



## **Solutions for the Telecommunications Industry**

*that let you...*

- *Control and reduce your cost of operation*
- *Improve efficiency in your business processes*
- *Reduce time to market*
- *Focus on your core business activities*

Telecom Service Providers have invested heavily in areas of broadband access, core transmission networks and 3G licenses. However the anticipated returns have not happened at the same pace. Challenges to Telecom Service Providers range from managing business critical IT systems and infrastructure with reduced budgets to achieving increased profitability through customer acquisition and retention.

Tata Infotech has been helping its Telecom customers face this challenging environment by sharing risks and reducing cost through its proven delivery model, thereby providing substantial costs savings.

Tata Infotech's offerings in the areas of Operation Support System (OSS) and Business Support System (BSS), wireless applications, wireless engineering services and security solutions empower Telecom Service Providers to run high-performance and profitable networks and services. For telecom equipment vendors, Tata Infotech provides product development and maintenance support to realize time to market goals along with cost savings.

By focussing on the problems specific to the industry, Tata Infotech strives to provide the most suitable solutions that yield maximum returns on investments from technology. Domain experts with technology background understand and translate business requirements into appropriate and optimal technology solutions.

Quality	Efficiency	Lower cost
<b>Domain Experience</b> <b>OSS / BSS</b> <ul style="list-style-type: none"> <li>• Mediation</li> <li>• Customer Care &amp; Billing</li> <li>• EMS (CA Unicenter, HP Openview, Bull-Openmaster)</li> <li>• Analytics (BI4tel)</li> <li>• ERP (SAP, others), CRM (Siebel, others), UMS (NAP, others)</li> </ul> <b>Wireless Testing &amp; Tools</b> <b>Wireless SI</b> <ul style="list-style-type: none"> <li>• RF Network Planning and Design</li> <li>• RF Network Implementation</li> <li>• RF Network Optimization &amp; Performance</li> </ul> <b>Wireless Applications</b> <ul style="list-style-type: none"> <li>• SMS, MMS, WAP applications, Yellow Pages</li> <li>• Mobile commerce, MCash, Secure Mobile Transactions, Video streaming</li> <li>• BREW &amp; J2ME based handset clients</li> </ul> <b>WiFi</b> <ul style="list-style-type: none"> <li>• Wireless LAN Design, implementation, centralized monitoring and billing of WLAN Networks</li> </ul> <b>NexGen Solutions</b> <ul style="list-style-type: none"> <li>• Seamless mobility, micro radio access, Push to Talk, Wireless broadband and backhaul</li> </ul>	<b>Service Offerings</b> <b>Systems Integration Services</b> <b>Infrastructure Setup</b> <ul style="list-style-type: none"> <li>• Consulting to Service Providers</li> <li>• Hardware and storage sizing</li> <li>• DRP Consulting</li> <li>• Security Consulting</li> <li>• Network Architecting</li> <li>• Network Security and Performance</li> <li>• Site preparation, deployment</li> <li>• 24x7 Support</li> <li>• Facilities Management</li> </ul> <b>IT Enabled Services</b> <ul style="list-style-type: none"> <li>• Call Center</li> <li>• Help Desk</li> <li>• Managed Services (NOC, etc.)</li> <li>• BPO (Billing, processing, maintenance)</li> </ul> <b>Technology Offerings</b> <b>Business Intelligence</b> <b>Enterprise Application Integration (EAI)</b> <b>Enterprise Information Portals (EIP)</b> <b>Reengineering and Web-enabling</b>	

## OSS / BSS Solutions

With over 800 man-years of experience in delivering OSS/BSS services and solutions to major telecom players worldwide, Tata Infotech has expertise in the entire spectrum of wire line, mobile, ISP, local and long distance telecom services. The services include implementing end-to-end solutions using best of breed products and industry standard integration frameworks. Application development and maintenance are also offered.

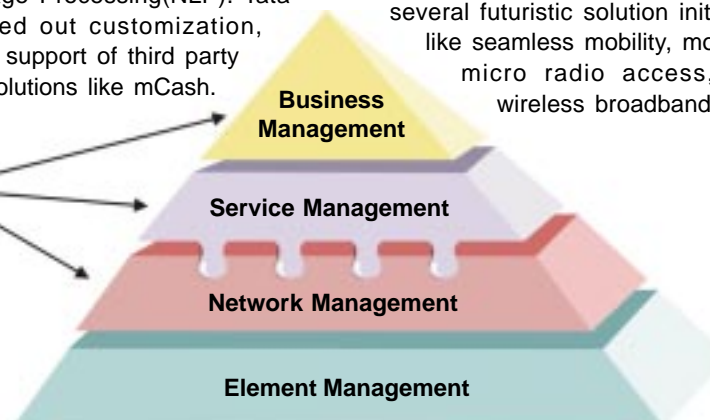
## Infrastructure Support

Setting up and maintaining an intelligent network computing infrastructure is a challenge that service providers must face head-on to remain competitive. A strong infrastructure provides the end user with high service quality and availability of critical business applications. Tata Infotech has proven experience in delivering end-to end solutions from consultation, design, architecture to deployment, audit and management.

## Wireless Applications

Today, wireless applications are not limited to voice alone. Mobile wireless network operators provide value added services to attract the subscriber base as well as to increase the Average Revenue per User (ARPU). Wireless Data Services are gaining popularity and there is a growing demand from subscribers for new wireless data applications like instant messaging, games, news, entertainment, productivity enhancement tools and location based services, to name a few. Tata Infotech has proven experience in working on innovative wireless applications like SMS-based Yellow pages query using advanced technologies like Natural Language Processing(NLP). Tata Infotech has carried out customization, implementation and support of third party mobile commerce solutions like mCash.

**Key Focus Areas**



## WiFi

Tata Infotech will assist Carriers in preparing the roadmap and countrywide plan for the Wireless LAN service. Tata Infotech will design the architecture of WiFi Hotspots. We also carry out RF Survey and Site Survey for these WiFi Hotspots, supply, install, Commission and Support WiFi infrastructure comprising of Access Points, Gateway Routers, Service Manager and AAA Server and also integrate existing / new Billing Application of the Carrier.

## Wireless Systems Integration

Tata Infotech provides Radio and Network Engineering expertise in technologies such as GSM, CDMA, Radio Trunking, and VHF & UHF. Our offerings in wireless engineering services to our domestic and international customers include:

- Network planning and design
- Network implementation
- Network optimization
- Network performance

## Wireless Testing and Tools

Tata Infotech has established a global delivery center for a leading Wireless Test Solutions Company, and maintains a full-fledged CDMA 1X lab for a leading Telecom Operator in India. The services include test application development, maintenance and upgrade of legacy testing tools and services based on the expertise in using these testing tools.

## NexGen Solutions

Tata Infotech's Telecom R & D team has been the driving force behind many initiatives for providing several futuristic solution initiatives in areas like seamless mobility, mobile commerce, micro radio access, push-to-talk, wireless broadband and backhaul.

## Case Studies

### Traffic accounting system for a Leading carrier service provider

Faced with the challenge of building an integrated system, the customer selected Tata Infotech for an end-to-end systems integration and implementation of an intercarrier accounting system, retail billing system, decision support system, financial accounting requirements and the billing mediation system. By extracting billing records (CDRs) from switches, the solution efficiently enforced better control over revenue management and helped in settling accounts with international carriers.

*Comprehensive revenue assurance  
Efficient data analysis*

### WLAN Hot-Spot Rollout for a leading carrier

A leading ISP and a provider of public telecommunication services in India, chose Tata Infotech as the Systems Integrator to rollout Wireless LAN services across the country. Tata Infotech is responsible for preparing a roadmap and countrywide plan for the WiFi Hot-Spots, Architecture Design, Site Surveys, Supply, Installation, Commissioning and Support of the WiFi infrastructure. A popular chain of coffee shops was chosen as the launch pad and the plan includes various restaurants, Hotels and Airports in India.

*Reduced time to market  
Improved market positioning*

### Business Intelligence solution for a large cellular provider

The client needed Business Intelligence to use its operational data effectively to retain customers and increase market share and airtime. The solution assisted them in analyzing the usage patterns of customers based on various factors like rate plans, origin and destination geographies, and call types. The client was able to understand subscriber preferences, broaden the subscriber base and increase the market share and revenue. The solution involved implementation of Key Performance Indicators (KPIs) in the call usage and churn areas using Tata Infotech's BI4tel data model.

*Increased market share and revenue  
Better knowledge of customer needs*

### Security audit for a leading Telecom service provider

Our client deployed a TCP/IP based Internet backbone to provide easy and reliable interconnect points to other ISPs, and Points of Presence for them. Tata Infotech was required to audit the network and systems architecture, performance, security, operations and management, and develop a road map for improving their network systems and services. Tata Infotech's audit covered an independent and detailed security review of internal procedures, the network topology, access controls, applications, databases, operating systems, network security inspections and other software and utilities.

*Resolution of security threats  
Improved system performance*

For further information:

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