VaaaN

Corporate Profile
VaaaN

What are we?
We are a leading organization specialized in Advanced Technical Solutions for Infrastructure Management

Who are we?
We are 250+ professionals having extensive experience in System Integration and Application Development

What do we do?
We are a “One Stop Solution Provider” for entire ITS domain
KEY OFFERINGS

- Toll Management Systems
- Electronic Toll Collection
- Weigh-In Motion
- Advance Traffic Management Systems
- Bus Rapid Transit Systems
- Integrated Transit Management Systems
- Automatic Fare Collection Systems
- Smartt Waste Management
- Smart City ITS
- Security & Surveillance
INTERNATIONAL & PAN INDIA PRESENCE

- Presence in over 16 Indian States
- 4 Regional Offices
- More than 120 Engineers in field
- 5 Major Projects in Bangladesh
Our holistic approach for each project enables us to add value to our clients and to boost the performance of our Solutions & Services.

Our Strengths:

- Local Capacity & Infrastructure
- In house Software/Hardware Development
- Testing & Training Facility
- Ability to seamlessly integrate different Technologies/New Products
- Domain Knowledge
- 24x7 Customer Service & Support
- Best on-ground project support & execution teams

360° Approach

- IN-HOUSE DESIGN
- SUPPLY
- INTEGRATION
- INSTALLATION
- LONG TERM MAINTENANCE
- TRAINING
The strategy of VaaaN, focused on striving for success and adding value to each project, explains our fast portfolio diversification.
INNOVATION- VaaaN

Innovation as per operating environment, Business Dynamics, Advancement in Technology

AVCC
- Non Intrusive IR Based Profiler
- Announcing Launch of 3D Laser Based Profiler

WIM
- Special Design to facilitate the Maintenance Ease without Lane Closure or Heavy Machinery to lift WIM
Innovation as per operating environment, Business Dynamics, Advancement in Technology

APPLICATIONS

• MIND – Management Information and Notification Dashboard
• RADAR – IOT based Application for Equipment Health Monitoring

DIGITISATION OF PAYMENTS

• Speedy Integration with NPCI CCH, E- Wallets
ADVANTAGE- VaaaN

Reliable & Scalable
- Over 1 Billion Vehicles annually i.e. over 3 Million Vehicles daily flow through our tollMax® system

Maximize Revenue Collection
- Over USD 500 Million toll revenue annually collected through our systems.

High Uptime, Security and Reliability
- 24x7 reliable operations at over 250 Toll Plazas in India and abroad

MSWIM Integrated
- MSWIM integrated system, to prevent overloading through efficient enforcement.
ADVANTAGE- VaaaN

Over 1500 Toll, ETC & WIM Lanes Installed
  • Projects across India & Abroad of over INR 200cr

PAN India NHAI-ETC Project in 120 locations
  • Expertise & Experience in both Closed Tolling and Open Tolling Projects

Won India’s Best ATMS project award from NHAI
  • Nagpur Betul (NH-69) 176 Km.

Surveillance Systems on more than 250 Toll Plazas & Highways
  • In Depth Experience on Surveillance Systems and Control Centers

More than 1/3rd of India’s Toll Plazas on NH’s run on our Systems
  • Stability of Solution and Quick Response time – Low Down Time
**ADVANTAGE - In-House Capacity**

<table>
<thead>
<tr>
<th>No Third party Dependency</th>
<th>Easy &amp; Ready Availability of Critical Spares</th>
<th>Prompt Customization &amp; Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Crucial hardware (AVC &amp; TLC) has been designed and is built, assembled and tested in-house.</td>
<td>- Critical spares such as AVC motherboards, AVC Sensors shall be stocked at your Toll Plaza - immediate resolution in the event of any H/W failure</td>
<td>- Ability to seamlessly integrate different Technologies/New Products</td>
</tr>
</tbody>
</table>

In House R&D, Local Production Capacity, Training Facility
Since inception of VaaaN Infra, our highly valued clients have put their trust into us.
tollMax®
Toll Management ERP
KEY BENEFITS OF VaaaN tollMax®

Smooth Functioning in over 1000 toll lanes in India and Abroad

ETC and CCH Integrated – Implemented in over 250 lanes

SSWIM and MSWIM Integrated – Running in over 300 Lanes

Robust & Redundant Database; Efficient MIS reporting

Pan India 24X7 Services; Remote Fault Management
MIND - Management Information & Notification Dashboard enables the Management to access the trend analysis of Toll Operations over their Mobile Phones & Tablets thus empowering them with first hand MIS. This analysis helps Management to analyse patterns of Exemptions, Revenue Collection, Violations & Run-throughs, usage of Discounted Passes etc.

AVERAGE TRAFFIC DISTRIBUTION

- Cash: 61.84%
- Return Journey: 2.81%
- Daily Pass: 6.64%
- Monthly Pass: 3.26%
- Monthly Pass: 6.00%
- Monthly Pass: 10.00%
- Monthly Pass: 8.90%
- Exemptions: 0.55%
- Run through: 0.55%
- No classification: 0.55%

* Sample Data
RADAR - Remote Auto Diagnostics & Advanced Resolution – tollMax® is equipped with RADAR which helps Tech Support to get real time information of any critical equipment failure and Real Time Tech Monitoring of Toll Plazas

PATH Toll Plaza

<table>
<thead>
<tr>
<th>CPU Usage</th>
<th>Drive Spaces</th>
<th>AVC Accuracy</th>
<th>TMS Services Running Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaza</td>
<td>Machine</td>
<td>Plaza</td>
<td>Machine</td>
</tr>
<tr>
<td>Lane 3</td>
<td>C Drive</td>
<td>Lane 3</td>
<td>AVC</td>
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<tr>
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<td>Lane 4</td>
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<td>Lane 6</td>
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<td>LGS</td>
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<td></td>
<td></td>
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<td>SSWIM</td>
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<td></td>
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</table>

TMS Hardware Connectivity Status

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<tr>
<th>Machine</th>
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<th>Barcode</th>
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<th>AVC</th>
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<th>ETC Reader</th>
<th>SSWIM</th>
<th>AS1</th>
<th>AS2</th>
<th>HS1</th>
<th>HS2</th>
<th>HS3</th>
<th>HS4</th>
<th>HS5</th>
<th>LightCurtain</th>
<th>InboxQueue</th>
<th>FailedQueue</th>
<th>Connectivity</th>
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<tbody>
<tr>
<td>Plaza</td>
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### ETC Growth in India

#### Toll Plazas

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<tr>
<th>Month</th>
<th>No of Toll Plazas</th>
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<td>100</td>
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<tr>
<td>May '16</td>
<td>142</td>
</tr>
<tr>
<td>Jun '16</td>
<td>195</td>
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<td>Jul '16</td>
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#### Increasing No. of Transactions

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<thead>
<tr>
<th>Month</th>
<th>No of Transactions (in '000)</th>
<th>Transaction Amount (in Lacs)</th>
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<tbody>
<tr>
<td>Apr '16</td>
<td>23</td>
<td>40.04</td>
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<tr>
<td>May '16</td>
<td>38</td>
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<td>Jun '16</td>
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<td>Jul '16</td>
<td>144</td>
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<tr>
<td>Aug '16</td>
<td>346</td>
<td>734.79</td>
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<td>Sep '16</td>
<td>547</td>
<td>1142.54</td>
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#### Rising Revenue

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FEATURES OF tollMax® WIM SYSTEM

- Vehicles are Weighed Accurately & Reliably
- Both SSWIM & MSWIM compatible
- OIML-R-134 & Legal Meteorology Certified
- Reliable & Quality Load Cells & Electronics
- 400% Overload Capacity
- Easy to Install and Maintain; Reliable & Tested
BENEFITS OF tollMax® WIM SYSTEM

- Overloaded Vehicles are selected automatically
- Efficient Weight Enforcement Controls
- Less Road Damage, Higher ROI
- Improved Traffic & Public Safety
- Certified Weighing for Automatic Enforcement
COMPONENTS OF VaaaN ATMS

- Video Surveillance System (CCTV PTZ Dome / Fixed Camera)
- Video Incident Detection System
- Vehicle Actuated Radar Speed Displays
- Emergency Roadside Telephones
- Fixed / Portable Variable Message Sign
- Meteorological System
COMPONENTS OF VaaaN ATMS

- Mobile App
- Portable Weigh in Motion
- Automatic Traffic Counter cum Classifier
- ATMS Control Centre
- Communications System Using Optic fiber
SECURITY & SURVEILLANCE

CONTROL CENTRE
1. Image Processing
2. Video Analytics
3. Recognition

Border & City Surveillance

Under Vehicle Surveillance

MPLS Network + GPRS Network
UNIFIED MONITORING & CONTROL

Traffic

Surveillance Cameras

VMS

Security Controls

Mobile Apps

Emergency Call

Weather

Incidents
INTEGRATED MULTI-MODAL TRANSPORT

- **BRTS SOLUTIONS**
- **METRO SOLUTIONS**
- **BICYCLE SHARING**
- **LAST MILE CONNECTIVITY**
- **SMART PARKING**
- **MULTI-MODAL CONNECTIVITY**
Electronic Payment Services

- Smart Card based Fare Collection
- RFID Enabled Fare Collection
- E-Wallet, M-Wallet Enabled
- Multiple Banks & CCH Linked
- Web Based Payment Gateway Linked
ADAPTIVE TRAFFIC SIGNAL CONTROL

1. Image Processing Tools
2. Microcontroller Based Traffic Light Controller
3. Wireless Transmission
VIDEO INCIDENT DETECTION
VIDEO INCIDENT DETECTION

Ambulance Detection

Vehicle Count at a Traffic Point

Video based SMOKE detection
RED LIGHT VIOLATION DETECTION SYSTEM

Red Light Violation Detection System (RLVDS)

ANPR System

Central Control
SPEED ENFORCEMENT

First gate: Bangalore Hyderabad Hwy 1
Date: 18/07/2013 10:21:20.443

Second gate: Bangalore Hyderabad Hwy 2

Plate: KA03MP25
Speed: 66 km/h
Violation number: 75 / 2013
Vehicle class: Autoveicolo
test01
Verify date: 18/07/2013 11:19:39

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SMART PARKING

- Optimum Space Utilization
- Reduces Pollution
- Reduces Operating Costs for Parking Operator
- Ease of Parking and Exit for the User
- Speedy and Efficient Solution
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