

Introduction

Evolution of this plan

This strategic plan represents the second iteration in the relatively brief history of the College of Computing & Informatics (CCI) at Drexel University, which came into being in 2014. It builds upon the foundation of the original plan by continuing key initiatives while introducing new, complementary ones. This plan arrives at a pivotal moment, coinciding with the rapid acceleration of the "Fourth Industrial Revolution," where information and technology (I&T) are reshaping our society and economy. This transformative era is also driving changes in I&T education, research, and innovation. Coupled with intensified competition in U.S. higher education, these times present both remarkable opportunities and challenges for our College and for the University.

CCI's unique role in the marketplace

CCI counts itself among a select group of I&T programs nationally that consolidate computing, data, cybersecurity, artificial intelligence and information sciences within a college-level organization. With our comprehensive array of cutting-edge academic programs, research endeavors, a prominent faculty and professional staff, and a strong commitment to social responsibility, we possess a distinct organizational advantage that positions us to play a defining role in meeting evolving societal needs regionally and nationally.

The path ahead

This advantage alone, however, does not guarantee our leadership, impact, or sustainability in this ever-changing landscape. It necessitates a forward-looking vision aligned with the transformative role of I&T in the 21st Century economy, a strategic approach, effective execution to stay ahead of the competition, robust internal and external support systems, and a growing resource base to foster innovative programs, research, organizational development, and infrastructure enhancement.

Our Dynamic Environment

Drexel and CCI operate within an environment that is changing and evolving more quickly than ever before. CCI must be actively cognizant of the environmental pressures that will impact the achievement of its strategic goals, such as:

- Computing and information sciences and technology are undergoing a sweeping transformation, signaled especially, but not exclusively, by the rise of artificial intelligence (AI).
- The entire global economy experienced a massive upheaval due to the COVID-19 pandemic, a profound disruption to which we are only now beginning to adjust.
- The transformation of I&T from a siloed, vertical discipline, to a horizontal one affecting virtually every industry and where I&T not only provides infrastructure support but also plays a central role in driving all aspects of operations and innovation. The education and training of future technical and scientific professionals must adapt to this seismic paradigm shift.
- Threats to “traditional” higher education – the predicted decline in college-bound students; rising college tuition; as well as growth in alternative forms of education and training.

The plan’s three overarching themes

Recognizing the nature of our disciplines, their role in society, and the often-volatile environment that surrounds us, three key themes form the foundation of this plan:

- *Build Our Identity:* Continue charting a course that establishes CCI as a leader in 21st Century I&T education and research.
- *Expand Our Impact:* Secure CCI's status as a premier provider of modern I&T talent, a hub for groundbreaking and high-impact R&D, a go-to destination for I&T talent and intellectual capital in the region, and an engine for University growth.
- *Drive Strategic and Sustainable Growth:* Formulate strategies for driving the College's growth in enrollment, academic offerings, research funding, and resources in a strategic and sustainable manner.

Mission and Vision

As part of this strategic planning effort, CCI took serious and detailed stock of its perceived strengths and weaknesses and of the external opportunities and threats that will impact it. Mindful of this critical assessment and its implications for CCI's future, the mission and vision for the College were forged and the complimentary strategic objectives crafted.

Mission: CCI's mission is to play a pivotal role both regionally and nationally in training the next generation of information and technology leaders and professionals. It aims to conduct cutting-edge research that advances the field of computing and informatics, thereby strengthening our nation's innovation enterprise while contributing to regional development and growth.

Vision: CCI envisions itself as a leader and powerhouse in pioneering 21st Century computing and informatics education and research. By aligning computer science and information science with contemporary societal and economic needs, CCI seeks to revolutionize computing and informatics education, empower faculty to lead groundbreaking research, and foster multidimensional information and technology talent development across disciplines and professions.

To realize this vision, CCI is committed to strategically reshaping its academic programs, promoting sustainable growth to expand its resources and impact, enhancing organizational capacity to engage in society-facing, significant research initiatives, and establishing itself as a vital enabler and partner within the University and the region.

Strategic Areas and Objectives

Three key strategic areas have been identified in this plan, accompanied by goals and anchored by metrics-centered objectives as appropriate:

Area #1: Academic Programming & Affairs

❖ Growth of undergraduate and graduate programs

- *Faculty support and scaling*

- Systematically increase the number of full-time CCI faculty members, both Tenure Track and Teaching, while also bolstering departmental-level support structures and college-level Academic Affairs groups.
- *Admissions process enhancements*
 - Develop innovative yield and anti-melt strategies tailored to different degree programs and modalities.
- *Alignment with market trends*
 - Utilize model-based planning to respond effectively to global market and academic research trends in technology.
- *Tuition discounting policy evaluation*
 - Ensure that this analysis is market-driven, with the goal of optimizing enrollment while maximizing net tuition revenue (NTR).
- ❖ **Enhance student retention and student success**
 - *Holistic service model*
 - Focus on providing support services for academically at-risk students identified through early warning systems and introduce innovative support services.
 - *Population-specific service models*
 - Ensure accessibility of all CCI services and support systems to campus-based, online, and corporate-partner students.
 - *Benchmarks for success*
 - Establish well-defined benchmarks for success by following best practices for retention.
- ❖ **Strengthen program quality and operations**
 - *Program health viability review*
 - Develop and implement mechanisms to regularly measure the health, viability, and potential restructuring of individual academic programs.
 - *Operational collaboration*
 - Enhance operational and logistical support, including education and research spaces, classroom scheduling, and technological resources.
 - *Course and program enhancements*
 - Develop a plan for reviewing and updating course evaluations, course and program objectives, and managing deficiencies and new program enhancements.

- *Process optimization*
 - Identify processes that challenge CCI priorities, including growth, student outcomes, and student satisfaction and create plans to mitigate them.
- *Strategic growth in PhD programs*
 - Establish strategic objectives for enhancing the PhD program, including advanced scholarly and academic activities, ensuring necessary resources to promote excellence in PhD research and scholarship, and elevating program reputations to attract top talent.
- ❖ **Create new intra-college partnerships and new external markets**
 - *Interdisciplinary program development*
 - Identify existing curricular components ripe for integration or create innovative programs in collaboration with other colleges and schools within Drexel.
 - *Academic engagement with Corporate Partners*
 - Devise strategic priorities aimed at strengthening our academic engagement with corporate partners to extend our reach and impact within the regional industry landscape.

Area #2: Research & Funding

- ❖ **Stimulate large-scale research and funding**
 - *Increase College ability to encourage and sustain this activity*
 - Create additional financial, academic and other support resources.
- ❖ **Cultivate a culture that pursues major projects, focusing on niche areas with existing strength**
 - Include review of faculty policies and reward structure; investment in infrastructure; early-stage career research; and internal and external opportunities
- ❖ **Foster a college-wide culture of research**
 - **Provide College-wide and departmental support for faculty at each stage of their careers to excel in their respective research area(s).**

Area #3: College Operations

- ❖ **Resource and staffing enhancements**

- Focus on selective growth prioritization; enhanced fiscal planning and management; operational efficiency and effectiveness; systematic resource management.
- ❖ **Support system for stimulating large-scale research and funding**
 - Prioritize faculty development and support; appropriate resource allocation; and adequate operational infrastructure.
- ❖ **Faculty assignment, reporting and review**
 - Emphasize policies and changes that enhance student retention and success; faculty interests and expertise; and incentives for large-scale research initiatives.
- ❖ **Marketing and Communications**
 - Support the goals of this strategic plan through: full-scale integration of new brand positioning; a strategic redesign of the College website; implementation of data-driven enhancements to the recruitment marketing plan; focusing brand awareness communications on faculty and research activity; and enhancing stakeholder engagement, such as alumni, through communications.
- ❖ **Culture & Community**
 - Build on the success of CCI's Culture & Community Council's commitment to be a welcoming, supportive, respectful environment for all.
- ❖ **Industry partnerships**
 - Elevate the scale, substance and impact of the Corporate Partners Program by establishing more 360-degree partnerships and energizing industry-sponsored R&D partnerships.
- ❖ **Inter-college partnerships and CCI's role at Drexel University**
 - Design and implement a university-wide curriculum that equips every Drexel student with robust knowledge and skills pertaining to the digital economy.
 - Cultivate extensive partnerships with other colleges and schools to create and launch a substantial portfolio of interdisciplinary programs.
 - Foster broad information and technology-enabled or -driven interdisciplinary research and development funding.
 - Continue expanding CCI's outreach to industry partners and establish CCI as the premier destination for talent and innovation in the region.

❖ **Future organization of CCI**

- Review and recommend changes to: the College's structure; leadership structure and management responsibilities; and the orientation and scope of key focus areas in order align the College's recent growth as well as changes in the technology and higher education markets.

As we recognize our tremendous growth since the creation of the College of Computing & Informatics ten years ago, this plan identifies our strategic objectives, priorities and strategies for CCI for the next five years to achieve even more growth and better align with the transformative roles of I&T in the modern economy. This plan represents a roadmap for the College to advance its core missions in education and research, to serve as a key growth engine for the University, and to help support University-wide growth and advancement. The plan calls for a major expansion of CCI in the next five years, not only in scale, but also in identity, competitiveness and impact, to position the College as a pillar in support of the economic growth of the region and beyond.

This document also represents a living plan for the College. We will continue to develop and adjust operational and implementation strategies in accordance with the priorities set forth in this plan. Each year, we will assess our progress, evaluate major developments internally and externally, and adjust our priorities, strategies and implementations as necessary.