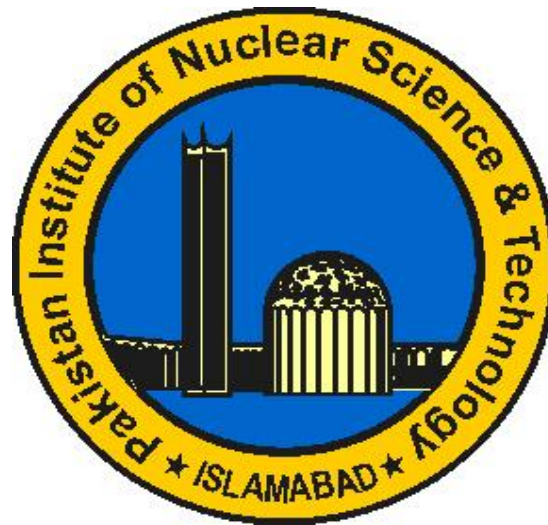


بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

# Scientific Information Division

# PINSTECH



*Asif Bashir*

Head SID

# *Pakistan Institute of Nuclear Science & Technology*



*Premier R&D centre of*  
**Pakistan Atomic Energy Commission**

# Major Objectives of PINSTECH

- To keep pace with the **frontiers of knowledge** in the field of Nuclear Science & Technology
- To serve as the **breeding ground** for the PAEC's technological development
- To produce **radioisotopes / radiopharmaceuticals**
- Applications of **radiation and isotope technology**
- Provide **trained manpower** to meet future challenges
- Work on non-nuclear fields which are **crucial for the development of science and technology**
- **High-tech support** to public/private organizations in industry, health, environment etc.

# Milestones



**Foundation  
of  
PINSTECH**

1963



**First batch  
of  
radioisotopes**

1967



**1<sup>st</sup> Physics  
Experiment at  
the Reactor**

1969

**Commissioning  
of UO<sub>2</sub> plant**

1973

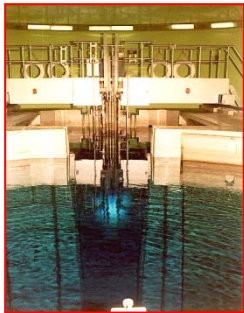
**Hf free Zr**

1984 1986

**Capacity to produce  
nuclear materials**



**Reactor  
Criticality**



**Reactor  
School**

**CNS  
M. Sc. Nuclear  
Engineering**



**Installation of  
Fast Neutron  
Generator**

**Production  
of UF<sub>4</sub>**

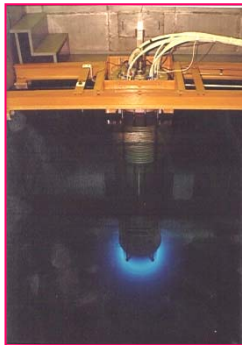


**Old Analog  
Control  
Panel**

**PARR-I  
Renovation**



**New Digital  
Control  
Panel**



**Criticality of PARR-II**



**CPA (250 keV)**



**Fabrication of Nuclear Instruments**

**Installation of Mo-99 Plant**

**100 publications in one year**

**Production of fission Mo-99**

**IDB Award**

**1988**

**1990**

**1992**

**1994**

**2000**

**2002**

**2004**

**2006**

**2008**

**2011**

**Production of radio-pharmaceuticals**



**PARR-I Upgradation**

- 5MW-10MW
- Core Conversion



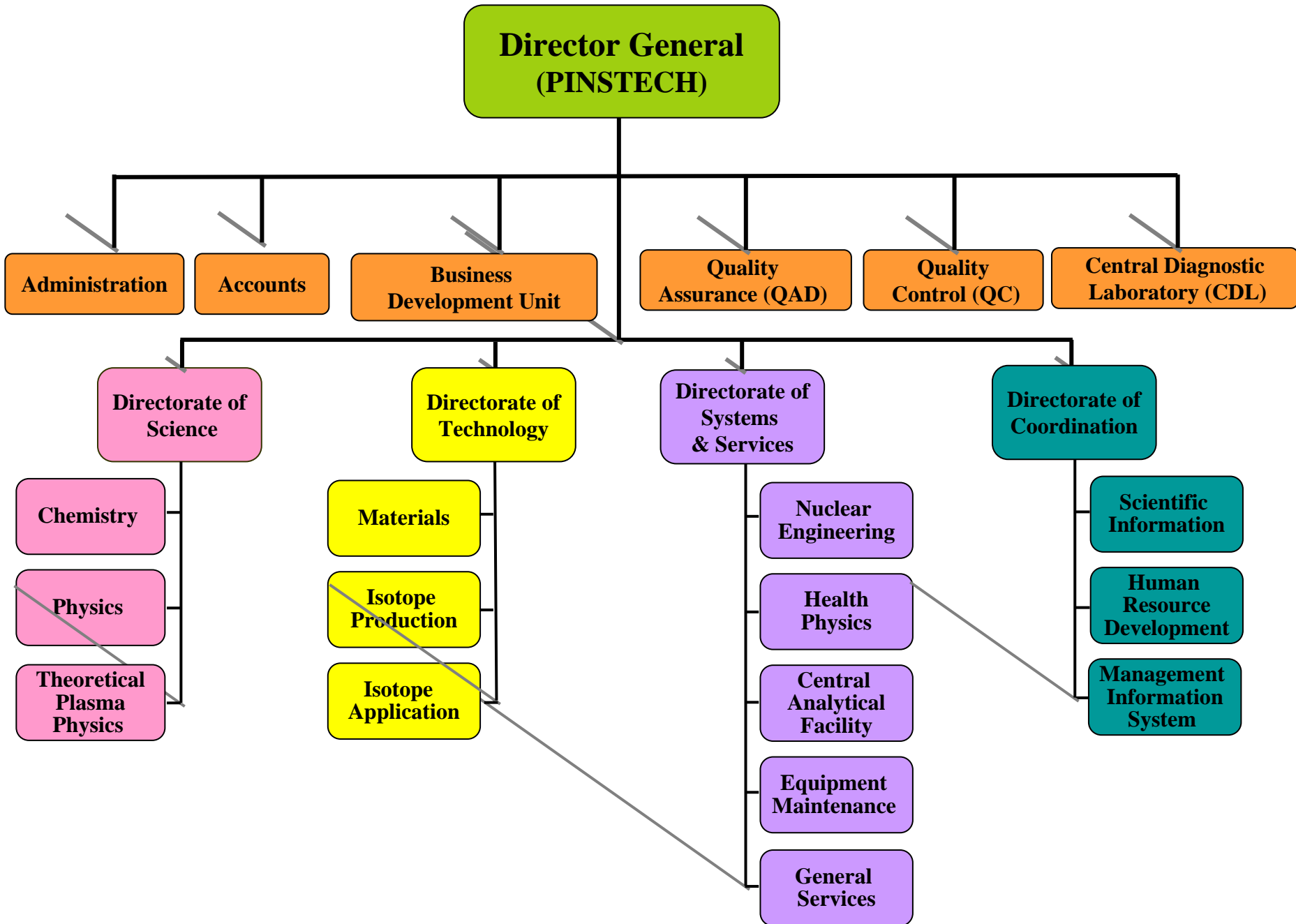
**Pakgen 99mTc Generator**



**Laser Land Leveler**



**R & D completed for the production of PARR-I fuel**



# **TOTAL MANPOWER**

## **(1606)**

**Technical Manpower 886**

**Scientists / Engineers 312**

**Supporting S&T Staff 574**

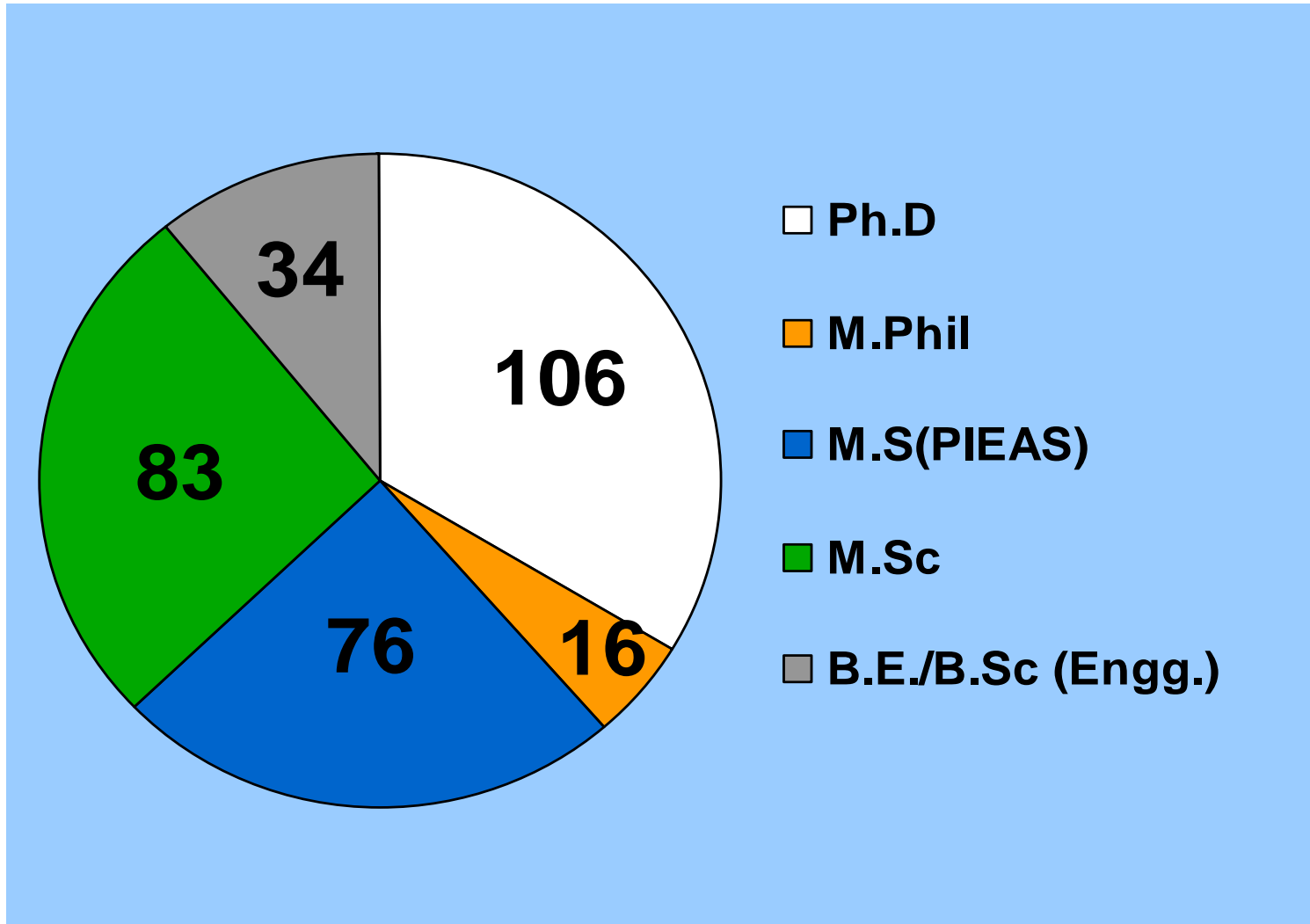
**Non-Technical Manpower 720**

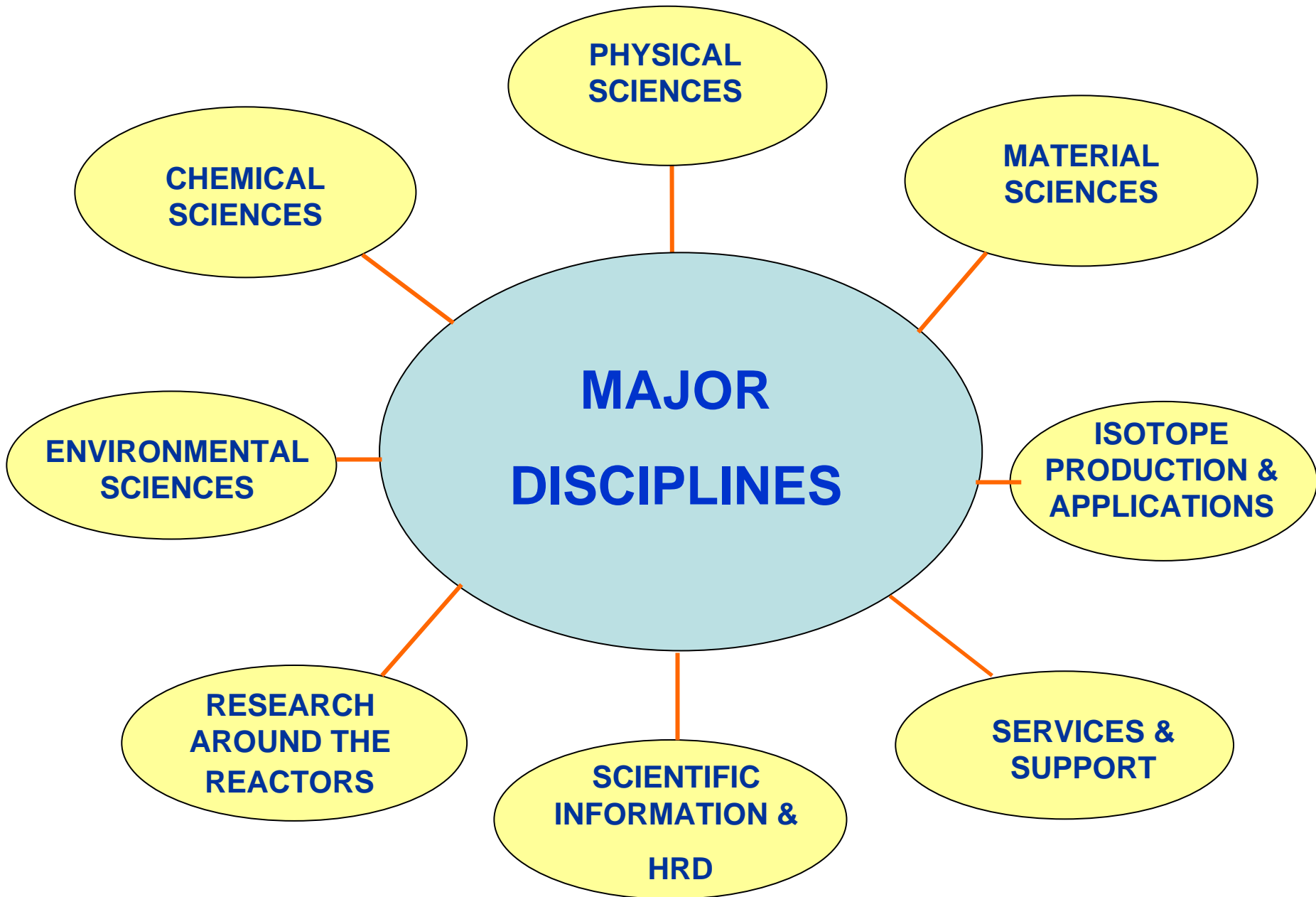
**Officers 22**

**Staff 698**

# TECHNICAL MANPOWER QUALITY

(314 Scientists & Engineers)





# Potential End Users of PINSTECH Facilities

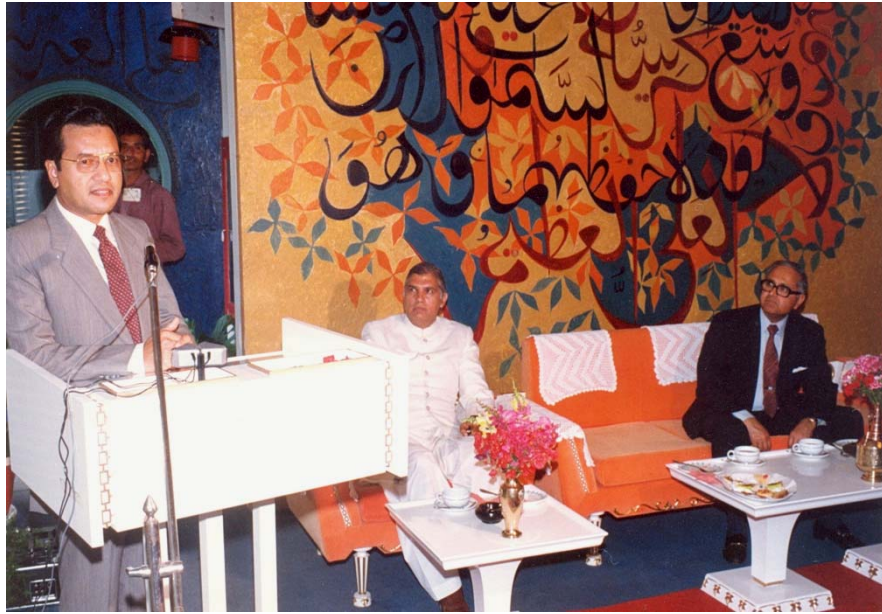
- **Health Sector (Nuclear Medical Centres)**
- **Industry (Chemical, Textile, Thermal Power Stations)**
- **Environment (Pak EPA, WASA, NGO's)**
- **Water Resources Developments (WAPDA, PCRWR)**
- **Irrigation, Agriculture (PARC, NARC)**
- **Mineral Resources (PMDC, Coal and Salt mines)**
- **Oil and Gas (OGDC, HDIP)**
- **Oceanographic Depts. (NIO, Pak Navy, KPT, Fisheries)**
- **Aviation Sector (Airlines, Armed Forces, Pak Railways)**
- **Defense Sector (POF, Mirage Rebuild Factory)**

# *Laurels for*

## **Scientists/ Engineers of PINSTECH**

- **48 scientists/engineers affiliated with PINSTECH have received civil awards like N.I, H.I, S.I, T.I and PoP**
- **3 scientists have received Khwarazmi International Prize**
- **19 scientists have been awarded gold medals from various national and international organizations**
- **Over 100 scientists & engineers of PINSTECH have received Annual Research Productivity Allowances by PCST**
- **17 scientists have been elected as Fellow of Learned Bodies such as TWAS, IAS, PAS etc.**

# Honored Guests



# *Scientific Information Systems*

**PINSTECH Library was established  
in 1966**

**Scientific Information Division was created  
in 1984**

***Declared as*  
National Library of Physical Sciences  
in 2002**

## ***MANDATE***

**Acquisition, management, preservation and dissemination of S & T information to PINSTECH/ PAEC as well as other R & D organizations and universities**

## ***IN-HOUSE COLLECTION***

**About 37,000 books, more than one million TOCs from 1700 journals and 1.5 million non-conventional literature**

## ***SID PRESS***

**Central printing facility of PAEC  
(4 offset, 2 letterpress machines and plate making unit)**

# **Main Activities**

- **Acquisition of books, journals, reports, etc to develop in-house collection**
- **Comprehensive S &T Information Database Management**
- **Shifting from conventional retrieval system to E-Library system**
- **Retrospective literature searching**
- **Current awareness services**
- **Package Scheme for R&D Establishments/ Institutions**

# SID Workforce

**Total strength = 72**

**Officers (Tech.) = 04**

**Supporting Staff (Tech.) = 33**

**Officers (Library professionals) = 03**

**Supporting Staff (Non-Tech.) = 32**

# Head SID

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graph TD; HeadSID[Head SID] --- CIMS[CIMS]; HeadSID --- INIS[INIS]; HeadSID --- LMS[LMS]; HeadSID --- LRMS[LRMS]; HeadSID --- RCS[RCS]; HeadSID --- SMS[SMS]; HeadSID --- STRS[STRS];
```

**CIMS**

**INIS**

**LMS**

**LRMS**

**RCS**

**SMS**

**STRS**

**CIMS:**

**Computerized Information Management Section**

**INIS:**

**International Nuclear Information System**

**LMS:**

**Library Management Section**

**LRMS:**

**Library Record Management Section**

**RCS:**

**Reference & Circulation Section**

**SMS:**

**Services Management Section**

**STRS:**

**Scientific & Technical Reports Section**

# **CIMS: Computerized Information Management Section**

- **Data Entry for in-house databases**
- **Management of literature database**
- **Downloading of bibliographic info of books (LoC, Amazon, etc.)**
- **Software development as per requirement**
- **SID LAN management/ networking**
- **Updating SID & The Nucleus Websites (*on-line submission of papers*)**
- **Coordination with HRD/MIS for GWA**
- **Service/maintenance of computers in SID**



# **INIS: International Nuclear Information System**

- **SID is the National INIS Centre for Pakistan**
- **Collection of scientific literature published within the country**
- **Preparation of INIS input records according to specified format of IAEA**
- **More than 900 records are submitted to INIS during 2011 (highest input from Pakistan so far)**
- **Preparation of retrospective searches from INIS database for scientists/engineers**  
*(received CDs are processed every month)*
- **Recently became member of INLN**



# Databases available in SID

- INIS database (1970 to date)
- Books database
- Table of Contents (TOC) of Journals available in the library updates.
- Technical Reports database
- Chemical Abstract database on CD ROM (1977-92)
- INSPEC database on CD-ROM (1989-2002)
- (For details, please visit the website ([www.sidnlps.org.pk](http://www.sidnlps.org.pk) ).  
([www.iaea.org/inis](http://www.iaea.org/inis))

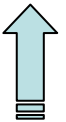
# **LMS: Library Management Section**

- **Subscription to International Journals**
- **Acquisition of reports/patents against adhoc requests**
- **Processing of acquired material for computerization**
- **Provision of reference services and manual literature searches**
- **Help in finalizing PINSTECH International reports**
- **Managing PINSTECH Printing Press**



# **LRMS: Library Record Management Section**

- **Acquisition of Books through local/foreign suppliers**
- **Classification and cataloging of publications**
- **Record of IAEA and donated publication**
- **Digital Books Treasury (full text of more than 14000 books)**
- **Record of transferred/cost recovered/written-off books**
- **Arrangement of annual stock taking**



# **RCS: Reference & Circulation Section**

- **Handling of books/publications circulation system (issue, return, reminders, etc.)**
- **Maintenance of Library and Exhibits Area**
- **Implementation of barcode system (Pin No. based)**
- **Automatic reminders for overdue books**
- **Helping users in on-line access to literature**
- **Audio/visual facility for on-line lectures**
- **Arrangement of scientific documentaries/films**
- **Conducting visits**



# **SMS: Services Management Section**

- **Provision of all type of literature/articles from all sources upon request**
- **Downloading of required material from HEC Digital Library**
- **Transmission of literature through emails**
- **Publication of Glimpses from Recent Arrivals**
- **Arrangement of translation facility for S & T documents**
- **Managing the SID Package Scheme**



# **STRS: Scientific & Technical Reports Section**

- Collection of about 1.5 million S & T reports  
*(37,000 received from NTIS during 2010)*
- Conversion of microfiche/microfilms into digital form (scanning and CD writing)
- Searching/downloading of reports by web browsing
- Procurement of reports, patents, etc.
- Publication of PINSTECH/Divisional reports
- To maintain record of PINSTECH/PAEC Annual Reports, brochures, etc.



# Printing Press

- **Printing Machines**
  - ✓ **One Automatic (Solna)**
  - ✓ **3 Offset (Rota)**
  - ✓ **2 letterpress (Tradel)**
- **Plate making unit**
- **Cutting, perforation, stitching machines**
  
- ***Designing/composing/printing of Annual Reports, Newsletters, conference material***
- ***Stationary for all PAEC Establishments***



# Microfiche to Softcopy

- A new machine (Mekel Mach VII) has been procured for conversion of microfiches into soft form.
- Anyone interested for conversion of microfiche into softcopy may contact SID for saving there literature available on microfiche.
- This is actually resource sharing of library equipments.

# **Work under Progress**

- **Access to required literature for every one at Desktop**
- **Dissemination of scientific info via emails/ website**
- **Increase in Digital Book Treasury (DBT)**
- **OPAC for DBT collection via website**
- **Barcode system implementation**
- **Improvement in the websites**
- **Full access to HEC Digital Library**
- **On-line request submission/ auto response**
- **Collection of bibliographic info from possible sources**



**THANK YOU**