



Inspiring Networks

SURAJ INFORMATICS

IT Networking and Automation Services Solution

Address

E 203, Tower No 7,
International Technology
Centre,CBD Belapur,
Navi Mumbai 400614.

General Support

sales@surajinformatics.com
+91-22-40309800
1800-200-7775



ABOUT Suraj Informatics

The Executive Summary should briefly explain each of the below.



Incorporated with the aim of providing economic solutions to the ever-increasing communication demands of organizations.



IT and Telecommunication Infrastructure Services and Solution Company. we have one simple focus i.e., to enable an infrastructure with advanced technologies that delivers not only on performance



We has designed and implemented last mile solutions for leading services provider, enterprise and its expertise in network engineering, along with its partnership with leading hardware and software vendors



ABOUT Suraj Informatics

- Team Member :120+
- Vast Pool of Technology and Domain Experts
- ISO 9001:2015 certified
- Turnkey integrated AIDC, Process Automation Solutions along with Intelligent Surveillance, Wi-Fi, Mobility, using Artificial Intelligence & IoT platforms.
- Global Network of strategic partners - ZEBRA Technologies, CISCO, Altai Technologies, HP, Dell, Molex, Geo-vision, Axis, Bosch, Hikvision and many more.....
- Trusted technology solutions partner for Sea-Ports/Terminals, Transport- Logistics , Manufacturing and Warehousing





The business solutions that Suraj Informatics provides are:

- Enterprises Networking
- IoT / Artificial Intelligence Solutions
- RFID Solutions
- Asset & Inventory Management
- Supply Chain Automation
- Mobility Solutions
- Asset & Inventory Management
- Video Surveillance
- Access Control- Biometric/ face detection
- Traffic & Parking Management
- Terminal Automation System (TAS)

- Optical Character Recognition Solutions (OCR)
- Warehouse Automation and Management System
- Automated Number Plate Recognition
- Gate Automation
- Weighbridge Automation
- PLC Automation
- Locationing Solutions
- Proximity Warning and Alert System
- Fuel Management System
- Smart City Solutions
- Bespoke Solutions



Benefits of CCTV Cameras in Schools

- **Keep Stock of Every Event**
- **Discipline is no more an issue**
- **Teachers' behavior can be monitored**
- **Students are monitored individually**
- **Help in investigation**
- **Emergencies can be tackled**
- **Intruders and offenders can be easily caught**
- **Prevents bullying**
- **Anti-theft agent**
- **A relief to parents**





Smart Classrooms

- Smart Classrooms are technology enhanced classrooms that foster opportunities for teaching and learning by integrating learning technology, such as **computers**, specialized software, audience response technology, assistive listening devices, networking, and audio/visual capabilities.
- Smart Classrooms is designed to enhance instructions and learning

Students Tracking System

- Any student tracking & management web-based (STM) system consists of several tracking devices (inserted in critical spots inside the facility and outside the facility) and a Web-Based server .
- Tracking devices consist of two main parts:
 - 1.The first part is the identification system which is necessary to identify a specific student.
 - 2.The second important part is the device transceiver which provides the ability for the tracking device to communicate with the web- based server by using of a certain protocol or standard.





ICT Labs in School

ICT (Information and Communication Technology) LAB play vital role in teaching and learning process for students and teachers respectively. It gives exposure to the students to learn the subject / lab using the Internet / Self learning practice tools.

What is ICT

- It is an umbrella term that includes all technologies for the communication of information.
- ICT can be defined as the use of hardware and software for efficient management of information. ICT refers to the forms of technology that are used to transmit, store, create, share or exchange particular task.

Scope of ICT in Education.

- A person from village also can refer the latest information and research everyday.
- Television broadcast is one of the best communication media to educate students, farmers, sportsman.
- The difficult experiments, advance surgery for medical students etc. can be viewed.
- LCD projectors can be used for effective training.
- The man power problem, the human mistakes can be avoided by on-line examination.

Solar Energy

- 1) Sunlight hit the solar panel (photovoltaic/ PV) and absorbed by semi-conducting materials such as silicone.
- 2) Electrons are knocked loose from their atoms, which allow them to flow through the material to produce electricity. This process is called the photovoltaic (PV) effect.
- 3) An array of solar panels converts solar energy into DC (direct current) electricity.
- 4) The DC electricity enters an inverter.
- 5) The inverter turns DC electricity into 120-volt AC (alternating current)
- 6) The AC power enters the utility panel in the house.
- 7) The electricity (load) is then distributed to appliances or lights in the Building



SMART CITY



Smart Cities – IOT Solution

Smart Home, Smart City

- **Smart Transportation & Parking:** End-to-end transportation solution for vehicle tracking, dispatching, parking area management, and optimal fuel consumption.
- **Smart Campus:** Indoor navigation to find places of interest, optimal routes, and emergency exits.
- **Smart Waste Management:** Smart bins with automatic messaging for bin status and pick-up.
- **Smart Building Management Systems:** Integrated solution for heating, ventilation, and air conditioning (HVAC) as well as lighting, access control, and surveillance.
- **Smart Water :** Water distribution and monitoring through IoT ecosystems and data analytics.
- **Smart Energy Management :** Real-time monitoring using machine learning for preventive maintenance and energy saving
- **Smart Environment Management Solution :** Monitoring pollution levels at points of interest.

Ports & Terminal

Why to automate?

.



Predictability & Reliability

Optimized processes, identification of bottlenecks, optimization of space within the Terminal



24 hour operation

Continuous monitoring and improvement



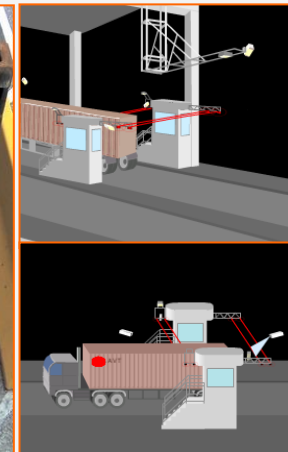
Continuous monitoring and improvement

Shorter stays of the ships at the container Terminal



Gate OCR Portal

The Executive Summary should briefly explain each of the below.



Damage Inspection

Gate OCR Portal



Driver Kiosk

Face camera

Touch screen

Phone

Printer



Weigh Bridge Automation

How the System will Work ?

- ✓ Once the truck reaches the WB, LED will turn RED, GP number will be pushed into the APMS and details of the truck will appear on the Operator Screen.
- ✓ Once the operator confirms the details, he can see the same in the cameras display also, he can confirm the Tare weight and can also speak to driver with a PA system. On confirmation, loading receipt is generated. The driver picks the same and goes to respective yard.
- ✓ Cargo is loaded and truck comes back to WB. Truck ID is sent to APMS and details are displayed on the operator screen. If all okay, CGP is printed and truck moves to Port Gate.

What if it fails ?

The WB will have readers installed from both directions. All the LED Signals and Cameras will work in Sync. So if one fails the other can be used.

Limitations ?

The system works in tandem with existing applications and is dependent on them



Weigh Bridge Automation

Benefits to Business

With this automations, we expect the following benefits to the Dry Cargo Team:

- **Improved Efficiency of WB:** Currently it takes around 10 – 15 minutes of time for each truck at the WB to process Tare Weight. Making the process online can reduce the same time to less than 5 minutes, even that is higher. With the usage of the same we can expect the system to reduce the cycle time to less than 2 minutes.
- **Turn around time:** We will be able to exactly monitor the turn around time of each vehicle inside the Port.
- **Reduce Errors:** Human errors will be reduced and process will be faster.
- **Shorter Queues:** With faster turnaround, the waiting of the trucks will be lesser and with expected rise in traffic, we will be ready to handle more numbers of vehicles.



Truck / Chassis Positioning System

Why do you need it? How does it affect your business?

Truck / Chassis Positioning System is automated system which helps to keep Truck / Chassis at correct position to reduce extra movement of Cranes & helps to uses Cranes efficiently.

Benefits of Truck / Chassis Positioning System

- Fast Loading / Unloading.
- Reduce Manual Intervention, Reducing Human errors.
- Increase in Efficiency & Better Turnaround time.

Results Of Truck / Chassis Positioning System

- Driver will adjust his truck / chassis by own.
- No need to give manual instruction.





Truck / Chassis Positioning System

There are two types of implementation.

Truck / Chassis positioning system with Single 3D sensor and Automated mechanical mechanism.

- 3D sensor is responsible for alignment in vehicle bidirectional movement.
- Same sensor is responsible for detection of Empty or Loaded Truck / Chassis in bidirectional movement.
- Need Mechanical mechanism to align 3D sensor with respect to lane.

Truck / Chassis positioning system with Horizontal 3D sensors at each lane and one vertical 3D sensor.

- Dedicated lane sensor will detect Empty or Loaded Truck / Chassis in bidirectional movement.
- Vertical sensor is common in for all lane and responsible for truck alignment.
- For bidirectional movement we need one more vertical sensor for alignment in other lane direction.

Fuel Management Systems (FMS)

What is Fuel Management System

Fuel Management Systems are used to **maintain, control and monitor fuel consumption and stock** in Container Port & Yard. Fuel management systems are designed to effectively measure and manage the use of fuel within the Container Port & Yard.

- Efficient way to utilize Fuel
- Requirement of fuel for particular period
- No downtime due to fuel issue.
- Cost Cutting due to efficient use of fuel
- Transparency in system

Why do you need it? How does it affect your business?

FMS can integrate many systems to one with secure data exchange between all system with process.

Benefits of FMS Solution

- Simplifies and speed up the fuelling process.
- Minimizes the risk of fuel theft.
- Stops fuel flow if removed from filter neck.
- Integrated automatic mileage capture option.
- Radio linked – No wire down fuel hose.
- Simply retrofit to standard nozzles.
- Ultra robust, Ergonomic design.



Man Machine Interface (MMI)

- RFID controller ,antenna and alarm are mounted on of the spreader
- RF range is adjustable depends on active/passive tags
- Whenever a tagged object is detected alarm will be activated
- Output of the controller can be used to control boom barriers also.
 - RFID tag read by fixed readers will be fed to APMS, manual entry of vehicle number can be eliminated.
 - When tag is read, images captured at the event can be referred against the vehicle transaction.
 - All the tag read event for the truck i.e. at IN Gate, Weigh Bridge, OUT Gate can be referred for the corresponding transaction with timestamp and report for same can be generated.
 - Truck movement at the weigh bridge can be controlled using sensors i.e. if the truck is properly aligned for weighment or not.
 - In case of any exception in the system, i.e. if tag is not read or sensors are not properly triggered, user interface can be provided to the operator for error intimation and handling.
 - If RFID tag assigned to truck is damaged, another tag with same RFID tag ID can be re-assigned eliminating the need for any change in application.
 - Implemented at Adani, Tuna port, Kutch

Working Principle

- As part of safety instructions, everyone in the yard has to wear Helmets & High Visibility Jackets. Tags are to be fixed with Helmets / High visibility Jackets.
- A RFID Reader is fixed at the backside of the vehicle with two antennas. The system is activated immediately it senses the vehicle in reverse gear.
- The Hooter is kept at the drivers cabin, connected to RFID Reader. The hooter is kept in such a position that it is always visible to the driver.
- Any person wearing the safety gears (fixed with Tags) if comes near the vicinity of the reader read range, the hooter will start making noise and give light signal.
- MMI is designed in such a way that the nearer the vehicle comes to the person, the volume of Hooter will keep on increasing, which will make the driver and the individual alter.



Some Of The Major Projects References:

2007-08 Adani Container Terminal	<p>SIPL has installed Radio Data Terminals (XT15 Handheld Terminal and 8515 Vehicle Mount Terminal) with Cisco first Outdoor WLC based Unified Wireless Solution in the Yard. The Complete Yard is covered with Protected Wireless Coverage. Over Years we are maintaining their system with our full-fledged support Team at the site.</p> <p>We are responsible for the WLAN & RDT devices at the site with an uptime of 99%.</p>
2008-09 Container Corporation of India	<p>SIPL has executed a 16 location project for CONCOR with Narrowband Technology and RDT's.</p>
2009-10 Adani SEZ	<p>With Success of automation of Container Yard, the system was extended to the Bulk and Steel Yard. The extension was seamless and the total network is services and supported by SIPL experienced and dedicated team at the site.</p> <p>The complete system is in contract with SIPL Services.</p>
2010-11 Nhava Sheva International Container Terminal	<p>In 2010, when DPW Nhava Sheva Container Terminal was trying to move out of traditional low bandwidth technology, SIPL was there technology partner. SIPL suggested them Wireless Network and Radio Data Terminals.</p> <p>We implemented WLAN system, Surveillance system and RDT's at the port and till date we are giving service and support at the site.</p>
2010-11 International Container Transshipment Terminal	<p>In the same year, when another DPW port, DPW Kochi was trying to do the setup, SIPL was again the Trusted Partner for implementation of Wireless Network and Radio Data Terminals. The system is maintained and supported by SIPL Team.</p>

Some Of The Major Projects References:

2011-12 Adani Hazira Port Private Limited	<p>SIPL has installed Radio Data Terminals (XT15 Handheld Terminal and 8515 Vehicle Mount Terminal) with Cisco first Outdoor WLC based Unified Wireless Solution in the Yard. The Complete Yard is covered with Protected Wireless Coverage. Over Years we are maintaining their system with our full-fledged support Team at the site.</p> <p>We are responsible for the WLAN & RDT devices at the site with an uptime of 99%.</p>
2011-12 Adani Container Terminal 3	<p>In 2012, Adani constructed new terminal, Container Terminal 3, SIPL was considered for the implementation and installation of Wireless Infra and RDT's. The complete system is under our maintenance and support.</p>
2011-12 Chennai International Terminal Private Limited	<p>SIPL has also supported CITPL. We have supplied and supported Wireless Infra and RDT's at the site.</p>
2012-13 Pipavav Port	<p>SIPL has also installed Wireless Infra for Gujarat Pipavav Port. We have implemented Cisco Mesh Outdoor Network with Redundant WLC configuration at the site.</p>
2014-15 DPW Mundra International Container Terminal:	<p>MICT has been using NB RDT's from long time and SIPL has been supporting them. Over the period of time and necessity to increase the bandwidth, SIPL is converting the NB units (RDT's) to SS and implementing Wireless Solution for the Container Yard.</p> <p>SIPL has implemented NB, RDT's and Surveillance System for DPW MICT earlier and is going to install DSSS Network and RDT's for MICT now.</p>

Some Of The Major Projects References:

2014-15 Nhava Sheva International Gateway Terminal	SIPL has already received an Order to Implement Wireless Solution, Surveillance and RDT's. The same would be live by March 2015.
2014-15 Lome Container Terminal, Togo	Optical fiber cabling network has been implanted by SIPL.
2015-16 Gujarat Pipava Port	Have trusted again on SIPL for creating Infra for new Yard and new Gate Building for which complete LAN Infra work and WLAN work is done
2015-16 Adani Port Container Terminal 4	The new CT4 at Mundra, SIPL was considered for LAN infra and MOBILITY infra.
2015-16 Nhava Sheva International Gateway Terminal	SIPL was entrusted again for MOBILITY solutions and LAN Infra Solutions.
2015-16 Container Corporation of India	SIPL has transformed the entire COCNOR TKD Yard into WLAN covered region with new rugged and stable WLAN infra and MOBILITY infra.
2015-16 Khorgosh Gateway Terminal-Kazakhstan	Altai wireless network implementation was done by SIPL.
2016-17 Adani Ennore Container Terminal	The entire Network, Wireless and Mobility infra part was given to SIPL to implement and support for 3 years. The project is under sign off & handover process.

Some Of The Major Projects References:

2016 -17 JNPT	SIPL has been awarded Gate Automation Project by JNPT.
2016-17 Container Corporation of India	SIPL has made the yard of another 7 locations Wireless Enabled to use RDT at the yard for their ETMS & DTMS applications.
2016-17 Salalah Port	VMTs and RDTs were commissioned and implemented by SIPL.
2017-18 BMCTPL, PSA	Entire Yard, Rail Yard and Wharf is Wi-Fi enabled for RDT usage
2017-18 CITPL	Wi-Fi implementation for complete yard for RDT usage
2017-18 KICT	SIPL has been awarded Gate Automation Project by KICT
2018-19 DP World (NSICT)	The project for upgradation of VMTs at RTG and ITV has been awarded to SIPL
2018-19 DP World (MICT)	VMTs for RTG were supplied and installed by SIPL.

Some Of The Major Projects References:

2018-19 Paradeep International Container Terminal	The complete project for wireless infrastructure and wired networking has been awarded to SIPL
2018-19 Adani katupalli Port	Wireless and RDT Infrastructure has been implemented by SIPL
2018-19 Krishnapattnam Port	Remote Crane Management System was implemented by SIPL
2018-19 Adani (Mundra, Hazira & Ennore)	SIPL was awarded the project for implementation of VMTs at ITV at each location



Service & Support

We have dedicated team of people who are trained and are working on the system from last 15 years. Based on the installation base and expertise, we assure you of the best services.

We understand “**Value for money**” and hence we offer different types of the services and maintenance contract, which we can consider and discuss further.

We understand how critical it is for the business to have it regularly maintained and updated. Even the most planned business would require continuous **support and maintenance**.

We have dedicated team with technical competence across different technologies. Other than that there are fully trained quality team with keen eye for details will check every single update.

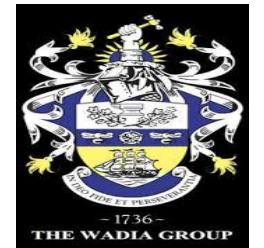


Some Of Our Major Clients:

adani™



CRODA



Contact Us



Inspiring Networks
SURAJ INFORMATICS



Mumbai

E 203, Tower No 7,
International Technology
Centre,
CBD Belapur, Navi Mumbai
400614.
Mumbai: 91-22-40309800



Dubai

Office 89, 3rd Floor, CBD Bank
Building,
Al Mankhool Road, Bur Dubai,
Dubai, UAE
Dubai: +971 04 2346089
Email :
amit@surajinformatics.com



General Support

sales@surajinformatics.com

+91-22-40309800

1800-200-7775



Delhi

M-54, LGF, Kalka Ji, New Delhi
110019
Delhi: +91-11-40502759/
26226259



Mohali

Plot No.: IT-C6, 5th Floor,
Sebiz Square,
Sector - 67, IT Park,
Mohali-160062



Gujrat

15, Suyah Plaza, Baroi Road,
Mundra Kutch, Gujarat-
370421
Gujrat: +91-9924417441



Other Branches

, Kolkatta , Chennai, Kochi ,
Ahmedabad, Vizag,
Hyderabad, Surat, Nagpur