Information Technology Policy

Vision

To be an IT enabled institution, embracing state-of-the-art technology in everything that we do.

Preamble

The Information Technology (IT) Policy at Nirma University sets forth the central approach that governs the responsible usage of all users of the University's information technology resources. This comprises the IT facilities allocated centrally or by individual departments. Every member of the University is expected to be familiar with and adhere to this policy. The users of the campus network and computer resources ("users") are responsible to properly use and protect information resources and to respect the rights of others.

Scope

The IT Policy applies to all University faculty, staff and students and all others using the IT resources, whether personally or of University owned, which access, transmit or store various types of related information.

Table of Contents

1. Objectives

Each user of the University Information Resources must ensure that it is used for promoting the mission of the University towards teaching, learning, research, and administration. In particular, the major objectives of this document are:

- To ensure the integrity, reliability, availability, and superior performance of the University IT Systems.
- To ensure that the availability and implementation of the IT Policy is in line withthe Strategic Planning document of the University.
- IT system protects the official e-identity (allocated by the University) of an individual.
- To ensure that all the users of the University are responsible for adhering to the procedures governing the implementation of this Policy document and any other matter incidental to those rules.

2. Model of IT Infrastructure

2.1 Major Components:

The IT components of the University can be majorly sectioned into three domains based on pre-engagement, during-engagement (present) and post-engagement of the major stakeholders of the University. The IT strategy document aims to formulate the policies, implementation procedures, and execution mechanisms to enhance the dynamic IT infrastructure, as per the contemporary needs. It also devises mechanisms to adhere to basic ethical values like Trust, Confidence and Integrity.

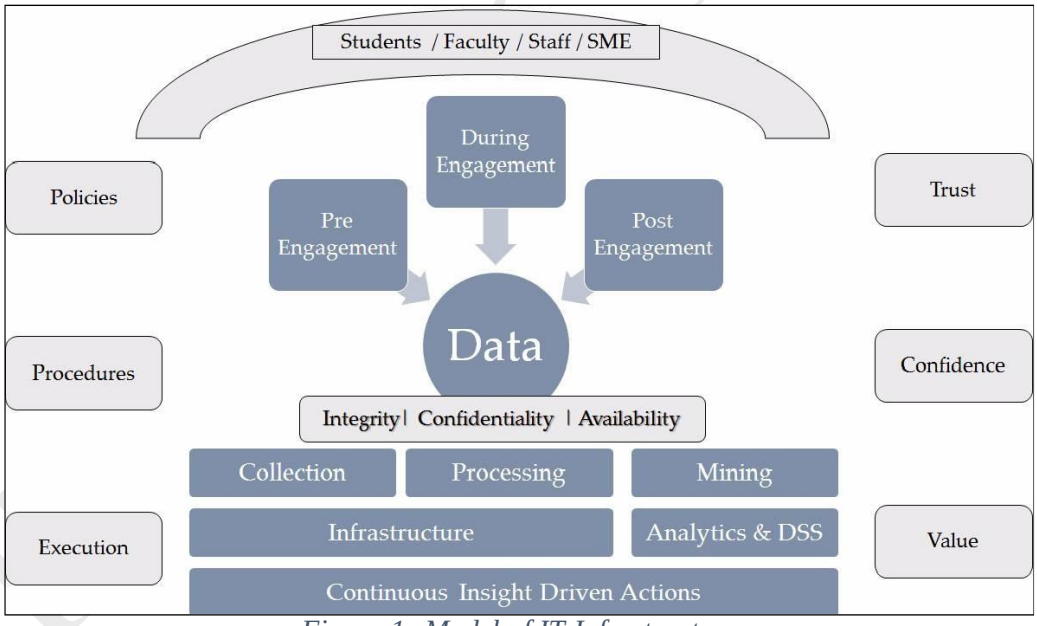

Figure 1: Model of IT Infrastructure

2.2 Salient Features:

- The digital information shall map to the CIA (Confidentiality, Integrity and Availability) standards for all engagement strategies.

- The bottom-up approach used for IT development shall enable the need analysis based on the state-of-the-art tools and technologies that drive the current software/hardware industry.
- The need to enhance/update the IT infrastructure shall be based on the growing number of users, introduction to new courses and programmes, market trends and industry expectations, feedback from stakeholders, funded research and consultancy projects.
- The official websites, campus collaborations systems, email facility and other social media platforms of the University, Institutes and Departments shall be used to disseminate relevant information related to pre, present and post engagements of the stakeholders.
- Procedure for timely publication of the information shall be followed through the Standard Operating Procedure (SOP) for content management.

3. Users and Organizational Hierarchy

The University shall endeavour to ensure fair implementation of this policy so as to meet with the objectives of its formation. The responsibility of the management of the operational aspects of IT resources is presented in Figure 2. The hierarchical flow of the University governance structure can be categorically defined as:

3.1 The respective Heads of Institutions shall be responsible for compliance with all University policies relating to the use/ownership of information resources, keeping in mind the Vision and Mission of the University.

3.2 Chief Technical Officer working at University level shall coordinate various activities related to the adherence of the IT Policy in association with the IT Administrator of the respective Institute.

3.3 IT Infrastructure Management Team (ITIM) comprises various teams like Infrastructure Team, ERP Team, Hardware Team, Application Development team, Database Team, Security Team, Audit and Compliance team, Support team and other sections for managing needs of various stakeholders, like student, faculty, staff, alumni, placement cell, out-reach activities and SME.

3.4 Individual Users - The users are solely responsible for the activities they perform on Institute/University systems and are required to authenticate with their "User Name/Password" pairs and IP (Internet Protocol) addresses assigned to them. It is the responsibility of the user to keep credential safe, secured and in no event, it should be shared with anyone.

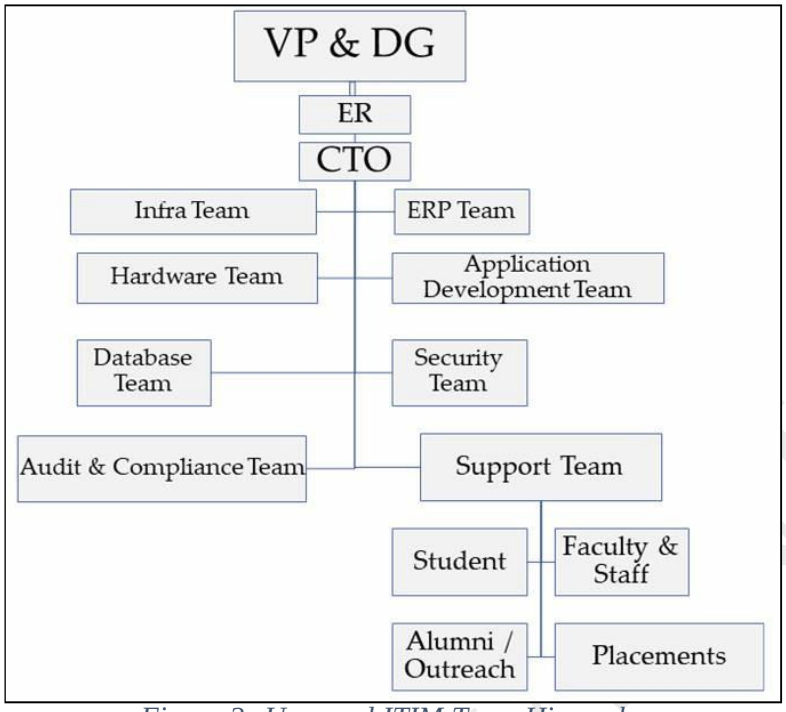

Figure 2: User and ITIM Team Hierarchy

4. IT Asset Management

The University shall lay down business processes for the management of hardware and software assets that facilitate the usage of IT resources at the University. This shall include procedures for managing the purchase, deployment, maintenance, utilization, energy audit, and disposal of software and hardware applications within the University.

4.1 Copying and Distribution: The University shall ensure that there is no violation in the copying and distribution of proprietary and licensed software.

4.2 Risks: The University shall emphasize on managing the risks involved in the use of IT resources. This shall include standard procedures for identification,minimization and monitoring of risk impact by preventive and corrective measures. This includes procedures for timely data backup, replication and restoring policies, power backups, audit policies, alternate internet connectivity for a fail-safe internet access.

4.3 Open Source Asset: The University shall endeavour towards the promotion and effective usage of open source software securely.

4.4 Data Management: Data is generated by various stakeholders can be categorized as under:

All data generated by any stakeholder will remain the property of University. The University shall formulate and implement necessary policies to protect, preserve and use the data in a formidable way. Further, the University shall device classification rules of the data such that internal and external norms are adhered toin storing, sharing and processing of such data.

5. Priority Areas

The IT Systems will be developed with a focus on various aspects catering to the following priority areas:

- Mobile device compatibility of all non-operational IT applications shall be ensured before making it available for other devices like laptop, desktop, etc.
- Seamless availability of technology shall be made accessible to all users of the University for a unified work culture.
- All the IT Systems shall be enabled for better sustainability, optimization, and maintainability through lean transformation.
- The development of light-weight applications and services shall be practiced for efficient bandwidth utilization and ease of use to reduce data wastage and redundancy.
- The data shall be stored and archived for enablement, implementation and execution of data analytics and Decision Support Systems (DSS).
- A bottom - up approach shall be used in planning, designing, procuring, implementing and executing any new IT System.
- Key Performance Indicators (KPIs) shall be identified and evaluated for the effectiveness of IT infrastructure.
- A regular assessment of the IT Systems through proper benchmarking and innovative practices shall be implemented for its continual development.
- Centralized sourcing of IT Assets (hardware, software, services) shall be enacted with proper evaluation and need based assessment of requirements and in selection of partner/vendors of good repute and market standing.

6. Goals of IT Infrastructure

The IT infrastructure shall be developed considering various goals like information dissemination and spreading awareness about various events and activities round the year. The following are the perspective goals achieved using various IT platforms:

6.1 Awareness:

Regular data updating, event information, announcements, and notifications of the University, constituent Institutes and Departments are disseminated through respective websites, social media platforms and newsletters:

- Websites shall be attractive, helpful, speedy, mobile friendly, efficient, well- managed with necessary features to carry out data analytics.
- Social media platforms followed by interested stakeholders shall be used for information dissemination, academics and admissions. The content on such platforms is to be kept afresh and updated frequently. The data from such platforms shall be used for analytics, marketing, insights generation and brand building for the University/Institute/Programmes.
- Regular, interesting, aesthetic content-based newsletter focussing on professional skill-set shall be available to the intended people on subscription basis.

6.2 Admissions:

Admissions are annual events carried out by all constituent institutes of the University.

- Admission related information shall be available on website round the year to facilitate the queries of prospective students.
- The admission related content on any public domain shall be customized to suit the requirements of all the running programs of the University.
- Links for applying to admissions shall be made available and the entire admission process is automated through a centralized admission system.
- Data analytics carried out using the admission system should be visible through the dashboard.
- Third party vendors should be hired to carry out the digital marketing for admissions.
- Content shall include important keywords for better Search Engine Optimization (SEO).

6.3 Academics:

- Various IT based tools to facilitate the academic activities and meet the needs of contemporary trends shall be developed / procured from time to time. Some of these include, the Learning Management System, Student Management System, Feedback system, Timetable and Resource Management System, Student App (Nirma University App), Electronic Storage of Assessments and Assignments, Video Conferencing Software, E-Examination System, and Archival Systems, student training and placement management system, etc.
- IT based systems shall be developed to track the Research and Development activities of the University like, documenting the research outcomes, monitoring the research projects, monitoring the progress of PhD scholars, Depository of articles and reports, planning and monitoring of faculty research, developing dashboards for quick information access etc.
- A comprehensive data-centric module, integrated with other applications shall be developed to meet the requirements of different accreditation and ranking agencies.
- IT based ERP system to manage faculty recruitments, employee information, budget and accounts, regulatory compliances, inventory, purchases, e-procurement and e-payment shall be developed.

6.4 Relation with alumnus:

An exclusive IT System to establish a long-lasting relationship with the alumnus shall be strengthened for regular interaction with alumnus, maintaining records of their professional growth and other alma support services, online conferencing and meeting, etc.

6.5 Dashboards and Reports:

Dashboards with various data analytics related support to generate reports related to alumni activities and interactions shall be made available.

6.6. Active Support System:

An active technical support system shall be set up to handle software and hardware issues ensuring lesser down-time, quick fault recovery and maintenance of the IT systems.

7. Hardware Asset Management

A centralized IT Infrastructure Management (ITIM) Team shall be responsible for procuring, implementing, and managing various hardware and software assets of the University. The hardware asset management includes the management of the physical components including servers, computers, network equipment, firewall, etc. from acquisition through disposal. Some of the common practices include request and approval process, procurement management, life cycle management, redeployment and disposal management. The process to be followed is as under:

7.1 Networking:

Campus-wide networking facilities and computing devices shall be made available to the users as per the growing needs of tools and technologies. The following points need to be observed for the same:

- The network connectivity shall be 24X7 on-campus /off-campus.
- The regular maintenance of the IT systems should be implemented such that the systems are available with and SLA of 99.9% availability.
- The networking systems shall be upgraded at regular intervals in order to meet the growing demand of hardware and software configurations and protocols.
- An ISP based internet access facility shall be upgraded to meet the growing bandwidth needs of a variety of applications and users on campus.

7.2 Campus-wide Wi-Fi Facility:

- The ITIM team shall manage to provide seamless connectivity to all the authorized wireless devices of the University.
- User credentials and device related information shall be maintained through IP- MAC binding and Wi-Fi registration rules.
- Campus-wide reliable Wi-Fi facility should be provided for all users.
- The number and configurations of the Wi-Fi access points in campus shall be upgraded from time to time to meet the wireless access needs of users on the campus.

7.3 Aging Policy:

- Hardware items shall be written off at the end of life, if it's not-repairable and offered under buy-back by following written-off process.
- Every year Dead-stock verification shall be done at Institute level by sending into the interdepartmental committee.
- Allocation of laptop to the regular faculty members shall be centrally managed by the ITIM Team.
- Periodic hardware maintenance shall be carried out as per the recommendation of the maintenance executive.
- The older hardware system shall follow either buy-back policy or recycled or undergo written-off process for efficient and timely utilization of the system and overall ease of using the hardware. Hence, it should be ensured that the Universityis not stuck with the old infrastructure.
- Ensuring availability of the latest licensed proprietary software shall be managed by the respective departments. In the due course of time, obsolesce of the licensed software shall be checked and initiate necessary process to ensure that only the working version of the software is in use.

7.4 E-Waste Management:

- Any electronic equipment that is unusable will be subject to the process of verified for its usability as per the aging policy, failing which the equipment shall be written-off or discarded by involving third party e-waste management agencies.

7.5 Servers and Workstations:

- A high-performance computing cluster shall be configured for providing support to compute and data intensive applications for research projects, student projects and other requirements.
- A network of storage systems shall be made available for providing data archival support to meet the requirements of various data analytics, decision support systems, and accreditation and benchmarking needs.
- Application Servers or cloud platforms to support ERP systems of the University for various applications like employee management, accounting management, student information system, examination system.
- Library server shall be used for quick access to the online repository, as well as providing remote access facility to the legitimate users of the University. The server can further be connected to have access to the library storage servers through campus network.
- Proxy server for providing internet services to all the legitimate users, firewall configurations, VPN connections and other user access policy related implementations.

8. Software Asset Management

Software Asset Management involves the processes for focusing on software assets, including licenses, versions and installed endpoints. The processes to be followed for the same is as under:

- Software installation, upgradation and support requests with vendors shall be managed centrally for each Department/Area level.
- The licences of the various operating systems, antivirus and other software shall be managed and activated by the ITIM team.
- Firewall Management: The primary purpose of Firewalls is to protect the Campus Networks from unauthorised access. Depending upon the capacity of the installed Firewalls in the campus, type and size of network traffics, the Chief Technical Officer may decide to install different firewalls in the campus. The bandwidth allocations and various filtering criteria to maintain the decorum of Academic Environment will be configured from time to time by a competent committee appointed by the Vice President and Director General of the University.

9. IT Usage and Prohibitions

The users of the University shall make effective usage of campus collaboration systems, internet, wireless resources, official websites (including university website, conference website, journal portals, online admission systems, and course website), and Management Information Systems (MIS) and ERP solutions, Learning Management System, Remote Login based facilities of the University and e-Library resources.

- The University shall stress upon the users to comply with University policies and legal obligations (including licenses and contracts).
- The University shall strive to arrange for awareness programmes to acquaint the users with the effective usage of IT resources.
- Prohibited Use - The users shall not send, view or download fraudulent, harassing, obscene, threatening, or other messages or material that are a violation of applicable law or University policy. In particular, contributing to the creation of a hostile academic or work environment is prohibited.
- Copyrights and Licenses - Users must not violate copyright law and must respect licenses to copyrighted materials. For the avoidance of doubt, unlawful file-sharing using the University's information resources is a violation of this policy.
- Social Media - Users must abide by the rules of the University towards the usage of social networking sites, mailing lists, news rooms, chat rooms and blogs.

- Commercial Use - The University IT resources shall not be used for any commercial and promotional purposes, through advertisements, solicitations or any other message passing medium, except as permitted under University rules.

10. Security and Integrity

- The University IT resources shall not be used for activities violating the basic functionality and mission of the University, except in a purely incidental manner.
- The users must refrain from making any unauthorised access of information in order to promote secure access of network and computers.
- The competent system administrator may access the information resources for a legitimate maintenance purpose.
- A secured flow of internet and intranet based traffic on the campus shall be managed through the use of Unified Threat Management (Firewall) system.
- Antivirus and security updates - The regular updating of the anti-virus policy and security updates should be done for the protection of computing resources.
- All University IT systems should be patched for OS/Firmware and for any applications in use at a shall cadence to ensure latest security updates are applied to the respective asset.

11. Violation of Policy

Any violation of the basic objectives and areas mentioned under the IT Policy of the University shall be considered as a violation and as a misconduct and gross misconduct under University Rules.

12. Implementation of Policy

For implementation of this policy, the University will decide necessary rules from time to time.

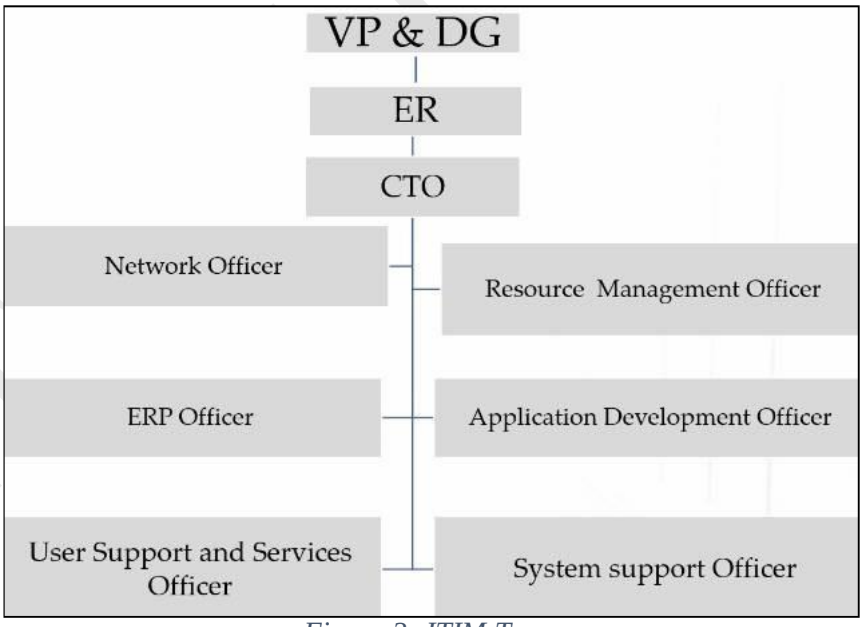

Figure 3: ITIM Team

The required procedure for review/upgradation of this document shall be done by the ITIM Team chaired by Vice President and Director General of the University. The other members of the ITIM Team shall comprise the Chief Technology Officer, Network Officer, ERP Officer, User Support and Services Officer, Resource Management Officer, Application Development Officer and System Development Officer, Head of Institutions, Executive Registrar and other members as nominated by the Chair.

The University shall form the following committees to ensure smooth and effective governance and operations of the University Technology Systems

12.1 IT Steering Committee:

The IT Steering Committee shall consist of Vice President, Director General, and Chief Technology Officer. It will be the highest authority that will work on policy matters as it relates to all the technology initiatives at the University. The decision of this committee will be considered final. The committee shall decide on key priorities of the University for a said period and appropriate funding for the same. The committee shall make procurement decisions upon due consideration of the note put forth by various constituents in its regular meeting. CTO shall present state of the technology affairs, operational excellence records, KPI's, any risks and its mitigation plan to ensure University systems, data and assets are available, secure and protected at all times.

12.2 IT Security & Audit Committee:

This Committee shall comprise Director General, Chief Technology Officer and Compliance Officer. With data at the centre of the University's mission in serving its stakeholders effectively and efficiently, the security of the same is of paramount importance. The IT Security and Audit committee will seek to ensure policies related to all technology assets of the University are adhering to the highest levelof security standards and are audited for effectiveness on a continuous basis. The Committee is charged with framing charters that ensure no-negative impact to the University's brand or its stake holders are adversely impacted. A Third Party organization shall be engaged from time to time to audit the security system.

12.3 Change Control Board:

The Board shall be chaired by the Chief Technology Officer and would consist of relevant members. The effective management of technology systems and assets rests on optimal, non-disruptive changes that are required to run the IT systems efficiently. The change control board is in charge of approving any changes requested by various IT teams, only after due evaluation of need of the change, it's intended purpose, disruption risk if any and alternate mechanisms enacted to avoid system unavailability. The Change Control Board will be responsible to ensure standard operating procedures are enacted in each discipline of technology serviceso that the maximum benefits of the technology are availed by the University stakeholders using the technology assets.

13. Budget

The University shall endeavour to maintain a budgetary provision of 2-3% of the Infrastructure development budget of the University towards the IT infrastructure upgradation/maintenance. This shall be towards facilitating the continual and seamless services to stakeholders.

14. Expansion Plan

14.1 The ITIM Team headed by Vice President and Director General of the University shall ensure that the existing IT Systems are revamped from time to time to meet the contemporary requirements of a state-of the art University Infrastructure and related benchmarks.

14.2 The expansion plan for the same shall be prepared in line with the budgetary provisions of the IT Policy implementation

14.3 Proper innovative practices should be identified and implemented for effective utilization the available resources.