



Lumbini  
Buddhist  
University

# UNIVERSITY DIGITALIZATION STRATEGIES -2023



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"Salutation to the Triple Gem"

# Lumbini Buddhist University



## University Digitization Strategy

2023



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## Abbreviations

HRD:	Human Resource Development
ICT:	Information Communication Technology
ISP:	Internet Service Provider
IT:	Information Technology
LMS:	Learning Management System
MIS:	Management Information System
MoEST:	Ministry of Education, Science and Technology
MOOC:	Massive Open Online Course
NOC:	No Objection Certificate
OER:	Open Educational Resources
CMS:	Content Management System
EIMS:	Electronic Information Management System
UMIS:	University Management Information System
ERPS:	Enterprise Resource Planning System
LBU:	Lumbini Buddhist University
UGC:	University Grants Commission
HEI:	Higher Education Institution



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# 1 Executive Summary

In response to the transformative potential of Digitization in higher education, Lumbini Buddhist University (LBU) is committed to developing a comprehensive Digitization Strategy. This executive summary outlines the key objectives, strategies, and action plans to foster a digitally empowered and future-ready academic ecosystem.

The Lumbini Buddhist University is aware of information technology (IT) 's vital role in contemporary administration and education. The university's comprehensive Digitization Policy approach is described in this executive summary to advance many aspects of technology management and integration.

The strategy strongly emphasizes developing a solid digital infrastructure across all the university's campuses. Through improved communication, data sharing, and online accessibility, this program aims to give students, instructors, and staff a seamless experience.

The institution is investing in platforms that provide remote access to lectures, resources, and collaborative tools as part of its focus on virtual learning environments. The institution wants to give flexibility and inclusion in teaching by embracing these spaces.

The institution is dedicated to improving its web-based Education Management Information Systems (EMIS) in line with contemporary practices. Through efficient IT solutions, this initiative aims to optimize data management, administrative procedures, and decision-making.

The strategy's cornerstones are the creation and distribution of digital resources. The institution wants to build a library of online learning materials to support lifelong learning and knowledge exchange within its academic community.

Development of human resources is crucial, and the institution intends to conduct frequent training programs. These courses will improve faculty and staff members' IT literacy, empowering them to successfully incorporate technology into their teaching, research, and administrative responsibilities.

A key component of the plan is office automation, which streamlines administrative procedures and minimizes manual interventions. The university aims to increase efficiency by digitizing procedures like admissions, registrations, and payroll.

Security, privacy, and adherence to legal requirements are of the utmost importance. The institution is committed to preserving privacy standards, eliminating plagiarism, and protecting intellectual property. The use of surveillance systems will be morally and legally compliant.

The establishment of thorough data management procedures will guarantee the accuracy of university data. This promotes data security and business continuity and involves data protection, consistent backups, and disaster recovery strategies.

The Digitization Policy at Lumbini Buddhist University encompasses a comprehensive strategy for implementing new technology. The institution wants to construct a technologically cutting-edge and safe learning environment by improving connection, digital infrastructure, virtual learning environments, resource development, human resource capabilities, automation, security, and compliance. The institution's dedication to excellence, innovation, and responsible IT usage is highlighted through this plan.



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## 2 Background

The dynamic landscape of higher education, coupled with rapid advancements in Information and Communication Technology (ICT), has reshaped the way universities and institutions approach teaching, learning, and administrative processes. Recognizing the transformative potential of Digitization, Lumbini Buddhist University (LBU) embarked on a journey to harness the power of technology for the betterment of its academic community and the broader educational ecosystem in Nepal.

The background for the Development of University Digitization Strategy stems from the global trends in higher education, where digital technologies have played a pivotal role in improving collaborations, governance, and overall education management. Across the globe, universities have embraced Digitization to create flexible and accessible learning environments, enhance resource sharing, and facilitate virtual communication among stakeholders. The positive impact of Digitization has been witnessed in terms of increased student engagement, personalized learning experiences, and efficient administrative processes.

In Nepal, despite its limited use, Digitization has shown promising results, especially during challenging times like pandemics and natural disasters. Universities experienced the benefits of Digitization, including the flexibility of self-paced learning through recorded lectures, 24-hour access to learning resources, and the ability to collaborate with faculty and students from remote areas. Additionally, digitization proved instrumental in better data management, progress monitoring, and seamless academic and administrative functioning during disruptions.

However, while acknowledging the potential benefits, certain challenges and limitations have been identified in the adoption of Digitization in Nepal's higher education landscape. These include the lack of a clearly defined strategic framework for higher education in the ICT policy, limited outreach of digital connectivity and access to digital devices, and a shortage of skilled human resources to fully leverage technology's potential in education.

In response to these emerging trends, challenges, and opportunities, Lumbini Buddhist University envisions the formulation of a robust and comprehensive Digitization Strategy. This strategy aims to provide a roadmap for the university's digital transformation, encompassing various dimensions, such as online learning, virtual collaboration, data management, and capacity building. The Development of University Digitization Strategy is driven by the commitment to foster academic excellence, inclusivity, and innovation, equipping its academic community with the digital tools and skills needed to thrive in an increasingly interconnected and technology-driven world. By embracing Digitization, LBU seeks to elevate its academic standing, enhance global engagements, and contribute to the advancement of higher education in Nepal.



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### 3 Current State Assessment

As Lumbini Buddhist University (LBU) embarks on the journey to develop its University Digitization Strategy, it is crucial to conduct a comprehensive Current State Assessment to understand the existing digital landscape within the institution. This assessment aims to identify strengths, weaknesses, opportunities, and challenges related to Digitization to inform the strategy's formulation effectively.

**3.1 Digital Infrastructure:** LBU currently possesses a basic digital infrastructure, including computer labs and internet connectivity. However, the infrastructure's coverage may be limited to certain areas, hindering widespread digital access for all stakeholders.

**3.2 Learning Management System (LMS):** The university has made some progress in implementing an LMS to facilitate online learning with Moodle, Zoom and MS Teams during its hard time of pandemic. However, its utilization and integration into teaching practices might vary across departments and faculties.

**3.3 Faculty Digital Literacy:** While some faculty members demonstrate strong digital skills, there is a need to enhance digital literacy among the entire academic staff to leverage technology effectively in teaching and research activities.

**3.4 Student Digital Engagement:** Students' digital engagement varies, with some embracing digital tools for learning and collaboration, while others may face challenges in accessing digital resources.

**3.5 Data Management:** LBU has adopted basic data management systems, but there may be room for improvement in terms of data accuracy, integration, and analysis to support evidence-based decision-making.

**3.6 Digital Learning Resources:** The availability and accessibility and integration to big digital resources houses of digital learning resources, such as e-books, academic journals, and multimedia materials, require enhancement.

**3.7 Digital Governance:** LBU may require a more defined governance structure to oversee the implementation of digital initiatives and ensure alignment with the institution's overall strategic objectives.



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**3.8 Connectivity and Access:** Owns basic level of connectivity throughout the university and other units. However, access to reliable internet connectivity and digital devices for both faculty and students might be limited. Moreover, there are issues in, ISP reliability, lack of dedicated manpower for immediate responses to technical issues, limited purchase of internet through telecommunication companies, and so forth.

**3.9 Capacity Building:** While some initiatives for faculty development in digital pedagogy exist, a comprehensive and ongoing capacity-building program for all stakeholders might be beneficial. Basic training to use tools exists, moreover it needs to assess and enhance the overall ICT capacity.

Based on this Current State Assessment, Lumbini Buddhist University will gain valuable insights into the areas that require immediate attention and the existing strengths that can be leveraged. This assessment will serve as a foundation for crafting a robust University Digitization Strategy, ensuring that the digital transformation aligns with the university's vision, goals, and commitment to academic excellence.

## 4 Mission, Vision and Goal

The mission of the University Digitization Strategy at Lumbini Buddhist University is to harness the transformative power of technology to foster an innovative, inclusive, and future-ready learning ecosystem. By leveraging digital tools and resources, we aim to enhance the quality of teaching and learning, promote collaborative research, and streamline administrative processes. Our mission is to create a digitally empowered academic community that thrives in an interconnected and technology-driven world, making a positive impact on society and contributing to the global knowledge landscape.

The vision of the University Digitization Strategy is to position Lumbini Buddhist University as a leader in digital education, setting exemplary standards in digital transformation within Nepal's higher education sector. Our vision is to create an environment where secure and friendly technology, innovative pedagogy, and inclusive digital resources converge to offer exceptional learning experiences to students and faculty. We envision seamless connectivity, access to state-of-the-art digital tools, and a dynamic virtual learning environment that empowers learners to excel academically, fosters critical thinking, and nurtures a deep sense of social responsibility. Through our commitment to continuous improvement and collaboration, we strive to drive positive change in society and shape a brighter future for the global community.

The goal of the University Digitization Strategy at Lumbini Buddhist University is to establish a comprehensive and sustainable digital ecosystem that optimizes technology to enrich teaching, research, and administrative practices. Our overarching goal is to seamlessly integrate Digitization



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across all aspects of the university's operations, fostering a culture of innovation, adaptability, and lifelong learning. By achieving this goal, we aim to equip our academic community with the necessary digital tools and skills to thrive in a rapidly evolving world, making LBU a center of excellence in digital education and research.

## 5 Objectives

**Specific Objectives of the University Digitization Strategy are as follows:**

- To utilize digital technologies and innovative pedagogies to enhance teaching methods, providing students with interactive, personalized, and learner-centered experiences.
- To digitize administrative workflows and services, enhancing efficiency, transparency, and accountability, while minimizing bureaucratic complexities.
- To ensure equitable access to quality education by offering diverse digital learning resources and removing barriers to digital connectivity for students from all backgrounds.
- To implement robust data management systems that enable evidence-based decision-making, institutional planning, and continuous improvement.
- To provide comprehensive capacity-building programs for faculty, staff, and students, nurturing their digital literacy and empowering them to effectively leverage digital technologies.
- To implement robust cybersecurity measures, safeguarding digital assets, personal data, and ensuring data privacy and ethical use of digital resources.
- To raise awareness about digital citizenship, responsible digital behavior, and ethical use of technology among all stakeholders.
- To develop a long-term sustainability plan for digital initiatives, ensuring continuous development, scalability, and adaptability to emerging technologies.

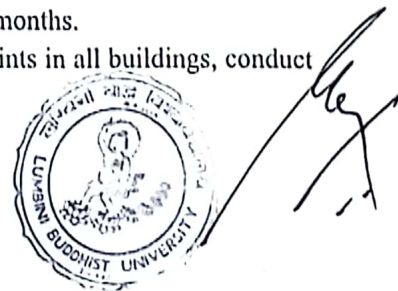
Through the pursuit of these objectives, Lumbini Buddhist University aims to establish a transformative and future-oriented digital ecosystem that nurtures academic excellence, embraces innovation, and fosters holistic development among its academic community.

## 6 . Digitization Strategies

### 6.1 Connectivity

6.1.1 Enhanced Campus Communication: The strategy prioritizes establishing robust connectivity across Lumbini Buddhist University's campuses. This includes investing in high-speed internet infrastructure to facilitate seamless communication among students, faculty, and staff.

1. Target: Achieve 100% campus-wide Wi-Fi coverage within six months.
2. Actions: Upgrade network infrastructure, install Wi-Fi access points in all buildings, conduct regular network maintenance, and provide technical support.



6.1.2 Intranet: Develop an intranet platform exclusively for the university to facilitate internal communication and collaboration.

Target: Launch an intranet system within nine months.

Actions: Collaborate with ISP, configuration of the intranet as per the requirement to access the resources within the organization.

## 6.2 Digital Infrastructure Development

6.2.1 Modernizing Hardware and Software: Upgrade and replace outdated hardware and software across campus facilities, including computers, servers, and networking equipment. Cost effective hardware procurement strategy throughout the university.

1. Target: Complete hardware and software upgrades within twelve months.

2. Actions: Conduct thorough technology assessment, procure necessary resources, and implement upgrades phased. Promote N-Computing Technology to reduce the number of CPUs. Promote the office centric server and work through workspace computers.

6.2.2 Practice of the Existing Foundation: Practice the foundational digital infrastructure to maintain the scalability and integrity of the IT systems of LBU.

Actions: Continuity and Upgrade the existing digital infrastructures to reduce cost and maximize integrity.

6.2.3 Cloud Adoption for Scalability: Transition to cloud-based solutions for storage, applications, and services to enhance scalability and flexibility.

1. Target: Migrate 60% of existing applications and services to the university cloud within six months.

2. Actions: Identify suitable cloud providers, assess compatibility, plan migrations, and train staff on cloud management, configure university cloud server as per the applications.

6.2.4 Data Center Modernization: Upgrade the university's infrastructure to support growing data storage and processing demands.

1. Target: Complete data center upgrade within five months.

2. Actions: Assess current data center capabilities, plan for increased capacity, implement new hardware and cooling solutions, and ensure redundancy for data protection, operate backup cloud server in case of primary server down, .

6.2.5. Robust Network Infrastructure: Upgrade all the network infrastructure including hardware and software's to reliability and mitigate the security threats.,

1. Actions: Conduct network assessment, upgrade switches and routers, optimize Wi-Fi coverage, and establish network monitoring systems.

6.2.6 Cybersecurity Enhancements: Strengthen cybersecurity measures to protect digital assets, sensitive data, and user privacy.

1. Target: Establish multi-layered cybersecurity protocols within six months.



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2. Actions: Implement firewalls, intrusion detection systems, regular security audits, user awareness training, and incident response plans.

6.2.7 Virtual Labs and Simulations: Develop virtual lab environments and simulations to facilitate practical learning in various disciplines.

Actions: Collaborate with faculty to design virtual labs, develop interactive simulations, and integrate them into the curriculum.

### 6.3. Learning Management System (LMS)

6.3.1. LMS Selection and Implementation: Choose a suitable Learning Management System that aligns with the university's goals and requirements.

1. Target: Finalize LMS selection and begin implementation within three months.

2. Actions: Evaluate LMS options, consider features, scalability, and user-friendliness, and initiate the implementation process, focused to Masters and PhD level .

6.3.2 Course Content Migration: Transfer existing course contents, materials, and resources onto the LMS platform.

1. Target: Complete course content migration for at least 50% of courses within three months.

2. Actions: Collaborate with faculty to upload materials, videos, assignments, and assessments onto the LMS.

6.3.3 Faculty Training and Onboarding: Train faculty members on effectively using the LMS for course delivery, interaction, and assessment.

1. Target: Provide initial faculty training within months of LMS implementation.

2. Actions: Organize training workshops, webinars, and tutorials on LMS usage and pedagogical best practices, dedicated support provider for every ten-faculty member until their perfection on LMS.

6.3.4 Student Onboarding and Support: Familiarize students with the LMS interface and functionalities to ensure smooth adoption.

1. Target: Provide LMS orientation for incoming students before the start of each semester.

2. Actions: Develop user guides, conduct orientation sessions, and offer ongoing technical support.

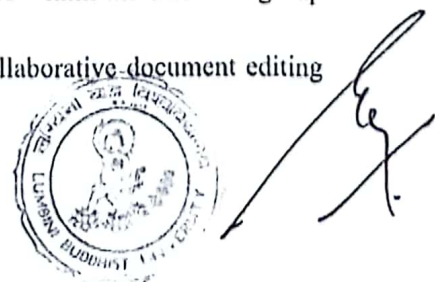
6.3.5 Assessment and Feedback Integration: Enable digital assessment tools and mechanisms, along with timely feedback provision.

1. Target: Integrate online assessments for all courses within twelve months.

2. Actions: Train faculty on creating online quizzes and assignments, implement auto-grading features, and ensure prompt feedback.

6.3.6. Collaborative Learning Spaces: Establish virtual spaces within the LMS for group projects, discussions, and collaborative learning.

Actions: Configure discussion forums, group chat features, and collaborative document editing tools.



**6.3.7 Multimedia Repository:** Develop a repository within the LMS for storing and sharing multimedia resources.

*Actions:* Design the repository interface, categorize resources, and ensure easy accessibility.

## 6.4 Strengthening Web-Based Education Management Information System (EMIS)

**6.4.1. Comprehensive System Assessment:** Evaluate the existing EMIS to identify strengths, weaknesses, and areas for improvement.

*Actions:* Conduct a thorough review of the current EMIS

**6.4.2 Technology Upgrade and Integration:** Upgrade the EMIS system to integrate with ERPS system.

1. *Target:* Complete technology upgrade and integration.

2. *Actions:* Identify necessary technology updates, ensure compatibility with other systems, and perform seamless integration.

**6.4.3. User-Centric Interface Design:** Redesign the user interface of the EMIS to be intuitive, user-friendly, and responsive.

*Actions:* Focused on UI/UX to design a visually appealing and easy-to-navigate interface, upgrade report systems in graphical presentation.

**6.4.4 Data Accuracy and Integrity Enhancement:** Implement data validation mechanisms and workflows to ensure accuracy and integrity.

*Actions:* Develop automated validation checks, user-friendly error notifications, and data correction procedures.

**6.4.5 Real-Time Data Reporting:** Enable real-time generation of reports and analytics for informed decision-making.

*Actions:* Develop reporting templates, integrate data visualization tools, and provide training on report generation.

**6.4.6 Student Management:** Streamline enrollment, and student records management.

*Actions:* Develop automated online enrollment and improve student record management.

**6.4.7 Continuous Training and Support:** Provide ongoing training and support for faculty and administrators to use the EMIS effectively.

1. *Target:* Offer regular training sessions and support throughout the year.

2. *Actions:* Develop training materials, conduct workshops, and provide a dedicated support channel.



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## 6.5 Digital Resource Development and Dissemination

6.5.1 Content Digitization: Convert physical resources into digital formats, including textbooks, lecture notes, and research materials.

1. Target: Digitize core educational resources within twelve months.

2. Actions: Scan or digitize print materials, ensure text recognition accuracy, and store resources in digital repositories.

6.5.2 Multimedia Creation: Develop multimedia resources such as videos, animations, and interactive simulations to enhance learning.

1. Target: Create multimedia content for key subjects within 6 months.

2. Actions: Collaborate with faculty and multimedia experts to design engaging learning materials.

6.5.3 Open Educational Resources (OER): Explore and curate online educational resources to supplement existing materials.

2. Target: Curate a repository of OER within 3 months.

2. Actions: Identify relevant OER platforms, select resources aligned with courses, and ensure proper attribution.

6.5.4 Digital Libraries and Repositories: Establish digital libraries and repositories to organize and store educational resources.

1. Target: Launch digital libraries for major subjects within 5 months.

2. Actions: Develop user-friendly interfaces, categorize resources, and ensure accessibility for faculty and students.

6.5.5 Digital Studio: Produce high-quality educational content, including audio/video lectures, online courses, simulations, and other interactive learning materials.

Actions: High Quality Studio with well-equipped materials and technology.

6.5.6 Online Resource Sharing Platforms: Create online platforms for sharing and accessing digital resources within and beyond the university. Use online Resource Sharing Tools Like Teams.

Actions: Develop user-friendly platforms, enable resource uploads, and encourage user contributions.

6.5.7 Feedback and Improvement Loop: Gather feedback from faculty and students to continuously improve and update digital resources.

1. Target: Conduct regular feedback cycles every semester.

2. Actions: Collect user feedback, analyze resource usage data, and make necessary updates.



## 6.6 Human Resource Development

6.6.1. Training Needs Assessment: Identify the IT skills and knowledge gaps among faculty and staff for effective digitization.

Actions: Conduct surveys, interviews, and assessments to understand skill levels and training requirements.

6.6.2 Customized Training Programs: Develop tailored training programs to address specific IT skill gaps and enhance digital literacy.

Actions: Design training materials, workshops, and online courses aligned with identified needs.

6.6.3 Staff IT Empowerment Workshops: Conduct workshops for non-academic staff to enhance their IT proficiency for administrative tasks.

1. Target: Organize staff IT empowerment workshops bi-annually.

2. Actions: Focus on software usage, data management, and office automation tools.

6.6.4 Reward: Promote and reward the teaching and nonteaching staff for the best performance in the usage of skills.

Action: Develop the learning attitude through rewards and recognition.

6.6.5 Professional Development Tracks: Establish IT-focused tracks within the university's professional development framework.

1. Target: Introduce IT tracks.

6.6.6 Feedback and Evaluation Mechanism: Establish a mechanism to gather participant feedback and continuously improve training programs.

1. Target: Implement a feedback and evaluation system.

2. Actions: Develop feedback forms, collect participant input, and improve accordingly.

## 6.7 University and Campus Office Automation

6.7.1 Process Mapping and Analysis: Identify administrative processes that can be automated, streamlining workflows and reducing manual tasks.

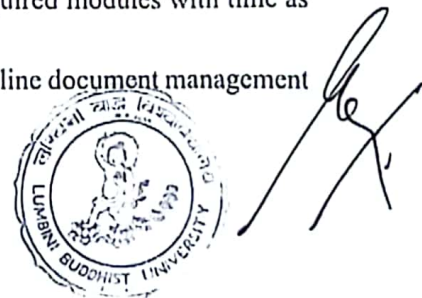
1. Target: Complete process mapping and analysis within 2 months.

2. Actions: Collaborate with departments to document existing processes and identify automation opportunities.

6.7.2 Integrated ERPS System Implementation: Integrate different modules like HR Management, Store and Inventory Management, Account Management software to manage administrative tasks, and data.

1. Actions: Develop the One-door system that can incorporate the required modules with time as per the requirement of university.

6.7.3 Online Document Management System: Implement an online document management system to centralize, organize, and secure documents.





1. Target: Launch the document management system within 4 months.
2. Actions: Develop the system architecture, migrate existing documents, and establish access controls.

6.7.4 Electronic Document Approval Workflows: Create automated workflows for document approvals, reducing the need for physical signatures as per the roles and permission.

1. Actions: Design approval processes, integrate with the document management system, and provide training.

6.7.5 Digital Record Keeping: Transition from paper-based records to digital formats, ensuring efficient access and retrieval.

1. Target: Complete digital record conversion for core departments within 5 months.
2. Actions: Scan and digitize paper records, organize digital archives, and develop search mechanisms.

6.7.6 Online Payment and Fee Collection System: Integrate Online payment gateway for students to pay fees and expenses securely.

1. Target: Integrate with existing system within 1 month.
2. Actions: Select a secure payment gateway, integrate it with student accounts, and provide user guides.

6.7.7 Automated Report Generation: Develop computerized tools for generating routine reports for administrative decision-making.

1. Target: Implement automated report generation for departments within six months.
2. Actions: Identify report requirements, design templates, and automate data collection.

6.7.8 Data Analytics Dashboards: Develop dashboards that provide insights into university operations and performance.

1. Target: Launch data analytics dashboards for key metrics within 7 months.
2. Actions: Define key performance indicators, integrate data sources, and design visualizations.

6.7.9 Continuous Feedback Mechanism: Gather feedback from users to continually improve the efficiency and usability of automated systems.

1. Target: Establish a continuous feedback loop within 2 months.
2. Actions: Collect user feedback, analyze pain points, and implement refinements accordingly.

## 6.8 University intellectual property Security, privacy, Plagiarism System, Surveillance and Copy right law.

The university recognizes the importance of safeguarding intellectual property rights and ensuring data privacy in the digital age. The university seeks to promote a culture of academic integrity and respect for intellectual property rights, ensuring that its Digitization efforts are conducted with the utmost professionalism and adherence to legal and ethical standards.



- I. University will conduct a comprehensive review of its existing policies related to intellectual property, data privacy, and copyright. This review will identify areas that require strengthening and updating to align with evolving Digitization practices and legal requirements.
- II. Focus on the formulation and implementation of intellectual property Security, privacy, Plagiarism System, Surveillance and Copy right policies and procedures for data protection, plagiarism prevention, and copyright compliance.
- III. Establish clear guidelines on data access, storage, and sharing to ensure the security and confidentiality of sensitive information.
- IV. University will prioritize the establishment of an Intellectual Property Rights (IPR) cell to oversee and enforce the university's policies related to intellectual property and copyright.
- V. University will collaborate with legal experts and consultants to ensure that its policies comply with national and international laws and regulations.
- VI. The university will raise awareness among the university community about the importance of intellectual property rights and the consequences of copyright infringement.

By taking a proactive approach to intellectual property security, privacy, plagiarism prevention, surveillance, and copyright law, the University aims to create a digital environment that fosters creativity, innovation, and ethical conduct.

## 6.9 University Data Management, Protection, back up and Disaster Recovery

University Data Management, Protection, Backup, and Disaster Recovery Strategy:

### 6.9.1 Data Management:

1. Conduct a comprehensive assessment of current data management practices and infrastructure.
2. Establish clear guidelines for data classification, access control, and data retention.
3. Implement data management tools and systems to enhance data organization and accessibility.
4. Regularly review and update data management policies to stay current with industry standards and legal requirements.

### 6.9.2 Data Protection:

1. Adopt stringent data protection policies to safeguard sensitive information.



2. Implement encryption, access controls, and multi-factor authentication to bolster data security.
3. Deploy advanced cybersecurity measures and tools to detect and prevent data breaches.
4. Continuously monitor and upgrade data protection measures to stay ahead of emerging threats and cyberattacks.

#### 6.9.3 Data Backup:

1. Evaluate current data backup procedures and infrastructure to ensure data redundancy and integrity.
2. Implement automated and regular data backups to secure academic and administrative data.
3. Invest in off-site data backup solutions and cloud storage to enhance data availability and resilience.
4. Conduct periodic data recovery tests to validate the effectiveness of backup systems.
5. Establish a dedicated backup management team to oversee and maintain data backup operations.

#### 6.9.4 Disaster Recovery:

1. Develop a comprehensive disaster recovery plan with procedures and protocols for data breaches, system failures, or natural disasters.
2. Prioritize critical systems and applications for rapid recovery in the event of a disaster.
3. Conduct disaster recovery drills and simulations to test the effectiveness of the plan.
4. Continuously review and update the disaster recovery plan to adapt to changing circumstances and potential risks.

### 6.10 IT system Security, safety, avoidance, and prevention from attack

#### University IT System Security, Safety, Avoidance, and Prevention from Attack Strategy:

##### 6.10.1 Security Assessment:

1. Conduct a thorough security assessment of the university's IT systems, networks, and applications to identify potential vulnerabilities and weaknesses.
2. Regularly review and update the security assessment to address emerging threats and new attack vectors.

##### 6.10.2 Cybersecurity Measures:

1. Implement robust cybersecurity measures, including firewalls, intrusion detection systems, and antivirus software, to protect against unauthorized access and cyberattacks.
2. Enforce strict access controls and authentication mechanisms to prevent unauthorized users from accessing sensitive information.

##### 6.10.3 Regular Security Audits:

1. Conduct regular security audits and vulnerability assessments to proactively identify and address potential security gaps.



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2. Engage external security experts to perform independent audits and validate the effectiveness of security measures.

#### 6.10.4 Backup and Recovery:

1. Implement a reliable backup and recovery system to ensure data integrity and availability in the event of a security breach or system failure.
2. Conduct periodic data recovery tests to validate the effectiveness of backup and recovery procedures.

#### 6.10.5 Continuous Monitoring:

1. Implement continuous monitoring tools and processes to detect and respond to security incidents in real time.
2. Regularly review security logs and alerts to identify potential threats and anomalies.

## 7 ICT enabled Monitoring & Evaluations system.

**7.1 Data Governance and Ownership:** A robust data governance framework will be established, defining clear roles and responsibilities for data ownership, access, and security. Data stewards will be designated to oversee data quality and compliance.

- 7.1.1 **Data Security and Privacy Measures:** Stringent data security measures will be put in place to protect sensitive information. Access controls, encryption, and data anonymization techniques will be implemented to safeguard data privacy.
- 7.1.2 **Business Intelligence and Analytics:** Utilizing advanced business intelligence and analytics tools, LBU will derive valuable insights from the integrated data. Data-driven decision-making will be promoted, supporting strategic planning and resource allocation.
- 7.1.3 **Data Reporting and Visualization:** Standardized data reporting templates and visualization dashboards will be developed to make data easily accessible and comprehensible for stakeholders. This will empower informed decision-making.
- 7.1.4 **Data Sharing and Collaboration:** Encouraging a culture of data sharing and collaboration, the university will establish data-sharing protocols and guidelines. Interdisciplinary research and cross-functional collaboration will be facilitated.
- 7.1.5 **Data Literacy Training:** Faculty, staff, and administrators will receive training on data literacy, covering data entry, maintenance, and usage. Enhanced data literacy will promote data-driven practices across the university.
- 7.1.6 **Ethical Data Usage:** All data management practices will adhere to ethical guidelines and regulatory requirements. Transparency and accountability in data usage will be upheld to ensure ethical data handling.



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#### Action Items:

1. Identify key performance indicators (KPIs) and metrics for monitoring and evaluating Digitization initiatives.
2. Implement an ICT-enabled monitoring and evaluation system to collect and analyze data on KPIs.
3. Utilize data insights to make informed decisions and improve Digitization strategies.
4. Regularly review the effectiveness of Digitization initiatives and make necessary adjustments.

## 8 Resources arrangement and allocation (financial, human, technological and others)

### 8.1 Financial Resources:

- Conduct a thorough financial analysis of the university's budget and allocate funds for Digitization initiatives based on priority and strategic goals.
- Explore opportunities for external funding, grants, and sponsorships to support large-scale Digitization projects.
- Implement a transparent and accountable financial management system to track expenses and ensure optimal resource utilization.

### 8.2 Human Resources:

- Conduct a skills assessment of existing staff to identify gaps and areas that require additional training.
- Develop a comprehensive human resource development plan to enhance the digital competency of faculty and staff.
- Recruit specialized IT professionals and experts to lead and support Digitization projects effectively.

### 8.3 Technological Resources:

- Assess the university's current IT infrastructure and identify areas for improvement and modernization.
- Allocate funds for the acquisition of new and advanced technologies, software, and hardware required for Digitization initiatives.
- Establish partnerships with reputable technology vendors to access cutting-edge solutions and services.

### 8.4 Facilities and Infrastructure:

- Evaluate the adequacy of physical facilities and infrastructure to support Digitization efforts, including classrooms, labs, and data centers.
- Plan for expansion and upgrade of facilities to accommodate new technology-based learning and administrative needs.



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### 8.5 Training and Capacity Building:

- Develop a comprehensive training program for faculty, staff, and students to build their capacity in using digital tools and platforms effectively.
- Allocate resources for workshops, seminars, and online courses to enhance the digital literacy of the university community.

### 8.6 Sustainability Plan:

- Develop a long-term sustainability plan to ensure the continuity of Digitization efforts beyond the initial funding phase.
- Explore revenue-generating opportunities through online courses, digital content sales, and other digital products.

## 9 Institutional Arrangement

### 9.1 Formation of Digitization Committee

1. Establish a high-level Digitization Committee comprising key stakeholders, including the Registrar, Deans, Heads of Departments, and IT experts/engineer.
2. The committee will be responsible for overseeing and guiding the overall Digitization strategy, guidelines and ensuring alignment with the university's vision and goals.

### 9.2 IT Support Unit:

1. Create a dedicated IT Support Unit within the university to handle all Digitization-related activities.
2. The IT Support Unit will consist of skilled IT professionals responsible for managing hardware, software, networking, and cybersecurity.

### 9.3 Digital Learning Center:

1. Establish a Digital Learning Center to provide training and support to faculty, staff, and students on using digital tools and platforms effectively.
2. The center will also conduct workshops, webinars, and seminars to promote digital literacy and enhance teaching and learning practices.

### 9.4 Technology Advisory Board:

1. Create a Technology Advisory Board consisting of IT experts and industry leaders to provide strategic guidance and recommendations on emerging technologies and best practices.
2. The board will assist in identifying innovative solutions to address challenges and enhance Digitization efforts.

### 9.5 Digitization Resource Center:

1. Develop a Digitization Resource Center to provide access to digital learning materials, e-books, research papers, and other educational resources.



2. The center will serve as a hub for promoting open educational resources and sharing knowledge across the university community.

#### 9.6 Review and Evaluation Mechanism:

1. Implement a periodic review and evaluation mechanism to assess the effectiveness of the institutional arrangement strategy.
2. Regular evaluations will help identify areas for improvement and ensure continuous enhancement of the Digitization process.

