TekMindz

e-Governance Project Showcase

ONE STOP SHOP FOR SOLUTIONS & INNOVATIONS

e-Governance Africa

Africa Region: Current & Pursued Markets

Ghana: School Management Applications

University Mobile

Rwanda

College ERP

Nigeria- payment Platform, mobile Wallet, Integration with CBS, NIBSS

Nigeria eGovernance: Immigration Services, Driving License, Postal System, CRFFN, eProcurement

- Ghana
- Nigeria
- Rwanda

Africa Focus

TekMindz has delivered over **25** projects in **eGovernance** for the **Federal Government of Nigeria** and the Republic of **Ghana** for their numerous government Ministries & Departments since 2008.

We have been leveraging cutting edge technologies to reshape the governance of Integrated **payment Platform**, **Immigration services**, **taxation and internal revenue system**, **Education** and Learning management System, the complete **National Postal Management** System, **Driving License** and many more **- providing cost-effective**, long term and stable solutions.

25+	**99.99%**	**1TB+**
eGovernance Projects delivered in Africa	Uptime for eGovernance Applications	Years in the Africa Region

Case Study : Immigration Services

TekMindz, for one of its African partners, has developed an online immigration system. At inception the department had a narrow operational scope and maintained a low profile and simple approach in attaining the desired goals and objectives of the government.

Features

- Online Application Portal
- Passport Offices / Embassies Management
- Fee Management
- Intelligent Interview Scheduler
- Integrations with Print & Other External Systems
- Support Administration
- Personal Records Management - HRMS
- Employee Salary Processing
- Extended Payment Platform
- Payment Gateway Integrations
- Multi-Currency Support
- Integration with various Core Banking Systems

- Bank Integrations for Pay @ Bank
- E-Wallet Facility
- Fraud Management System
- Robust Reporting Engine
- Mobile Integrations for easy payments
- Security standards includes VBV & MCS

Case Study : Payment Platform

There was a big need to create an organized payment ecosystem to resolve the existing problem of heavy reliance on cash-based transaction. The conventional systems are not prevalent in this region of the world as, again, it is a heavily cash dominated region. Plastic money (credit card) is sparingly used. There is no net-banking consolidation either for usage by third-party merchant applications.

Key Challenges

To ensure that the solution is easily and effectively used by majority of the population, multiple options for payments were required to be developed. Special care was required to be taken for the security feature in the solution, so that the customers can use the solution without any fear of fraud. To make this solution widely acceptable, it was required to be integrated with a Core Banking Solution (CBS) of majority of banks present in this region.
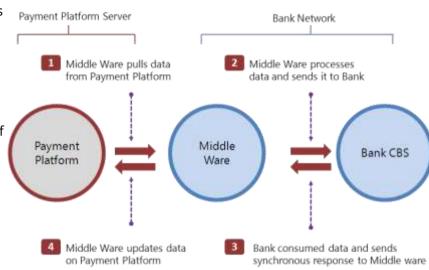
Our Solution

An online payment solution - unique and one of its kinds - was developed by TekMindz. The solution enables companies and institutions to present bills to their customers in a simplified and transparent manner.

Case Study : Payment Platform Contd..

Features

- A complete payment platform with backbone integrated with banks
- Pay at Bank feature facilitating user with no plastic money
- eWallet feature – charge once and use multiple times
- eWallet to eWallet Fund Transfer
- Real Time Transactions
- Integrations with Core Banking systems like Finacle and FlexCube of Major Banks
- Integrations with local payment switches like eTransact and InterSwitch
- Detailed Monitoring Dashboards
- Maker Checker concepts strongly implemented and configurable at each level
- Developed with security standards including VBV & MCS
- Multi-Currency support and is working in multiple countries in Africa
- Simplified Mobile Interface for end user ease

Payment Platform Server

Bank Network

1 Middle Ware pulls data from Payment Platform

2 Middle Ware processes data and sends it to Bank

Payment Platform

Middle Ware

Bank CBS

4 Middle Ware updates data on Payment Platform

3 Bank consumed data and sends synchronous response to Middle ware

Case Study : Automation of Driver's License

The federal road commission (FRSC) was established in February 1988 with the mandate to reduce, to the barest minimum, the incidences of road traffic accidents and the consequent human and material losses, among other functions.

Key Challenges

Some of the key challenges the Federal Road Safety Commission of Nigeria faced spanned from ensuring applicants' unique identity, ensuring database accuracy and organized management to ensuring security credentials are in place for the driving license to automating the process for the issuance of driver's license so as to bring transparency and ease in the system for the citizens. Moreover, revenue collection from the process was a major challenge.

Our Solution

TekMindz proposed and developed an integrated system which comprises of smart card based driver licenses along with data authentication, data storage and application processing. The overall solution comprises of:

- A web portal for automating the driving license submission and approval process
- A Smart Card system for capturing the biometrics and driver's demographic data

Case Study : Automation of Driver's License Contd..

Features

- The Salient features provided by the web portal include Application form Submission,
- Application Form Approval and Integration with L1 Identify.
- The salient features provided by the L1 Identify System include capturing biometric data such as Finger Printing, Facial Recognition, centralized database for Biometric Data and centralized systems for generation of Smart Cards.

VIO/RTO Payment to BIR to make a DL Test appointment, conduct test, and capture picture and biometric information.

1 Applicant initiates process from home

2 Front office applicant processing

3 Back office database management and transaction with approval workflow

Anyone, through internet access, can access the portal. Typically, the portal is developed externally & paid-per-click.

Your workflow enables the verification of identities & personal information

OTC Issuance

4 ID Production

Printing can be centralised, kept same or made hybrid where large volumes (cities) are central print farms.

Central Issuance

5 CI-produced IDs mailed

6 IDs used as proof of identify
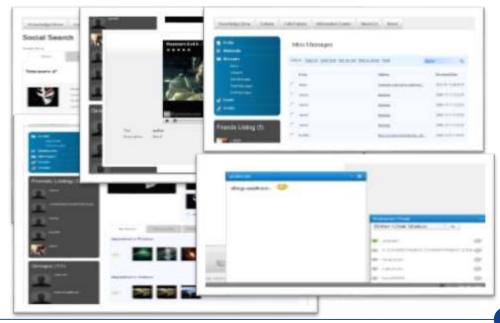
Case Study : Student Social Networking

The application is an educational and student networking web application. It delivers a high quality interactive experience that allows millions of students and members to interact in social, cultural and educational contexts. This provides students a platform to exchange ideas, to connect and to share information.

Features

- Chat & IM
- Online study
- Course forums, e-learning
- Live question & answer sessions
- Advanced note sharing system
- Secure privacy controls
- Create, edit & share media
- Purchasing airline tickets or phone top-up cards
- Post a CV for Job hunting
- Access to interact with potential employers
- Web Stores with secure online payments
- Mobile Version of the website
- Widgets for various mobile platforms

TECHNOLOGY: TekWeb

A LAMP technology based solution with our in-house web 2.0 social networking component based framework named TekWeb.
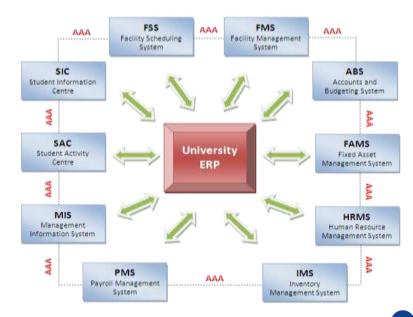
Case Study : College Portal

The clients, who are prominent Universities in their region, have a large number of courses and students spread across a number of Campuses operating under their flagship. As the years passed, the count of students had grown exponentially and at the same time, it had directly influenced the number of courses and campuses. There were certain departments which were already computerized but the data was all scattered in bits and pieces thereby making integration of information a very critical challenge. What was needed was a centralized ERP system, using which, the college administrators can track and control each and every activity.
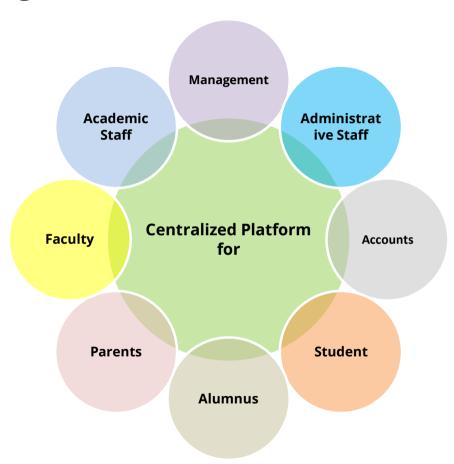
Technology : php – Salient Features

- Involved in complete life-cycle of requirements gathering, gap analysis, design, implementation and QA.
- Full life-cycle project management.
- End to end implementation of the complete solution
- In-house Plug and play MVC framework useful to add new functionalities/modules on the fly.
- Great scalability and resilience ability to withstand high load of concurrent users.
- Available in form of SAAS and for deployment within your own WAN/LAN.

Case Study : College Portal

Centralized Platform for

- Management
- Administrative Staff
- Accounts
- Student
- Alumnus
- Parents
- Faculty
- Academic Staff

TEKMINDZ

APPENDIX:
Case Studies

Case Study : Pay4Me

Case Study – Pay4Me Mobile Application

mPay4Me Mobile Application is built on Java 2 Micro Edition (J2ME), Sun's version of Java, aimed at machines with limited hardware resources such as PDAs, cellular phones and other consumer electronics and embedded devices.
The Application mainly focuses on data communication between web applications and wireless devices.

Security Overview

mPay4Me Mobile Application ensures the entire data communication is secure using SSL + AES encryption where wireless devices send the 128 bit encrypted request and receive the response encrypted in the same manner. The integration supports real time data access through wireless devices.
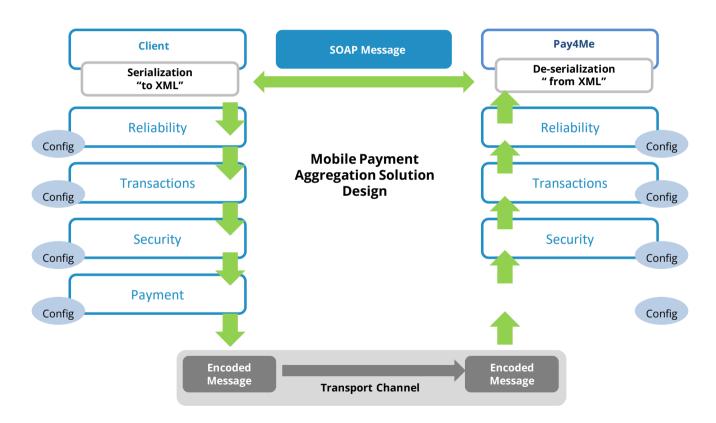
Features

- Real Time User Authentication
- User Privileges – Access Control Mechanism
- eWallet to eWallet Fund Transfer
- Check Balance - Funds in eWallet
- Real Time Payment Request for other eWallet
- Monitoring of Payment Requests
- Approval of Payment Request

Communication Channels

mPay4Me Mobile Application works with most mobile supported internet communication channels such as GPRS, WiFi etc. to connect to a server deployed on cloud.
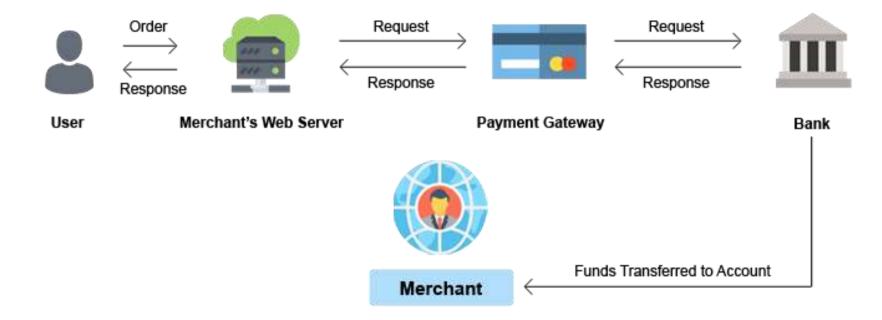
Case Study – Pay4Me Mobile Application Contd..

Client

Serialization "to XML"

SOAP Message

Pay4Me

De-serialization " from XML"

Reliability

Config

Transactions

Config

Security

Config

Payment

Config

Mobile Payment Aggregation Solution Design

Reliability

Config

Transactions

Config

Security

Config

Config

Encoded Message

Transport Channel

Encoded Message

Case Study – Pay4Me Mobile Application Contd..

Case Study : Presidential App

Case Study – Presidential Application

Overview

A mobile application that is used for campaigning candidates. This app has been developed for President of Tanzania.

Features for Citizen

- About Party Candidate
- Candidate Profile & Experience
- Events
- Campaign
- Photo Gallery, Videos
- Social Media Integration with **Facebook**, **Twitter** & **Instagram**
- Contact to Candidate

Features for Party Worker

- Captain and Volunteer Login
- Captain and Volunteer Report

Technology & Platform

- Android Application

Case Study : University Mobile Portal

Case Study – University Mobile Portal

Overview

A tablet based application is required in universities in Africa to provide access to various university assets & information.

Features for Citizen

- Student registration
- Events, News
- eBooks
- Examination
- Images, Videos
- Academics, academic calendar
- Facebook, Twitter
- courses
- library
- Auto synchronization feature for offline and online

Technology & Platform

- iOS and Android Application

e-Governance India

Case Study – HRMS for CSIR

The client, who is an Autonomous Scientific Research Organization of the GOI wants to use ICT as an enabler for various HR processes such as employee profile, service book, leaves, department promotions, manpower deployment, transfer etc. The client needed MIS, Dashboards, Analytics and Reports for monitoring and having end-2-end view of various Key Performance Indicators and processes and complete transfer management.

Our Solution

TekMindz as a solution provider has developed the Human Resource Management and Information System that provides the core features such as :

- Employee Profile
- Activity Monitoring
- Manpower Dashboard
- Department Promotions
- Performance Management, and Transfers

Case Study – HRMS for CSIR Conrd..

Features

- Capturing the business workflows of the HR Processes
- Designing the workflows
- Developing, Testing and deploying the solution
- N tier architecture solution that is scalable and provides seamless integration with other applications of the client
- Developed using Microsoft .NET Technologies and SQL Server database
- SOA based solution by using windows workflow foundation provided by .NET
- Analytical details are provided by developing dashboards that display various graphs and charts

Case Study - Enterprise Integration Portal for DSIR

The client wants to automate all their internal processes including file stacking, their various schemes. This will help the client to keep a track of all their processes under which DSIR grants money to different organizations.

Our Solution

Process Automation, Process Activity Monitoring, Manpower Dashboard, Fund tracking & Report Generation. Salient features of the project:

- Intuitive UI with features like Drag-Drop, visual reports, Dashboards, BI etc.
- Designing the business workflows of the Processes
- N-tier architecture solution that is scalable and provides seamless integration with other applications of the client
- Developed using Microsoft Technologies
- SOA based solution by using Windows Workflow Foundation
- Analytical details are provided by developing dashboards that display various graphs & charts

Features

- Capturing the business workflows
- Designing the workflows
- Developing, Testing and deploying the solution
- N tier architecture solution that is scalable and provides seamless integration with other applications of the client
- Developed using Microsoft .NET Technologies and SQL Server database
- SOA based solution by using windows workflow foundation provided by .NET
- Analytical details are provided by developing dashboards that display various graphs and charts

Case Study - Electronic Queue management System for Delhi NCT

Developed a Queue Management System with inbuilt intelligence to assign patients across various OPD's, Doctors calling unit to manage patient by the doctors, Administrator Module to view overall situation of all OPD's with respect to patients assigned to each OPD's, installation of LCD's panel and output of Queue Management Application on LCD's panel. Bar-coded Patient card generation & issuance of Token based on the scanned card.

Our Solution

Queue Management System with inbuilt intelligence to assign patients across various OPD's, Doctors calling unit to manage patient by the doctors, Administrator Module to view overall situation of all OPD's with respect to patients assigned to each OPD's, installation of LCD's panel and output of Queue Management Application on LCD's panel, Installation of CCTV's and its live feedback in Central control room.

Features

- Designing the business workflows of Queue Management System
- N tier architecture solution that is scalable and provides seamless integration with other applications of the client
- Developed using Java Technology
- SOA based solution
- Analytical details are provided by developing dashboards that display various graphs and charts

Case Study : Go Tourist

Case Study: GoTourist

GoTourist is a Mobile Application conceptualized and developed by TekMindz for the Ministry of Tourism of the Government of India to showcase how technology can benefit both the Citizen and Government.
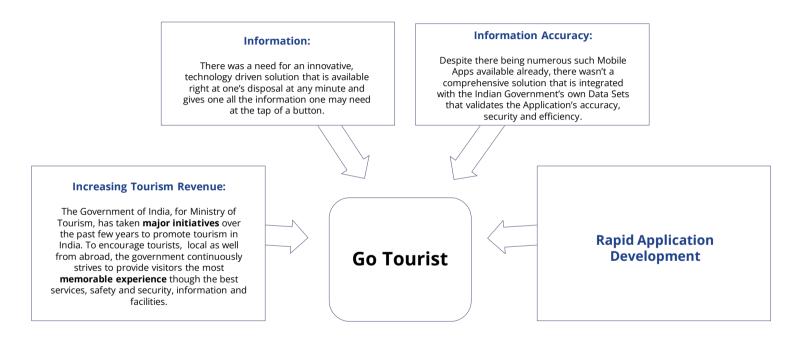
The application was developed for the Government of India's #OpenDataApps Challenge using Open Government Data.

The initiative was undertaken to encourage data-driven innovation in the country

Through GoTourist, TekMindz has developed a single stop Mobile, Tablet and Web Based Tourism Application. The application will use the government approved data sets from Data Portal of the Government of India i.e. http://data.gov.in.

Case Study: GoTourist Contd..

Information:

There was a need for an innovative, technology driven solution that is available right at one's disposal at any minute and gives one all the information one may need at the tap of a button.

Information Accuracy:

Despite there being numerous such Mobile Apps available already, there wasn't a comprehensive solution that is integrated with the Indian Government's own Data Sets that validates the Application's accuracy, security and efficiency.

Increasing Tourism Revenue:

The Government of India, for Ministry of Tourism, has taken **major initiatives** over the past few years to promote tourism in India. To encourage tourists, local as well from abroad, the government continuously strives to provide visitors the most **memorable experience** though the best services, safety and security, information and facilities.

Go Tourist

Rapid Application Development

Case Study: GoTourist Contd..

Social Media

The Application is integrated with Facebook, LinkedIn and twitter. The feedback provided by the users can be rated

Mobile

The Mobile application is platform independent and available on Android, iPhone (iOS), Windows Mobile and Blackberry. The application is also available on Tablets.
Also provided is a Web Interface for users who would like to browse for the details over the internet
The Mobile application supports QR Code and NFC applications
The Mobile application also provides Payment Gateway integration for all purchases made for the items/services sold through this portal

Analytics Features

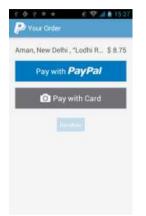BI Analytics are used to predict the tourist behavior and for Ministry to take proactive action.

Cloud Development

The solution is deployed on Cloud
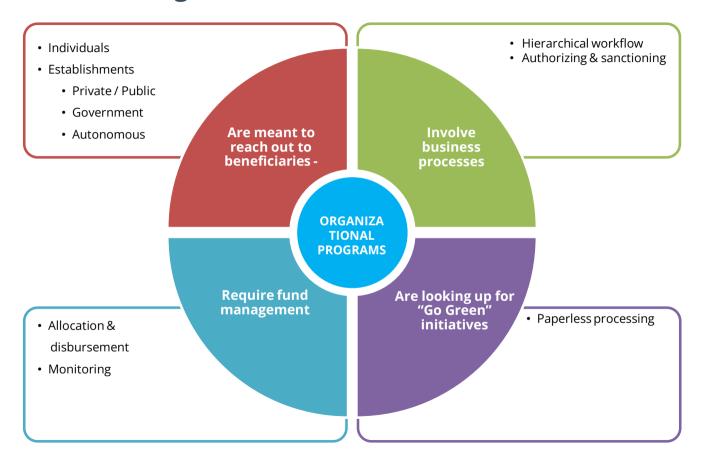
Case Study: GoTourist Contd..

Scheme Automation Solution

A Showcase...

Organizational Programs

- Individuals
- Establishments
  - Private / Public
  - Government
  - Autonomous

Are meant to reach out to beneficiaries -

- Hierarchical workflow
- Authorizing & sanctioning

Involve business processes

ORGANIZA TIONAL PROGRAMS

Require fund management

- Allocation & disbursement
- Monitoring

Are looking up for "Go Green" initiatives

- Paperless processing
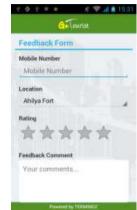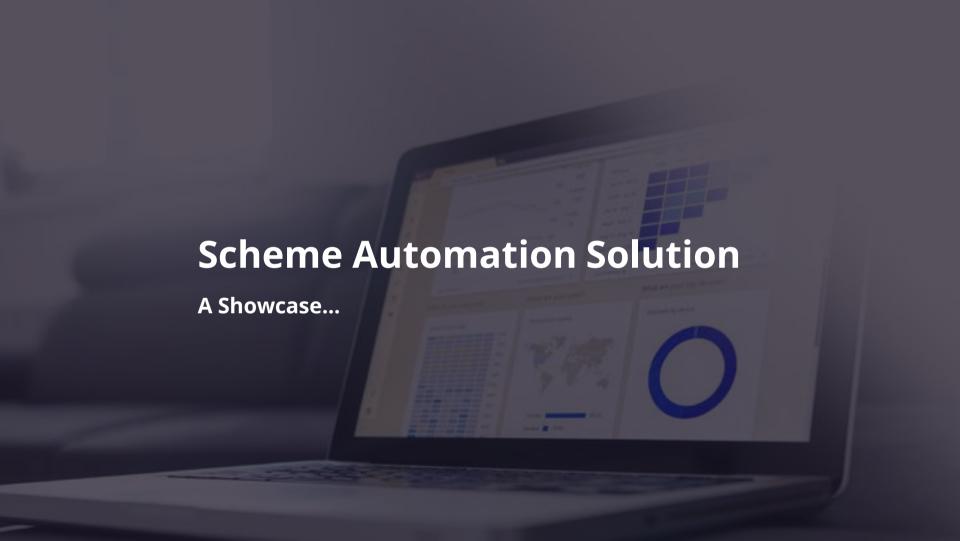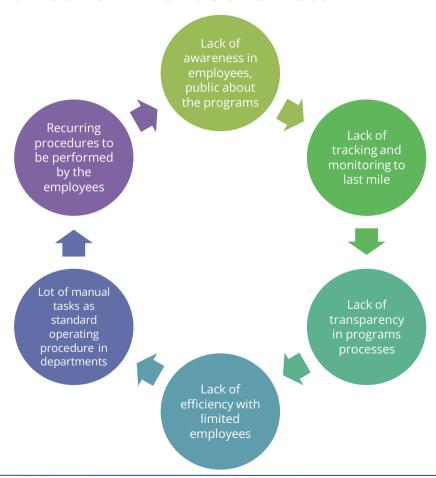
Problem Areas For Government Schemes:

- Lack of awareness in employees, public about the programs
- Lack of tracking and monitoring to last mile
- Lack of transparency in programs processes
- Lack of efficiency with limited employees
- Lot of manual tasks as standard operating procedure in departments
- Recurring procedures to be performed by the employees

What Is The Solution?

TekMindz's Scheme Automation Solution is:

A Web based, centralized and online framework providing
- Public registration
  - Ease of accessibility
- Transparency
  - Organization image makeover
- Effectiveness
  - Less error prone with integrated workflows and business rules
- Efficiency
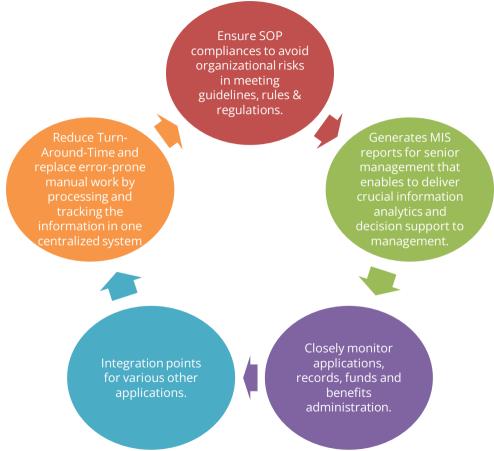 - Less time consuming to process the records

Designed with best practices, rules &. regulations prevalent in Government organizations
- Flexible workflows and configurable rules
- Adapts the changes as per the Govt. guidelines that may change over course of time.

Configurable for use over intranet and internet for internal and external users

What IT Does?

Ensure SOP compliances to avoid organizational risks in meeting guidelines, rules & regulations.

Generates MIS reports for senior management that enables to deliver crucial information analytics and decision support to management.

Closely monitor applications, records, funds and benefits administration.

Integration points for various other applications.

Reduce Turn-Around-Time and replace error-prone manual work by processing and tracking the information in one centralized system

What IT Does?

Implement programs and schemes of following nature:

- Financial (Grants)
  - Funded schemes
  - Individuals
  - Organizations

- Scholarships
  - Students
  - Research Scholars

- Non-Financial (Recognitions)
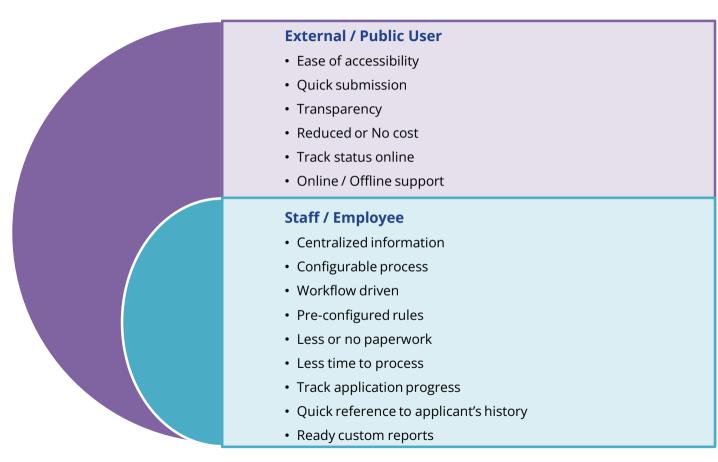 - Tax exemptions
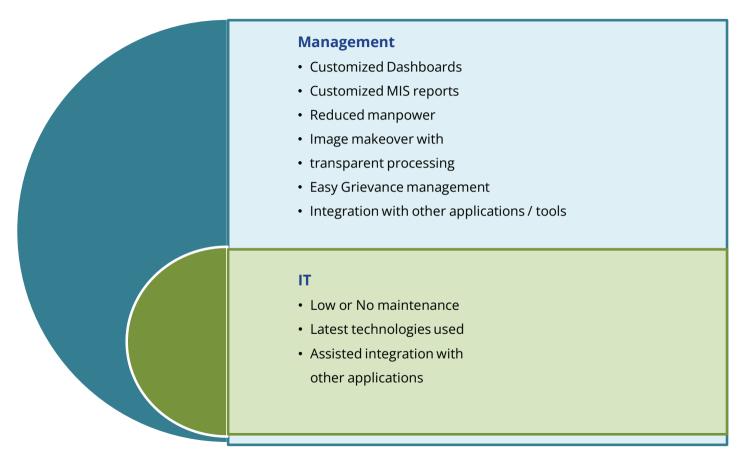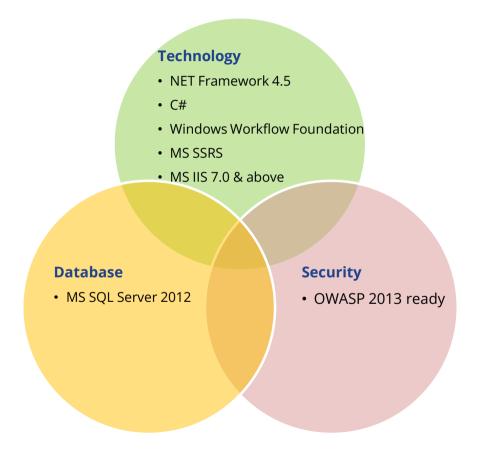 - Status recognitions

Key Differentiators

Online & Paperless

Audit Trail

Process driven

Avoid errors

SCHEME AUTOMATION

Centralized & Transparent

Effective & Efficient

Flexible Workflows

Customized to specific needs

Benefits

External / Public User

- Ease of accessibility
- Quick submission
- Transparency
- Reduced or No cost
- Track status online
- Online / Offline support

Staff / Employee

- Centralized information
- Configurable process
- Workflow driven
- Pre-configured rules
- Less or no paperwork
- Less time to process
- Track application progress
- Quick reference to applicant's history
- Ready custom reports

Benefits

Management
- Customized Dashboards
- Customized MIS reports
- Reduced manpower
- Image makeover with
- transparent processing
- Easy Grievance management
- Integration with other applications / tools

IT
- Low or No maintenance
- Latest technologies used
- Assisted integration with
  other applications

Technology Behind

Technology

- NET Framework 4.5
- C#
- Windows Workflow Foundation
- MS SSRS
- MS IIS 7.0 & above

Database

- MS SQL Server 2012

Security

- OWASP 2013 ready

Beneficiaries

DST

Organization Name:
Department of Science and Technology

Organization Users: **12**

Current Application Base: **65000**

Scalable (In Next 3 Years): 500000

Organization Units: **1**

Successfully Implemented For: 1+ years

Organization Type:
Ministry of Science and Technology (Government of India)

Reference Url:
http://www.inspire-dst.gov.in/

DSIR

Organization Name:
Department of Scientific and Industrial Research

Organization Users: 40

Current Application Base: 3800

Scalable (In Next 3 Years): 10,000

Organization Units: 1

Successfully Implemented For: 2+ years

Organization Type:
Ministry of Science and Technology (Government of India)

Reference Url:
http://dsir.csir.res.in/DSIRPrograms/Login/Default.aspx

Preview– DSIR

Awards Received – DSIR

Preview – DST

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Thank You

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