have emerged from both different geographies and other industry sectors -- such as insurance -- challenging the value delivered to customers and the costs.
- ✓ There are more opportunities for mergers, and they must offer a return on investment through greater reach and economies of scale. Customers have better access to information and new expectations.
- ✓ The Internet, cable news, mailing lists and newsgroups are just a few examples of how regular investors are provided with information that was previously unavailable to them.

- ✓ As service industries have moved to availability through a variety of communications and support 24x7, customer expectations have hit new highs.
- ✓ Customers at lower tiers have become interested in wealth management services as well. The astute use of technology can make this a profitable business. New technologies and business models have raised the bar on efficiency.
- ✓ The proliferation of networks has reduced the need for human handling and created new opportunities for financial services firms to reengineer processes.
- ✓ Online banking has facilitated data capture and shifted work to customers.

### **The capabilities**

By performing an analysis of these issues and trends, there are five capabilities that appear to be needed as the finance industry goes forward:

Three that can be pivotal to financial firms' future success -- flexibility, efficiency, and innovation; and two that appeals to the customer -- convenience and experience.

It is logical to add security to this list. While the financial sector has always been more attentive to security issues than many industries -- both to protect assets and to protect clients, today, business executives are exquisitely aware that there are vulnerabilities in the current infrastructure and new ones stemming from increased use of Web sites, wireless technology and online identities.

For each of these capabilities, there are specific technologies, or clusters of technologies, that can potentially make a difference in the medium term.

Flexibility -- Companies that are locked in to one way of doing business and slow to change are particularly vulnerable as jurisdictional and geographic barriers become more flexible or, in some cases, begin to fall altogether. Companies that are less hierarchical and have infrastructures that allow them to quickly change and grow can gain an advantage in this new environment.

How can organisations become more flexible? One of the most difficult tasks will be transforming the organization to take full advantage of talent through virtual teaming, decision support and other tools of knowledge management. Because of the social and cultural changes that these technologies require, smaller companies may have an advantage here, particularly if they can be part of the leading edge in dynamic partnering. Adherence to industry standards, the use of open source software, XML and architecting for rapid deployment may provide more dependable returns for larger firms looking to become more flexible.

Efficiency -- Mergers are one way of increasing a company's efficiency. One promise of mergers is the reduced costs realized from finding and eliminating redundancies and taking advantage of economies of scale.

Traditional approaches to reengineering and scaling the organization lead the way here, but a number of technologies can make the difference. Workflow analysis and support tools can help to identify process problems and reveal what work is really analogous, despite department-specific, non-standard terms. These tools can help organize work, based on people's actual activity patterns, rather than on a theoretical practice model from headquarters. Efficiencies can also be found by using tools for rapid deployment and by architecting efficiency... for example, by including Storage Area Networks). Although concerns about security are likely to delay widespread

adoption of grid computing by the financial sector, the value of sharing resources and putting idle resources to work will ultimately be compelling.

Innovation -- History shows that finding new ways of assessing risk or determining value can create enormous and profitable markets. While novel ideas may have a better chance in a less hierarchical organization, with virtual teaming and decision support, large organizations may have the benefit of using business analytics, simulation, visualization and experimental economics to generate and test ideas. More data, more powerful systems and deeper algorithms can help provide the competitive advantages that financial firms seek.

Convenience -- More and more, customers want to interact on their own terms. Portals that allow greater personalization and link to real time messaging are of more value than generic sites that only announce new products or provide limited account information. Wireless access to changing data, such as stock quotes, is already a customer expectation; access to experts and alerts is on its way. Home networking offers enormous opportunities for understanding and managing expenses and risk, and the range of options will increase as higher bandwidths become more available. This will provide a wealth of contextual data that can help focus responses and reduce requirements for explicit data entry.

Experience -- The customer's "experience" of your financial institution is created from the sum total of many things, from the ATM machine's interface, to the complexity of the account paperwork, to an employee's tone of voice. The experience design goes beyond the role of IT, but emerging technologies related to context and personalization are key.

Content management and profiling can use -- or even create -- an experience that is less frustrating and more effectively targeted toward the customer's needs, interests and current entry device of choice. The use of modular data, such as XML, can facilitate lifestyle and event transactions. Consider this non-obvious connection: Your customer has an opportunity to change their insurance choices and carrier within a site devoted to wedding planning. Applications related to electronic identities, including single sign-on, can help market to the engaged couple, as well as aid in authenticating and authorizing transactions.

There are also tools, such as collaborative filtering, that can identify and nurture "virtual communities" that may build confidence and knowledge (which are often prerequisites to buying financial products). Here again, decision support and simulation -- which can be effective education tools -- can play a role.

Security -- Privacy, safety, confidentiality and protection are important across every aspect of business. Unfortunately, today there is no single technology that can encompass all of these aspects to achieve a high level of security. Security is systemic, comprised of layers, rules, actions and specific technologies that are both mixed into, and bolted onto, the core systems.

Still, single sign-on can be more than a convenience. It can enhance security by reducing the complexity for the user and encouraging security-conscious user actions, such as good password management. Biometrics can speed authentication and provide an extra measure of security. Ultimately, autonomic computing -- whose premise is to help protect the system at every level and identify new threats -- may help set the standard for security. The financial sector is likely to be the most demanding customer for this type of technology.



## **The results?**

Your clients spend a lot more time thinking about home improvements, helping their children with their homework and paying their bills than they do about financial products. But, when they need you -- to get a loan to pay for contractors, to save for college, to automatically track budgets, estimate taxes or suggest investment options -- you appear on their favourite Website with a tailored offering. You make it easy for them to compare choices and even easier to finish the documentation they need to transact business with you, even if they are calling from a cell phone in the middle of the night as they drive back from visiting a potential college with their oldest daughter. They look to you, not just as a financial firm, but also as a trusted advisor.

To address this demand, we have harnessed Internet power to maximize transactional efficiency while integration online banking and other new customer channels. By enabling real-time personal, financial information, they hope to enhance customer relationship, improve retention, and increase in-house efficiency. We felt it is imperative that the country's public sector and cooperative banks should adopt global industry standard banking software if they are to successfully compete with international banks as well as private sector banks, which are increasingly gaining ground in the Indian market. Enhanced services and customer experience being offered by tech-savvy banks will be key drivers of customer loyalty.

## ***Whither Internet Banking***

A number of banks have either gone for Mobile Banking or are on the verge of going for it the type that enables the customer to transact business on line in real time.

The decision to implement a Mobile banking solution for cooperative banks should not be based on the "we-too-have-it" factor (Mr. Jones' effect). Before you decide for Mobile based delivery channel you should consider a variety of factors. The first and the foremost being the business justification for it. In any case the RBI is going to need it (duly passed by your board of directors) before you get permission for it. You will have to take into account the following factors:

Possibility of new business generated.

1. Additional floating funds expected from new as well as the existing customers.
2. Expansion in the geographical reach of your business.
3. Your plans to integrate with other banks or the total banking system (RBI has started the implementation of RTGS. An internal real-time transaction system combined with the Real Time Gross Settlement System of the RBI will be a miraculous achievement for the Indian banking customer).
4. The image value. The image of a tech-savvy bank, especially if you are targeting Generation X.
5. The chances of your customers shifting loyalty if you do not modernize.

You may have two objections to my above statements:

- A. It is just not possible to quantify the above factors.
- B. If you take into account these factors, almost every bank will have a strong case for delivery channel management system for banking.

But, if that is the case, why should you spend time and money on analysing these. Time and money do not come for free.

Triggers

24 x 7 availability, increase in customer convenience, retention and cost reduction triggered the concept of online banking. The cost of an

online transaction is estimated to be nearly one eighth of that done through branch banking.

The challenge for banks would lie in expanding their subscriber base of online consumers and enhance their service portfolio. How the banks fare in designing, improving, marketing and rolling out services will greatly impact the adoption trends.

While Internet banking in India is still in nascent stage, it can become a significant channel for servicing customers. Countries like Singapore have nearly 10% of their population banking online. Though India may have a very small online banking population, the untapped market represents a huge potential.

There are reasons for it. For one, if you have built a detailed business case for it with projected figures, your Internet banking team knows where to push and for what objective.

### ***The Mobile and Wireless Challenge: Issues and Problems***

It's no secret that building a mobile banking solution is complex, and requires advanced technical skills to bring successful solutions to market quickly. Financial institutions are faced with technical barriers when developing mobile banking solutions, such as integrating disparate networks, devices, and operating systems.

In addition, as customers use the public Internet to convey confidential information to highly portable devices, rigorous security issues must be addressed. Finally, financial institutions must also overcome integration issues to ensure the seamless flow of information between enterprise systems and mobile devices.

Much of m-commerce's strength lies with Wireless Application Protocol (WAP) technology, which allow users to access the Internet

by using wireless devices such as WAP-enabled mobile phones or palm PCs.

WAP is an open, global standard for communication between a mobile handset and the Internet oriented applications. In addition to allowing direct connections to Internet-based mobile services and information, WAP also offers tremendous flexibility: dynamic creation of WML pages, opportunities for companies to offer and host mobile services, bandwidth optimisation, and data encryption over the mobile network. Other technologies used worldwide to enable mobile payments today are Bluetooth, WiFi, and RFID (radio frequency identification), a short-range transmission system. For the local scene, however, the popular short messaging services (SMS) and General Packet Radio Service (GPRS) are the predominant technologies or data bearer for mobile banking transactions.

### **Why wireless banking**

Real world issues have often driven the banking sector into a leadership position for the adoption of emerging technologies. The financial sector has always had an appetite for advanced IT. Popular use of ATMs predated home computers by years, and today, we see strong moves by innovative firms into wireless, natural language and business analytics.

### **Why?**

The financial industry's key product is information, whose flow is often impeded only by the need for signatures and documents. Your competitors also know this. They often have both the money and the risk tolerance needed to take a chance on new technologies.

### Enhanced customer satisfaction

By “going wireless,” any financial institution has greater flexibility to please customers and support the basics of account management. No longer do customers have to wait until they get to a PC or ATM, or wait on hold on a telephone queue for banking or brokerage information. This convenience not only promises to attract new customers, but also protects existing relationships against aggressive competitors.

### Achieve a higher profile in your target market

Using mobile phones and other wireless devices such as PDAs’ customers are just a click away from your Welcome panel — via a branded button that sits on their personal handset screens. Trials show that mobile banking customers tend to interact with their financial institution more frequently. Every transaction becomes an opportunity to reinforce your brand image.

### Gain a customer advantage

Financial institutions can deliver new services to new customers virtually whenever and wherever they want.

With mobile device users growing at an exponential pace, an institution can stand out from the competition by being among the first few to offer mobile banking.

### Enhanced Productivity

Firms with more connected employees have the largest need for mobile data and are adopting enterprise mobile deployments at an increasing rate. The reason is that employees and customers are becoming more and more mobile over time. To this point, Meta Group states that 75 percent of knowledge workers will be mobile more than 25 percent of their time by 2003. Applications that are focused on delivering essential enterprise applications and information like sales force automation; solve a critical problem by

maintaining and improving efficiency rates within an enterprise. Banking and financial services companies need to provide up-to-the-minute financial information in order to drive additional revenue-generating activities like stock-trading and asset management activities for high-value equity customers.

### **Key Business drivers**

- ✓ So it is by improving business processes that mobile solutions will find their place in many enterprises.
- ✓ Several internal and external factors are converging to drive a sense of urgency among businesses to find these process efficiencies:
- ✓ Increased customer expectations. With the advance of the Internet era customers expect instant service and problem resolution;
- ✓ Need for effective time utilization. Employees commute and travel more extensively, cooperate across time zones, and face increasing workloads;
- ✓ Need for employee empowerment. Employees need to make informed decisions and act on them anytime, anywhere in the face of more time spent away from the office;
- ✓ Cost reduction and cost avoidance. Enterprises aim to shorten business process cycles through reduced manual workflow and data re-entry and errors in order to keep a minimal cost base;
- ✓ Advancing enterprise connectivity. Business requirements to connect processes across the entire value chain are growing as enterprises interact electronically both internally and with suppliers, buyers and customers;
- ✓ Technological progress. Virtual private networks (VPNs), wireless broadband access and higher wireless security increasingly enable mobile connectivity and help enterprises stay on the competitive edge;
- ✓ Legislation and government requirements.

Insurance, education, social services, and law enforcement agencies are all subject to new and changing government mandates to document activities, improve public service and share information across geographic boundaries and departments.

Mobility provides tangible benefits in terms of cost savings and new revenue as well as intangible benefits like better customer service and higher job satisfaction for the employee.

**About Author:** Deepak Pareek is a seasoned Financial Technology Specialist specializing in Enterprise, Internet, and Wireless applications. He has worked with a wide range of companies, financial institutions, and IT personnel to effectively meet the benchmarks. Deepak is available to consult on your next IT project [e-mail](#) him for additional details.