



Navayuga Infotech

A CMM Level 4 & ISO 9001 Company



eGovernance SBU

Harnessing ICT & ITeS
into the Government Domain



eGovernance

eGovernance is about a process of reform in the way Governments work, share information and deliver services to external and internal clients for the benefit of both government and the citizens and businesses that they serve.

eGovernance harnesses information technologies such as Customized software solutions, Wide Area Networks (WAN), Internet/Intranet, World Wide Web, and mobile computing by government agencies to reach out to citizens, business, and other arms of the government to:

- Improve delivery of services to citizens
- Improve interface with business and industry
- Empower citizens through access to knowledge and information
- Make the working of the government more efficient and effective

The resulting benefits could be to provide better & timely services to citizens, transparency, greater convenience, less corruption, revenue growth, and cost reduction.



Navayuga's eGovernance Initiatives

Navayuga's eGovernance Initiatives, managed by its eGovernance SBU, with its core members having in-depth working knowledge & vast experience in the Government domain, was established with a primary objective of providing state-of-the-art, end-to-end solutions and services to several Government organizations across the globe. The eGovernance SBU shall enable Government organizations offer better ICT & ITeS to the citizens and its stakeholders. The eGovernance Venture at Navayuga creates a platform for the Government to incorporate the best technology and industry practices that will enable them to address the ever-demanding needs of citizens more efficiently, transparently and accurately.

Navayuga's eGovernance Venture enables Government to harness information technologies such as Customized software solutions, Wide Area Networks, Internet/Intranet, World Wide Web and mobile computing to reach out to citizens (G2C), businesses (G2B) and other arms of the Government (G2G) to improve delivery of services and to empower citizens with better access to information and enhanced transparency.

Navayuga's eGovernance solutions are oriented towards helping Government organizations transform into enterprise infrastructure-based, end-to-end digital Government that;

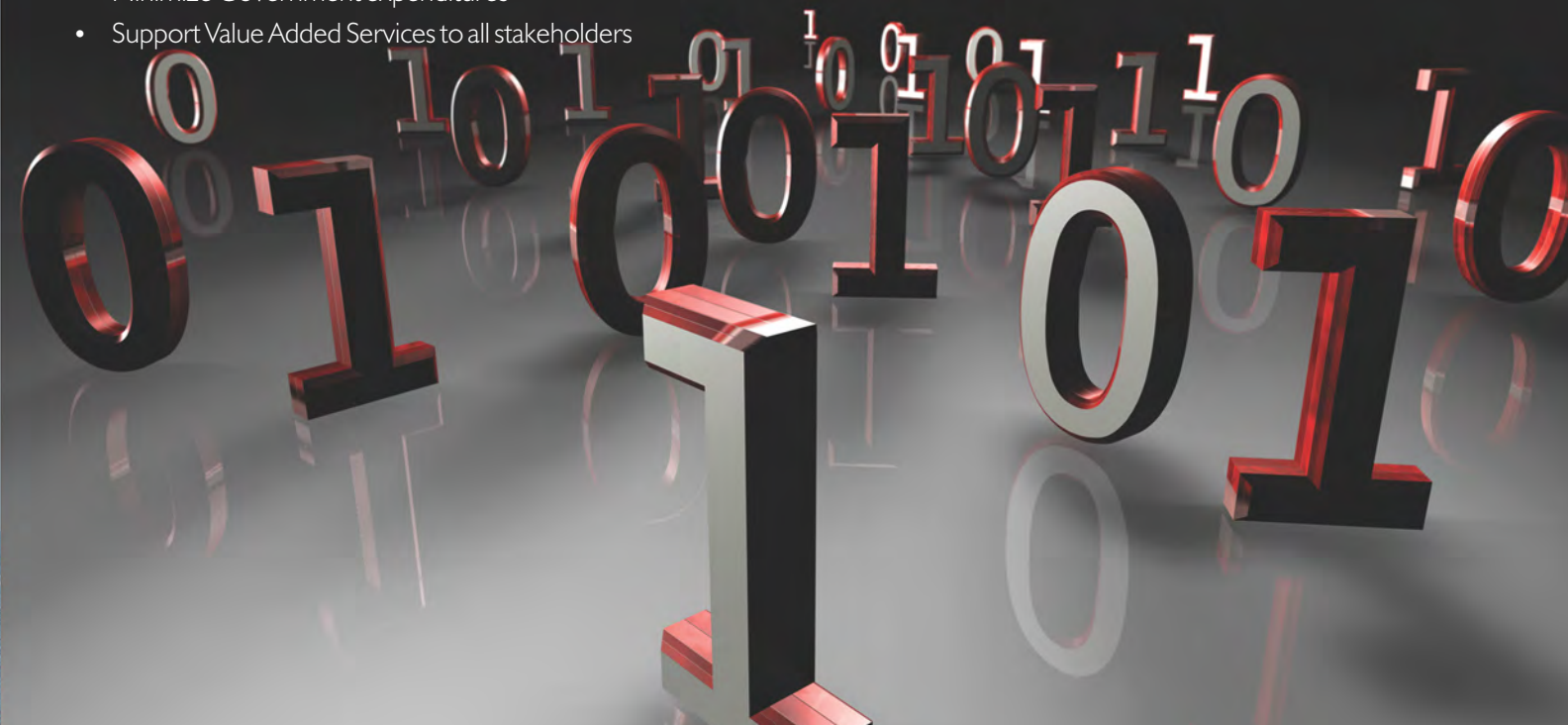
- Provide Citizen centric services
- Increase Government accessibility
- Bring Transparency in its services thus supporting Right To Information
- Disseminate information online with responsibility
- Optimize Government resources
- Minimize Government expenditures
- Support Value Added Services to all stakeholders

Focus Areas

- Agriculture
- Education
- Rural Development and Gram Panchayat
- GIS
- Urban Bodies like Municipalities, Water and Sanitation etc
- Police
- Transportation

Thematic Areas

- Enterprise Resource Planning (ERP) Solutions
- HRMS
- FAS
- Project/Scheme Monitoring System
- Education Resource Management (ERM) Solutions
- GIS Solutions
- Government Portals & Web Sites
- Office Procedure Automation
- Electronic Document Management System
- Port Management System
- Consultancy (BPR, DPR, URS, SRS)
- Infrastructure Solutions (based on competency of partners)



Navayuga's eGovernance Offerings

Navayuga's eGovernance offerings provide end-to-end solutions that range from consultancy and technology services to productisation and support. The eGovernance offerings have been designed on a set focus areas within the government sector.

Navayuga, in order to deliver effective and simple solutions to the governments, has built strategic partnerships with local / global organizations with unique insights, knowledge and experience of deploying several successful projects across the globe. Navayuga's eGovernance solution and services offerings are:

- Customized Software Application Development Business applications custom built to client specifications using appropriate technologies and relevant domain expertise, to ensure optimal functionality.
- Consultancy Services Provide IT consultancy services to Government organizations for Business Process Reengineering, Detailed Project Report and Techno-Functional consultancy during all phases of IT implementation.
- Product Engineering and Integration Cost-effective migration of legacy applications to state-of-art technology and seamless integration with existing applications to reduce implementation & roll-out time.
- GIS Solutions Navayuga through its subsidiary Navayuga Spatial Technologies Pvt Ltd (NST) offers innovative, efficient and quality solutions and services in all areas of spatial and non-spatial technology and applications. Navayuga brings horizontal and vertical integration of satellite / aerial Remote Sensing, Photogrammetry, positioning applications, GIS database and applications, GIS Web-services and networking of GIS databases.

- Training and Maintenance Excellent end-user training to enable efficient and effective implementation & roll-out; Facility Management Services to ensure uninterrupted delivery of services.
- Quality Assurance and Testing Navayuga by virtue of its quality certifications (CMMI level 5 & ISO 9001:2000), offers the best in industry services that ensures quality to the Government organizations. As a part of Quality Assurance initiatives, comprehensive Quality control plans utilizing manual and/or automated state-of-the-art testing tools and methodologies are offered; including system testing, load testing, performance testing and test suite management.
- Project Management Experienced project managers who possess strong project management, technical & functional skills ensure quality, time & cost effective delivery of projects to clients as per their requirements managing the complete project life cycle to ensure customer satisfaction.
- Staff Augmentation Highly qualified developers immediately available at competitive billing rates to clients' total investment in managing human resources.

Additional benefits:

- A partnership with an organization built on quality. This includes ISO 9001:2000 and CMM level 4 certifications.
- One-stop-shopping for all ICT & ITeS Solutions
- Expert & Experienced Solution managers who apply the best IT practices
- Significant cost savings.

Consultancy Services

Interact closely with Government organization to identify area that require process re-engineering by deploying experts from the Government domain and develop strategies that include:

- eGovernance roadmap for implementing ICT & ITeS
- Identify & document short-term & long-term needs
- Build a framework for implementing integrated services

Technology Services

- Deploy Experts and identify User Requirements
- Propose an end-to-end solution framework that meets the user requirements
- Project Management
- GIS Solutions
- Technology Identification
- System Integration
- Process Management & Consultancy
- Vendor Management

Solutions & Services

- Detailed Requirement study and analysis
- Application design and development
- eLearning Courseware Development (Computer / Web Based Training)
- Multimedia Services
- Turnkey Software Solutions
- Productization
- Implementation & Training
- Support & Maintenance

Technologies, Services, Products & Projects

The table below shows the various Government departments with whom Navayuga's eGovernance SBU has been working closely on various technologies, services, products and projects, leveraging its expertise to meet the Information and Communication Technology (ICT) needs of each of these departments:

Government Departments	
Agriculture	Rural Development and Gram Panchayat
Police	Education
Water Board	Mineral Development
Municipal Corporations	General Administration
Civil Supplies	Transport

Navayuga's Expertise	
Microsoft Technology	Open Source Technology
.Net Framework	J2EE
ASP.Net	JSP & Servlets
C#.Net	Core Java
VB.Net	EJB
AJAX for .Net	Javascript & AJAX
Javascript	PHP
MS SQL Server	MySQL / PostGre SQL
SSRS	Ireports / Jasper
WCF / WPF	Struts

Services	Products
Consulting	HRMS
GIS	FAS
ePayment Gateway	University Management System
CSCs Setup	Office Procedure Automation
Hosting Application as Services	Government Portal
Facility Management Networking	

Projects

Enterprise Payroll Management System, Govt. of Kosovo

Enterprise Port Management System

Airport Information Management System (AIMS)

University Management System

Focus Areas

Agriculture

Education

Police

Transport

Municipality

General Administration

Civil Supplies

Utilities

Rural Development & Gram Panchayat

Offerings

eGov Portal

Smart Card

eMunicipality

Office Procedure Automation

Airport Management

Land Records

Document Management

Port Management

Grievance Redressal

MIS

Citizen Centeric Services

Rural Information

ERP

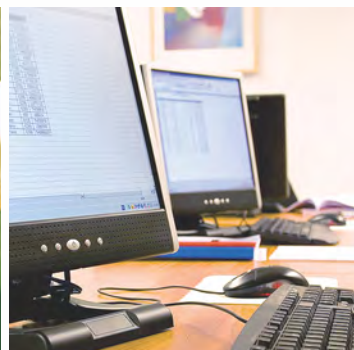
Agri Marketing

Decision Support System

GIS Solution

University Automation

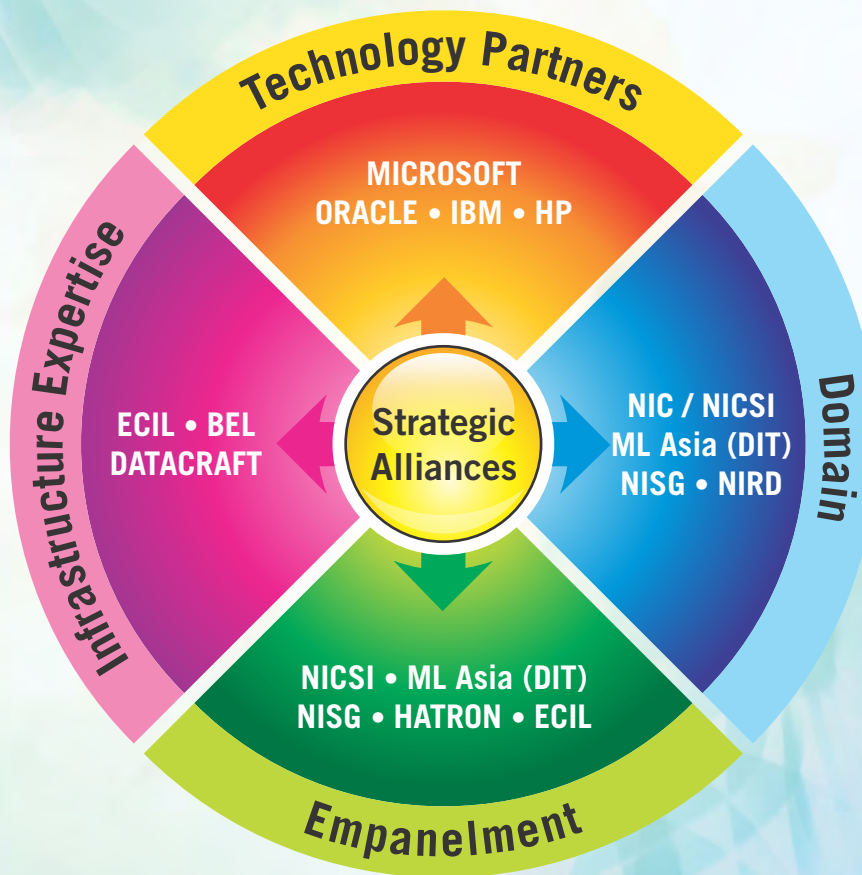
Facility Management



Strategic Partnerships

Navayuga's eGovernance initiatives provide the entire spectrum of ICT & ITeS solutions for the Government organizations across the globe. Navayuga in order to deliver effective and simple solutions to the Government establishments has built strategic partnerships with local/ global organizations having unique insights and knowledge of eGovernance with rich experience of deploying several successful projects.

Navayuga's Alliances			
Domain	Empanelment	Technology Partners	Infrastructure Expertise
NIC / NICSI	NICSI	Microsoft	ECIL
Media Lab Asia (DIT)	Media Lab Asia (DIT)	Oracle	BEL
NISG	NISG	IBM	DATA CRAFT
NIRD	HATRON	HP	
	ECIL		



Navayuga through its empanelment, strategic alliances, Government domain experts and partnerships has successfully provided diverse ICT & ITeS Solutions to Government organizations that include;

- IT Consulting
- Turnkey Projects
- Solutions & Services
- System Integration Services
- GIS based Solutions
- Data Centre Setup & Facilities Management
- Hosting of Solutions as Services

IT Consulting

Navayuga's consulting practice is driven towards giving the best consultancy services to our customers. They include:

- Build business models, define processes and software systems using industry-standard modeling techniques
- Using object-oriented, component-based tiered technologies
- Making use of existing in-house technology resources and maximizing ROI and minimizing risks by following an incremental and iterative development methodology.
- Navayuga works towards preparation of various documents and reports for Government departments to focus on their Vision, Mission and Objectives of ICT implementations.
- Understanding User Requirements by Government
- Domain Experts
- Concept/Approach Papers
- Business Process Re-engineering (BPR) Reports
- Detailed Project Reports (DPR)
- Requirements Gathering & SRS Preparation

Solutions and Services

Navayuga's eGovernance Initiatives, by virtue of its combined expertise and understanding of the complex needs and requirements of the Government organizations, has developed and implemented solutions & services on heterogeneous domains & technologies.

Offshore Development Centre (ODC) Services - Navayuga has 350+ technically skilled resources at Hyderabad office specialized in software development activities.

Navayuga's eGovernance Venture offers a wide range of customizable solutions namely:

- University Management System (UMS)
- Human Resource Management System (HRMS)
- Financial Accounting System (FAS)
- eGovernance Portal
- Office Procedure Automation
- Project/ Scheme Monitoring System
- Payroll Management System

Navayuga's eGovernance Venture addresses turnkey projects in areas such as:

- Airport Information Management System (AIMS)
- Enterprise Port Management System (EPMS)
- University Automation
- Enterprise Resource Planning (ERP)
 - » HRMS
 - » Financial Accounting
 - » Inventory & Purchases Management
- Smart card based solutions
- Document Management System (DMS)

Client List (Partial)

Client List (Partial)	Project
Airports Authority of India (AAI)	Airport Information Management System
University of Namibia (UNAM) - Namibia	University Management System
Narayana Group of Educational Institutions - India (100 Branches)	University Management System
Government of Kosovo	Enterprise Payroll Management System
Krishnapatnam Port Company Limited, Government of Andhra Pradesh (PPP Model)	Enterprise Port Management System



Overview of the Projects executed by Navayuga

University Management System (UMS)

University Management System (UMS) is an Internet (web) based Enterprise Application from Navayuga Infotech, designed to automate the entire operations of a university and/or, any educational institution. It allows multi-divisional, multi-departmental functional system with varied features like admissions, online registration, online examinations, curriculum management, time-tabling, feemanagement, results, library, career, hostel and transportation.

UMS is a customizable product, which allows customizing, deploying and implementing the required modules with minimum time possible. Time-to-Use & feel the MIS is much faster than any legacy and classical application modules. UMS is built with known industry standards and compliances and hence it's easily interoperable. Integrating & connecting with third-party applications is always easy by user customization or development & deployment changes with least impact and with a minimum time frame. As the core-architecture is developed by using the latest & state-of-art technologies, it provides excellent performance, efficiency and high security.

UMS Modules

Student Information System

- Pre-Admission Management
- Under Graduation Program
- Post-Graduate Program
- Research Program
- Admission Management
- Fees Module
- Academics Management
- Curriculum Definition
- Examination Process
- Paper Setting
- Student Attendance & Analysis
- Student Marks & Analysis
- Encryption Based Question Bank
- Conduct of Examinations
- Evaluation and Results
- Finalized Internal Assessment
- Award List
- Re-valuation
- Issue of Results
- Award of Degree Management
- Alumni Management

Finance Management System

- Company & Accounting Structure
- Cost Center Management
- Budgeting (Cost Centre based)
- Creditors System
- Debtors System
- Cash & Bank
- Procurement System
- Assets Management
- Inventory & Stores Management

Human Resource System

- Recruitment Management
- Employee (Personal) Information System
- Leave Management System
- Time Office Management
- Employee Appraisal System
- Medical & Insurance

Payroll System

- Salary - Scale & Notch Definition
- Earnings, Deduction & Allowance
- Roster Management - Shifts Definition & Scheduling
- Overtime & Pay-By-Claim processing
- Salary Process Scheduling
- Pay-Slips Generation and Mailing
- Income Tax Calculation
- Pension Fund Management

Space & Infrastructure Management System

- Space Hierarchy Definition
- Space & Location Derivations
- Space Allocation Management
- Transport & Fleet Management
- General Maintenance Requisition Tracking System

Generic Utilities

- Committee Management
- Meetings Management
- Visitor Management
- User & Security Administration
- Application & System Help Desk Management
- User based Application & Setup Customizations
- Alerts Engine: SMS/Email/Fax

UMS is bundled with a powerful analytical & reporting engine. Provides extensive built-in reports in different categories for different user groups with varied objectives for an Enterprise such as:

- Operational Reports
- Adhoc Reports
- Management Reports
- Statistical & Analytical Reports
- Dash Board
- What-IF Analysis Reports Enterprise Payroll Management System



Enterprise Payroll Management System

The Client

In 2004, the government of Kosovo solicited bids for the development of a payroll management system for government employees, following its designation as a UN protectorate.

The Project

The payroll management system would need to support 100,000 employees across a significant range of functionality. Included in the system is dynamic support for multiple languages, flexible definition of pay periods, support for tax schedules and withholding rates specified via an administration function, deferred payments, comprehensive employee-related data management, and a sophisticated fine-grained security model to protect the integrity of the system.

Scope of Work

- Navayuga created a complete project specification at client site
- Assigned a complete team of developers dedicated solely to the client
- Provided the solution in multiple languages
- Performed comprehensive product testing

Technologies

VB.NET, Web services, SQL Server 2000, Windows Server 2003

Benefits

In six months a robust product was delivered to the client and the Kosovo Ministry of Public Affairs was immediately able to utilize the system to pay the salaries of all government employees throughout Kosovo. Remote access to individual municipalities was provided allowing end users to provide information on the number of hours worked, holidays taken etc. A significant increase in productivity and accuracy was achieved.

Airport Information Management System (AIMS)

Navayuga Infotech has successfully executed a turnkey contract for the Airports Authority of India (AAI). Navayuga Infotech deployed an Airport Information Management System (AIMS) at the Hyderabad and New Delhi Airports. The system is being introduced as a part of the Information Technology initiative undertaken by AAI. The system automates, analyzes and presents information, which will go a long way in effectively and efficiently managing airports, leading to customer satisfaction and improved organizational management.

Leveraging its expertise in total technology solutions and services, Navayuga as the project management consultants and implementers, not only authored the solution, comprising of hardware, software and networking components, but also offered complete facility management services, including the vital task of continuous updation and maintenance of all technical and administrative modules. On successful completion and installation of the solution, Navayuga also conducted several extensive awareness and training programmes for the end-users.

The turnkey project was completed in nine months with out any time and cost overruns. The Airport Information Management system will supplement the AAI in coordinating information management, capacity analysis, operations management, and personnel allocation.

AIMS Modules

- Airport Terminal Management (ATM)
- Air Traffic Control (ATC)
- Airport Managing Director
- Stock Management/Inventory Module
- Maintenance Management
- Emergency Management
- Security Management
- Commercial Management
- Land & Estate Management
- Ground and Flight Safety (GSF)
- Human Resource and Payroll Module
- Cargo Terminal Handling Module
- Apron Management
- Traffic Statistics & Reports
- Legal Management
- Finance, Accounts & Revenue Management
- General Information
- Administration Management

The AIMS application will soon be deployed at all the 80 airports in India. Navayuga has also deployed the following products:

- Airport Inventory and Maintenance System
- Air Traffic Billing System - In 45 airports around India

Enterprise Port Management System

Introduction

Ports face several new challenges requiring them to meet demands for sophisticated data communication solutions. No longer content with just handling their cargo, customers increasingly expect ports to be sophisticated at handling their data. They also expect ports to have the most sophisticated data technology available to handle the way they move data around the terminal.

Enterprise Port Management System (EPMS) is an Internet (web) based end-to-end integrated Port solution from Navayuga Infotech that handles vessel and cargo movement activities in and out of the port. For better decision-making the system provides users with real time information about vessel arrival / departure, port facilities management, cargo & logistics information, gate operations, etc. The objective of the application is to get the highest competitiveness by maximizing the work efficiency, enabling effective usage of port facilities and achieving customer satisfaction by high quality service. It also provides you with various enterprise based functional, operational & management modules with seamless integration & interoperability.

Marine Operations

Allows the user to effectively and efficiently manage Marine operations such as Anchorage, Pilotage, Berthing, Unberthing, Shifting and Warping. It also caters to systemized management for vessel arrival / departure and movement status in the port, berth management, automatic invoice generation / calculation of port dues and services requested, etc.

Features

- Vessel Voyage Registration
- Automated Proforma Invoice / Rate Card Definition
- Complete Pilotage and Berthing process recording
- Capturing and recording all services offered to a vessel
- Finalisation / Closure intimation of all interfacing activities
- Dashboard to view entire marine operations with real time information

Cargo Operations

Provides a solution for the smooth management of import / export process documentation and helps to plan, allocate, schedule, control and monitor all cargo operations to maximize their productivity and efficiency. The application captures the activities and functions of Gate, Warehouse and Rail.

Consists of complete Import and Export process flow Captures entire operations flow right from documentation to delivery Extensive and sequential Gate Operations flow Usage of technologies like Bar Code scanning, thus reducing Human errors Invoicing of Services such as wharfage, storage, etc.



EPMS - Modules & Features

Marine & Vessel Operations System (MVOS)

- Berth Definition and monitoring
- Vessel Documentation
- Service Request / Recording
- Marine Closure
- Vessel Dashboard

Cargo & Logistics Management System (CLMS)

- Import / Export Documentation
- Gate Operations
- Warehouse Operations
- Control Centre Operations
- Shipping Operations
- Jetty Operations
- Storage Planning
- Weighbridge Integration

Operations Resource Management (ORM)

- Personnel Calendar
- Personnel Deployment
- Labor Requisition / Allocation
- Work Order Generation / Finalization / Approval
- Equipment Requisition / Allocation / Recording

Rail Operations Management System

- Rail Documentation
- Exchange Yard Operations
- Placement / Release of Rake
- Indent for Wagons
- Wagon Allotment

Human Resource Management System

- Role / Designation Configuration
- Workflow Definition

Material Management System

- Vendor Management
- Procurement Process
- Quotation System
- Purchasing & Invoicing
- Inventory & Stores
- Goods Indent / Receipt / Issue / Transfer Customs & EDI
- CHA / Importer / Exporter
- Immigration
- Navy / Coast Guard
- Data Configuration
- Data Transfer
- PCS Messaging Hub

Finance Management System

- Rate Card Automation
- Customer Service Agreements
- Automated Invoicing / Billing
- Bill Adjustments
- Cash / Bank Transactions

Administration & User Customization

- Complete port administration for Port Authorities
- Easy to use web interface
- Easily adaptable to any specific port
- User based Application & Setup Customizations

Vehicle / Fleet Management

Visitor Management

Equipment Maintenance System

Payroll Management System

Estate & Infrastructure Management



GIS Solutions & Services

- Natural resources management - inventory and management of agriculture crops, land cover and land use, forestry resources, water resources etc. Establishing a natural resources information system, around a GIS core, will be key for many government needs.
- Disaster and emergency response - where applications of GIS for response and rehab/relief work is the core.
- Land records with a Land Information System (LIS) - where land records computerization with the cadastral maps can provide innovative land management solutions and public enterprise.
- Urban management, property and taxation applications as part of an urban GIS where multi - scale GIS solutions for planning and administration of urban areas and optimizing tax-collection can be enabled.
- Insurance applications to support the needs of insurance agencies for crop and property insurance management.
- Port GIS to support planning and management of Ports - both already operational and new ones being taken up.
- Aviation GIS to support Airports Asset management and air - traffic control requirements.
- Traffic and Road management - mainly as road infrastructure planning and management.
- GIS in energy and power sector.
- Telecom GIS to support fixed and mobile telecom services (including Location Based Services).
- Transport GIS for optimizing fleet operations and transportation networks.
- Police GIS to support police and security requirements.
- Defense applications and services (handles in a separate division).
- Engineering GIS to support construction, architectural and landscaping applications.
- Enterprise GIS to support retailing requirements, business geographics, real estate requirements.
- Unique solutions for energy sector applications.
- Host of applications front - ending spatial technologies on conventional IT back-ends.



NAVAYUGA



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