



World's First Mini ERP Soft Solution Suite for SME's

Strategy Paper

Ver: 1.0

Integrated Information Technology

*Adopting, Implementing, Deploying and Maintaining
Secure, Efficient and Cost-Effective IT Solutions
across the Distributed Education Campus*

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Executive Summary

Innove was founded in 2002. Since then, Innove has helped many firms in various parts of the world implement IT systems across the enterprise. Innove's solutions have stretched across domains, industries and verticals. Innove has extensive experience in working on Microsoft and Java based technologies for clients in several countries. Our track record in building lasting partnerships over the last 7 years would speak for itself, and its clients include several multi-national companies and government bodies across the world.

Innove has a specifically large experience base in the Education Sector.

The purpose of this Approach Paper is to provide a panoramic view of what to expect while taking up such an initiative across the group and its colleges. Each of the individual solutions / practice areas mentioned in the document can be / have been elaborated upon in great detail. This document seeks to provide everyone with a launch pad. Both client and consultant will need to invest some time in studying the exact needs and requirements and work out a more detailed roadmap for the same.



Information Systems in the Education Sector

Managing the 21st C Enterprise

The increasing complexities of business and the pressure of global competition today dictate that both large firms and SMEs seek to involve the services of Information Technology in their organizations. Over the past decade or so, Technology has helped firms improve bottom-lines, enhance productivity, increase customer satisfaction, integrate business processes and strengthen core-competencies. IT has become a necessity for businesses that wish to succeed in the new millennium and obtain competitive advantages.

Implementing IT for the Enterprise: The Core Areas

Information Technology may have endless applications in the workplace and in what they can be harnessed to do. However, it is essential for a firm to match requirements with a clear economic payback. The fundamental areas of interest will therefore be ones that provide rapid return-on-investments.

Information Technology has a primary role to play in helping firms maximize the value of their resources. Resources need to be allocated and used efficiently to maximize profits at the end of the day. Resource Planning is about automating the tasks involved in performing business processes, integrating all departments, divisions, and functions across a company onto a single computing environment. It also encompasses planning and execution for optimal marshalling of human resource in order to maximize potential.

Firms of today need to focus a lot of time, money and energy on building and maintaining the client base. The logical and eventual aim of it all is to provide services that are totally e-enabled. This may include support for e-transactions, e-payments and unmitigated e-commerce. An e-enabled business will be able to reach out to customers far quicker than its competitors, and provide ease of transactions and business mobility.

The Education Services Firm: The Requirements

The Education Services industry is fast becoming a fiercely competitive one. Firms therefore stand to gain from Information Technology in terms of Enterprise-wide IT solutions, resource planning, online learning, customer relationship management, smart-card systems and pervasive online applications. Education services enterprises have undergone significant evolution in all aspects of the industry, ranging from comprehensive e-learning programmes to global information management to infrastructure design to enhanced customer marketing and sales campaigns.



The Education Service Enterprise needs the power of accurate, real-time, mined information at its doorstep. It needs to be able to reach out to its customers and service them in increasingly generous amounts at low costs. It therefore needs to invest in viable IT infrastructure that will provide it the leverages it needs. Business Intelligence is of critical importance, as it would differentiate the firm in the marketplace.





Technology Strategy in the Education Sector

The Objectives

As in every other industry, the ultimate aim of this setup is to provide for a paperless setup across the enterprise. In the Education space, this broadly encompasses two areas – First, the management of the organizations internal processing needs, and Second, online delivery of courses and teaching to students.

The Strategy to setup would involve carefully analyzing the needs to the organization, to come up with a roadmap with clearly quantifiable milestones, guidelines for effective implementation, clear economic paybacks and end-goals.

The Strategy would need to mesh through the Software needs, the Hardware needs and the People needs together to make sure they gel together. A clear *Roll-Out Strategy* would need to be defined.

Software in the Education Service Workplace

- Education Management Systems (Education ERP, School Management)
- Learning Management Systems (e-Learning)
- Accounts Management Systems (Finance)
- Human Resource Management Systems
- Smart-Card Technology
- Video-Conferencing
- Client Relationship Management
- Web-Services / Inter-Application Connectivity

Infrastructure: Hardware and Bandwidth

- Cloud
- Data Farms
- Backup and Recovery Systems
- Bandwidth
- Localized Infrastructure at Campuses
- Localized Infrastructure in Laboratories
- Infrastructure at Client Points
- Desktops and Thin Clients
- Peripheral Equipment

People-related Needs

- Systems Training and Support



- Change Management for Employees
- Cultural Issues in Implementation and System Management
- Business Continuity Systems
- Disaster Recovery Systems

Maintenance and Support

- Applications Maintenance
- Infrastructure Management
- Infrastructure Optimization
- Desktop and User Support
- Centralized Command and Control Mechanisms

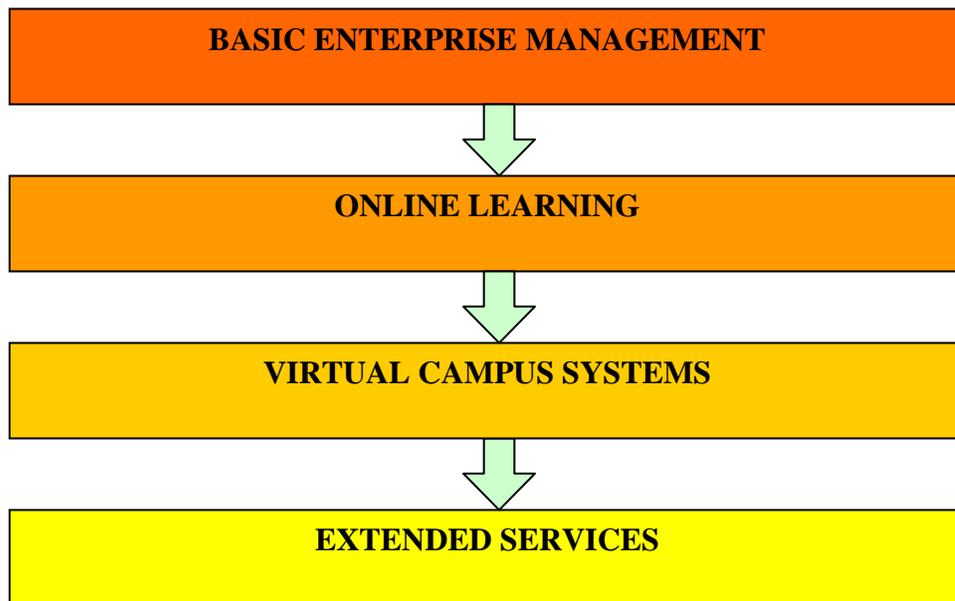
Critical Success Factors

1. Need to plan out clearly the hardware-software-bandwidth optimal requirements. Either item being too much would reduce ROI, and being too less will produce inadequate results.
2. Maximizing Return on Investment for the client
3. Maximizing efficiency of the new process
4. Minimizing Redundancy
5. Minimizing Risk to Company
6. Closely integrating with existing systems and processes
7. Allowing for future scale of operations

Implementation: The Four-Phased Approach

Breaking down the implementation of the system into clear, quantifiable chunks helps not only in a smoother roll-out, but also in computing and achieving cleared targets of ROI. Not having a neat roll-out strategy is one of the major stumbling blocks in any large scale Enterprise IS rollout. In this document, we present a broad-based approach for this.

The best form of implementation for is by following a clear, modular and phased approach shown diagrammatically below.



Phase 1: Basic Enterprise Management - Automation of business processes, data processing, backbone infrastructure, in-house management.

Phase 2: Online Learning -. Incorporating features of e-Learning Systems and IT-based Content Delivery Networks.

Phase 3: Virtual Campus Systems - Logical extension of solutions and services to make them seamlessly available globally, in both wired and mobile realms

Phase 4: Extended Services - Total automation of all business needs for a paperless enterprise.

Merits of the Phased Approach

- Cost
- Integrity
- Logical Scheme
- Ease of Implementation
- Low Learning Curve

Phase 1

BASIC ENTERPRISE MANAGEMENT

The first phase involves the computerization of the organization's basic needs, and automation of its most critical business processes. Such automation shall strive for:

- Computerize Data and Records of the company
- Provide good data to the management on the utilization of the firm's resources.
- Increasing efficiency of employees involved in the respective areas.
- Provide good data to the management on the production and sales.
- Streamline current Business Processes.
- Reducing costs in handling of routine tasks.

The Salient Features of Enterprise Management Technology

Software

Education Management System (eCOLE): Takes care of Prospect Management, Student Management, Payment Management, Attendance, Examination, Marks, Scorecards, Leave Management, Staff management, Scheduling, Timetables, Courses, Subjects, Modules, Credits. It supports Multi-campus, Multi-currency, Multi-university features. The system can have various User Groups, Security Levels etc. 

Basic Accounting System and Payroll Management: Track and manage income, expenses and cash flow; monitor employee record and salaries. (Approx cost USD 5,000)

HR / Employee Database Management: Maintain employee particulars; qualifications; interests; employee job-logs; employee attendance and leave policy. 

Secure Global Access - Web-based information access for employees. It makes the work place ubiquitous and lets the application be accessed from anywhere in the world.

Intranet - Information Sharing across the Enterprise to increase the velocity of processes. 

Infrastructure

Data Farms: Servers and Hardware that can host the systems, with scalability and redundancy concerns taken in. (Cost Variable)

Phase 2

ONLINE LEARNING

The second phase involves taking the organization on the Online Learning mode. The objectives being:

- Setup a modus operandi for e-Learning
- Facilitate digitization of the courses
- Enable the students and teachers to make use of the Internet in sharing resources
- Increase trainer productivity
- Lower training overheads
- Personalized delivery of knowledge
- Blending traditional teaching approach with the newer online model
- Greater depth in performance statistics and analysis

The Salient Features of Enterprise Management Technology

Software

Learning Management System (OCTAL): Takes care of complete online learning process. Courses, Content, Question Banks, Online Tests, Admin Boards, Discussion Forums, Newsletters, Help Sessions, Calendars, Organizers. 

Online Courses / Content Conversion: Digitization of Course Materials, Lecture Notes, Tests, Assignments, and other Content.

CRM System / Customer facing Web-Portal: Takes care of information dissemination to parents, clients, customers, and other external parties.

Workforce & HR solutions: To deliver improved employee performance, productivity and satisfaction - attributes essential for organization's to succeed in today's business environment. 

Franchise Portfolio and Product Management: Manage Client Database, contacts and particulars; maintain client portfolio; manage product lists.

Infrastructure

Bandwidth Expansion: Bandwidth would need to be expanded to accommodate a large volume of concurrent users, as students would be logging in for notes, tests and so on.

Phase 3

VIRTUAL CAMPUS SYSTEMS

The third phase seeks to create a Virtual Campus Environment.

- Integrate all systems to exchange data
- Provide third generation systems
- Allow students and teachers to interact in a virtual mode

The Salient Features of Enterprise Management Technology

Software

Smart-Card Systems / RFID Systems: Integrating Smart-Card Systems, Integrate the same with Security systems in the campus(es), Integrate to the Attendance and Timesheets. 

Mobile Integration: Integrating all services for provision on Mobile Interfaces. 

Video Conferencing System: Enabling One-Way Video-Streaming and Two-Way Video-Conferencing. 

Infrastructure

Thin Clients / Desktop Machines: Thin Clients shall provide a low-maintenance mechanism for the organization to manage access and hardware problems. 

Bandwidth for Various Locations: Multi-campus bandwidth needs to be organized.



Phase 4

EXTENDED SERVICES

The fourth phase would extend the various Systems to provide Value-Added Services to the organization.

- Extension of Services
- Knowledge-enablement of the Enterprise
- Easily expanding the customer base
- Cutting costs
- Improving customer satisfaction
- Differentiation of services

The Salient Features of Enterprise Management Technology

Software

Business Intelligence: Business Intelligence Systems provide the management with credible knowledge by mining through all raw information and data available through all other systems. 

Web-Services / Inter-Application Connectivity: Making applications talk to each other through a Web-Service Gateway. 

E-transactions: Facilitating financial transaction over the Net. Linking to Banks and other required financial remitters.

Infrastructure

Web-Service Gateways: Web Services Gateway is a middleware component that provides an intermediary framework between Internet and intranet environments during Web service invocations.

IDM Gateways: Identity Management is important to managing a secure enterprise.