

স্মার্ট বাংলাদেশ বিনির্মাণ বিষয়ক কর্মপরিকল্পনা

সংস্থার/প্রতিষ্ঠানের নাম : ঢাকা বিশ্ববিদ্যালয়

1. Vision:

Create a world-class educational ecosystem that enables individuals as dynamic human capital and ethical leaders for a sustainable future.

2. Mission:

M1: *Transformative Education*

Provide transformative education by enabling students to embrace lifelong learning and fostering a sustainable knowledge-based society through the continuous pursuit of scholarship, humanistic values and technological innovation.

M2: *Collaborative Research and Innovation*

Pursue collaborative research and innovation, leveraging partnerships to expand the boundaries of knowledge.

M3: *Educational Ecology*

Develop an educational ecosystem that fosters excellence, transparency, inclusivity, and accountability.

M4: *Community Engagement*

Engage with stakeholders and communities in building a just, fair, diverse, and sustainable world.

M5: *Ethical Responsibility*

Empower students to become ethically responsible global citizens for positive societal impact.

M6: *National Heritage*

Instill a deep sense of national heritage and pride in students, upholding historical roots and global connectivity.

Adaptation with the changeable demands of the technological learning in the 21st century is of high importance to the educators in order to face many challenges through accelerating the process of building knowledge society. In the pursuit of meeting such changeable demands, Smart Bangladesh Vision 2041, which is being inclusive, is built on 4 pillars: Smart Citizens, Smart Government, Smart Economy and Smart Society. Keeping this rationale in mind, the University may conceptualize these four pillars within its context of smart university (see Table 1). A Smart University is a university that uses technological innovation within its organization to accomplish its mission. Therefore, identifying and prioritizing missions and visions of the university is of utmost importance to the initiation of activities associated with the concept of smart university campus.

Table 1: Pillars from National and University Context

National Context	University Context
Smart Citizens	Smart Students
Smart Government	Smart Administration, Smart Departments & Institutes
Smart Economy	Smart Payment Systems including Smart Budgetary Process & Allocation
Smart Society	Smart Campus

Smart University is about being inclusive, and about the faculties, students and staffs belonging to this University. Built on the four pillars of smart students; Smart Administration, Smart Departments & Institutes; Smart Payment Systems including Budgetary Process and Allocation & Smart Campus, it is about bridging first- (technology access) and second-level (technology skills and usage) digital divides by innovating and scaling up sustainable digital solutions so that all faculties, students and staffs regardless of their knowledge domains such as Science, Engineering, Social Sciences, Humanities, and Business & administrative units such as academic functioning, ICT, planning, financing and administrative activities etc. can benefit from such innovative digital solutions.

Investing in this regard would help build Smart University by ensuring efficiency and effectiveness of the desired short- medium- and long-term plans and visions of the University. This would also help step towards realizing Bangabandhu's dream of *Sonar Bangla* (i.e., a Golden Bangladesh) through enabling and establishing sustainable learning environment at the University.

UNDERSTANDING SMART UNIVERSITY CAMPUS

Students, staffs and teachers expect their university to provide a digitally connected smart campus by ensuring integrated learning experiences and streamlining students' services. The university should adopt on-campus IoT technologies that would help advance reputation objectives. The following activities are required to make the university more efficient in delivery services:

- Advanced network infrastructure at all tiers or University should combine wired and wireless infrastructure and hardware to support a smart campus concept
- Ensuring access to internet connections
- Smart learning environment
- Smart classroom
- Specifying parking spaces and provide campus mapping technologies
- Improved security system
- Value addition to classroom instructions
- Virtual health services
- Mobile and contactless payment options
- Meeting the needs of off-campus students
- Smart locks and smart ID cards provide convenient access control
- Automate temperature, lighting, and utility use
- Optimize transportation routes and schedules based on travel patterns

- Identify opportunities for new revenue streams.
- Introduce IDs that can be combined with smart payment, making payment transactions in the canteen or at the university bookstore or library
- Automated lending of books
- Online ordering of food in the cafeteria
- Clean and green environment
- Increase student satisfaction through student engagement techniques

POTENTIAL ACTIVITIES TO BE UNDERTAKEN

The required actions as per the pillars defined at the context of University would help create an ‘Innovation University’ through fostering the application of ICT in teaching and administrative activities.

1. **Smart Students:** The Smart Students Pillar aims at including and empowering all the students of the University with a digital mindset first through creating awareness and implementing extensive digital literacy programs among the existing students belonging to different Departments and Institutes. This would help collaborate with the government and industry for co-creation of services and policy making. The Smart Students Pillar may comprise 4 key programs: Digital ID for all student, Smart Students Campaign, Up-skilling and Re-skilling Students, and Digital Collaboration Platforms.

- ❖ **Digital ID:** A digital ID for all students with a unique code would help create controlling use-cases across manifold aspects of the University services. A unique digital ID would help contribute to achieving strategic activities of the University such as attendance in the class and examination, payment for the food etc.
- ❖ **Smart Students Campaign:** The initiation of campaign is essential to highlight the importance of digital-first mindset and Smart Bangladesh Vision 2041 among all university students. One of the key pillars of Digital Bangladesh was ‘Connecting Citizens’, where Bangladesh has made tremendous success in providing access to digital devices. However, digitally-ready

citizens are of great importance to realize the benefits of the vision 2041. University should undertake university wide campaign so the students could comprehend the potential benefits. At the same time, University should invest here to make digitally-ready students.

- ❖ **Up-skilling and Re-Skilling Students:** This program consists of 3 parts: Digital skilling, digital curriculum, and smart device access. Digital up-skilling and re-skilling would require the 3-pronged strategy to make the current state of the university into an innovative university. These include software application & service digitization, fusion of working hour of students' advantage with high-tech innovation, and leveraging 4IR for competitiveness and low carbon campus. These would become possible only if the university could have digitally ready students for which digital skills are thought as critical enabler. A university-wide coordinated digital up-skilling and re-skilling programs are vital to embed digital skills at all levels of the university. Introducing digital curriculum will reinforce digital literacy, which is one of the core elements of Smart Bangladesh Vision 2041. In order to achieve the Smart Vision 2041 and equip the university students with the smart devices such as computers, laptops and tablets, digital literacy, skills and competencies need to be introduced across the knowledge domains. However, this requires ensuring university students' widespread access and usage to smart devices across the Administrative units, Departments & Institutes. Adoption of more advanced and versatile devices would help expedite the process of building smart society.
- ❖ **Digital Collaboration Platforms:** As a part of Bangladesh's Vision 2041, it is essential for the University to build student-student, administration-student, department-student & institute-student connections to stimulate functioning of the university. All these, in turn, would help improve efficiency, effectiveness, and governance by connecting students, teachers and staffs in the ways most meaningful to them. More importantly, student-centric university administration, departments and institutes and democratization and decentralization of the university functioning are of essential to make the digital vision 2041 a reality.

- 2. Smart Administration, Smart Departments & Institutes:** The concept of Smart Administration, Smart Departments and Smart Institutes at the University has been aligned with the national context of Smart Government 2041. This would be able to ensure good governance at the University by implementing 100% paperless. In addition, University should undertake necessary steps for increasing health insurance coverage and access to quality healthcare through digitizing healthcare ecosystems to attain the health targets for 2041. Moreover, establishing a well-functioning digital job platform can play a pivotal role in driving employment and inclusion. Digital tech also could help play a spirited role in building smart university through transformation of services (e.g. paper-based to paperless). University aspires for establishing efficient, accountable, student-centric university administration and service provisioning for which Digital tech might help treat this and take the university to a new height. ICT policies at the university level may promote the multiuse of ICT and guarantee transparency and accountability of students, administrative units, departments and institutes. University should think about policies such as cyber security and data protection policies, emerging technology policies (particularly AI) and ease of doing ICT business policies. For unlocking the digital transformation in the University, it is important for placing digital up-skilling and re-skilling programs at all levels of the University. Smart planning (e.g. time-bound) at the University level may include, but not limited to preparation, processing & appraisal of development project and recurrent expenditure using digital technologies and digitization of a M&E system.
- 3. Smart Budgetary Process & Allocation:** Smart activities at the budgetary process and allocation at the University will be about creating an innovation campus. Establishing a central digital procurement e-marketplace (i.e., a centralized, unified procurement platform through which University can relate to vendors to smooth and optimize category-based transactions) at the University will have impacts on improving budget efficiency and effectiveness of administration, departments & institutes, reducing corruption and improving governance in the procurement process. Even Scholarship payment for the students should be smart and disbursed digitally.
- 4. Smart Campus:** Smart campuses are often perceived as miniature replicas of smart cities and serve as living labs for smart technology research, development, and adoption, along with their traditional teaching, learning and research functions. The four major domains of the smart campus are society, economy, environment, and governance.

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ক্রমিক নং	স্মার্ট বাংলাদেশ অর্জনে আপনার অধিদপ্তর/অধীনস্থ দপ্তর/সংস্থার করণীয় কী	প্রত্যাশিত ফলাফল কী হবে	করণীয় বাস্তবায়িত হলে কোন সমস্যার সমাধান হবে?	সংশ্লিষ্ট স্মার্ট স্তম্ভ/স্তম্ভসমূহ (স্মার্ট সিটিজেন/স্মার্ট অর্থনীতি/স্মার্ট সরকার/স্মার্ট সমাজ ব্যবস্থা	২০৩০ সালের মধ্যে কতটুকু বাস্তবায়িত হবে	২০৩৬ সালের মধ্যে কতটুকু বাস্তবায়ি ত হবে	২০৪১ সালের মধ্যে কতটুকু বাস্তবায়ি ত হবে	বাস্তবায়ন কারী সংস্থা	সহযোগী দপ্তর/ সংস্থা
1	Automate all university services through an Advanced Education Management System (EMS).	It will reduce communication time and will speed up different processes, improve efficiency and reduce human error, will ensure accountability and transparency in the services like : Learning Management, Student Information System, Classroom Management System, Assessment System, Campus Management and financial management,	Automation will save time, efforts, and cost, making everything more transparent and hassle-free.	Smart Citizen	50%	80%	100%	University of Dhaka	University Grants Commission, Bangladesh
2	Train all teachers and students to adopt a robust Learning Management System (LMS) in phases.	It is simple for employees and students to learn at any time and from any location when they have access to instructional resources online. Additionally, learners have the option to learn at their own pace, which can be particularly helpful for people who have hectic schedules, prefer to	The centralization of all instructional resources is made possible by an LMS. Progress tracking, reporting on the overall effectiveness of training initiatives, and the associated return on investment are all made possible by integral monitoring and insight	Smart Citizen, Smart Society	50%	80%	100%	University of Dhaka	University Grants Commission, Bangladesh

		study alone, work remotely, or are part of dispersed teams.	capabilities. Knowledge checks, discussion boards, quizzes, and multimedia information are examples of interactive components that enhance learning and improve retention. Additionally, LMSs facilitate communication and cooperation among students, teachers, managers, and other educators, all of which can improve the learning process.						
3	Digital ID for all students and ensuring its application	A digital ID for all students with a unique code would help in the control of different services across the University	A unique digital ID would help contribute to achieving strategic activities of the University such as attendance in the class and examination, payment for the Food and accommodation and other services etc.	Smart Citizen, Smart Government	50%	80%	100%	University of Dhaka	University Grants Commission, Bangladesh
4	Implement the Outcome Based Education (OBE) Curriculum in line with the Bangladesh Accreditation Council (BAC) and other relevant	One of the major advantages of outcome-based education is that it sets clear, measurable goals for each student.	OBE focuses on teaching the most practical, real-world skills. Whether it's developing critical thinking, problem-solving, or effective communication, the goal is to ensure all the students have the right tools needed to succeed in the future.	Smart Citizen, Smart Government	50%	80%	100%	University of Dhaka	University Grants Commission, Bangladesh

	accreditation bodies.								
5	Introduce non-credit courses as degree requirements	Soft skills are personal attributes that influence how well one can work or interact with others. These skills make it easier to form relationships with people, create trust and dependability, and lead teams. They are essential for one's success in the workplace and their personal life.	Students will learn about Communication Skills, Emotional Intelligence, adaptability, Problem-Solving Skills, Leadership Skills, Teamwork and Collaboration, Time Management and Organizational skills and will be empowered to deal with different challenges of the 21 st -century	Smart Citizen	50%	80%	100%	University of Dhaka	University Grants Commission, Bangladesh
6	Provide support for early-career faculty members and researchers	Ensure enough scholarships, stipends, and other research-related opportunities for the young researchers and faculty members	Will improve the quality and quantity of the research output of the university.	Smart Citizen	50%	80%	100%	University of Dhaka	University Grants Commission, Bangladesh
7	Digital Collaboration Platforms	As a part of Bangladesh's Vision 2041, it is essential for the University to build student-student, administration-student, department-student & institute-student connections to stimulate functioning of the university.	This would help improve efficiency, effectiveness, and governance by connecting students, teachers and staffs in the ways most meaningful to them. More importantly, student-centric university administration, departments and institutes and democratization and decentralization of the university functioning are of	Smart Citizen, Smart Society	50%	80%	100%	University of Dhaka	University Grants Commission, Bangladesh

			essential to make the digital vision 2041 a reality.						
8	Form research clusters and create centres of excellence focusing on frontier technology	This will promote cutting edge interdisciplinary research aligned with University's long term strategic interests.	The impactful research will result high value patents, which will in turn initiate the establishments of start-ups and revenue for the university.	Smart Citizen	50%	80%	100%	University of Dhaka	University Grants Commission, Bangladesh
9	Smart Budgetary Process & Allocation	Smart activities at the budgetary process and allocation at the University will be about creating an innovative campus. Establishing a central digital procurement e-marketplace (i.e., a centralized, unified procurement platform through which University can relate to vendors to smooth and optimize category-based transactions)	The University will have impacts on improving budget efficiency and effectiveness of administration, departments & institutes, reducing corruption and improving governance in the procurement process. Even Scholarship payment for the students should be smart and disbursed digitally.	Smart Economy	50%	80%	100%	University of Dhaka	University Grants Commission, Bangladesh
10	Smart Campus	A Smart Campus will connect devices, applications, and people to enable new services, improve efficiencies and enhance the experience of students and staff on campus. It will offer opportunities for potential increase in operational efficiency, cost savings, and the improvement of public safety.	The university in a digitally connected smart campus will ensure integrated learning experiences and streamlined students' services. A green campus will be sustainable and energy efficient.	Smart Society	50%	80%	100%	University of Dhaka	University Grants Commission, Bangladesh

11	Community Engagement	Promote the application of research findings and the transfer of knowledge for societal benefits. Develop outreach programmes to address local community needs and challenges. Develop inclusive policies and practices that endorse diversity and internationalisation.	Create a dedicated technology transfer office to facilitate the transfer of university-developed technologies and innovations to the commercial and non-government sectors through consulting and advocacy. Include alumni members in a more effective role in community building. Strengthen outreach offices, such as the international office and teacher-student centre.	Smart Society	50%	80%	100%	University of Dhaka	University Grants Commission, Bangladesh
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