



# Company Profile

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## 1. COMPANY PROFILE

VTT established in 1992, is an international organization of strategy and management consultants who serve clients in public and private sectors. VTT specializes in delivering expert solutions in the functional areas of business strategy and transformation, technology enablement, regulatory advocacy and human capital management. We are a focused group of consultants with diverse experience. We leverage expertise from our core team as well as associates who are market leaders, academicians and industry veterans.

**Our Impact** – Our corporate clients engage us as trusted advisors to find new avenues of growth, optimize operations, improve their competitive profile, or inspire organizational changes. Our public sector clients depend on us for understanding socio-political contexts, capacity building and mobilization in communities, integrating stakeholders for large scale initiatives and innovating creative solutions for real-world problems. We deliver results not reports.

**Our Vision** is to continually empower our clients and partners to utilize and profit from the greatest corporate asset of this age - the ability to interpret and harness information.

**Our Business Philosophy** is based on the following:

- **Clients are our top priority** - We work smart to help clients succeed and work tirelessly to accommodate their needs. We ensure the success of our clients by rapidly improving productivity and efficiency to maximize returns
- **Integrity** – We perform our work with the highest level of integrity, honesty and professional diligence
- **Innovative and better Ideas** - We provide innovative and sustainable solutions to help meet pressing challenges enabling our clients to innovate communicate and achieve strategic goals.
- **Employees, the most valuable asset** - We continue to hire and develop the best and most qualified experienced professionals. We strive to be the employer of choice in our industry.
- **Excellence in everything** - Through continuous learning and a passion for innovation, we are committed to delivering the best for our clients, from strategy to implementation. Our clients, vendors, partners and employees are always treated with the utmost integrity and professionalism.

## 2. SERVICE OFFERINGS

VTT offerings include a wide spectrum of services. We tailor our services to the needs of our clients and the unique situation which every challenge brings. A brief of our services is shown below:

Strategy and Transformation	Technology Solutions
<ul style="list-style-type: none"> <li>▪ Competitiveness</li> <li>▪ Corporate Strategy</li> <li>▪ Corporate Due Diligence</li> <li>▪ M&amp;A strategy</li> <li>▪ Project/Program Management</li> <li>▪ Monitoring &amp; Evaluation Framework Design and Implementation</li> <li>▪ Business Process Modeling and Re-Engineering</li> <li>▪ Survey &amp; Research Solutions</li> <li>▪ CapEx and OpEx Management</li> <li>▪ Change Management and Transformation</li> <li>▪ Internal and External Communications Management</li> </ul>	<ul style="list-style-type: none"> <li>▪ e-Enabled Business Transformation</li> <li>▪ IT Strategy and Architecture</li> <li>▪ IT Governance</li> <li>▪ Integration and Development Services</li> <li>▪ Services Management/ Outsourcing/ BPO</li> <li>▪ Vendor Management</li> <li>▪ Mobile Banking Strategy and Implementation</li> <li>▪ Community Development Solutions</li> <li>▪ Technology for Operations (CRM, SCM and ERP)</li> </ul>
Regulatory Affairs	Human Capital Management
<ul style="list-style-type: none"> <li>▪ Interconnect Implementation</li> <li>▪ Tariff and Taxation</li> <li>▪ Spectrum Design and Management</li> <li>▪ Mobile and Local Number Portability</li> <li>▪ Mobile Banking Regulation</li> <li>▪ VoIP Implementation</li> <li>▪ Capacity Based Interconnection</li> <li>▪ Telecommunications Licensing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Capacity Building and Empowerment</li> <li>▪ Organizational Analytics</li> <li>▪ Behavioral and Cultural Change</li> <li>▪ Organization Design and Alignment</li> <li>▪ Staff and Leadership Development</li> <li>▪ Performance Transformation</li> <li>▪ HCM Solutions Suite</li> </ul>

### 3. OUR ENGAGEMENTS

VTT has been involved in diversified engagements with both local and international clients. These engagements leveraged our expertise in the diverse fields of Corporate Strategy and Market Analysis, Capacity Building for Community Development, Survey & Research Solutions, Project Management, Business Processes Design and Re-Engineering, E-Enablement and Infrastructure Planning, Human Capital Management and Organizational Development, CAPEX Management and Regulatory Advocacy. We have completed engagements successfully for both public and private sector clients. Below are the Case Studies from representative engagements:

## Provision of Institutional Support for ICT Led Activities

**Client Name:** Pakistan Jobs Project – USAID

### Client’s Business Challenge

The USAID Pakistan Jobs project is a USAID funded project designed to improve the competitiveness of the Pakistani economy by strengthening systems for workforce development, encourage Pakistani companies to invest in human capital, and improving access to training, Jobs and business opportunities for youth and women. The overall objective of this project is to improve employment for youth and women, increase their incomes and contribute to the sales of enterprises.

Jobs project initiated a project to link private sector partners with institutions in Pakistan for closing the gap between skill sets being produced and skill sets required in the industry. This project included (1) Enhancing ability of American Business Council (ABC) Network, (2) Enhancing capacity of CISCO/ ICT Network Academy Partners, (3) Conducting HR Fora with private sector companies and (4) Pilot Implementation of Soft Skills trainings and Job Portal at TEVTAs.

To that end, USAID Pakistan Jobs Project acquired the services of VTT for carrying out Component 1 and component 2 of the exercise.

### VTT Solution

VTT, as strategic and technical advisors to Pakistan Jobs Project, formulated a team of industry experts including expertise in Human Capital management, marketing and promotions, capacity building and training development and delivery.

The idea for Component 1 was to work very closely with American Business Council (ABC) Network and gain strategically and tactically from the same in terms of visibility of the project, identifying opportunities for project beneficiaries and designing an employment exchange program. VTT focused on designing, developing and deploying the enabling tools for creating a collaborative environment as well as conducting workshop to orient the ABC members for utilization of these enabling environments. The salient tasks of Component 1 included:

- Documenting ABC requirements and designing an employment exchange program (EEP) system
- Developing customized gateway to Portal for ABC website to capture ongoing recruitment requirements
- Developing means to communicate in effective manner to ABC partners to ensure continuous use of portal
- Designing customized Learning Management System (LMS) for the purpose of knowledge sharing amongst the strategic EEP HR sub committee
- Development and marketing of a Jobs Project / ABC partners Motivational Speaker Series in conjunction with CISCO Academy Network institutes to facilitate linkage building mechanism for CISCO Academy Network partners

During the second component of the project, VTT focused on the capacity building of Cisco Academy Network Partner institutions, for integrating their presence on the web based portal, forge private sector linkages, designing long term soft skills training programs and portal customization. VTT designed and developed the

enabling tools for enhancing the capacity of CISCO academy network partners and conducted the workshop with private sector stakeholders and deployment of enabling tools. VTT also conducted training sessions to orient the academy network partners for utilization of these enabling environments. The salient tasks of Component 2 included:

- Incorporating advanced requirements for Cisco Academy Network Placement Center Job Portal
- Identifying private sector linkages for employment using the Jobs Project-ABC platform
- Developing a model for longer term soft skills training program implementation strategy targeting two sites
- Professional Development Workshop to engage private sector partners and increase brand value of CISCO Academy Networks
- Developing a lesson plan for CISCO Academy Networks to use and increase their understanding of various functionalities available on the LMS to form a sustainable support community
- Developing capabilities within CISCO Academy Network to ensure quality implementation and documentation of project milestones using LMS and showcasing success stories
- Assisting with branding of CISCO Academy Network
- Designing and implement Cisco Academy Network subsection to feature success stories

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### **Client’s Business Results**

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- Improved employment for youth and women, increased their incomes and contribute to the sales of enterprises
- Enabled the ABC to select and employ candidates with their requisite skill sets and training and benefit from high quality of human resource
- Enabled knowledge sharing and competency development through a learning management system
- Capacity Building of Pakistani institutions to produce high quality graduates with increased employability

**Exploring Overseas Employment Opportunities for Highly Skilled Pakistani Human Resource**

**Client Name:**

**Pakistan Jobs Project - USAID**

**Client’s Business Challenge**

The USAID funded Pakistan Jobs Project, a study aimed at evaluating the overseas employment market for skilled Pakistani labor. The task of this desk study assignment was to design the methodology, explore and extrapolate the data, evaluate and benchmark the information, identify the gaps and define an implementation strategy. Future interventions may be designed using this study as a benchmark. On the tactical level the main objective of the study was to identify a high-level overseas placement program for Pakistan.

**VTT Solution**

VTT created comprehensive methodologies for conducting a baseline study and performed thorough desk research incorporating many previous studies and also demand data as was available from potential demand countries. USAID considered its review of available information to have been thorough and comprehensive. VTT has provided concise implementation plan which contains practical and immediately achievable recommendations. VTT completed its job successfully within the tight time frame which includes:

- Identification of target sectors and countries for overseas employment opportunities.
- Analyzed the target sectors in identified countries for potential job positions.
- Identified and analyzed roles of stakeholders from Government of Pakistan.
- Identified and analyzed private sector partner organizations that could contribute towards skill enhancement and overseas placement for men and women.
- Analyzed the Philippines model of overseas employment office and building a business case for setting up such a model in Pakistan.

**Client’s Business Results**

- A roadmap to develop an effective overseas placement program for highly skilled Pakistani Human resource which will ensure maximum participation of women.
- An implementation plan that identifies opportunities evaluates the gaps which lie within the system and identifies a clear way forward for all stakeholders.

“... VTT DEMONSTRATED REMARKABLE EXPERTISE IN CREATING COMPREHENSIVE METHODOLOGIES FOR CONDUCTING A BASELINE STUDY....”

“...I BELIEVE YOU WILL FIND THAT VTT IS RESPONSIVE TO SPECIFIC STUDY NEEDS AND THAT YOU CAN RELY ON THE FIRM TO PROVIDE A QUALITY PRODUCT. YOU WILL NOT REGRET ENGAGING VTT....”

AMY C. RAMM,  
DEPUTY CHIEF OF PARTY, TECHNICAL LEAD  
USAID PAKISTAN JOBS PROJECT

Strategy for Mobile Banking to increase the Outreach for Micro-Finance in Pakistan

Client Name: Kashf Foundation and Shore Bank International – USAID

**Client’s Business Challenge**

The Client, Kashf Foundation is one of the largest Micro-Finance providers in Pakistan. Kashf growth strategy suggests outreach to 1 million clients by 2010. Kashf required to develop an extensive strategy to position Kashf Foundation (and its forthcoming Microfinance Bank) to effectively and persuasively approach the mobile operators with an appealing business proposition and come up with a Micro-Finance Mobile Banking Solution for pilot testing. The focus was to ease the payment process and increase the outreach for acquiring customers.

**VTT Solution**

Micro-Finance Mobile banking is a relatively new concept in Pakistan, and VTT performed one of the pioneering works in this field which explicates the strategic interactions between the mobile sector and microfinance banking sector. VTT was involved in developing a detailed implementation plan highlighting the strategic interaction between the mobile sector and the microfinance banking sector, the regulatory, business, commercial, administrative and technical issues for implementing a mobile banking framework and a way forward for all stakeholders. The work focused on:

- Micro-finance Mobile Banking Strategy and analysis of the Regulatory, Commercial, Administrative, Business, Technical and Implementation issues
- Commercial and Business Plan
- A complete Outreach model for ease of payment and reduction of transaction cost
- Technical Plan
- The strategic interaction framework between the mobile sector and microfinance banking sector
- Need based development of a Mobile Banking Solution
- Providing a concise way forward for any public or private entity which plans to venture in this fairly nascent domain
- Ensuring secure transactions while providing the services of credit and finance
- Developing a work-flow allowing a simplified interaction between the micro finance institutions, telecom authorities and entrepreneurs

As follow-on work to this successful engagement, the consultants of VTT were invited by World Bank to present their findings on the technical, commercial, regulatory and implementation challenges for Micro-Finance Mobile Banking and assist them in devising strategy for Mobile Banking implementation for their initiatives in the South Asian market.

**Client’s Business Results**

- An Optimal and Efficient working model for the implementation of Micro-Finance Mobile banking in the country was created
- The Client acquired a better understanding of the business rationale for the mobile phone companies for testing the micro-finance market
- The Client got clarity with respect to the understanding of the technical, commercial, business, administrative and regulatory issues involved in Micro-Finance Mobile Banking
- A complete outreach model was created which ensured ease of payment for Micro-Finance customers while reducing the transaction cost

Decision Support Tool for Malakand Survey Project

Client Name: ACTED

Client’s Business Challenge

ACTED, in corporation with DFID, launched a comprehensive baseline and vulnerability assessment survey covering three districts, 50 Union Councils, and over 450 villages in Malakand Division, Pakistan. The survey covers over 12 sub sectors of information including health, education, water, agriculture, micro-economy, and market indicators. Each village profile is linked through Global Positioning system coordinates and digital capturing to present an in-depth view of the community. End-users can run queries across over 120 indicators of information with 12 layers of mapping. ACTED’s team employed close to 50 enumerators, logistics, and finance support ensures access to some of the most logistically difficult areas of the region.

VTT Solution

VTT has been engaged as a consulting firm on this project, VTT provides expertise in formulating comprehensive methodologies for conducting assessment surveys, development of strata for stratified sampling, identification of primary and secondary sources for data collection and collection of data through research and interviews, development of stock report formats based on interviews with key stakeholders and designing and implementation of complex databases for data handling, storage retrieval and analysis for GIS application.

Client’s Business Results

- The survey exercise and the resulting web-mapping application enabled each village profile in Malakand Division to be linked through Global Positioning System coordinates and digital capturing to present an in-depth view of the community. It employs the highest standard of ACTED GIS/MIS capability and expertise.
- VTT’s quality work has made certain that end-users can run queries across over 120 indicators of information with 12 layers of mapping.

“....VTT’S QUALITY WORK HAS MADE CERTAIN THAT END-USERS CAN RUN QUERIES ACROSS OVER 120 INDICATORS OF INFORMATION WITH 12 LAYERS OF MAPPING....”

“....VTT HAS SHOWN IMMENSE PROFESSIONAL COMPETENCY DURING THE COURSE OF THE ASSIGNMENTS AND DELIVERED EACH AND EVERY TASK WITHIN THE PROMISED TIMEFRAME. I HAVE SELDOM COME ACROSS CONSULTING FIRM THAT GIVES SO MUCH EMPHASIS ON QUALITY AND EXCELLENCE AND VTT IS ONE OF THEM....”

**HEATHER MARIE CAMPBELL** COUNTRY DIRECTOR,  
ACTED PAKISTAN

**Process Assessment and Document Census for the Malakand Grants Program**

**Client Name:**

**Chemonics International Inc.- FIRMS Project**

**Client’s Business Challenge**

Pakistan Firms Project has launched an SME Grants Program to support the rehabilitation and recovery of small and medium sized enterprises (SMEs) in Malakand Division, with an early emphasis on Swat District. Learning from prior experience, Firms project required to conduct a detailed assessment of the **functional processes** needed to administer the Grants Program in order to successfully deliver on the Grants program. This task also envisioned to capture and articulate in writing a detailed specification document of business, system and data requirements that were required to operationalize the functional processes with a centralized database application. The challenge of this work was to develop effective processes and requirements QUICKLY to meet the urgent demands for rollout of USAID and PaRRSA.

**VTT Solution**

Firms project engaged VTT’s process development and optimization experts to develop the functional processes for the FIRMS Malakand Grant Program. The effort includes background reading of Grants Manual and other program documentation, conducting interviews with relevant stakeholders and to utilize VTT’s experience and knowledge of international best practices to achieve optimized and practical process flows.

- Through our expertise in process mapping, VTT identified high level processes requisite for Malakand Grants Program.
- These processes were discussed in detail with Firms Project team to develop detailed workflows up to Level 3.
- The processes were finalized with input from Firms Project team and other stakeholders.
- Furthermore, VTT identified and listed all the documents which were used in Malakand Grants program functional processes to formulate a standardized document inventory.
- This inventory aimed at helping all technical and administrative staff working with these documents, either as authors, editors, controllers, reviewers or other, to have a common understanding regarding each document.
- VTT provided Firms project with a work plan for future activities required to operationalize the functional processes through a workflow automation system.

**Client’s Business Results**

- This exercise proved to engage all relevant stakeholders through panel discussions and bring them on an agreed upon way of doing business, such that every stakeholder will have his/her role cut-out and responsibilities will be clearly defined.
- The processes and document inventory enabled the Firm’s project team to effectively plan the Grants rollout process by providing a practical roadmap and an understanding of on-ground scenario.
- These processes as defined by VTT, were appreciated by all stakeholders and guidelines for rollout of an effective grants program.
- The processes enabled Firms project to set benchmarks for monitoring the grants program execution and evaluate the program’s impact after completion.

## E-Enablement and Capacity Building through Tele-Community Centres

**Client Name:** Plan International

### Client's Business Challenge

Plan International required assistance in devising strategies for upgrading the standard of living in rural communities, particularly for youth and farmer community of rural Punjab, Plan International wanted to connect the villages on the information highway in a way that will be directly beneficial for the communities. The solution required needed to have targeted information dissemination

### VTT Solution

VTT, as consultants and strategic partners of Plan International devised the following solution for implementing the desired objectives in rural communities:

- Development of tele-community centers on the basis of a socio-business model which will be sustainable and provide the rural communities with customized services to improve the utilization of information services
- Development of e-portal to provide localized and customized services to farmers and youth community. These services ranged from basic weather and crop rate information to sophisticated video conferencing facilities such as tele-medicine and e-learning.
- The e-portal included a centralized database of skilled workers in the community to match them against available employment opportunities and skill enhancement programs.
- Development of SMS Aggregator Solution which will transmit information to end users on mobile phones via integration with the e-portal.
- Trainings for tele-community center staff and inhabitants of the region for effective use of all services
- Development of ICT related capacity building trainings to be delivered in the tele-community center

### Client's Business Results

- A working model was created for a novel ICT based solution for community development of rural Pakistan
- The model provided the client with a community outreach solution for various complementary programs such as rural health initiatives, education and distance learning and livelihood programs.
- The model ensured job creation and promotion of Micro-Entrepreneurship in the rural communities
- The model can be further enhanced for the purpose of complete value-chain automation of agriculture, live stock and dairy

**Competitiveness in Pakistan’s Information Technology and Telecom Sector**

**Client Name:** Competitiveness Support Fund (CSF) – USAID

**Client’s Business Challenge**

The Client, Competitiveness Support Fund (CSF) has been established to support Pakistan’s goal of a more competitive economy by providing input into policy decisions, working to improve regulatory and administrative frameworks and working to enhance public-private partnerships within the country.

Though Pakistan was hailed as a leader in ‘Mobile Industry Growth’, the constant decline in Pakistan’s competitiveness ranking for Telecom and IT suggested that a detailed analysis was required to identify issues that constrained future growth. To that end, CSF engaged VTT to develop a comprehensive understanding with respect to the competitiveness of Pakistan’s IT and Telecom industry.

**VTT Solution**

VTT successfully developed a detailed competitiveness report highlighting various challenges faced by Pakistan’s Telecom and IT industry and carried out high-level analysis of the challenges and their effect on the growth of the industry. VTT carried out an extensive exercise to mobilize a dialogue across the value chain. VTT conducted local and global market analysis, interviewing of key stakeholders from the IT and Telecom Industry, benchmarking and needs assessment. The exercise resulted in an inventory of current challenges faced by the industry and an action agenda to address the constraints and better position the IT and Telecom Industry Pakistan and take advantage of opportunities for growth. The key issues and challenges addressed as a result of this report are:

- Infrastructure Sharing
- Local Manufacturing Industry
- Integration of IT and Telecommunications
- Collaboration with Universities and Research Institutes
- Interconnect Issues
- Voice Over Internet Protocol (VOIP)
- Research and Development
- Utilization of Universal Support Fund (USF)
- Issuance of 3G Licenses
- Market Competitiveness through Number Portability

**Client’s Business Results**

- The exercise, and the report it produced, served as the basis for analysis and action to ensure that Pakistan’s multi-billion dollar IT and Telecom Industry contributes in the most efficient and effective manner to improve Pakistan’s overall competitiveness
- The exercise resulted in an inventory of current challenges faced by the industry and recommendations and action agenda to address the constraints
- VTT’s recommendations on the issues were put into practice by the telecom industry stakeholders, number portability, infrastructure sharing and utilization of USF to name a few.

“IT IS MY PLEASURE TO EXPRESS MY APPRECIATION FOR THE EXTREMELY HIGH LEVEL OF SERVICES WE HAVE RECEIVED FROM THE CONSULTANTS OF VOICE TEL TECH...”

**MR. ARTHUR BAYHAN**  
**CHIEF EXECUTIVE OFFICER**  
**CSF – USAID**

**IT Enabled Business Transformation and Project Management**

**Client Name:** Fauji Fertilizer Bin Qasim Limited (FFBL)

**Client’s Business Challenge**

The Client, one of the largest Fertilizer producers in the region, has been a more than 100% dividend paying company since 2004. However, the organization was operating in a very bureaucratic fashion with no utilization of modern trends in using IT as a backbone like Project Management, Supply Chain Management, Human Capital Management and Finance Functions. In order to remain competitive and transform into an agile organization, the Management sought to leverage Information Technology to enable Organizational Transformation, thereby improving Organizational effectiveness and efficiency. To that end, FFBL acquired the services of Voice Tel Tech for Setting up of a Project Office, overall Change Management, Business Process Re-engineering, E-enablement through latest Tools and Technologies, Planning and Managing execution of end-to-end ERP solution in the company.

**VTT Solution**

VTT, as strategic and technical advisors to FFBL, induced Corporate Cultural Change and E-Enabled Business Transformation in the bureaucratic and strong hierarchical organization of FFBL. VTT assisted FFBL by:

- Setting-up of a large scale PMO for achieving IT Enabled Business Transformation utilizing VTT’s Project Management expertise and standardized frameworks. The PMO sought to establish a One-Team Concept by involving key resources from the client’s side in project execution.
- Providing Strategic Guidance and devising Change Management Strategies for E-Enablement.
- Leading the Organizational Change effort through intensive trainings and workshops for middle and higher Management. This also included extensive internal communication management.
- Optimization, Automation and Gap Analysis of the Business Processes of FFBL (including HR and Finance Department) to minimize the redundancy, delays and errors in overall organizational business functions and maximize the efficiency, timeliness and accuracy in the information flow.
- Establishment of a futuristic IT infrastructure in FFBL which may cater for the needs of organizational business for next 8-10 years with optimum total cost of ownership (TCO).
- Facilitation and Empowerment of FFBL Employees with the latest tools and technologies to enable them share their knowledge, work and resources in an integrated collaborated environment. This included the implementation and configuration of a workable SharePoint Portal Solution.
- Selecting vendors, monitoring and guiding vendor performance, and providing regular status updates to management.

**Client’s Business Results**

- The company saved valuable revenue by eliminating wasted resources in supply chain, finance and administrative processes
- Corporate Cultural Change was induced in the organization from a Bureaucratic to more Dynamic environment
- Organization’s Business Processes were streamlined thereby ensuring a successful ERP Implementation
- Transformation into an agile, competitive and efficient organization through a robust ERP Solution supporting a complete suite of solutions including Supply Chain Management, HCM, Manufacturing, Procurement and Financial Integration.

“VTT MANAGED TO ACHIEVE THE DESIRE GOALS THROUGH A HIGHLY DEDICATED AND PROFESSIONALLY COMPETENT TEAM... I THANK VTT FOR THE SERVICES THEY HAVE RENDERED AND CERTAINLY LOOK FORWARD TO A LONG LASTING CONTINUED WORKING RELATIONSHIP...”

**LIEUTENANT GENERAL ANIS AHMED ABBASI**  
 CHIEF EXECUTIVE & MANAGING DIRECTOR  
 FAUJI FERTILIZER BIN QASIM LIMITED

**Framework for the Implementation of Local Number Portability in Pakistan**

**Client Name:** Pakistan Telecommunications Authority (PTA)

**Client’s Business Challenge**

The Client, Pakistan Telecommunications Authority (PTA), is the regulatory body of the country whose objective is to create a fair regulatory regime to promote investment, encourage competition, protect consumer interest and ensure high quality ICT services.

PTA, required to develop an understanding of Local Number Portability (LNP), its impact on the existing operator’s business and the monetary implication, so that a regulatory framework in this regard could be devised.

**VTT Solution**

VTT advised and assisted the regulatory body in preparing a regulatory framework for implementation of Local Number Portability by Fixed and Wireless Operators, including the monetary implications, extent of its use, benefits/ draw backs, methodology of implementation, its impact on existing operators business with special reference to new versus old licensees and emergence of new business. VTT carried out an extensive study on the Local Number Portability, market analysis, international benchmarking and needs assessment and finally presented the findings, the understanding of the subject and the roadmap for implementation. The extensive framework presented the regulatory body with a solution and roadmap that catered for the following:

- The solution supported existing services and features implemented by the stakeholders
- The existing numbering resources were efficiently utilized
- The subscribers were not required to change their telephone numbers
- There would be no unreasonable degradation in service (such as call setup delays) or network reliability degradation when subscribers switch carriers
- No carrier has any proprietary interest
- The solution is able to accommodate location and service portability

**Client’s Business Results**

- The regulatory body got an extensive understanding of local number portability and its impacts on charging, technical and regulatory aspects, numbering system, customers, carriers etc.
- The regulatory body had a framework and roadmap to implement local number portability across the country to promote competition and fair play
- The impending implementation would promote competition in the telecommunications market and maximize the benefits of a competitive telecommunications market for consumers

“VOICE TEL TECH’S SERVICES FOR STRATEGY AND MANAGEMENT CONSULTANCY WAS OF THE HIGHEST PROFESSIONAL CALIBER...”

**MR. SAJJAD LATIF AWAN**  
 DIRECTOR (POLICY AND RESEARCH)  
 PAKISTAN TELECOMMUNICATION AUTHORITY

## CAPEX and OPEX Management Strategy, Business Process Re-Engineering for SCM

**Client Name:** Helios Towers Nigeria (HTN)

### Client's Business Challenge

The client provides African wireless operators with fully managed tower sites on a lease basis, reducing capital requirement and logistical complexity. Being one of the largest infrastructure providers in Africa, the client has deployed a multimillion dollar network, with very large expansions being planned. In lieu of its planned large investments, the client was seeking to reduce the amount of CAPEX which will be incurred on future deployments by re-engineer its supply chain processes. Being a novel operation of its kind in Africa, HTN was seeking to:

- Take CAPEX and OPEX reduction initiatives piecemeal, so that in house capabilities are strengthened for such tasks and;
- It is ensured that HTN meets quality standards set in its SLAs with customers.

The client required expertise for carrying out these tasks with the help of industry experts who have had experience of large scale infrastructure rollout cycles and understand the market standards and pricing

### VTT's Solution

The client engaged a VTT team of telecommunications industry veterans with a collective experience of managing rollouts for 3000+ BTS sites. This team approached the CAPEX management initiative in three phases. Phase one included the following:

- BTS Site equipment included in HTN's scope was investigated. A target was set to achieve a cost reduction of at least 15% for these items.
- Through information validation, scope freeze and subsequent refinements in the shape of price breakups and detailed bill of materials, VTT made comparisons with obtained benchmark pricing from the market.
- VTT produced a CAPEX management strategy and recommendations report which provided baseline prices for target items ensuring a CAPEX reduction of 25%

This exercise was immediately followed by Phase two, which included the following:

- Off-site procurement support to HTN's procurement department.
- Engaging vendors by generation and floating RFPs for selected items

Building on the previous two phases, Phase three of the exercise focused on providing cost effective designs for individual BTS site items, which provided higher efficiency while maintaining HTN's quality standards:

- Different modules/parameters were identified that could be designed technically to achieve significant cost reduction
- Best design options were found and analyzed for these modules/parameters for different groups of operators per site and for the prevailing environment of Nigeria
- HTN was presented with recommendations of new technical designs for each individual item on the identified parameters, cost reduction analysis through these designs and sample design diagrams.

### Client's Business Results

- The client was able to reduce its procured item costs by 20-30%, utilizing the bench marks provided by VTT in Phase 1 and 2, which resulted in a saving of millions of dollars
- The design changed recommended by VTT in Phase 3 provided a further CAPEX reduction potential of approximately 50% in site build costs, which entailed a saving of millions in future expansions
- Knowledge transfer from VTT enabled the client to build its team and introduce strong processes, ensuring that the client received optimal costs from vendors while ensuring the quality according to its SLAs

## Organizational Restructuring

Client Name: WaridTel, Pakistan

### Client's Business Challenge

The client, a cellular service operator was operating in the highly competitive market of telecommunications in Pakistan. The organization was less than optimal in most departments. Departments were overstaffed and there were many redundancies in job functions, specifically in the middle management positions. Due to intense competition among cellular companies and price wars, it was becoming increasingly important to reduce OpEx and maintain a lean and efficient organization to enhance productivity. Under these circumstances, the leadership of the company decided to do the following:

- Reduce redundant and surplus job functions and skill sets;
- Retain technical and managerial skills deemed critical to meeting the company's future strategic objectives
- Make changes in organizational structure and align job functions to streamline and rationalize headcount

The client required expertise for carrying out these tasks, with the use of standardized frameworks and industry best practices and benchmarks.

### VTT's Solution

VTT provided the client with its Human Capital Management experts; specializing in the telecommunications industry, who performed the following main tasks:

- Formulated a comprehensive workforce planning strategy suitable for the client and relevant to expertise required in the telecommunications industry
- Prepared tools for information collection from different departments
- Conducted one-on-one interviews and focus group sessions with senior and middle level management
- Analyzed the gathered data and identified future workforce requirements in mission critical job functions
- Analyzed the organization structures and workforce requirements using standardized frameworks, such as eTOM, TAM and industry best practices
- Benchmarked the clients performance with its competitors in the local and regional markets using certain KPIs
- Formulated restructuring recommendations, which proposed critical structural changes and alignments of job functions with workforce requirements

The client was presented with final recommendations from VTT and also provided with a detailed implementation strategy covering change management for implementation of recommended restructuring.

### Client's Business Results

- The client received a comprehensive understanding of their operational environment and the workforce planning strategy to be used for assessing future workforce requirements.
- The client implemented VTT's major restructuring recommendations in the commercial and HR Departments and streamlined the workforce according to the requirements of a lean organization.
- Efficiency of the newly structured organization was greatly improved and valued OpEx was saved.

## HR Functional Assessment and Recommendations

**Client Name:** WaridTel, Pakistan

### Client's Business Challenge

The client was facing the challenge of hiring and retaining mission critical staff. Amidst growing competition and high value salary structures, offered by competitors, the attrition rates were high and it was very difficult to retain the best quality of human resource. Leadership of the company decided to do the following:

- Benchmark compensation and benefits packages with the local market of telecommunications, as well as other multinational companies
- Assess the effectiveness of HR department and suggest improvement in policies and procedures

The client required expertise for carrying out these tasks with the help of standardized frameworks and thorough market research.

### VTT's Solution

VTT Consultants with Human Capital Management expertise in the telecommunications sector performed the following main tasks for the client:

- Formulated interview protocols and conducted data collection from all departments through one-on-one interviews and focus groups
- Assessed the client with VTT's HCM Framework which included the following seven components for assessing organization's HCM competitiveness on four maturity levels:
  - Performance Management
  - Retention
  - Staff Development
  - Recruitment and Hiring
  - Workforce Planning
  - Information Sharing
  - Personnel Transaction Support
- Conducted gap analysis for HR departments processes using eTOM process model from TM Forum's NGOSS framework
- Conducted comprehensive market study for benchmarking compensation and benefits packages with multinational companies and direct competitors

The client was presented with VTT's recommendations for revising the compensation and benefits packages, filling the gaps in existing HR processes and initiating critical improvements in the seven segments of HCM framework

### Client's Business Results

- The client was able to understand its position in the market in terms of compensation and benefits offered to its employees and devise competitive packages
- The client was able to significantly reduce its attrition rate from 30% to 10% subsequent 6 months
- With the implementation of HR improvements as recommended by VTT, the client was able to reduce the attrition rates and move towards being the employer of choice in the market
- The client received a comprehensive understanding of VTT's HCM Framework and was enabled to assess its performance in the future regarding HCM

**Consultancy Services for IT Enablement of First Responder's Network**

**Client Name:**

**National Highways and Motorway Police**

**Client's Business Challenge**

The Client, National Highways and Motorway Police (NH&MP) is a government organization that ensures safety and provides assistance to road users. NH&MP required consultancy services to equip and empower the first responders through utilization of latest available and feasible Information and Communication Technology infrastructure covering the countrywide motorways network.

**VTT Solution**

VTT as strategic and technical advisors to National Highway and Motorway Police assisted NH&MP to evaluate and select the appropriate service provider for provision of the following services:

- Provisioning of cellular services to First Responders across the highway network
- Installation of location based services to track the position of NH&MP officers and vehicles.
- The infrastructure to facilitate the subscribers of the mobile phones to obtain information via SMS, short code information retrieval, Voice messaging, call centre access or any other means regarding different areas of highways
- Information dissemination through Documentary, Voice, Print or Electronic media for road safety and projection of new facilitation offered by NH&MP.
- Installation of Electronic sign-boards

**Client's Business Results**

- An efficient and effective First responders network across the highways and motorways for ensuring safety of the road users and providing prompt assistance, significantly reducing their response time
- A feasible ICT infrastructure covering the countrywide motorways and highways network

## 4. DEVELOPMENT SECTOR INITIATIVES

For the past 5 months, VTT team has been engaged in developing unique solutions for the development sector. With a growing impact of aid projects in the country and with an urgent need to utilize this opportunity, our team has been strategically focused on researching the needs for community development in the sectors of health and livelihood. This has led to the creation of some distinctive initiatives which are reflective of VTT's expertise in enabling environment solutions using latest technological innovations. A couple of initiatives on which we are engaged are presented below.

### 4.1 HEALTH SECTOR INITIATIVE

VTT along with its partner HDF is perusing a community development initiative for the health sector, particularly for health of pregnant women. This initiative is a precise illustration of how IT infrastructure and IT based skill sets can enhance the capacity of lady health workers in rural areas to significantly increase their efficiency through liaison with a centralized specialist doctor. *Funding for this initiative has also been sought in our proposal for the Pakistan Jobs project of IT related trainings.*

#### IT Based Remote Patient Monitoring System for Rural Population

##### Community Challenge

The current medical statistics clearly show that the situation is catastrophic. Only 31% of the total births are attended by skilled personnel. This leads to Infant mortality rate in Pakistan being highest among SAARC countries standing at 70 deaths per 1,000 live births. Moreover Pakistan also has the highest maternal mortality rate in South Asia. Being agriculture based country, most of Pakistan's population lives in far flung and remote areas where accessibility is an important issue. These people do not have access to medical care as the health services infrastructure in these areas is nil. The density of doctors in the population is very scarce. Maternal Mortality Ratio in Pakistan increased from 350 per 100,000 live births to 400 during year 2000 to 2005. The Millennium Development Goal for Pakistan is to achieve an MMR of 140 per 100,000 live births by the deadline of year 2015. The MDGs related to child and maternal care can be achieved only through a coordinated health care system. The Government of Pakistan has a plan of expanding the lady health workers' network and introducing 50,000 more lady health workers during 2005-10. Therefore, to bring about a change, there is a need to develop a low cost infrastructure which would provide basic monitoring and care to these people in remote areas by providing the existing workforce of lady health workers with an infrastructure which links them to the tertiary health care system.

This initiative seeks to leverage IT infrastructure to enable the lady health workers. However these health workers and other maternity attendants lack basic knowledge of operating any IT based solution.

##### Development Solution

There is a clear opportunity to develop a reliable, efficient and easily deployable remote patient monitoring system that can play a vital role in providing basic health services to the remote village population of Pakistan at their door step. This system will enable expert doctors to monitor patients in remote areas of Pakistan. As a result, the patients will no longer need to travel long distances to reach to the nearest basic health units and will be examined by a mere GP.

The system will be a mobile patient monitoring system, integrating personal digital assistant (PDA) technology and wireless local area network (WLAN) technology. At the patient’s location, a wireless PDA-based monitor is used to acquire continuously the patient’s vital signs, including heart rate (HR), three-lead electrocardiography (ECG), and blood oxygen saturation (SpO2). Through the WLAN, the patient’s bio-signals will be transmitted in real-time to a remote central management unit, and authorized medical staff can access the data and the case history of the patient, either through the central management unit or the wireless devices. This system design is a proprietary of HDF.

A prototype of this system has been developed and implemented by HDF, VTT’s partner organization. However to take this initiative to a large scale, it is necessary to provide the health workers with IT based skill sets so that they can effectively operate and utilize the equipment. With a basic computing course and training on the equipment the health workers can significantly improve their productivity, which will result in improvement of the overall health situation of mothers and new born children.

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**Expected Results**

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- This project, being the first of its kind, will bring about a technological revolution in the health sector by introducing infrastructure based on modern technology and communication advancements.
- This would initiate a wave of interest in the research field (especially Bio-Engineering which is nearly non-existent at present) in the country.
- New research will result in new advancements and thus the field of Bio-Engineering which has been ignored for so long, will come to academia/industry spotlight.
- The Health Sector will benefit from the advancements in communication technology and will be able to improve the quality of health service in the country by providing health care at the customer’s doorstep.
- Collaboration of Academia, Information Technology sector and the Health sector will result in increased use of Information and Communication Technology (ICT) in the field of Bio medical engineering.
- On National level, this would result in an increase in the coverage of health facilities across the country.
- This project will enable the government to fulfill its dream of providing basic medical facilities to all its citizens especially those living in remote areas.
- As a result of this project, the people living in remote areas will be delivered with a better quality health service.

**4.2 AGRICULTURE SECTOR INITIATIVE**

Building on our experience from the development of a tele-community centers solution for Plan International, the VTT team is working towards solutions which can provide strategic value addition in the agriculture sector. Pakistan is majorly an agri based economy, with the sector being a significant contributor to the GDP and an employer for a sizeable portion of the population. Thus the implication of this solution can be far reaching for the Pakistani economy, specifically for the vast community engaged in this sector.

**Strategic Value Addition Initiatives for the Agriculture Sector**

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**Community Challenge**

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Agriculture contributes about 24 percent of the gross domestic product (GDP) and employs 47 percent of the national employed labor force in Pakistan. Agriculture remains the major sector of the GDP composition. A major part of the economy depends on farming through production, processing and distribution of major

agricultural commodities. This holds true not only for Pakistan, but also for the region in general. However the sector is plagued with a number of issues.

- With up to 40% of waste in the value chain between producer and consumer there are vast opportunities for improvements in the agri sector of India, Pakistan and Bangladesh
- The sector employs some 50-60% of the workforce and +/-30% of the GDPs in these countries
- Trading is centralized, partly nationalized and controlled by middlemen with capital and connections, but these are usually not adding a significant value in the end-to-end chain
- The sector is severely underperforming due to lack of standardization

The sector requires significant intervention from the public and private stakeholders for improving its efficiency, with the help of modern day tools. However new systems implementation also requires the following considerations:

- A high tech barrier to benefit from system, whereas low tech customers (farmers, retailers)
- Even if the tech barrier is lowered by making simple systems and localized content, adaptation to technology can be very challenging

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### Development Solution

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Based on its previous experience for developing a community outreach solution, VTT seeks to enrich the agriculture sector by the development of innovative technology based solutions which will impact the end to end value chain. There is a definitive opportunity in the sector.

Lessons learned from emerging markets dictate that ***“If the value of overcoming the barrier is high enough and people are attracted with the right opportunities, progressive communities will readily adapt”***. Also, it needs to be ensured that relatively low tech community outreach models can be the utilized which can humanize the outreach to farmers.

VTT and its partners intend to develop solutions based on the latest technologies that can change the dynamics of this sector.

- **Developing Community Outreach Models and Capacity Building (Tele-Community Centers)**
  - Will be used to provide basic ICT services and to conduct trainings/e-learning classes in rural localities
  - Community outreach communications solutions for empowering farmers with market and other capacity building information
  - Ensuring human interaction for an easy adaptability to technology solutions
  - Online data/information transfer facility will be available for initiatives of NGOs/donor agencies
- **Understanding and Modeling Agri-Business Value Chains**
  - VTT in collaboration with operational modeling experts from academia, intends to develop a set of mathematical decision models to increase the efficiency of of selected agri-value chains in Pakistan
  - Develop an ICT architecture based on tele-community centers for rural areas to deliver these decision models to various actors involved in the agri-value chain (small and large farmers, buyers, stockers, distributors and, and retail sellers)
  - Formulate a forward-looking business plan to build, sustain and expand this modeling-ICT infrastructure to the main rural regions of Pakistan

- **Developing Commodity Exchange Solutions based on Optimized Operations Modeling**
  - VTT and intends to develop an agricultural commodity exchange system based on GSM technology and mobile banking
  - This requires to make available and standardize market information such as price, quantity and quality
  - Shift trading from human interaction over to an electronic trading platform allowing pier-2-pier networks and pricing of the demand/supply volatility (price fluctuations) risk by establishing future contracts

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#### Expected Results

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- These initiatives are among the pioneering efforts for utilizing information technology and latest communication tools to empower the agri sector in Pakistan
- These initiatives will be a concrete step for increasing value chain efficiency as it will remove the actors which do not add value to the final product
- This will create a nationwide impact which will be translated into an increase in the agricultural produce, better value for product, hence an improvement in the standard of living for millions of families