LARGEST INDIAN MANUFACTURER OF VEHICLE TELEMATICS DEVICES
OUR VISION

To be a vibrant company, providing quality and efficient service to customers and a rewarding experience to its employees.

OUR MISSION

We will develop products and provide services that will have a Strong Social Impact and would improve the quality of Human Life. From a business perspective, our products/services will help our clients get a better control over their business and make a positive impact to their bottom-line...
PROMOTERS PROFILE
A Commerce and a Management graduate, with an experience of 20 years in the fields of Finance, Banking, HRD and Telecom. He is the founder Director of iTriangle Infotech Pvt Ltd. Have served in various capacities in the fields of finance, training, sales (direct sales, distribution and retailing), marketing, conceptualising and designing of products in the domains of telecommunication and related electronic products.

An Electronics engineer, having a Post Graduate Diploma in “Embedded System Designing” from Center for Development of Advanced Computing (C-DAC). Has more than 12 yrs of industrial experience in embedded systems designing and development with an exposure to hardware and software designing on Automotive embedded systems. Has worked with Siemens and C-DAC. He is one of the founder members and the Technical Director of the company.

Has 20 years of experience in the software industry. In the last 5 years, he has served as the Vice President of Product Management at SmartRx (a healthcare startup) and at Pengala (an educational startup), both based here in Bangalore. Before that, he was a Program Manager at Microsoft, Redmond working mostly on multimedia technologies. Prakash has a Masters degree from the University of Washington and an undergrad degree from the University of Mysore, both in Computer Science. Technical Director of the company.
MENTORS

Dr. Shyam Vasudev Rao
PhD – (IISc) Bangalore, M.Tech, B.E. (E&C)

Has a Doctorate from Indian Institute of Science, Bangalore in the area of Scalable Computer Systems and Architecture Applied to Real-time control of MTDC systems; is a Gold medalist from Indian Institute of Science and Dept. of Science & Technology- Lockheed Martin India Innovation Growth program 2011 for Innovation of a Eye Screening Device. Has worked at Senior positions in Ericsson, Phillips Innovation and is also the President and the CTO of Forus Health Pvt Ltd. He is the Mentor and the Non-Executive Director of the company.

Dr. S.K. Katti
BE. Telecom, BE. Electrical, ME Electrical, PhD – (IISc) Bangalore

Has a doctorate from Indian Institute of Science, Bangalore. His technical contribution is in the area of Systems science and has worked on Multi Variable System Design. An Electronics, Electrical and Computer Science Engineer, He has a varied experience of 43 yrs in the field of education. Published several research papers in the areas of Control Systems, Artificial Intelligence and Speech Recognition. He is currently doing research work in the area of Speech Recognition and Digital Signal Processing. He is the Mentor for iTriangle InfoTech Pvt Ltd.
Executive Summary

**GEOGRAPHY**
Bangalore, India based company

**COMPANY INCEPTION**
Commenced operations in February 2009

**MANUFACTURING**
Manufacturing of GPS-GSM-RFID-Sensor based Tracking and Monitoring Systems.

**CORE COMPETENCE**
Engaged in Design, Development in the domains of GPS, GIS, Mobile Applications, RFID, Web Based Enterprise Applications

**SERVICES**
End to End Solution Providers in the field of Telematics that includes hardware, software and cloud/mobile based applications for various domains. Technology Consulting Services.

Over 200,000 devices deployed in India and overseas.

**CURRENTLY THE LARGEST INDIAN SUPPLIER OF TELEMATICS BASED GPS-GSM VEHICLE TRACKING & MONITORING HARDWARE.**
TELEMATICS

Vehicle Monitoring and Tracking Systems and Fleet Management Systems

Remote Vehicle Diagnostics through OBD devices

Industrial/Infra Data Acquisition

Remote Generator monitoring System

Personal and Health Care

Automotive

Wearable health monitoring

Personal tracking and Safety

Existing Products

Up Coming Products
END TO END SOLUTION IN THE TELEMATICS BASED TRACKING & MONITORING DOMAIN

Company business Flow

Hardware
- In-house Design and Development
- Manufactured though an outsourced EMS Facility
  - Vehicle/Personal/Asset Tracking Devices (OBD & Non OBD)
    - Bharat 101, TS101 Basic & Ady, U101v1
    - MeSafe
    - Stay Safe
  - Accessories
    - RFID Readers
    - Panic Button
    - Vehicle Immobilizer

Software
- In-house Design and Development
- Hosted and Managed on Cloud
  - Domain Specific Solutions like Fleet Management, Asset Management, Employee/Student Transport Management, Waste Pickup, Mine Management Solutions

Sold through Franchisee, Distributors and Direct Channels
Service Centres in Bangalore, Mumbai, Pune and Associated Service Centres across the Country
BUSINESS LIFE CYCLE

B2B

- Hardware Sales to System Integrators and Service Providers
- Software Sales to System Integrators and Service Providers
- Customized Design and Development of Solutions
- Design and Consultancy Services
BUSINESS LIFE CYCLE

B2C

Retail: End to End Sales to Franchisee, Distributors and Partners

Corporate & Major account End to End Sales to large Customers

Government Tenders
Platform Capabilities

- RS-232
- GPIO
- Motion Sensor
- CAN
- Analogue I/O
- OBD II

Micro Controller

GSM 2G/3G interface

GPS Receiver

Database Architecture capable of handling thousands of simultaneous transactions

Application access through web and mobile applications.

Modular design helps in customization and fast time to market.

All these can be customized to various telematics requirements as required by customers in various domain.

Some of the salient features of the platform are:

- Both 2G and 3G support available for data transfer to the server.
- The server component is highly multithreaded and can handle thousands of simultaneous connection with the devices.
- Consists of various interfaces for data acquisition such as GPIO, ADC, RS232, CAN, I2C, SPI, OBD II etc.
- Database Architecture capable of handling thousands of simultaneous transactions.
- Application access through web and mobile applications.
- Modular design helps in customization and fast time to market.
EMBEDDED

SYSTEM EXPERTISE
TELEMATICS AND REMOTE DATA ACQUISITION

GSM / GPS / RF PRODUCT DESIGN

IOT

AUTOMOTIVE

Linux/RTOS Based Embedded Systems

Digital and Analog electronics design.
Remote Data Acquisition over GSM, 3G, Local networks etc.
Embedded Automation products.
Wireless product development based on GSM, Wifi, Bluetooth, Zigbee.
C/C++ and Embedded firmware development.
Design of Real time systems.
GPS, GSM and RFID based solutions.
Sensor networks.
Embedded hardware designing on 8/16/32 bit platforms.
Embedded firmware Development on 8/16/32 bit controllers
J2ME/Android Mobile application development.
Board support packages
Design, development and porting of embedded
OS/stacks/packages/libraries and such components.
Protocol stack development for embedded systems.
Network Protocol development and testing.
Process Automation and industry specific applications.
Enterprise application solutions.
RTOS on embedded systems.
By extending the platform, we have developed a complete vehicle and fleet management solution in the brand name of aQuilLa Track, loaded with a complete range of applications and features that increases the business efficiency, productivity and the bottom-line of our Customers.

**Vehicle/ Asset Tracking and monitoring**

**HARDWARE PRODUCT OFFERINGS**

**INDIA’S FIRST AIS 140 CERTIFIED TRACKING DEVICE**

**BHARAT 101**

- 4 Digital Inputs (1 Dedicated Ignition Input)
- 2 Digital Outputs, 2 Analogue Inputs
- 1 RS232 (Serial) Port
- Multi Operator SIM Card Support
- Embedded SIM Provision
- IP67 enclosure
- 3 Axis Accelerometer & 3 Axis Gyroscope
- Multiple IP Support & much more...

**TRACKING DEVICE TS101 ADVANCED**

- With Accelerometer and Serial Port
- Compact Basic Vehicle tracking/Fleet management black box with multiple I/O’s and rugged IP67 casing.

**BASIC TRACKING DEVICE TS101**

- Tamper proof switch (FOTA) Firmware upgrade Over The Air
- Compact Basic Vehicle tracking/Fleet management black box with I/O and rugged IP65 casing. With Glonass & Bluetooth.
We have developed a next generation GPS tracking platform on which, a variety of products for different markets like transportation, asset tracking, geographical data acquisition, fleet management etc can be developed. The technology involves GPS, GSM, RFID and various sensors with web based control, tracking, and monitoring facilities on a Google map interface. It’s even possible to acquire data pertaining to the remote entities to which the tracker device is attached.

**Vehicle/ Asset Tracking and monitoring**

**ADVANCED TRACKING DEVICE (UX101)**
with CAN and KWP

For the first time in India Automotive ECU type connector for additional stability. Compact Ultra high end Vehicle tracking/Fleet management black box with multiple I/O’s and rugged IP67 casing with CAN and KWP

**SMALL & COMPACT PLUG N PLAY**

Motion Sensor  
3 Axis Accelerometer  
Suitable for Track & Trace Application

**ON BOARD DIAGNOSTICS OBD II**

With Track and Trace

Motion Sensor - 3 Axis Accelerometer, CAN and K-Line Support for Vehicle Data Acquisition
By extending the platform, we have developed a complete vehicle and fleet management solution in the brand name of aQuiLa Track, loaded with a complete range of applications and features that increases the business efficiency, productivity and the bottom-line of our Customers.

**Upcoming**

**MDT**  
**ANDROID BASED MOBILE DATA TERMINAL**  
With Track and Trace  
MDT with Android OS. Inbuilt 4G and GPS. Wide support for integration

**MeSafe**  
**GPS-GSM Based Personal Track & Alert System**  
This GPS-GSM based Track and Alert System is a compact device, which could be hung over the neck, waist belt or a key chain. MeSafe will provide Live Web Tracking or Tracking via SMS as per the users’ requirement. It will have several utility and interesting features which will basically ensure tracking, monitoring the movements of the user and provide timely help at times of distress.
Field Proven Reliable Design. Devices Running from 2013 in the market with minimal / No maintenance.

Store and Forward Architecture ensures maximum Data Availability and zero data loss due to network conditions.

More than 200K unit deployed till date.

Modular platform enabling quick addition and deletion of features enables Low time to Market.

Field proven Protocols and Firmware stack.

ICAT, ARAI Certified products.

Manufactured in TS16949 Certified facility.

IPC member since 2015.
SOFTWARE EXPERTISE

Competent & Confident team
Domain expertise in a variety of sectors including telematics, multimedia, public sector etc.
Great mix of hardcore techies and usability/aesthetics folks
Hands-on leadership team: ~ 25 years of industry experience.
Plus a bunch of very talented youngsters!

Agile Development Process with Open Source Software
Development methodology is usually Lean or Agile with very quick turnarounds
Development is on LAMP stack with Java and PHP

Sustaining Business with Industry Leaders
MNC
Government sector
Public transport companies

Business Growth on Horizon
SOFTWARE PLATFORM

CAPABILITY
MOBILITY SERVICE

Public/Private Transport
Mining
Personal Safety
Educational Institutions
Employee Transport
ATM Security
Healthcare

REMOTE TRACKING & MONITORING

DOMAIN LAYER

WEB PORTAL
MOBILE APP

ACCESS/APPLICATION LAYER

USER INTERFACE (UI)

CLOUD
WEB
DB
SECURITY
RTDP*

INFRASTRUCTURE/TECHNOLOGY

EMBEDDED S/W

DEVICE PLATFORM

END-TO-END SOLUTION: PROVIDING A PLATFORM (H/W, S/W, SOLUTION, SERVICE)

* Real Time Data Processing
**Domain Specific Applications**

- **Transport and Logistics**
  - Track locate, monitor speed and distance, Halt and Stop info, Remote fuel management etc.
- **Waste Management System**
  - Waste bin's RFID tag is read by the vehicle's RFID reader during garbage collection. Tag data is sent to the server along with GPS tracking data.
- **Mining Industries**
  - Using GPS-GSM-RFID based technology to provide a complete solution for Sand Mining and Mineral industries.
- **Educational Institutions**
  - SMS alerts for pickup, drop, and critical events, Panic Button, Geo Fencing, Geo Tagging to control movement of vehicles.
- **Air Force**
  - Dashboard, Live tracking, Travel Replay, Halt and Stop details, Daily and Monthly Reports etc.
- **Public Transport**
  - Expected Time of Arrival and Expected Time Departure, MIS reports etc.
- **Employee Travel Management System**
  - Employee login/logout details, Remote Fuel Monitoring with Pilferage reports etc.
AQUILA WEB BASED TRACKING APPLICATION

- Comprehensive tracking and monitoring application with rich user experience.
- Optimised for load and performance to scale up to 1,00,000 devices & with thousands of concurrent user connection access.
- Cloud based application with an option for on premise hosting - both windows and Linux servers
- Fully Mobile Responsive Web Application. This is in addition to the availability of Mobile Apps for Android and iOS.
- Rich integration with Map Service, Email and SMS alert Service, and 3rd party interfaces.
- Currently hosted on a secure Tier III datacentre at White field Bangalore.

Tracking and Monitoring your assets, from your Desktop, Laptop, Android /iOS Smart Phone
CUSTOMER-SPECIFIC
BE-SPOKE SOLUTIONS DESIGNED AND DEVELOPED
Collaborative development
- Provided unique features
- Mobile Responsive Portal
- Dynamic Route Creation
- Role based functionality in configurable way
- Customised Reports
- ETA
Conformance to Bosch Security and Corporate UI Guidelines

Intelligent Alerting and Alarming Systems
- Alarming on low SMS Credits
- Alarming on Possible Loose Connections
- Alerting on non-tracking of a vehicle
Total Distance since installation for Service Reminders
Immobilisation from the portal
Customised APIs and Reports

Comprehensive solution to monitor LPG cylinder carrying vehicles in and out of the bottling plants.
Movement of vehicles from bottling plants to distributor location.
The ETA for the vehicles to help the bottling plant authority to plan for production.
We have designed and developed a customised vehicle tracking system for Air force
- Dashboard
- Live Tracking of vehicles on licensed Google map
- Travel Replay
- Locate vehicles
- RFID based vehicle on/off
- Accelerometer with Motion-Sensor
- Halt and stop details
- Speed Report
- Geo Tagging
- Geo Fence Violation

iTriangle is providing solution to Sand mining & Mineral Management System for Mysore Minerals Limited.
- Designed and developed Mine Management System application software.
- Installation of RFID Reader and antenna.
- Integration of electronic weigh bridges with the application.
- Supply and installation of RFID tags

Launched as E-maarg with Karnataka Indian Oil (LPG) in Mid February.
- Automated Process to Create Round Trip Routes between Plants and Distributors. (Using Google Route Options)
- Online Process to Approve Route Trip Routes/Distances by the District and State Level Committee, and to generate the Reports.
- It provides a faster and easier way of RTD Creation and Approval.
- MIS Reports.
CURRENT OPERATIONS ACROSS THE COUNTRY

Himachal Pradesh
Delhi
Guwahati, Assam
Nagpur, Maharashtra
Bhubaneshwar, Odisha
Mumbai, Maharashtra
Pune, Maharashtra
Goa
Mangalore, Karnataka
Bengaluru, Karnataka
Chennai, Tamilnadu
Coimbatore, Tamilnadu
Cochi, Kerala
Trivandrum, Kerala

(All these locations have Sales & Service Support Infrastructure)
OUR MAJOR CLIENTS & PROJECTS

- Bosch
- Infosys
- MapmyIndia
- Nissan
- Ola
- Uber
- InfoTrack
- Trimax
- telematics4u
CUSTOMER TESTIMONIALS

- GPS Tracking Devices from iTriangle have helped us to track the movements of our vehicles. The MIS reports are very useful and helped us in the overall management of the department vehicles in different locations.
  
  - Dr. Nagaraj
  Deputy Director, University of Agricultural Science, Bangalore

- Aquila Track, tracking units from iTriangle Infotech have really helped me to manage & monitor my fleet of buses in Bhubaneshwar, productivity and has increased the overall efficiency of our business. Their hardware units are stable and the customized solutions and reports that they provide are extremely useful.
  
  - Sudhanshu Jena
  Dream Team Shahara Bhubaneshwar, Orissa.

- iTriangle team is agile, has a good and motivated team and has installed Tracking Devices in different cities in India, in our cabs.
  
  - Siddarth Shetty, ANI Technologies

- We have installed Aquila Track tracking devices in our college buses. It has really helped us in tracking and managing the movement of our buses, has helped us to reduce wasteful travel and also helped us majorly in cutting down our fuel costs because of their fuel monitoring system.
  
  - Dr. G R Udupi, Principal, Vishwanath Deshpande Rural Institute of Technology, Haliyal, Karnataka.

- iTriangle has installed the VTUs in 6422 BMTC city buses. We have found the team to be service oriented, technically capable and has helped us in taking the project towards implementation and going live.
  
  - Biswajeet Mishra, Director- IT, BMTC

- iTriangle Infotech offers good value for money by way of good pricing, stable solutions and good service. They have implemented GPS Tracking Devices in more than 7000 cabs for Uber across 8 cities in India.
  
  - Nitin Kempanahalli, Uber India
OUR MAJOR

CLIENTS & PROJECTS

Schools & Educational Institutions

Schools & Educational Institutions

- VDRIT, Haliyal
- Cambridge Primary School, Lingasugur, Raichur
- R T Nagar School, Bangalore
- Malgudi Vidya Niketan, Bangalore
- Kautiya Vidyalaya, Mysore
- Gnyanodaya Public School, Mysore
- SLU School, Bangalore
- CN National Public School, Bangalore
- East Point, Bangalore
- Purna Pramathi School, Bangalore
- Euro kids, Davangere
- BM School, Bangalore

Govt. & Public Sector

- Bangalore Metropolitan Transport Corporation
- Bhubaneswar City Transport Bhubaneswar
- Central Coalfields Limited, Piparwar, Ranchi
- Ordnance Factory, Ministry of Defence, Chanda
- Ordnance Factory, Bhandara
- 2rajrifles, MEG Bangalore
- Dept. of Commercial Taxes, Karnataka
- Dept. of Horticulture, Karnataka
- Krishna Jala Bhagya Nigam Ltd.
- Municipal Corporation, Chintamani
- Krushi Vigyan Kendra, University of Agricultural Sciences, Bangalore
- City Municipal Corporation, Chikkaballapur
- City Municipal Corporation, Davangere
- Canara Bank
- Air Force Station, Yelahanka
- TMC, Bannur
- Mysore Minerals Ltd, Bangalore
- Gadag-Betageri City Municipal Council, Karnataka

Corporates & Others

Corporates & Others

- Bosch India Limited
- Infosys Limited
- OLA Cabs, Bangalore
- Uber Cabs, Mumbai
- Nandi Infrastructure Corridor Enterprises Pvt Ltd, Bangalore
- Radiant Distributors, Bangalore
- Goyal Sales Corporation, Hubli
- Sonim Technologies, Bangalore
- Mobily Infotech India Pvt. Ltd, Bangalore
- Anuvart Apparels, Bangalore
- Medilings Bioscience Pvt Ltd, Bangalore
- Manpasand Manpower Pvt Ltd, Bangalore
- Honda Transport, Hubli
- Unitex Apparels Pvt Ltd, Bangalore
- Gia Corp Care, Bangalore
- Neam IT, Hubli
- Udipi Tours & Travels, Bangalore
- Go Go International Pvt Ltd, Bangalore
- Sun Multitek Enterprises, Bangalore
- Nav Bharat Crane Service Pune
- Unity Travels Bangalore
- Sys Cabs Bangalore
- K.Rajkamal Bangalore
- G.S. Break Down Ahmedabad
- Power Tech Call Centre LLP, Bangalore
- Sys Cabs, Bangalore
- United Associate Engineers, Bangalore
- Creative Info Services, Bangalore
- GW. Precision Tools Ltd, Bangalore
- Nisarga Leisure & Travels Pvt. Ltd., Bangalore
- Miles on Wheels, Bangalore
- Technocon Constructions & Infrastructure, Bangalore
- Wind World (India) Ltd., Bangalore

OEM/System Integrators

OEM/System Integrators

- Wipro, Bangalore
- Trimax IT Infrastructures & Services Limited, Mumbai
- Tata Consultancy Services Ltd, Bangalore
- Escorts Ltd, Faridabad
- Bayonet, Kenya
- Argus Technologies LLP, UAE
- Colosseum Tech Solutions Pvt. Ltd, Hyderabad
- Rolta India Ltd., Mumbai
- Himu Softech, Bangalore
- Infotrack Telematics, Bangalore
- Pulser Electronics, Mumbai
- AC Tech Pvt. Ltd, Ahmedabad (Deployed at IOCL)
- Aftech Ltd, Pune
- Ragvik Technologies Pvt. Ltd., Gauhati
- Telematics 4U, Bangalore
- MapMyIndia, CE Info Systems Pvt. Ltd, New Delhi
- Verve Compusoft Pvt. Ltd, Pune

- Trawellday Tours & Travels Bangalore
- Rescue 24/7 Tow Services
- Manjushree Car Rentals, Bangalore
- Zen PowerTechnologies, Bangalore
- Ayoni Technologies LLP Bangalore
- Charoen Pokphand Seeds Pvt Ltd, Bangalore
- Nawanik Motors(BMW), Bangalore
- Express Cargo, Bangalore
- Maruthi Cement and Steels Pvt Ltd, Bangalore
Thank you!