

## IV. INFORMATION TECHNOLOGY AND e-GOVERNANCE

### 1. INTRODUCTION

'Information Technology and e-Governance' (IT-eG) division was formed in the mid of the X<sup>th</sup> Plan period to facilitate the accelerated usage of various Information Technology opportunities and hence provide an IT enabled work environment in the Department. Primarily aims to convert the existing procedures and processes into *citizen centered*, IT-eG division keeps implementing e-Governance in the Department progressively in conformance to the National eGovernance Action Plan. For the implementation of an 'IT Action Plan', IT-eG Division operates on a separate IT Budget Head that came into effect in DSIR since FY 2004-05.

### 2. IT ACTION PLAN

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- *IntraDSIR*: Enrich the contents of the IntraDSIR by including downloadable forms and circulars relevant to employees of the Department.
- *IT Training*: Provide relevant training courses to the officers/ staff that enable them to work on computers by using application software developed.
- *e-Reports*: Convert the Acts, Rules, Circulars and other published materials of interest or relevance to the public, in the electronic form.
- *Website*: Enrich the contents of the DSIR website by including downloadable forms and guidelines relevant to various citizen services that Department provides.

### 3. IT-EG ACTIVITIES

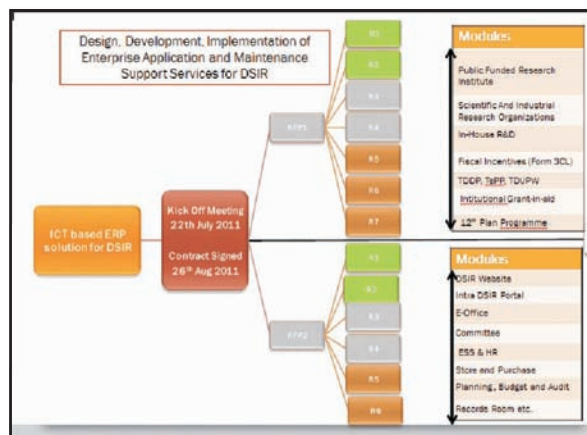
With the available program development and management skills and expertise, IT governance implementation activities that has been carried out during 2012-13 may broadly be categories into the following:

- (i) Maintained all the existed/created IT applications and infrastructure to ensure smooth functioning of IT-centric work environment.
- (ii) Identified some adoptable IT trends/ application, validated /customized them for possible implementation along with an ERP solution that is being developed to add value to the existing IT-centric work environment.

A project in PPP mode that was initiated to facilitate evolve a highly productive and user-friendly, electronic knowledge-based workplace in DSIR, that would offer effective C2G & G2C services ensuring minimized overheads and prompt information availability, while adhering to Government of India Rules, Regulations and Policies, pursuing some key interventions through IT enablement of processes while building Enterprise Resource Planning (ERP) Solutions. Under this, the comprehensive set of initiatives have been taken to aim at transforming DSIR into embracing a performance culture - leveraging process redesign, automation of administrative procedures, enhancing collaboration/ networking, clarity in definition of roles (individual/ team/ cross-functional), analysis of required skill sets for various roles, augmenting team performances, workplace learning and mentoring, analysis of required skill sets for various roles, augmenting team performances, augmenting of skills, knowledge sharing, implement electronically enabled work places, electronic self services, and transparent mechanisms for decision support/ enhanced efficiency at all levels.

Number of modules are being developed have been grouped under two RFPs with pre-defined milestones. There are seven milestones under RFP1 that covers Enterprise Integration, Portal design for Program Implementation and e-Service Delivery. Similarly, there are six milestones under RFP2 that covers e-Enablement of the Processes, Workflow Management, Decision Support Systems, Record Management and Data

Warehousing & Mining. These milestones since were all prioritized with respect to various activities, several modules could go online.

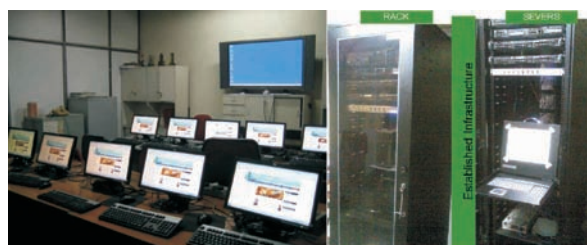


#### 4. ACHIEVEMENTS

Several weekly review meetings were conducted that ensure adequate progress made on the project 'Design, Development, Implementation of Enterprise Application and Maintenance Support Services for DSIR'. Conforming to each points under the set Action Plan, the highlights on achievements through implementation of various infrastructure/ information systems developed has been as follows:

##### 4.1 Infrastructure Development:

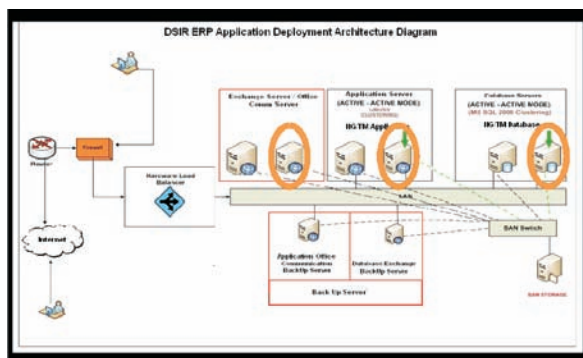
Various meetings of IT Committee were organized/attended as and when required, to assess and meet the specific recommendations to procure/develop IT related hardware/software. Department's stature has been mutated as it becomes one of the IPv6 compliance organisation, all those PC were not IPv6 compliance have been taken out of the existing intraNet and 46 of them have been replaced by



Thin Clients that operate over two new servers. IPv6 enabled Laptops were also issued to all Scientists/officers for use in office.

#### 4.2 Networking:

The necessary hardware comprises of deployed switches and Rack mount servers in a Rack has established a LAN connectivity that has been maintained with the help of services provided by NIC.



Through segmentation services over the routers, a VLAN for DSIR within Technology Bhawan was created and remain in use. A three levels Security Architecture has been adopted as authentication, use of cryptography/Encryption and allowing access to IP-restricted services. Three rack servers out of a proposed most suitable deployment architecture have been procured, installed and now made operational within an established SAN at CSIR HQ. These DSIR servers at CSIR HQ remain accessible through a VPN service provided by NIC. A staging server with two production servers hosting numerous pre-audited software application housed at CSIR HQ, have facilitated the required full accessibility to developmental team in executing various activities on ERP solution project of DSIR.

#### 4.3 Office Automation:

To enhance efficiency and transparency on the internal operations towards service delivery of an important component of the plan scheme of DSIR namely Industrial R&D Promotion, being a

regulatory Programme, ICT based Governance system has now been developed under RFP1 that has gone online for electronic submission of applications for registration / recognition / renewal of recognition for In-house R&D units & SIROs, Fiscal Incentives for Scientific Research, & PFRI.

Under this Enterprise Integration, Portal design for Program Implementation and e-Service Delivery, various modules now became operational have been the following:

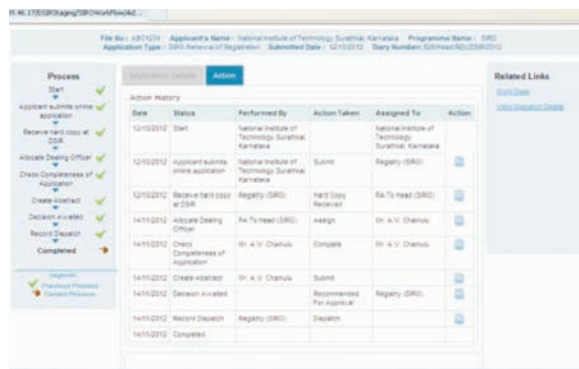
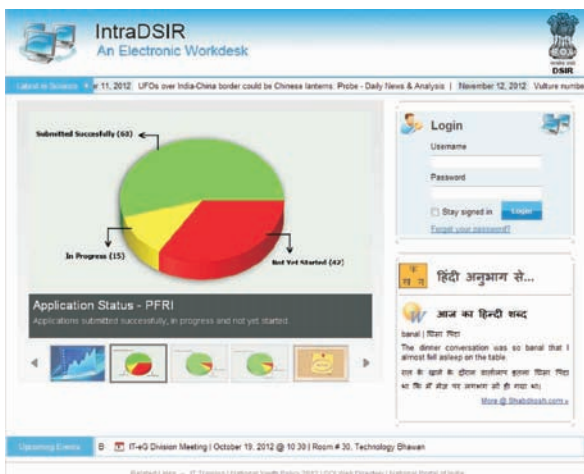
##### 4.3.1 Extra DSIR

With the development and availability of a DSIR portal, the Institute/ organization/ individual could now use their authenticated ID and password on login button that has been made available at Home pages of existing website as well as on the revamped website of DSIR.



##### 4.3.2 Intra DSIR

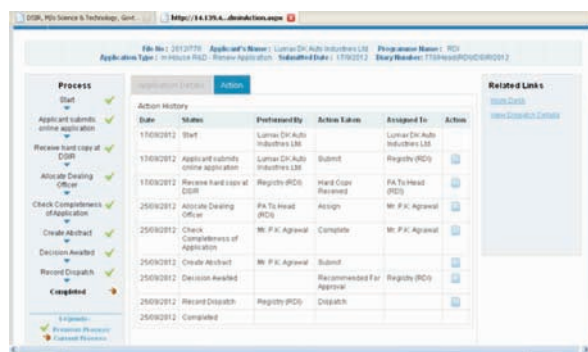
Once the submission of application online using respective web-enabled form in regards registration/recognition/renewal of recognition under In-house R&D units & SIROs, Fiscal Incentives for Scientific Research, or PFRI, the same then could now be processed online at the backend of each processes by identified functionaries using their authenticated ID & password over an *Electronic Workdesk*.



### 4.3.5 In-House R&D

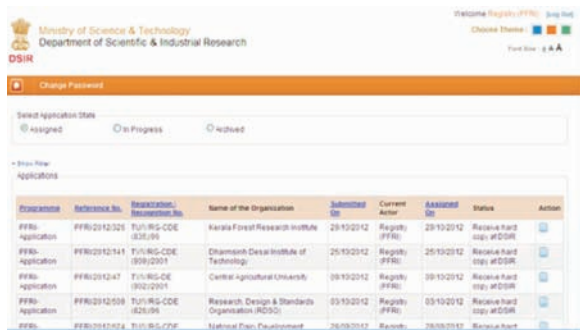
The module have gone live with both front and backend processing complete

Dealing officers receive e-mail alerts and in addition they also view the submitted application in their in-tray of this electronic workdesk. Based on the assigned roles, each of ficer go a their respective programme landing pages and carry out the required backend processing of the applications. This includes generation of abstracts, meeting schedules, prepare MoMs, create Noting\seek approvals and also generate certificates respectively. The following are the modules have gone live;



### 4.3.3 Public Funded Research Institute

The module have gone live with both front and backend processing complete



### 4.3.6 Fiscal Incentives (Form 3CL)

The module have gone live with both front and backend processing complete



### 4.3.4 Scientific And Industrial Research Organizations

The module have gone live with both front and backend processing complete

### 4.3.7 Institutional Grants-in-aid

Currently only the prototypes for various institutional grants-in-aid have been developed and these module would go live only after the required UAT could get successfully conducted.





Intra DSIR remains as an effective messaging client that facilitates attaching files and sending the same to other employees with pop up facility, it intend virtually to eliminate flow of paper based intra-office/inter-office memos, circulars and similar documents.



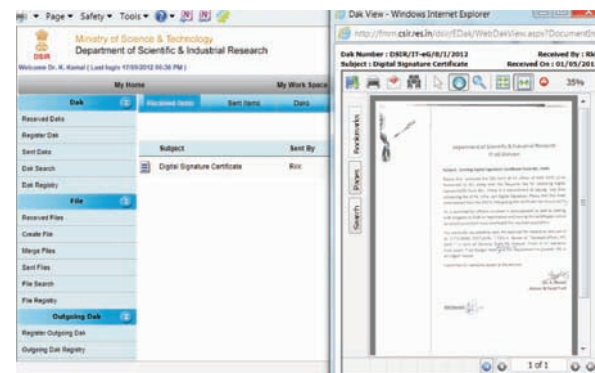
This also acts as a secured single sign on, role based access site for DSIR employees to all developed/developing applications of eGovernance that include all the modules of ERP solution e.g., eOffice and Committee & Meeting, ESS and HR etc.

Under e-Enablement of the Processes, Workflow Management, Decision Support Systems, Record Management and Data Warehousing & Mining, following different applications have been developed, have undergone validation, UAT and have moved to a production server while awaiting the required third party Audit have been the following;

#### 4.3.8 eOffice (eDak & eFile) Module

This module has been designed according to the currently practiced eDak system in DSIR. The

available GUI in this eOffice for End Users, helps display the web forms and save the data and to move eDak according to the route defined to the selected users. It facilitates the physical storage of Daks in an Electronic Form. The product provides the mode of selecting a dak either through the local hard drive of computer of an end user, or simply by scanning the Dak through Scanner and importing it to the desired location. Each eDak can be clicked and opened for providing a user-friendly view to the user.



The eOffice also provides facility on the physical storage of Files in an Electronic Form. The eFiles can be viewed by the users once they have been granted access rights to view or modify them. A file section provides a list of files that can be accessed by this user. Each file may comprise of several eDaks. Information related to each eFile would be associated with it which can also be viewed by user.

#### 4.3.9 Committee and Meeting Module

The committee and Meeting Module provide the Convener of the meeting to constitute a committee. Using this module the concern forms a Committee's Name along with the Members for Committee Approval, thus it is electronically routed to the members for their consents in form as Accept, Reconsider or Seek Clarification from the Convener of the meeting. After the members consented, convener finally could constitute the committee and Notify it through an Office



Memorandum electronically to all the stakeholders of this committee.

#### 4.3.10 ESS and HR Modules

For online submission of employees application

under Employee Self Service (ESS) and HR modules have been developed and data collection and population that remain in progress.

The modules covering the activities related to HR processes have been developed include (i) Loans & Advances, (ii) House Building Allowance, (iii) GPF, (iv) Children Education, (v) Telephone Reimbursement, (vi) Small Family,

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#### 4.6 Website:

Re-designing of the existing static website has been carried out which subsequently aimed to be made dynamic & database-driven and would be bilingual - supporting English and Hindi languages. The Graphical User Interface (GUI) of this re-designed website has been aimed to be user-friendly and rich in appearance since it uses superior graphics, self-explanatory, promptly guiding the user to different sections, offering appropriate navigation assistance to user in the form of tooltips, messages, images etc. wherever required / applicable. The user can switch between different themes / color schemes, and choose the font-size out of a number of pre-defined sizes as per their convenience.

In its present static version it remains compliant to Standards & Guidelines namely as (1) UUU Trilogy – Usable, User Centric, and Universally Accessible (2) Government of India Web Guidelines (GOIWG) issued by the Government of India and offers an easy-to-understand navigation. The re-designing of website was taken up to ease its seamless integration with other automated systems developed/being developed offering compatibility and smooth data flow between applications yet ensuring the security by means of Passwords, Secure network and encryption of data (https).

At present, this website of the Department is continuously being updated through regular updates being effected at the site <http://www.dsir.gov.in>

### 5. VARIOUS APPLICATIONS CUSTOMIZED AND USED

An IT-centric work environment existed in the Department with deployment of various web based applications which remains operational. Some of those information client server application systems as developed by other departments have also successfully been adopted by DSIR through required customization to

execute routine procedures and these applications systems have been the following;

#### 5.1 Integrated Finance, DDO and Utilization Software (IFDUS)

Integrated Finance, DDO and Utilization Software (IFDUS) was developed for DSIR kept fully operational. The bills for Salary Contingency, TA/DA and LTC Advance and Other Advances have been prepared and processed through this IFDUS.

#### 5.2 Composite Pay Roll System

A Composite Pay Roll System that was developed by NIC for IFD of GOI departments being used in this department for preparation of bills for Salary, all advances, arrears and allowances. This system is used for calculation of Income Tax and Preparation of Form 16 and e-TDS (quarterly and annually). The system also has an interface for sending transactions to the Bank. A Data Entry Operator regularly updates the monthly payments and expenditures inputs for the system.

#### 5.3 CPSMS

A web enabled application namely - Central Plan Schemes Monitoring Systems (CPSMS), developed in the office of the CGA serves as a common platform for monitoring of the Central Sector and Centrally Sponsored Schemes remained functional in DSIR. On this system a unique Sanction ID (SID) gets generated that enables tracking of releases as per the accounting and budget heads. Various reports such as Scheme-

Scheme Name	Account Head	Sanction Generated	BE Generated (Rs)	Bill Generated (Rs)	Referrals (Rs)
ACCESS TO KNOWLEDGE FOR TECHNOLOGY DEVELOPMENT AND PROGRAMIZATION (A.T.K.)					
	9421-00-000-03-01-01-0	8,50,00,000.00	14,50,00,000.00	8,00,00,000.00	8,00,00,000.00
	Scheme Total	8,50,00,000.00	14,50,00,000.00	8,00,00,000.00	8,00,00,000.00
CENTRAL ELECTRONICS LIMITED (CEL)					
	9421-00-000-02-01-01-0	0.00	10,00,00,000.00	0.00	0.00
	9421-02-000-02-00-04-0	0.00	5,00,00,000.00	0.00	0.00
	9421-02-000-00-00-05-0	0.00	5,00,00,000.00	0.00	0.00
	Scheme Total	0.00	15,00,00,000.00	0.00	0.00
CONVULSANT DEVELOPMENT CENTRE (CDC)					
	9421-00-000-00-01-01-0	1,50,00,000.00	2,00,00,000.00	1,50,00,000.00	1,50,00,000.00
	Scheme Total	1,50,00,000.00	2,00,00,000.00	1,50,00,000.00	1,50,00,000.00
IOP - 800 (IOP)					
	9421-00-000-02-01-01-0	7,50,00,000.00	10,00,00,000.00	7,50,00,000.00	7,50,00,000.00
	9421-00-000-02-01-01-0	5,00,00,000.00	7,00,00,000.00	5,00,00,000.00	5,00,00,000.00
	Scheme Total	12,50,00,000.00	17,00,00,000.00	12,50,00,000.00	12,50,00,000.00



wise Release, Bill Status Details, Sanction Status are generated from CPSMS Portal and sent to the Concerned officials for information.

#### **5.4 CPGRAMS**

Department remained equipped with a Public Grievance Redress & Monitoring System (CGPRAMS) designed and developed by DAR&PG & NIC. This WEB based system remains available centrally to the public accessible at DSIR website and for DSIR employees within the Department remains accessible at IntraDSIR. Nodal officer has the ID and password and hence submitted grievances through this system to the Department get attended regularly.

#### **5.5 RTI**

The static contents of a separate section on Right to Information added earlier to the DSIR website has been regularly updated and remains available for proactive disclosures under Section 4 (1) (b) of the RTI Act under Right to Information Act 2005 enacted on June 15, 2005. Various reports are generated from RTI-MIS Portal and sent to the Concerned officials for information.

### **6. ON-GOING ACTIVITIES**

Considerable progress made under the ERP project is being reviewed regularly. It has been planned to impart training to the DSIR employees on weekly basis, for all those modules that are ready for use now.

