



جامعة الإمام عبد الرحمن بن فيصل
IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY

كلية علوم الحاسب وتقنية المعلومات
College of Computer Science and Information Technology

STRATEGIC PLAN

The College of Computer Science
and Information Technology

2021 | 2025



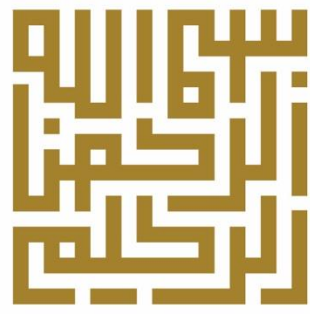


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of
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2021 - 2025

May 2021







Dr. Abdullah M Al Rubaish

H.E. The President

Imam Abdulrahman Bin Faisal University

Message from the President

Dear colleagues,

On the wonderful completion of the strategic plan for the College of Computer Science and Information Technology (CCSIT), I would not let go the opportunity to congratulate all those who contributed to editing, composing, and developing this indispensable document. No doubt, it strongly complements the strategic plan of the Imam Abdulrahman Bin Faisal University (IAU) through its goal of providing quality education and practice supplemented by research applied to the relevant community.

There has always been a great demand for the skilled people and hi-tech professionals to serve local community throughout the kingdom. In fact, the prime objective of CCSIT is to provide training, research, and innovation on the built-environment specialties in the field of Computer Science, Computer Information Systems, Cyber Security and Digital Forensics, and Artificial Intelligence. No doubt, these cadres play a critical role in building the generations of qualified personnel capable to contribute to the Saudi Arabian growth and development. With its state-of-the-art facilities, the world-class faculty and unbounded commitment to both public and private sectors, CCSIT is one of the colleges that, IAU hopes, will make promising contributions to the community.

At the end, I would like to thank everyone who was involved in formulating this strategic plan, and all those who also devoted their valuable time and effort while sharing their views in this regard whenever needed. This strategy builds on a platform of success and a long tradition of facing the future with ambition. I am pleased to recommend this plan to the IAU and CCSIT community, and I look forward to working with you in achieving our vision.



Dr. Abdullah Bin Hussein Alkadi

**Vice President for Studies, Development and Community Service
Imam Abdulrahman Bin Faisal University**

Message from the Vice President for Studies Development, and Community Service

All praise belongs to God alone and may His blessings and peace be upon our Prophet.

The Imam Abdulrahman bin Faisal University's (IAU) continued development and enhancement, both in academics and infrastructure, is a major goal of the University's Strategic Plan. In all of its academic, administrative, and community activities, the University strives for excellence and quality. With these lofty goals in mind, the Vice Presidency for Studies, Development, and Community Service (VPDSCS) was established at IAU to help make these goals a reality. The IAU VPDSCS is in charge of coordinating and supporting the University's quantitative and qualitative development efforts and initiatives. The IAU VPDSCS aims to make the IAU a leader in innovation and development among universities in the Kingdom of Saudi Arabia (KSA).

I am delighted to see the strategic plan of CCSIT for year 2021-2025. The new strategic plan is aligned to IAU strategic plan and adheres to the main functions of quality education in the computing discipline, research on cutting edge technologies, and extending services to the community, as well as human, environmental, institutional, financial, and technical development. I endorse the plan and express my heartiest appreciation to CCSIT for preparing such a comprehensive plan.

After praising Allah (SWT), I extend my appreciation and gratitude to the efforts of all those who contributed to the construction of this plan from the Faculty of Computer Science and Information Technology and from the University Vice Presidency for Studies, Development and Community Service.

I pray to Allah to grant us success in our quest to develop our University and take its right position in promoting better quality of life for the citizens of our great Nation.



Dr. Abdullah Mohammed Almuhaideb

**Dean, College of Computer Science, and Information
Technology**

Message from the Dean

Since its inception in 2010, CCSIT is committed to three core functions: quality education in computing discipline, research on cutting edge technologies, and extending services to the community. Considering the Kingdom's Vision 2030 and IAU latest strategic plan (2018-2025), CCSIT has aligned priorities and envisioned strategic plan accordingly. In the last 5 years, the focus of the college was on developing a research culture, increasing student intake, and initiating new academics programs, and accreditation of programs. While for the next 5 years, the college aims to consolidate academic programs, explore revenue generation, enhance the culture of community service, and strengthen research & innovation. The current strategic plan sets the direction of the college for next five years (2021-2025) with a focus on the core functions of the college. In addition, the plan strictly follows IAU strategic plan and integrates non-basic functions that includes human development, environmental development, institutional development, financial enhancement, and technical development.

CCSIT strategic plan is organized into goals, objectives, initiatives, and performance indicators. For such a challenging quest, we continue to improve in the areas of teaching & learning, community engagements, and research proliferation. As well, we continue to attract competitive students and employ endowed faculty members. The college units work in coordination and take various initiatives to achieve related KPIs and report annual data to the college along with action plan. In CCSIT, we take periodical monitoring, evaluation, and documentation of our performance seriously. To monitor the progress, annual data for the KPIs will be collected at the end of a year and presented at relevant forms for the necessary project.

As the Dean, I am poised our faithful stakeholders, dedicated staff, committed faculty members, vivid students will assist us accomplishing the college targets by 2025.

Executive Summary

In order to comply with Imam Abdulrahman Bin Faisal University's latest Strategic Plan (2018-2025), CCSIT presents the new strategic plan that has been devised by a panel of experts based on a thorough scan of external and internal factors related to CCSIT.

The plan is set to consolidate and improve the quality of students; expand and accredit current academic programs; and launch new programs addressing the needs of the profession, region, and the Kingdom. In addition, the plan has been tailored to achieve excellence in research, innovation, and community partnership for the socio-economic uplift of the region and the nation. CCSIT strategic plan is comprised of 8 goals, 18 objectives, 36 initiatives and 106 Key Performance Indicators (KPIs). Each goal is aligned to one IAU strategic goal. Each goal is branched into measurable objectives, initiatives, and KPIs. The new CCSIT strategic framework is flexible enough to accommodate potential changes.

The plan consists of two major parts having 10 chapters:

- Part-I introduces the College and highlights the goals and objectives of the plan in eight chapters: Chapter 1 introduces the College, followed by scanning external and internal factors in Chapter 2. SWOT analysis is shown in Chapter 3 and based on the analysis, Chapter 4 lists strategic priorities and focus areas. CCSIT vision, mission, values, and strategic goals are reflected in Chapter 5. Chapter 6 shows the breakdown of 8 goals into 18 objectives. Alignment of CCSIT strategic goals with IAU strategic goals is reflected in Chapter 7. The list of initiatives and KPIs is given in Chapter 8.
- Part-II provides the rationale behind the objectives, corresponding projects/initiatives, respective key performance indicators, and schedule for each action. Implementation details of the plan are sketched in Chapter 9.
- Acknowledgments are made in Chapter 10.

كلية علوم الحاسب وتقنية المعلومات

COLLEGE OF COMPUTER SCIENCE & INFORMATION
TECHNOLOGY



LIST OF ABBREVIATIONS AND ACRONYMS

IAU	Imam Abdulrahman Bin Faisal University, KSA
CCSIT	College of Computer Science and Information Technology, IAU
KFUH	King Fahd University Hospital (KFUH), KSA
SWOT	Strength Weakness Opportunities and Threats (SWOT)
ABET	Accreditation Board for Engineering and Technology
BSCS	Bachelor of Science in Computer Science (BSCS)
BSCIS	Bachelor of Science in Computer Information Systems
CYS	Bachelor of Science in Cyber Security and Digital Forensics
BSAI	Bachelor of Science in Artificial Intelligence
MSCS	Master of Science in Computer Sciences
ICS	Information & Communication Services
NCAAA	National Commission for Academic Accreditation & Assessment, KSA
DQAA	Deanship of Quality & Academic Accreditation
KPIs	Key Performance Indicators

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GIRL SECTION



Part-I: CCSIT – Introduction

About the College of Computer and Information Technology

CCSIT at Imam Abdulrahman Bin Faisal University (IAU) is one of the largest colleges offering 5 academic programs. Upon its inception in 2010, CCSIT committed itself to provide students with cutting edge computing and information technology curricula through its academic departments. CCSIT understands the importance of staying current in its fields to meet the demand for highly educated professionals who will empower the socio-economic uplifting of the region. CCSIT is committed to deliver quality education, enhance academic programs, diversify college body, and serve the community.

The emphasis IAU administrators put on, and support for, making CCSIT a premier college is justifiable. Such is the case because the common factor among the top 20 universities in the world happens to be their computer science departments' top ranking. The reason is the field's products that every other major discipline needs to automate their educational system. This includes but is not limited to Statistics, Medicine, Mathematics, Computational Biology, Business and Marketing, Computational Chemistry, Physics, etc. Top-ranked universities worldwide value the role computer science plays. As such, they invest on them significantly more compared to other disciplines.

Educational Programs

CCSIT singlehandedly optimize the human's scientific and technological progress through cutting edge automation tools. In order to meet the growing demand in the job market for accomplished computer science, information technology, and cyber security and digital forensics professionals who possess the latest scientific and technological skills, CCSIT offers five-degree programs in the following areas:

- Bachelor of Science in Computer Science (BSCS)
- Bachelor of Science in Computer Information Systems (BSCIS)
- Bachelor of Science in Cyber Security and Digital Forensics (CYS)
- Bachelor of Science in Artificial Intelligence (BSAI)
- Master of Science in Computer Sciences (MSCS)

To support these degrees, a list of elective courses in advanced topics primed for students to choose from. It includes popular topics such as Data Mining & Warehousing, Modeling & Simulation, Expert Systems, Advanced Programming Languages, Ethical Hacking, Ethical Hacking and Digital Forensics, Cyber Warfare, Advanced Computer Forensics, Advanced Software Engineering, Knowledge Management & Information Retrieval, Multi-Agents, Computer Vision & Computer Graphics, Advanced Operating Systems, Mobile Application Programming, Distributed Systems, Computer Networks, AI, Data Science, and several other courses concentrating on current topics of interest.

Location

The main campus of Imam Abdulrahman Bin Faisal University (IAU) is located in Dammam—the largest city in the Eastern Province of Saudi Arabia. Dammam is an important Saudi port on the Arabian Gulf. Recently, it expanded to the limits of its modern neighboring towns—Al-Khobar and Al-Dhahran. Dammam is the home for world’s most important centers for petroleum production and refining. The population of the region surpasses a million.

IAU is located about ten kilometers from the Arabian Gulf, seven kilometers from the city of Al-Khobar, twenty kilometers from Dammam’s province's administrative capital, and 45 kilometers from King Fahd International Airport.

CCSIT has a separate section for each student gender. The males’ section is housed in building number A11, and the females’ section is housed in building number 650. Both buildings are located on the main campus.

Activities

Community Engagements: Currently, CCSIT enjoys a vibrant community of local professionals and expats working in various sectors of the society. The Eastern Province is known for its natural resources; nonetheless, the Kingdom’s strategic plan is shifting emphasis toward dependence on knowledge economy. As such, the burden is mostly falling on CCSIT, and it likes to play a dynamic role in advancing the knowledge of transforming disciplines in general and benefiting the region in particular. Annually, CCSIT arranges a series of activities including workshop, hackathons in addition to training a wide range of community members. CCST faculty is involved in a number of community projects and the number is increasing every year. Awareness sessions are

arranged in school by CCSIT faculty and staff at various schools in the region to highlight information security related threats.

Collaborations: Quality teaching, innovative research, and esteemed community services make the true trifold of CCSIT’s powerhouse. These are also the determining factors of success. CCSIT welcomes the opportunities for creating value through partnerships where information and expertise are shared and applied for the common good its partners. CCSIT supports the collaborative exchange of knowledge and resources among its apt stakeholder—faculty, staff, and students. As well, CCSIT collaborates with its local, regional, national, and global communities to achieve its mission. Annually, several final year student-projects resolve issues facing IAU, the local industry, or the local community at large.

Research: CCSIT is primarily a teaching college where focused research has been a priority. Although some of its faculty members conduct research on cutting edge topics, there exists a room for further improvement by focusing on set targets. Generally speaking, CCSIT’s research has been marginal. Nevertheless, intentions are set to provide more research opportunities for faculty members, students, and staff. Such a move enables excelling in the areas of expertise of its faculty members. It also creates a culture of innovative research, entrepreneurship, and cutting-edge social services. The organization structure of CCSIT is shown in Figure 1-1.

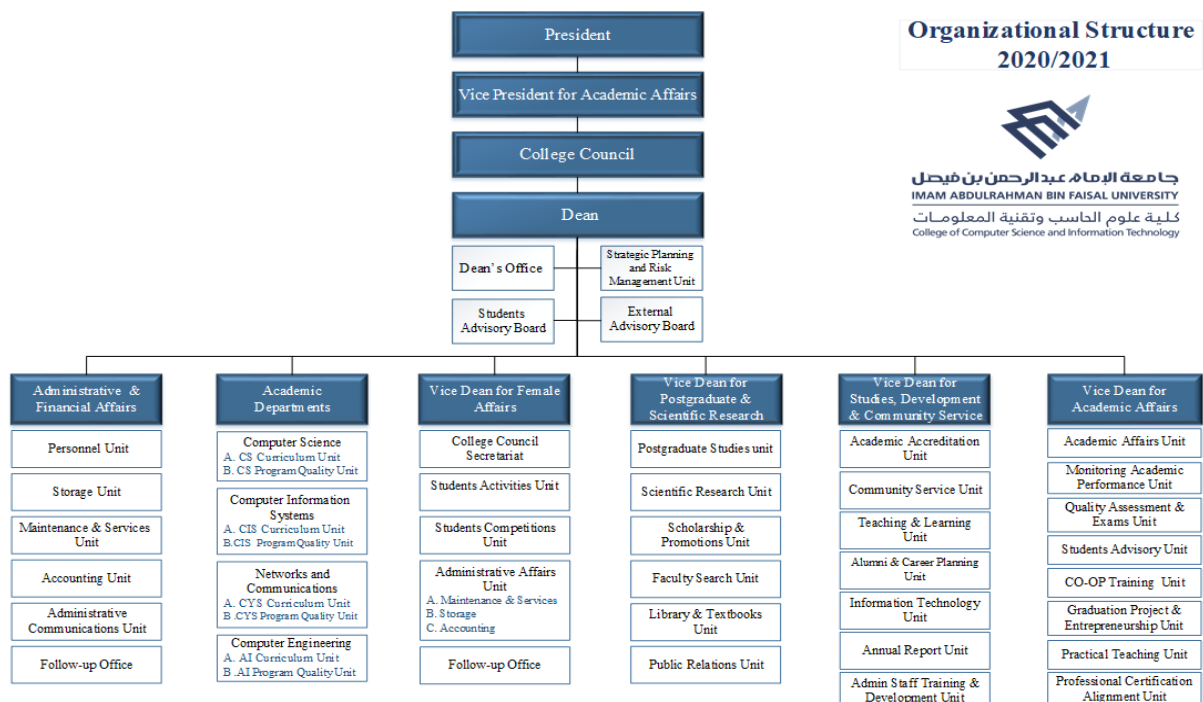


Figure 1-1 Organization Structure of CCSIT

Part 2. Environmental Factors in Strategic Planning

Along with Strengths, Weaknesses, Opportunities, and Threat (SWOT) analysis, the Strategic Planning Unit at CCSIT scanned various factors that can affect the CCSIT in the areas of teaching & learning, students, faculty, staff, community services, research and accreditation. The input from college faculty, staff and alumni were collected and brainstorming session were held by the strategic planning and risk management unit of CCSIT (Appendix-II). These factors are divided into both external and internal factors.

External Environment Factors

External elements are the outside factors, and the college has no control over it. These outside factors allow CCSIT to make necessary adjustments and adopt to the external environment. There are numerous factors that could be considered as external, however some of the most outstanding and important factors are listed below.

Accreditation: Accreditation of academic programs gaining popularity in general and in computing discipline in particular. There is an increasing trend for the Accreditation Board for Engineering and Technology (ABET) accreditation in the region for computer science and IT programs and hence there is a great need to accredit the existing academic programs. At present the college has accredited three academic programs successfully and planning to accredit the newly developed program by 2025.

Emergence of Artificial Intelligence: Artificial intelligence (AI) is poised to be the next technological revolution to change the way we work today. AI technology is designed to mimic human thinking by “learning” through recognizing patterns and drawing on past experiences. Today, AI technologies can identify objects, understand speech, translate languages, recognize faces and analyze sentiments. Siri, Google Now, and IBM’s Watson are obvious examples of artificial intelligence (AI), but AI is actually all around us. It can be found in vacuum cleaners, cars, lawnmowers, video games, medical research and international finance markets. In recent years scientists made breakthroughs in artificial intelligence (AI), using neural networks, which mimic the processes of real neurons. On the other hand, the volume of data is expected to grow to 35 trillion Gigabytes in 2020 as compared to 0.5 trillion Gigabytes in 2009 i.e., by a factor of 44. World Economic Forum in 2011 declared that “Data is the new Oil”. Today, deep learning allows machines to process information for themselves on a very sophisticated level enabling them to

perform complex functions like facial recognition and next-generation genome sequencing.

Inter-disciplinary Research: The top 20 universities in the world also have the top 20 to 25 highest rank departments of computer science. This is not an accident. The reason is the fact that computer science acts as a glue between other major disciplines (Statistics, Mathematics, Computational Biology, Business and Marketing, Computational Chemistry, and Physics etc.). The aforementioned justifications suggest joining hands with other college at IAU for inter-disciplinary research and degree programs.

Pandemics: The current spread of COVID-19 has posed the college with numbers of challenges. The online teaching systems are in place but the courses which need labs are difficult to cope with.

Data Science: Data Science, Big-Data and Cloud-Computing are the keywords describing hot areas in the computing discipline these days and to provide state of the art skills to CCSIT graduates, there is a need for higher degree programs related to big data, cloud computing, and software engineering.

Higher Education Sector: The current budget of the Kingdom has been extraordinarily important for higher education growth in the Kingdom. Currently, CCSIT produces a good number of undergraduates every summer, and there is reasonable demand from the College alumni to offer higher education opportunities at the College. Also, the college has recently hired a good number of research faculty members and to have full advantage of their presence, the college aims to expand higher educational programs by 2025. These higher degrees program will provide advanced training and enhanced career opportunities for students in the region, especially for female students.

A paradigm shift: There is a paradigm shift in the economy from oil dependency to non-oil economic sectors. More businesses are emerging in the non-oil sector in order to compete with other economies. The national policy focus is on creating a knowledge-based economy. The leadership in the nation has a clear focus on creating a competitive, knowledge-based economy, which in turn creates demand for health education in the country. All these initiatives are extended to create more job opportunities for the graduates. With the new setup of IAU, the need for revenue generation would be of paramount interest.

Competitive scenario: The competitive scenario of higher education in the region has been externally forcing universities and colleges in the Kingdom to be quality oriented and have a distinctive competence and competitive advantage over their counterparts in the region. Recently, other universities in the region have started evening programs for master level that provides an excellent opportunity for the college to improve its current programs and start collaboration with other universities in cutting edge technologies.

Internal Environment Factors

The internal factors refer to anything within and under the control of the college. These factors can influence the functions of college, programs and so on so forth. These factors can be overcome at the college level and hence incorporated in the latest CCSIT strategic plan. A few of main internal factors are listed below:

Senior level faculty: The College has a good number of faculty, but there is a need for senior ranks to assist the college in research and higher degree programs. This need is more critical for MS level programs.

Poor Web image of CCSIT: The CCSIT web image is not upto the mark and sometimes reflect out dated information. College should publicize events and recognitions of students, faculty, and staff etc are various forms including social media.

Stakeholder Involvement: Lack of communication with the stakeholder to identify market needs and skills demands. Opinion of stakeholders should be given full weightage while initiating new programs etc.

Rapidly changing curriculum: The computing field is very dynamic while the academic program at CCSIT are those taken from KFU while there is a need for intruding more programs to cope with the rapid changing curriculum. Academic programs are subject to review every 5 years. Two of current programs needs curriculum review at present.

Technological challenges: Massive technological challenges happen currently in the area of educational programs for enabling student success. The teaching methods, YouTube, social media, and other online materials open many challenges and opportunities for computing curriculum. To cope with ever changing disciplines and advancements in computing, the college should be vigilant to respond to such changes at adequate levels.

Revenue generation: Total reliance on government funding and limitations of alternative resources. Financial strength is a factor in its own right that influences the internal environment of CCSIT. Despite good funding from the IAU, it is very difficult to support departmental activities due to a lack of discretionary funds for the College. With the new financial structure of the IAU, revenues should be generated at the college level from programs, research and innovation etc.

Competition: Dammam is an industrial hub and a good number of universities exist in the region. CCSIT is facing strong competition from the current public, private, and foreign colleges/universities. At the same time competitive environment provides the opportunity for quality education, collaboration, and community service.

Part 3: SWOT Analysis

A number of brainstorming sessions were held at CCSIT involving stakeholders for Strength, Weakness, Opportunities, and Threats (SWOT) analysis. As an outcome of these activities, the list of SWOT analysis is given below.

Weaknesses



1. Lack of professors and associate professors.
2. Lack of teaching faculty, consequently faculty members are overwhelmed with teaching and not much time left for research.
3. Insufficient number of female faculty to teach female sections.
4. Difficulty in hiring outstanding faculty members.
5. Shortage of publishing research in classified international journals and beneficiary usage of research outputs.
6. Lack of connectivity between research outputs and community services
7. Lack of R&D cooperation with the industry.
8. Lack of PhD Program.
9. Students are not very loyal to the CCSIT due to weak connection with

Strengths



1. Classrooms and Laboratories are equipped with the latest technology and educational tools.
2. Diversity of faculty members in the college (different countries).
3. Library provides all the basic scientific references and periodicals.
4. Three ABET accredited programs (CS, CIS, CYS).
5. New BSc program in AI.
6. Master Programs.
7. Ability to attract the best female students due to the lack of competition in the region.
8. Good interest from students to participate in outside activities: conferences, shows, and competitions.
9. Faculty and Students achievements (awards, patents, publications).
10. Good reputation of the college within the university and in the outside communities.

Opportunities



1. The Kingdom Vision 2030 supports the scientific research.
2. CCSIT outputs meet the Kingdom Vision 2030.
3. The only public university for female students in the region.
4. Possibility of innovative academic programs as there is a need for information security related programs.
5. The recent announcement of IAU as a Semi Govt Institution.
6. To offer PhD programs.

Threats



1. Existence of similar academic programs and/or top-ranking universities in local region.
2. Competitors started offering M.Sc. programs (AI/ML and DS major and professional master offered).
3. Competitors also started accepting female students (graduate level

Part 4: CCSIT Priority Areas

To sketch the strategic plan, Strategic Planning and Risk Management Unit was formulated by the Dean of the college. Several brainstorming sessions were held at the CCSIT by involving selected faculty, staff, current students, and external stakeholders, including the industry, employers, and alumni. Several more meetings were also held with members of the community, in which different people from a variety of social classes were represented. Full support was extended to the unit while sketching the strategic plan for CCSIT from Vice President for Studies, Development and Community Services at IAU.

Before drafting the strategic plan, several brainstorming sessions were held to facilitate a healthy discussion on the future directions for the College. The input of stakeholders who participated in the online sessions was considered. Afterward, Strength Weakness Opportunities and Threats (SWOT) analysis was performed. The analyses revealed the need for further improvement of the quality of curriculum, research & innovation, community engagement, revenue generation, and new academic programs etc. A few of the main priorities of the college are:

Improving the Quality of Graduates

Being the top priority for CCSIT, more resources and efforts have been devoted to set high teaching and learning standards. The focus is on providing students access to high-quality academic programs. Such programs foster students' progress towards their educational goals. It also prepares them to address emergent issues confronting the region and the nation at large.

Engaging the Community

CCSIT believes in strong collaboration with its community and professional societies. To provide a culture of intellectual curiosity and entrepreneurship, students, faculty, staff, and community are the major resources of the College. CCSIT places great emphasis on recruiting, training, developing, and retaining highly qualified faculty and staff. This will result in continuous improvement across its activities, which include teaching, research, and community service. CCSIT is situated at a place in the region with a dynamic community. As such, CCSIT arranges trainings, workshops, and evening courses for the community as one of its missions. Being a part of a public university, CCSIT is funded by the national government. The university allocates adequate financial, physical, human,

and technological resources to the CCSIT as per need. The allocated resources are enough for CCSIT's survival; however, leveraging its strengths requires extra funding.

Proliferating Research

To foster excellence in computing disciplinary research and innovation, CCSIT is committed to investing even more resources to serve its community. CCSIT has already identified key research areas and seeks to hire additional faculty members accordingly. Through workshops, trainings, and other activities, CCSITs plans a culture of innovation for enriching the discipline and the community. Such culture involves intra as well as inter-college research collaboration as appropriate. The MSCS program and scientific research unit have been activated to enhance the quality of research output as well as publicize college research achievements.

Maintaining Accreditation

Academic accreditation testifies to the quality education. So far, the Accreditation Board for Engineering and Technology (ABET) has become the de facto for assessing computing education. At present, all eligible degree program such as Bachelor of Science in Computer Science, Bachelor of Science in Computer Information Systems, and Bachelor of Science in Cyber Security and Digital Forensics have obtained ABET accreditation. In the next 5 years, accreditations of these programs are the target in addition to accrediting the newly launched program of Bachelor of Science in Artificial Intelligence.

Based on priority areas, external and internal scanning of various factors, CCSIT has identified the following strategic focuses for next 5 years which are the driving forces for our strategic plan:

1. Promote student success by ensuring excellence in teaching, learning, and student-centered support services.
2. Attain and maintain accreditation for the current academic programs.
3. Initiate unique degree programs as per the job market.
4. Encourage more community outreach and awareness programs.
5. Improve the research output at students and faculty levels.
6. Implement risk management system at the college.
7. Explore opportunities for revenue generation.
8. Enhance the college facilities and infrastructure.

A high-level sketch of CCSIT strategic plan is given in Figure 4-1



Figure 4-1 High Level Sketch of CCSIT Strategic Plan (2021-2025)

While draft the latest CCSIT strategic plan, the following references were used for benchmarking purposes.

- ✓ IAU Strategic Plan (2018-2025), <https://www.iau.edu.sa/en/about-us/strategic-planning-resources/the-universitys-strategic-plan-2018-2025>
- ✓ Strategic Plan (2020-2025), The College of Architecture and Planning, IAU

Part 5: Vision, Mission, and Strategic Goals of CCSIT

CCSIT has recently revised the vision, mission, and goals to be aligned with IAU vision, mission, and goals. The latest vision, mission, goals, and values are given below followed by IAU strategic goals.

Vision:

“To be a leading computing college at national, regional, and global levels.”

Mission:

“Provide quality computing education, discovery, and professional services with community engagements.”

CCSIT Strategic Goals:

Goal 1: Offer quality education in the computing domain.

Goal 2: Stimulate creative intra and inter college collaborative research.

Goal 3: Facilitate the culture of community services and advocate social integration.

Goal 4: Recruit and retain high caliber faculty and talented staff.

Goal 5: Improve college infrastructure for sustainable environments.

Goal 6: Develop and implement a robust management system.

Goal 7: Strengthen financial self-sustenance and entrepreneurship culture at the college.

Goal 8: Upgrade infrastructure and computing laboratories.

College Values:

S#	Value	Definition
1	Loyalty:	To perform obligations towards my university and my community with all sincerity, dedication, and enthusiasm.
2	Excellence:	To perform the university work with all accuracy, quality, and excellence.
3	Teamwork:	To work with my colleagues as one coherent, friendly, and cooperative team to serve the university interests and achieve its goals.
4	Transparency:	The practices and procedures governing university transactions should be characterized by openness, clarity and publicity.
5	Diversity:	The college community should allow commendable difference that is in opinion and absorb diversity in origin, color, religion and gender and social and cultural backgrounds, etc.
6	Creativity:	The college community should be able to transcend traditional ideas and rules, patterns, and relations and to create new and useful meanings, ideas, forms, methods and interpretations
7	Social responsibility:	The college should be committed to achieve welfare and well-being of the surrounding community and to adopt a useful and harmless environmental model in all its activities.

Part 6: Strategic Goals and Objectives

Based on our SWOT analysis, we present the goals and objectives of the strategic plan. The focus of the plan is on three functional areas: (i) education (ii) research in cutting edge technologies, and (iii) community services. In addition, the plan integrates human development, environmental development, institutional development, financial enhancement, and technical development as non-core functional areas. Based on these functional areas, 8 strategic goals applicable till 2025 have been divided into 18 objectives of the plan as sketched in Table 6-1.

Table 6-1 Objectives of the CCSIT Strategic Plan

Goal 1: Offer quality education in the computing domain	
Objective 1.1:	Strengthen existing academic programs
Objective 1.2:	Initiate new academic programs in computing discipline.
Goal 2: Stimulate creative intra and inter college collaborative research	
Objective 2.1	Recruit and retain high caliber research-intensive faculty.
Objective 2.2	Increase faculty participation in collaborative research projects.
Objective 2.3	Develop new research opportunities for undergraduate and graduate students.
Goal 3: Facilitate the culture of community services and advocate social integration	
Objective 3.1:	Organize community-based learning events and/or activities.
Objective 3.2:	Strengthen the external advisory board for both college and programs.
Objective 3.3:	Create, promote, and organize the alumni-networks for expanding and enhancing their active role in the college's positive development.
Goal 4: Recruit and retain high caliber faculty and talented staff.	
Objective 4.1:	Hire prominent and competent professors at each department.
Objective 4.2:	Extend research support to faculty for quality publications.
Goal 5: Improve college infrastructure for sustainable environments	
Objective 5.1:	Provide faculty and students with sufficient information on the significance of sustainability in the built environment.
Objective 5.2:	Arrange activities to promote environmental sustainability.
Goal 6: Develop and implement a robust management system	
Objective 6.1:	Create a risk management plan for the college.
Objective 6.2:	Implement a risk management system at the college.
Goal 7: Strengthen financial self-sustenance and entrepreneurship culture at the college	
Objective 7.1:	Start paid-programs and short courses.
Objective 7.2:	Encourage the culture of entrepreneurship at the college.
Goal 8: Upgrade infrastructure and computing laboratories	
Objective 8.1:	Develop specialized research laboratories at CCSIT.
Objective 8.2:	Equip all research laboratories with necessary equipment and tools to support academic programs.

Part 7: Mapping of CCSIT with IAU Strategic Goals and Description of the KPIs

Mapping of CCSIT with IAU Strategic Goals

There has always been a desire for updating strategic plan among the College community after the new IAU strategic plan for the academic year 2018-2025. In fall 2020, a serious effort started under the Dean-CCSIT to prepare a 5 years strategic plan for the College, which must be aligned with Vision 2030 and IAU’s latest strategic plan. A Strategic Planning and Risk Management Unit was formulated to have a brainstorming session with the stakeholders and an initial draft of the plan was prepared in October 2020. Internal reviews by CCSIT faculty/staff led to several generations of the initial draft and eventually the latest 5 years CCSIT strategic Plan for 2021-2025 was approved. The plan has 8 goals where each goal is mapped to a function area: Education, Human and Technical Development, Community Services, Research, Institutional, Environmental Development, and Financial Enhancement. CCSIT strategic plan 2021-2025 is fully aligned to college goals and IAU strategic goals as shown in Table 7-1.

Table 7-1 Alignment of CCSIT strategic goals and IAU strategic goals

CCSIT Strategic Goals (2021-2025)	IAU Strategic Goals							
	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8
Goal 1: Offer quality education in the computing domain	√							
Goal 2: Stimulate creative intra and inter college collaborative research		√						
Goal 3: Facilitate the culture of community services and advocate social integration			√					
Goal 4: Recruit and retain high caliber faculty and talented staff.				√				
Goal 5: Improve college infrastructure for sustainable environments					√			
Goal 6: Develop and implement a robust management system						√		
Goal 7: Strengthen financial self-sustenance and entrepreneurship culture at the college							√	
Goal 8: Upgrade infrastructure and computing laboratories								√

As shown in Figure 7-1, each goal is supported by several objectives, while for each objective, there are several initiatives which are expected to result in measurable KPIs.



Figure 7-1 Breakdown of CCSIT Strategic Plan from Goals to Objectives to KPIs

Key Performance Indicators of the CCSIT Strategic Plan

To measure the performanc of our strategic plan, relevent KPIs are extracted. The key performace indicatorsts listed in Table 8-1 against a number of projects. These KPIs are assigned to various units at college and reflect the performance of the plan. All these KPIs will be constantly monitored and annually evaluated and reported for the succesful execution of the plan. KPIs are also mapped to stretegic goals in Table 8.2.

Table 8-1 Mapping of projects/initiatives with relevant KPIs

Objectives	Projects/Initiatives	Key Performance Indicators
<p>Objective 1.1: Strengthen existing academic programs</p>	<p>i. Align academic programs according to guidelines of accreditation bodies and relevant societies.</p>	<p>1.1.1 Ratio of students to faculty (based on the faculty members who work full time) in CS program.</p> <p>1.1.2 Ratio of students to faculty (based on the faculty members who work full time) in CIS program.</p> <p>1.1.3 Ratio of students to faculty (based on the faculty members who work full time) in CYS program.</p> <p>1.1.4 Ratio of students to faculty (based on the faculty members who work full time) in AI program.</p> <p>1.1.5 Percentage of CS programs courses reviewed annually.</p> <p>1.1.6 Percentage of CIS programs courses reviewed annually.</p> <p>1.1.7 Percentage of CYS programs courses reviewed annually.</p> <p>1.1.8 Percentage of AI programs courses reviewed annually.</p> <p>1.1.9 CS program updated within 5 years.</p> <p>1.1.10 CIS program updated within 5 years.</p> <p>1.1.11 CYS program updated within 5 years.</p> <p>1.1.12 AI program updated within 5 years</p>
	<p>ii. Facilitating students learning and achieve the standard level of academic, technical and administrative support staff</p>	<p>1.1.13 No of training activities for CS students on latest technologies</p> <p>1.1.14 No of training activities for CIS students on latest technologies</p> <p>1.1.15 No of training activities for CYS students on latest technologies</p> <p>1.1.16 No of training activities for AI students on latest technologies</p> <p>1.1.17 Student’s overall rating on the quality of their courses. (Average rating of students on a</p>

Objectives	Projects/Initiatives	Key Performance Indicators
		<p>five-point scale on the overall evaluation of courses.)</p> <p>1.1.18 Student evaluation of academic and career counselling. (college level, Average rating on the adequacy of academic and career counselling on a five- point scale in an annual survey of final year students.)</p>
<p>Objective 1.2: Initiate new academic programs in computing discipline</p>	<p>i. Conduct surveys for the need of new educational programs</p>	<p>1.2.1: Survey conducted for any need of new programs under CS discipline.</p> <p>1.2.2: Survey conducted for any need of new programs under CIS discipline.</p> <p>1.2.3: Survey conducted for any need of new programs under CYS discipline.</p> <p>1.2.4: Survey conducted for any need of new programs under AI discipline</p>
	<p>ii. Develop curriculum for new programs.</p>	<p>1.2.5 Number of academic programs developed under CS dept.</p> <p>1.2.6 Number of academic programs developed under CIS dept.</p> <p>1.2.7 Number of academic programs developed under Network and Communication dept</p> <p>1.2.8 Number of academic programs developed under Computer Engineering dept</p>
<p>Objective 2.1: Recruit and retain high caliber research-intensive faculty</p>	<p>i. Arrange research workshops, seminars, and conferences.</p>	<p>2.1.1 Number of refereed publications in the academic year per full time equivalent teaching staff.</p> <p>2.1.2 Percentage of full-time faculty members who have at least one refereed publication in the previous year</p> <p>2.1.3 Number of research workshops, seminars, and conferences organized</p>
	<p>ii. Facilitate research faculty with adequate research associates and collaborate with industry</p>	<p>2.1.4 Percentage of researchers recruited to work in high-priority research areas from the total University researchers.</p> <p>2.1.5 Percentage increase in publication from previous year</p>

Objectives	Projects/Initiatives	Key Performance Indicators
Objective 2.2: Increase faculty participation in collaborative research projects.	i. Setup policy and procedure aligned with IAU and form research teams in all departments.	2.2.1 Percentage of faculty participated in research teams. 2.2.2 Percentage of joint publications with other institutions
	ii. Allocate fund and provide infrastructure to encourage faculty participation in research teams	2.2.3 Number of citations from college 2.2.4 Number of new citations in previous year 2.2.5 Percentage increase in citation from previous year
Objective 2.3: Develop new research opportunities for undergraduate and graduate students	i. Identify new research opportunities and involve students in research teams	2.3.1 Percentage of undergraduate projects produced papers in conferences/journals. 2.3.2 Percentage of undergraduate students associated with research groups
	ii. Increase the number of researchers to work in high priority research areas.	2.3.3 Percentage of MSCS thesis that produced journal papers (Q1/Q2) 2.3.4 Percentage increases/decrease of MSCS thesis that produced journal papers (Q1/Q2) than previous year 2.3.5 Percentage of faculty members who have research profiles in Research ID (Web of Sciences), Scopus, Google scholar, Publons and ORCID) and affiliated to IAU.
Objective 3.1: Organize community-based learning events and/or activities	i. Organize special lectures related to computing discipline for the welfare and awareness of community.	3.1.1 Number of community-based learning activities 3.1.2 Percentage of college students and affiliates engaged in community service activities.
	ii. Encourage faculty, staff, and student's involvement in community related events/activities	3.1.3 Number of events (lectures, seminars, and workshops) to promote the culture of quality among students and affiliates. 3.1.4 Number of awards/certificates/recognitions received by college for community services

Objectives	Projects/Initiatives	Key Performance Indicators
<p>Objective 3.2: Strengthen the external advisory board for both college and programs</p>	<p>i. Update external advisory boards and programs involve external advisory board members for collaborations.</p>	<p>3.2.1 Percentage of programs with external advisory board</p> <p>3.2.2 Number of meetings of external advisory boards held in previous year.</p>
	<p>ii. Implement recommendations of advisory board at program levels.</p>	<p>3.2.3 Annual CS report on the implementation of program advisory groups' recommendations</p> <p>3.2.4 Annual CIS report on the implementation of program advisory groups' recommendations</p> <p>3.2.5 Annual CYS report on the implementation of program advisory groups' recommendations</p> <p>3.2.6 Annual AI report on the implementation of program advisory groups' recommendations</p>
<p>Objective 3.3: Create, promote and organize the alumni-networks for expanding and enhancing their active role in the college's positive development.</p>	<p>i. Involve alumni in external advisory boards of the programs and college.</p>	<p>3.3.1 Percentage of alumni in CS advisory board</p> <p>3.3.2 Percentage of alumni in CIS advisory board</p> <p>3.3.3 Percentage of alumni in CYS advisory board</p> <p>3.3.4 Percentage of alumni in AI advisory board</p>
	<p>ii. Develop alumni-networks and organize Annual activities</p>	<p>3.3.5 Number of CS alumni networking meetings per year</p> <p>3.3.6 Number of CIS alumni networking meetings per year</p> <p>3.3.7 Number of CYS alumni networking meetings per year</p> <p>3.3.8 Number of AI alumni networking meetings per year</p> <p>3.8.9 Achievements of notable alumni publicized</p>

Objectives	Projects/Initiatives	Key Performance Indicators
Objective 4.1: Hire prominent and competent professors at each department.	i. Identify the departments needs for faculty in various areas.	4.1.1 Number of faculty hired per year. 4.1.2 Number of faculty hired with citation >2000 per year. 4.1.3 Proportion of teaching staff leaving the institution in the past year for reasons other than age retirement.
	ii. Publicize hiring calls at various forums including college faculty, alumni, and websites	4.1.4 Percentage of faculty hired per year versus needed. 4.1.5 Ratio of 1(Prof):2(Associate Prof):6 (Assist. Prof) maintained at the college?
Objective 4.2: Extend research support to faculty for quality publications	i. Hire talented candidates as Research Associates.	4.2.1 Number of funded research projects executed per year. 4.2.2 Percentage of faculty with RA support
	ii. Encourage faculty in bringing local and/or international funds and opportunities to college.	4.2.3 Percentage increase/decrease in funded projects than previous year. 4.2.4 Percentage of papers published annually in Q1/Q2 journal as compared to total papers in previous year. 4.2.5 Number of Research Associates hired
Objective 5.1: Provide faculty and students with sufficient information on the significance of sustainability in the built environment.	i. Raise awareness and promote the university's green principles and practices and conduct regular awareness sessions for faculty and students on sustainable built environment.	5.1.1 Number of sessions organized on sustainability awareness per year. 5.1.2 Number recognitions received by college in connection to sustainability.
	ii. Encourage research thesis addressing indigenous problems aiming sustainability environment	5.1.3 Number of MS having sustainability component. 5.1.4 Number of MS thesis published to sustainability related work in conferences/journals
Objective 5.2: Arrange	i. Promote research that contribute to achievement of	5.2.1 Number of funded research projects on sustainable built environment

Objectives	Projects/Initiatives	Key Performance Indicators
activities to promote environment sustainability	sustainable built environment.	5.2.2 Total funds on sustainable built environment
	ii. Promote students' group projects that incorporate design, analysis, and assessment of sustainable built environment	5.2.3 Number of undergraduate projects per year on sustainable built environment 5.2.4 Percentage of undergraduate projects produced publications on sustainable environment
Objective 6.1: Create a risk management plan for the college	i. Coordinate with the relevant offices for creating risk management plan at CCSIT.	6.1.1 Risk management committee formulated. 6.1.2 Risk management document prepared for the college.
	ii. Continually review and enhance the safety procedure the labs	6.1.3 Safety procedure incorporated in risk management plan. 6.1.4 Risk management document aligned with IAU plan
Objective 6.2: Implement a risk management system at the college	i. Implement risk management system and develop procedures to prevent the accidental disruption of basic information applications	6.2.1 Number of trainings arranged on risk reporting system. 6.2.2 Risk reporting mechanism implemented at the college. 6.2.3 Number of workshops arranged on risk management procedures
	ii. Provide adequate training for the faculty and staff to enable them to use risk management system	6.2.4 Number of incidents reported in online lectures/exams. 6.2.5 Percentage of labs displaying safety policies and list of items/features
Objective 7.1: Start paid programs and short courses.	i. Identify, design, and offer high quality short courses in selected specialties and promote them in the market.	7.1.1 No of needed short courses identified under CS programs. 7.1.2 No of needed short courses identified under CIS programs. 7.1.3 No of needed short courses identified under CYS programs.

Objectives	Projects/Initiatives	Key Performance Indicators
		7.1.4 No of needed short courses identified under AI programs
	ii. Promote the spirit of competition and motivation in the field of innovation in the university.	7.1.5 No of funded research projects received funding from outside organizations. 7.1.6 Percentage increase/decrease in research projects received funding from outside organizations than previous year
Objective 7.2: Encourage the culture of entrepreneurship at the college	i. Facilitate student projects toward commercialization and provide logistical support to support innovative businesses	7.2.1 No of patents from undergraduate projects 7.2.2 No of companies created from undergraduate projects.
	ii. Discover the potential of commercialization in MS thesis	7.2.3 No of companies created from undergraduate projects. 7.2.4 No of patents from MS projects/thesis
Objective 8.1: Develop specialized research laboratories at CCSIT college	i. Constantly upgrade computing labs and develop a list of potential areas that need specialized labs.	8.1.1 Lab- engineers/dedicated person appointed for each lab. 8.1.2 Ratio of computers per students
	ii. Improve the capability and quality of software/hardware	8.1.3 List of features, policies and strengths posted in each lab. 8.1.4 Create faculty/students account for accessing specialized hardware (CUDA GPU)
Objective 8.2: Equip all research laboratories with necessary equipments and tools to support	i. Make a college level forum of the technical experts and provide hardware and software	8.2.1 Level of satisfaction of faculty and staff about the effectiveness of ICT 8.2.2 Students evaluation of computing labs 8.2.3 Average rating of stakeholders' satisfaction with the sufficiency, quality, and accessibility to hardware/software

Objectives	Projects/Initiatives	Key Performance Indicators
academic programs	to support e-learning and distance education.	
	ii. Utilize computing labs for trainings purposes	<p>8.2.4 Number of competitions arranged for students.</p> <p>8.2.5 No of hands /certification trainings arranged</p>

Table 8 2 CCSIT Strategic Goals and Corresponding KPIs

CCSIT Strategic Goals	Key Performance Indicators
Goal 1: Offer quality education in the computing domain	1.1.1 Ratio of students to faculty (based on the faculty members who work full time) in CS program
	1.1.2 Ratio of students to faculty (based on the faculty members who work full time) in CIS program
	1.1.3 Ratio of students to faculty (based on the faculty members who work full time) in CYS program
	1.1.4 Ratio of students to faculty (based on the faculty members who work full time) in AI program
	1.1.5 Percentage of CS programs courses reviewed annually
	1.1.6 Percentage of CIS programs courses reviewed annually
	1.1.7 Percentage of CYS programs courses reviewed annually
	1.1.8 Percentage of AI programs courses reviewed annually
	1.1.9 CS program updated within 5 years
	1.1.10 CIS program updated within 5 years
	1.1.11 CYS program updated within 5 years
	1.1.12 AI program updated within 5 years
	1.1.13 Number of training activities for CS students on latest technologies
	1.1.14 Number of training activities for CIS students on latest technologies
	1.1.15 Number of training activities for CYS students on latest technologies
	1.1.16 Number of training activities for AI students on latest technologies
	1.1.17 Student’s overall rating on the quality of their courses. (Average rating of students on a five-point scale on the overall evaluation of courses.)
	1.1.18 Student evaluation of academic and career counselling. (college level, average rating on the adequacy of academic and career

CCSIT Strategic Goals	Key Performance Indicators
	counselling on a five- point scale in an annual survey of final year students.)
	1.2.1: Survey conducted for any need of new programs under CS discipline
	1.2.2: Survey conducted for any need of new programs under CIS discipline
	1.2.3: Survey conducted for any need of new programs under CYS discipline
	1.2.4: Survey conducted for any need of new programs under AI discipline
	1.2.5 Number of academic programs developed under CS dept
	1.2.6 Number of academic programs developed under CIS dept
	1.2.7 Number of academic programs developed under Network and Communication dept
	1.2.8 Number of academic programs developed under Computer Engineering dept
Goal 2: Stimulate creative intra and inter college collaborative research	2.1.1 Number of refereed publications in the academic year per full time equivalent teaching staff.
	2.1.2 Percentage of full-time faculty members who have at least one refereed publication in the previous year
	2.1.3 Number of research workshops, seminars, and conferences organized
	2.1.4 Percentage increase in publication from previous year
	2.1.5 Percentage of researchers recruited to work in high-priority research areas from the total University researchers.
	2.2.1 Percentage of faculty participated in research teams.
	2.2.2 Percentage of joint publications with other institutions
	2.2.3 Number of citations from college
	2.2.4 Number of new citations in previous year
	2.2.5 Percentage increase in citation from previous year

CCSIT Strategic Goals	Key Performance Indicators
	2.3.1 Percentage of undergraduate projects produced papers in conferences/journals.
	2.3.2 Percentage of undergraduate students associated with research groups.
	2.3.3 Percentage of MSCS thesis that produced journal papers (Q1/Q2).
	2.3.4 Percentage increases/decrease of MSCS thesis that produced journal papers (Q1/Q2) than previous year.
	2.3.5 Percentage of faculty members who have research profiles in Research ID (Web of Sciences), Scopus, Google scholar, Publons and ORCID) and affiliated to IAU.
Goal 3: Facilitate the culture of community services and advocate social integration	3.1.1 Number of community-based learning activities.
	3.1.2 Percentage of college students and affiliates engaged in community service activities.
	3.1.3 Number of events (lectures, seminars and workshops) to promote the culture of quality among students and affiliates.
	3.1.4 Number of awards/certificates/recognitions received by college for community services.
	3.2.1 Percentage of programs with external advisory board
	3.2.2 Number of meetings of external advisory boards held in previous year
	3.2.3 Annual CS report on the implementation of program advisory groups' recommendations
	3.2.4 Annual CIS report on the implementation of program advisory groups' recommendations
	3.2.5 Annual CYS report on the implementation of program advisory groups' recommendations
	3.2.6 Annual AI report on the implementation of program advisory groups' recommendations
	3.3.1 Percentage of alumni in CS advisory board
	3.3.2 Percentage of alumni in CIS advisory board
	3.3.3 Percentage of alumni in CYS advisory board
	3.3.4 Percentage of alumni in AI advisory board

CCSIT Strategic Goals	Key Performance Indicators
	3.3.5 Number of CS alumni networking meetings per year
	3.3.6 Number of CIS alumni networking meetings per year
	3.3.7 Number of CYS alumni networking meetings per year
	3.3.8 Number of AI alumni networking meetings per year
	3.8.9 Achievements of notable alumni publicized
Goal 4: Recruit and retain high caliber research-intensive faculty and talented staff.	4.1.1 Number of faculty hired per year
	4.1.2 Number of faculty hired with citation >2000 per year
	4.1.3 Proportion of teaching staff leaving the institution in the past year for reasons other than age retirement.
	4.1.4 Percentage of faculty hired per year versus needed
	4.1.5 Ratio of 1(Prof):2(Associate. Prof):6 (Assist. Prof) maintained at the college?
	4.2.1 Number of funded research projects executed per year
	4.2.2 Percentage of faculty with RA support
	4.2.3 Percentage increase/decrease in funded projects than previous year
	4.2.4 Percentage of papers published annually in Q1/Q2 journal as compared to total papers in previous year
	4.2.5 Number of Research Associates hired
Goal 5: Improve college infrastructure for sustainable environments	5.1.1 Number of sessions organized on sustainability awareness per year
	5.1.2 Number recognitions received by college in connection to sustainability
	5.1.3 Number of MS having sustainability component
	5.1.4 Number of MS thesis published to sustainability related work in conferences/journals
	5.2.1 Number of funded research projects on sustainable built environment
	5.2.2 Total funds on sustainable built environment

CCSIT Strategic Goals	Key Performance Indicators
	5.2.3 Number of undergraduate projects per year on sustainable built environment
	5.2.4 Percentage of undergraduate projects produced publications on sustainable environment
Goal 6: Develop and implement a robust risk management system	6.1.1 Risk management committee formulated
	6.1.2 Risk management document prepared for the college
	6.1.3 Safety procedure incorporated in risk management plan
	6.1.4 Risk management document aligned with IAU plan
	6.2.1 Number of trainings arranged on risk reporting system
	6.2.2 Risk reporting mechanism implemented at the college
	6.2.3 Number of workshops arranged on risk management procedures
	6.2.4 Number of incidents reported in online lectures/exams
	6.2.5 Percentage of labs displaying safety policies and list of items/features
Goal 7: Strengthen financial self-sustenance and entrepreneurship culture at the college.	7.1.1 Number of needed short courses identified under CS programs
	7.1.2 Number of needed short courses identified under CIS programs
	7.1.3 Number of needed short courses identified under CYS programs
	7.1.4 Number of needed short courses identified under AI programs
	7.1.5 Number of funded research projects received funding from outside organizations
	7.1.6 Percentage increase/decrease in research projects received funding from outside organizations than previous year
	7.2.1 Number of patents from undergraduate projects
	7.2.2 Number of companies created from undergraduate projects
	7.2.3 Number of patents from MS projects/thesis
	7.2.4 Number of companies created from MS projects/thesis
Goal 8: Upgrade infrastructure	8.1.1 Lab- engineers/dedicated person appointed for each lab
	8.1.2 Ratio of computers per students
	8.1.3 List of features, policies and strengths posted in each lab

CCSIT Strategic Goals	Key Performance Indicators
and computing laboratories	8.1.4 Create faculty/students account for accessing specialized hardware (CUDA GPU)
	8.2.1 Level of satisfaction of faculty and staff about the effectiveness of ICT
	8.2.2 Students evaluation of computing labs
	8.2.3 Average rating of stakeholders' satisfaction with the sufficiency, quality, and accessibility to hardware and software
	8.2.4 Number of competitions arranged for students
	8.2.5 Number of hands /certification trainings arranged



Part-9: Implementation Plan

Overview of the Schedule

The implementation phase of the CCSIT Strategic Plan has been divided into 8 goals where each goal has several objectives and initiatives. To monitor the progress of the plan, measurable KPIs have also been developed against each initiative. We establish SMART KPIs where S stands for specific, M for measurable, A for achievable, R for relevant, and T for Time phased. Before drafting the KPIs, several brainstorming sessions were held with stakeholder. Accordingly, respective units for measuring the KPI and setting action plan to achieve the KPIs have formulated. The responsible units will follow the process as shown in Figure 9-1 for KPIs data collection, analysis, and reporting etc. The plan will be implemented from year 2021 and data will be collected annually at the end of the year. CCIST strategic plan will be concluded by end of 2025.

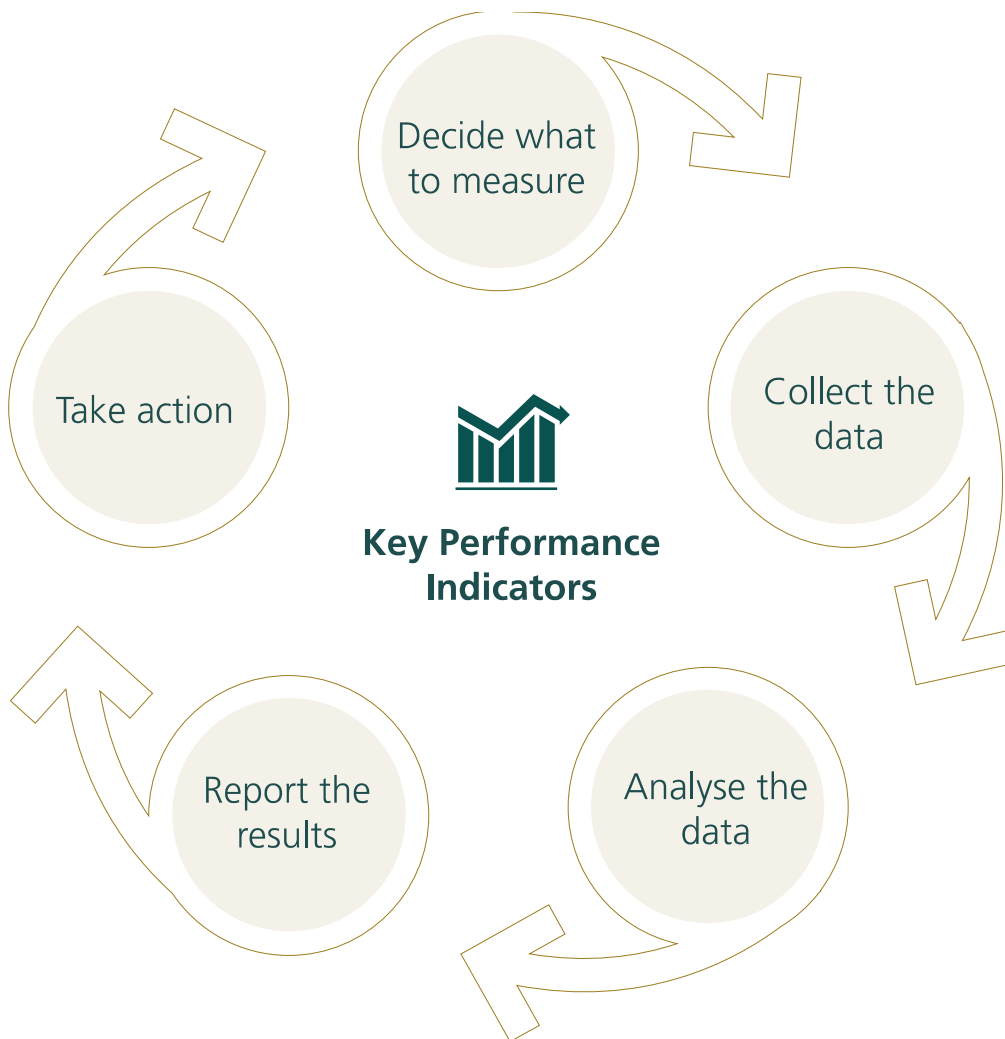


Figure 9-1 Process for KPI measurement and reporting at CCSIT

Goal 1: Offer quality education in the computing domain.

Objective 1.1: Strengthen existing academic programs

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	✓ CS/CIS/CYS/AI Program Quality Unit ✓ CS/CIS/CYS/AI Curriculum Unit

KPIs
1.1.1 Ratio of students to faculty (based on the faculty members who work full time) in CS program
1.1.2 Ratio of students to faculty (based on the faculty members who work full time) in CIS program
1.1.3 Ratio of students to faculty (based on the faculty members who work full time) in CYS program
1.1.4 Ratio of students to faculty (based on the faculty members who work full time) in AI program
1.1.5 Percentage of CS programs courses reviewed annually
1.1.6 Percentage of CIS programs courses reviewed annually
1.1.7 Percentage of CYS programs courses reviewed annually
1.1.8 Percentage of AI programs courses reviewed annually
1.1.9 CS program updated within 5 years
1.1.10 CIS program updated within 5 years
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1.1.14 No of training activities for CIS students on latest technologies
1.1.15 No of training activities for CYS students on latest technologies
1.1.16 No of training activities for AI students on latest technologies
1.1.17 Student’s overall rating on the quality of their courses. (Average rating of students on a five-point scale on the overall evaluation of courses.)
1.1.18 Student evaluation of academic and career counselling. (college level, average rating on the adequacy of academic and career counselling on a five- point scale in an annual survey of final year students.)

Project Calendar (5 years)

Projects	
i.	Align academic programs according to guidelines of accreditation bodies and relevant societies
ii.	Facilitating students learning and achieve the standard level of academic, technical, and administrative support staff

Starting and Ending Years	2021	2022	2023	2024	2025
2021-Ongoing	▶				
2021-Ongoing	▶				

Goal 1: Offer quality education in the computing domain.

Objective 1.2: Initiate new academic programs in computing discipline

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	✓ CS/CIS/CYS/AI Curriculum Unit

KPIs
1.2.1: Survey conducted for any need of new programs under CS discipline
1.2.2: Survey conducted for any need of new programs under CIS discipline
1.2.3: Survey conducted for any need of new programs under CYS discipline
1.2.4: Survey conducted for any need of new programs under AI discipline
1.2.5 Number of academic programs (including PhD program) developed under CS dept
1.2.6 Number of academic programs (including PhD program) developed under CIS dept
1.2.7 Number of academic programs (including PhD program) developed under Network and Communication dept
1.2.8 Number of academic programs (including PhD program) developed under Computer Engineering dept

Project Calendar (5 years)

Initiatives/Projects
i. Conduct surveys for the need of new educational programs
ii. Develop curriculum for new programs (including PhD programs)

Starting and Ending Years	2021	2022	2023	2024	2025
2022-2023		→			
2023- 2025			→		

Goal 2: Stimulate creative intra and inter college collaborative research.

Objective 2.1: Recruit and retain high caliber research-intensive faculty

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	✓ Scientific Research Unit

KPIs
2.1.1 Number of refereed publications in the academic year per full time equivalent teaching staff.
2.1.2 Percentage of full-time faculty members who have at least one refereed publication in the previous year
2.1.3 Number of research workshops, seminars, and conferences organized
2.1.4 Percentage increase in publication from previous year
2.1.5 Percentage of researchers recruited to work in high-priority research areas from the total University researchers.

Project Calendar (5 years)

Initiatives/Projects
i. Arrange research workshops, seminars, and conferences
ii. Facilitate research faculty with adequate research associates and collaborate with industry

Starting and Ending Years	2021	2022	2023	2024	2025
2021-Ongoing	▶				
2021-Ongoing	▶				

Goal 2: Stimulate creative intra and inter college collaborative research.

Objective 2.2: Increase faculty participation in collaborative research projects.

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	✓ Scientific Research Unit

KPIs	
2.2.1	Percentage of faculty participated in research teams.
2.2.2	Percentage of joint publications with other institutions
2.2.3	Number of citations from college
2.2.4	Number of new citations in previous year
2.2.5	Percentage increase in citation from previous year

Project Calendar (5 years)

Initiatives/Projects	
i.	Setup policy and procedure aligned with IAU and form research teams in all departments.
ii.	Allocate fund and provide infrastructure to encourage faculty participation in research teams.

Starting and Ending Years	2021	2022	2023	2024	2025
2021- Ongoing	→				
2021- Ongoing	→				

Goal 2: Stimulate creative intra and inter college collaborative research.

Objective 2.3: Develop new research opportunities for undergraduate and graduate students

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	<ul style="list-style-type: none"> ✓ Graduation Project & Entrepreneurship Unit ✓ Postgraduate Studies unit ✓ Scientific Research Unit

KPIs
2.3.1 Percentage of undergraduate projects produced papers in conferences/journals.
2.3.2 Percentage of undergraduate students associated with research groups.
2.3.3 Percentage of MSCS thesis that produced journal papers (Q1/Q2).
2.3.4 Percentage increases/decrease of MSCS thesis that produced journal papers (Q1/Q2) than previous year.
2.3.5 Percentage of faculty members who have research profiles in Research ID (Web of Sciences), Scopus, Google scholar, Publons and ORCID) and affiliated to IAU.

Project Calendar (5 years)

Initiatives/Projects
i. Identify new research opportunities and involve students in research teams
ii. Increase the number of researchers to work in high priority research areas.

Starting and Ending Years	2021	2022	2023	2024	2025
2021-Ongoing	→				
2021-Ongoing	→				

Goal 3: Facilitate the culture of community services and advocate social integration.

Objective 3.1: Organize community-based learning events and/or activities.

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	✓ Community Service Unit

KPIs
3.1.1 Number of community-based learning activities.
3.1.2 Percentage of college students and affiliates engaged in community service activities.
3.1.3 Number of events (lectures, seminars and workshops) to promote the culture of quality among students and affiliates.
3.1.4 Number of awards/certificates/recognitions received by college for community services.

Project Calendar (5 years)

Initiatives/Projects
i. Organize special lectures related to computing discipline for the welfare and awareness of community
ii. Encourage faculty, staff and student’s involvement in community related events/activities

Starting and Ending Years	2021	2022	2023	2024	2025
2021-Ongoing	—————▶				
2021-Ongoing	—————▶				

Goal 3: Facilitate the culture of community services and advocate social integration.

Objective 3.2: Strengthen the external advisory board for both college and programs

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	<ul style="list-style-type: none"> ✓ Academic Accreditation Unit ✓ CS/CIS/CYS/AI Program Quality Uni

KPIs
3.2.1 Percentage of programs with external advisory board
3.2.2 Number of meetings of external advisory boards held in previous year
3.2.3 Annual CS report on the implementation of program advisory groups' recommendations
3.2.4 Annual CIS report on the implementation of program advisory groups' recommendations
3.2.5 Annual CYS report on the implementation of program advisory groups' recommendations
3.2.6 Annual AI report on the implementation of program advisory groups' recommendations

Project Calendar (5 years)

Initiatives/Projects
i. Update external advisory boards and programs involve external advisory board members for collaborations
ii. Implement recommendations of advisory board at program levels.

Starting and Ending Years	2021	2022	2023	2024	2025
2021-Ongoing	▶				
2021-Ongoing	▶				

Goal 3: Facilitate the culture of community services and advocate social integration.

Objective 3.3: Create, promote, and organize the alumni-networks for expanding and enhancing their active role in the college’s positive development.

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	<ul style="list-style-type: none"> ✓ Academic Accreditation Unit ✓ Alumni & Career Planning Unit

KPIs
3.3.1 Percentage of alumni in CS advisory board
3.3.2 Percentage of alumni in CIS advisory board
3.3.3 Percentage of alumni in CYS advisory board
3.3.4 Percentage of alumni in AI advisory board
3.3.5 Number of CS alumni networking meetings per year
3.3.6 Number of CIS alumni networking meetings per year
3.3.7 Number of CYS alumni networking meetings per year
3.3.8 Number of AI alumni networking meetings per year
3.8.9 Achievements of notable alumni publicized

Project Calendar (5 years)

Initiatives/Projects
i. Involve alumni in external advisory boards of the programs and college
ii. Develop alumni-networks and organize Annual activities

Starting and Ending Years	2021	2022	2023	2024	2025
2021-One time	→				
2021-Ongoing	→				

Goal 4: Recruit and retain high caliber faculty and talented staff.

Objective 4.1: Hire prominent and competent professors at each department.

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	✓ Faculty Search Unit

KPIs
4.1.1 Number of faculty hired per year
4.1.2 Number of faculty hired with citation >2000 per year
4.1.3 Proportion of teaching staff leaving the institution in the past year for reasons other than age retirement.
4.1.4 Percentage of faculty hired per year versus needed
4.1.5 Ratio of 1(Prof):2(Asso. Prof):6 (Assist. Prof) maintained at the college?

Project Calendar (5 years)

Initiatives/Projects
i. Identify the departments needs for faculty in various areas
ii. Publicize hiring calls at various forums including college faculty, alumni, and websites

Starting and Ending Years	2021	2022	2023	2024	2025
2021-One time	—————▶				
2021-One time	—————▶				

Goal 4: Recruit and retain high caliber faculty and talented staff.

Objective 4.2: Extend research support to faculty for quality publications

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	✓ Scientific Research Unit

KPIs
4.2.1 Number of funded research projects executed per year
4.2.2 Percentage of faculty with RA support
4.2.3 Percentage increase/decrease in funded projects than previous year
4.2.4 Percentage of papers published annually in Q1/Q2 journal as compared to total papers in previous year
4.2.5 Number of Research Associates hired

Project Calendar (5 years)

Initiatives/Projects
i. Hire talented candidates as Research Associates
ii. Encourage faculty in bringing local and/or international funds and opportunities to college.

Starting and Ending Years	2021	2022	2023	2024	2025
2021-Ongoing	—————▶				
2021-Ongoing	—————▶				

Goal 5: Improve college infrastructure for sustainable environments.

Objective 5.1: Provide faculty and students with sufficient information on the significance of sustainability in the built environment.

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	<ul style="list-style-type: none"> ✓ Community Service Unit ✓ Postgraduate Studies unit

KPIs
5.1.1 Number of sessions organized on sustainability awareness per year
5.1.2 Number recognitions received by college in connection to sustainability
5.1.3 Number of MS having sustainability component
5.1.4 Number of MS thesis published to sustainability related work in conferences/journals

Project Calendar (5 years)

Initiatives/Projects	
i.	Raise awareness and promote the university's green principles and practices, and conduct regular awareness sessions for faculty and students on sustainable built environment
ii.	Encourage research thesis addressing indigenous problems aiming sustainability environment

Starting and Ending Years	2021	2022	2023	2024	2025
2021-Ongoing	→				
2021-Ongoing	→				

Goal 5: Improve college infrastructure for sustainable environments.

Objective 5.2: Arrange activities to promote environmental sustainability

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	<ul style="list-style-type: none"> ✓ Scientific Research Unit ✓ Graduation Project & Entrepreneurship Unit

KPIs
5.2.1 Number of funded research projects on sustainable built environment
5.2.2 Total funds on sustainable built environment
5.2.3 Number of undergraduate projects per year on sustainable built environment
5.2.4 Percentage of undergraduate projects produced publications on sustainable environment

Project Calendar (5 years)

Initiatives/Projects
i. Promote research that contribute to achievement of sustainable built environment
ii. Promote students' group projects that incorporate design, analysis, and assessment of sustainable built environment

Starting and Ending Years	2021	2022	2023	2024	2025
2021-Ongoing	→				
2021-Ongoing	→				

Goal 6: Develop and implement a robust management system.

Objective 6.1: Create a risk management plan for the college

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	✓ Strategic Planning and Risk Management Unit

KPIs
6.1.1 Risk management committee formulated
6.1.2 Risk management document prepared for the college
6.1.3 Safety procedure incorporated in risk management plan
6.1.4 Risk management document aligned with IAU plan

Project Calendar (5 years)

Initiatives/Projects
i. Coordinate with the relevant offices for creating risk management plan at CCSIT
ii. Continually review and enhance the safety procedure the labs

Starting and Ending Years	2021	2022	2023	2024	2025
2021-One Time	→				
2021-Ongoing	→				

Goal 6: Develop and implement a robust management system.

Objective 6.2: Implement a risk management system at the college

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	✓ Strategic Planning and Risk Management Unit ✓ Teaching and Learning Unit

KPIs
6.2.1 Number of trainings arranged on risk reporting system
6.2.2 Risk reporting mechanism implemented at the college
6.2.3 Number of workshops arranged on risk management procedures
6.2.4 Number of incidents reported in online lectures/exams
6.2.5 Percentage of labs displaying safety policies and list of items/features

Project Calendar (5 years)

Initiatives/Projects
i. Implement risk management system and develop procedures to prevent the accidental disruption of basic information applications
ii. Provide adequate training for the faculty and staff to enable them to use risk management system

Starting and Ending Years	2021	2022	2023	2024	2025
2021-Ongoing	—————▶				
2021-Ongoing	—————▶				

Goal 7: Strengthen financial self-sustenance and entrepreneurship culture at the college.

Objective 7.1: Start paid programs and short courses.

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	✓ CS CS/CIS/CYS/AI Curriculum Unit ✓ Scientific Research Unit

KPIs
7.1.1 No of needed short courses identified under CS programs
7.1.2 No of needed short courses identified under CIS programs
7.1.3 No of needed short courses identified under CYS programs
7.1.4 No of needed short courses identified under AI programs
7.1.5 No of funded research projects received funding from outside organizations
7.1.6 Percentage increase/decrease in research projects received funding from outside organizations than previous year

Project Calendar (5 years)

Initiatives/Projects	
i.	Identify, design, and offer high quality short courses in selected specialties and promote them in the market.
ii.	Promote the spirit of competition and motivation in the field of innovation in the university.

Starting and Ending Years	2021	2022	2023	2024	2025
2021-Ongoing	—————▶				
2021-Ongoing	—————▶				

Goal 7: Strengthen financial self-sustenance and entrepreneurship culture at the college.

Objective 7.2: Encourage the culture of entrepreneurship at the college

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	<ul style="list-style-type: none"> ✓ Graduation Project & Entrepreneurship Unit ✓ Postgraduate Studies unit

KPIs
7.2.1 No of patents from undergraduate projects
7.2.2 No of companies created from undergraduate projects
7.2.3 No of patents from MS projects/thesis
7.2.4 No of companies created from MS projects/thesis

Project Calendar (5 years)

Initiatives/Projects
i. Facilitate student projects toward commercialization and provide logistical support to support innovative businesses
ii. Discover the potential of commercialization in MS thesis

Starting and Ending Years	2021	2022	2023	2024	2025
2021-Ongoing	→				
2021-Ongoing	→				

Goal 8: Upgrade Infrastructure and Computing laboratories

Objective 8.1: Develop specialized research laboratories at CCSIT.

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	<ul style="list-style-type: none"> ✓ Information Technology Unit ✓ Teaching and Learning Unit

KPIs
8.1.1 Lab- engineers/dedicated person appointed for each lab
8.1.2 Ratio of computers per students
8.1.3 List of features, policies and strengths posted in each lab
8.1.4 Create faculty/students account for accessing specialized hardware (CUDA GPU)

Project Calendar (5 years)

Initiatives/Projects
i. Constantly upgrade computing labs and develop a list of potential areas that need specialized labs
ii. Improve the capability and quality of software/hardware

Starting and Ending Years	2021	2022	2023	2024	2025
2021-Ongoing	→				
2021-Ongoing	→				

Goal 8: Upgrade Infrastructure and Computing laboratories

Objective 8.2: Equip all research laboratories with necessary equipment and tools to support academic programs

OVERVIEW	
Duration	5 years
Cost	Estimated budget plan is available with college finance office
Starting date	2021
Responsibility for Implementation	✓ Practical Teaching Unit ✓ Students Competitions Unit

KPIs
8.2.1 Level of satisfaction of faculty and staff about the effectiveness of ICT
8.2.2 Students evaluation of computing labs
8.2.3 Average rating of stakeholders' satisfaction with the sufficiency, quality, and accessibility to hardware and software
8.2.4 Number of competitions arranged for students
8.2.5 No of hands /certification trainings arranged

Project Calendar (5 years)

Initiatives/Projects
i. Make a college level forum of the technical experts and provide hardware and software to support e-learning and distance education
ii. Utilize computing labs for trainings purposes

Starting and Ending Years	2021	2022	2023	2024	2025
2021-Ongoing	▶				
2021-Ongoing	▶				

10. Acknowledgments

College of Computer and Information Technology at Imam Abdulrahman Bin Faisal University would like to extend sincere thanks and acknowledgement to the faculty, staff, students, and alumni for their assistance and feedback while drafting the Strategic Plan 2021-2025 for the college. Special thanks go to Prof. Dr. Mahmoud A. Abdellatif, Adviser for the Vice President for Studies, Development and Community Services, and Eng. Mohammed Abdelraheem PMO Director, at the office Vice President for Studies, Development and Community Services for their support, insightful comments, assistance, and guidance in the process of creating Strategic Plan 2021-2025 for CCSIT. Strategic Planning and Risk Management Unit at CCSIT is thankful to the respectful Dean, Vice Deans, Department Chairs, faculty, and staff for the insightful comments on the initial versions of CCSIT strategic plan for year 2021-2025.

Appendix-I: ABET accredited programs of CCSIT

Institutions

1 result(s)

EXPORT

Imam Abdulrahman Bin Faisal University
Dammam, Saudi Arabia

Imam Abdulrahman Bin Faisal University

Dammam, Saudi Arabia (www.iau.edu.sa)

EXPAND ALL

Programs that are no longer accredited are excluded from the results below
[View historically accredited programs](#)

Computer Information Systems (Bachelor of Science in Computer Information Systems)

Accredited: Oct 1, 2018 – Present

Expand ▼

Computer Science (Bachelor of Science)

Accredited: Oct 1, 2016 – Present

Expand ▼

Construction Engineering (Bachelor of Science)


Accredited: May 1, 2018 – Present

Expand ▼

Cyber Security and Digital Forensics (Bachelor of Science in Cyber Security and Digital Forensics)

Accredited: Oct 1, 2018 – Present

Expand ▼

كلية علوم الحاسب وتقنية المعلومات College of Computer Science and Information Technology	
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Unit Tasks Form

Unit Name	Strategic Planning and Risk Management Unit
Report to	The Dean
Chair	1. Dr. Nador Min Allah Abdullatief (nabdullatief@iau.edu.sa)
Members Name:	2. Dr. Mohammed Gollapalli 3. Dr. Atta-ur-Rahman 4. Dr. Farmanullah Jan 5. Dr. Nahid Sultana 6. Dr. Khadeejah Alhindi 7. Ms. Madeeha Saqib (Coordinator)
Expected Unit Tasks	
<ol style="list-style-type: none"> 1. Strategic plan development, including both long-term goals and short-term operational strategies. 2. Performing annual scans while considering factors such as economic, legislative, industry trends, market demands, and other internal and external changes. 3. Monitoring and regularly reporting on progress of the strategic plan. 4. Performing periodic reviews of the college vision, mission goals and values, and recommending updates as needed. 5. Identify key risks to the strategic plan and suggest alternative strategic actions. 6. Assess the actual performance of all the college Units. 	
Deliverables:	
<ol style="list-style-type: none"> 1. Annual Progress Report – Key Performance Indicators 	
Note: A copy submitted to Dean Office	
Regular Unit Tasks	
<ol style="list-style-type: none"> 1. Suggest policies, procedures, and guidelines related to the Unit. 2. Hold regular meetings at least once per month at a place and time to be fixed by resolution entered on its minutes. 3. Prepare and submit the Unit's work plan, and its monthly meeting minutes. 4. Develop plans to achieve relevant Performance Indicators as per the College's Strategic Plan. 5. Submit an end of year report and provide a presentation to the College. 6. Coordinate with the Public Relation and Documentation Unit for collecting and exchanging data. 7. Carry out any other tasks that the Dean may assign to the Unit. 	



جامعة الإمام عبد الرحمن بن فيصل
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College of Computer Science and Information Technology