

The School of Informatics and Computing: A Vision for Excellence

“The best way to predict the future is to invent it.”

— Alan C. Kay

Introduction

The School of Informatics and Computing (SoIC), IUPUI, has evolved rapidly in the past decade. Many challenges have influenced that evolution. We have been challenged to forge a coherent identity and mission from a set of related but formerly distinct academic cultures, to communicate that identity both internally and externally, and to realize our mission in substantial academic work. These challenges are also opportunities and responsibilities. In this document, the first strategic plan in our school’s history, we accept the fundamental responsibility to now move beyond the challenge of identity to define a vision of our future, to chart strategies that will elevate our standards and extend our academic work into new fields, to engage new collaborators, to ask and answer new questions.

Our Mission

As a school of Indiana University, the SoIC is committed to excellence in the traditional categories of academic work: Research/creative activity; teaching and learning; and civic engagement/service. This plan is our vision for excellence – and our mission.

We recognize and embrace the ongoing evolution of the field of informatics and computing. Ours is an integrative discipline which advances theory and practice in

- computing and the application of information and media technologies;
- the impact of these technologies for individuals and society;
- the impact of these technologies in any field of study.

The SoIC equally embraces its mission to ensure a welcoming and inclusive environment; and to help ensure that all members of society may participate in a century shaped by our computational disciplines.

And the SoIC also recognizes that in addition to its primary mission in research and education, we have a clear duty to advance the economy and culture of the state that supports us. We fulfill this duty by training graduates for a wide range of computing and information technology occupations, by partnering with both for-profit and non-profit institutions to address their professional needs, by supporting a culture of entrepreneurship for our students, faculty and alumni. Simply stated, our mission is to become and be recognized as:

1. A school with an international reputation for excellence in research and innovation in the theory and application of information technologies.
2. A school recognized as a national leader in educational innovation, offering students traditional and technology-enabled learning experiences aligned with community needs and professional opportunities of the 21st century.

3. A school that leverages its location in the heart of Indiana to engage scientific, civic, corporate and creative institutions to advance our shared goals.

For this strategic plan, this categorical mission translates into goals that apply to all areas of our multidisciplinary school: bioinformatics, health informatics, health information management/administration, human–computer interaction, media arts and sciences, and library and information sciences.

In addition, this plan defines goals in the general realm of best practices, comprising the administrative, collegial and other logistical processes that collectively support a productive, healthy and diverse environment for our faculty, students and staff.

Please note: This plan bridges the planning initiatives of our SoIC departments (Bio-Health Informatics, Human-Centered Computing and Library and Information Science, with more detailed planning documents attached) and our campus Strategic Plan: IUPUI 2015 <http://strategicplan.iupui.edu>. This SoIC plan distills and summarizes the more detailed plans of our departments, and places our school’s goals in the broader context of IUPUI’s vision of the future. This vision comprises the following initiatives (referenced in our SoIC plan as SP#):

1. Leverage our Strengths in Health and Life Sciences
2. Accelerate Innovation and Discovery through Research and Creative Activity
3. Deepen our Commitment to Community Engagement
4. Strengthen Internationalization Efforts
5. Promote an Inclusive Campus Climate
6. Develop Faculty and Staff
7. Promote Undergraduate Student Learning and Success
8. Increase Capacity for Graduate Education
9. Transform Online Education
10. Optimize our Enrollment Management

OUR GOALS: RESEARCH

We will become a school with an international reputation for excellence in research and innovation in the theory and application of information technologies.

Research Goal #1: Within five years, the SoIC will be recognized locally and nationally as a source of expertise, research and innovation in the broad realm of urban health and well-being, and that one third of our achievements in research and creative activity evolve from issues and opportunities in this realm. (SP 1, 2)

Research Goal #2: Within two years we will establish at least three centers of research excellence:

- *iCAIR: Indiana Center on Accessible Informatics Research* will focus on cutting-edge, interdisciplinary research at the forefront of IT innovations with a focus on human-centered, accessible and adaptive informatics. (SP 1, 2, 3)

- *Center for Brain Health Informatics* will focus on the universal need for better brain health in a world of powerful and rapidly evolving technology. (SP 2, 3, 7)
- *The Center for Personal and Community Heritage Informatics* will research and develop strategies and applications of information technologies to increase the usability and usefulness of local historical and cultural materials; and to expand these resources by developing informatics tools to better document individuals, communities and places. (SP 3, 9)

Within five years, it is our goal that each of these centers become self-sustaining through external grants and contracts; that each center maintain at least two ongoing research initiatives that engage collaborators from other schools and the professional world.

Research Goal #3: Within five years, it is our goal that each tenure-track faculty is supported as principal investigator or co-PI by at least one externally funded grant or sponsored project. (SP 2)

Research Goal #4: Every year, every tenure-track faculty in our school will publish or present a significant scholarly work in high-quality peer-reviewed venues. (SP 2, 3)

Research Goal #5: Within five years, it is our goal that all research grad students are fully supported by externally funded faculty projects. (SP 2, 8)

Research Goal #6: Within five years, all undergraduate and graduate students in our school will have at least one research experience related to their intended career paths, and participate in at least one formal presentation in a peer-reviewed venue. (SP 7)

Research Goal #7: To supplement and expand the impact of our centers and all faculty research, the SoIC will create a school office of technology transfer, to work with our centers and faculty, and with other campus agencies to encourage commercialization of innovations arising from faculty and student projects. (SP 2, 3)

OUR GOALS: TEACHING

We will become a school recognized as a national leader in educational innovation, offering students traditional and technology-enabled learning experiences aligned with community needs and professional opportunities of the 21st century.

Teaching Goal #1: Within three years, our school will conduct a comprehensive review of departmental curricula to ensure that all course offerings, degree programs and certificates are academically rigorous, aligned with campus guidelines and principles, and relevant to the intellectual, cultural and economic aspirations of our students, our community and our times.

From this review, the school will define key course and programmatic initiatives to ensure the relevance of our academic mission into the future. In particular, this plan will define curricular strategies designed to support the school's stated emphasis on the research and development of information technologies to enhance urban health and well-being. (SP 1, 3, 7, 8, 9)

Teaching Goal #2: Within three years, our school will be recognized as a national leader in the

delivery of innovative learning experiences, including technology-enabled experiences, non-traditional course structures such as learning modules, inter-disciplinary and community-based learning experiences, including off-site learning. (SP 7, 8, 9)

Teaching Goal #3: Within two years, each department will develop and implement a strategy to encourage, recognize and reward curricular and pedagogical innovation that aligns with the evolving career, research and engagement opportunities available to our students. All teaching faculty will develop and teach at least one new course, course strategy or learning module at least once every two years. (SP 7, 8, 9)

Teaching Goal #4: Within one year, our school will develop and implement an evolving strategy to recruit, enroll, advise and mentor to graduation a cohort of high-achieving students who reflect the diversity of our community and the world. (SP 4, 5, 7, 8, 10)

Teaching Goal #5: Within three years, the school will develop and implement a broad strategy to partner with extramural experts and institutions to offer our students meaningful learning experiences that complement our intramural curricula and the teaching of our full-time faculty. This strategy will offer every SoIC student a wide array of learning experiences through civic engagement (e.g. internships, co-ops, service learning and externally mentored learning). (SP 3, 7, 8, 9)

Teaching Goal #6: Within two years, the SoIC will be recognized nationally as a school that attracts, motivates and nurtures excellent teachers whose pedagogy evolves, to a significant degree, from their research and engaged work in the realm of health and life sciences. (SP 1, 6)

Teaching Goal #7: Within three years, our school will be recognized internationally for its competitive, rigorous graduate programs that educate tomorrow's intellectual and industrial leaders. (SP 4, 8)

Teaching Goal #8: Within three years, our school will be recognized in Indiana as a leader in innovative urban education strategies that encompass a P-20 approach (from pre-kindergarten to graduate school), to build a seamless learning continuum with the overlapping resources of the pre-K-12 system, higher education, and the corporate/professional world to prepare students for success in an informatics-driven era. (SP 3, 5, 7, 8)

OUR GOALS: *ENGAGEMENT*

We will become a school that leverages its location in the heart of Indiana to engage scientific, civic, corporate and creative institutions to advance our shared goals.

Engagement Goal #1: Our school will produce research that has direct, positive and significant impact on the people and institutions of Indiana – and will be recognized as such by the state's civic, corporate and cultural leaders. (SP 2, 3)

Engagement Goal #2: Within two years, our school will be recognized throughout central Indiana as an enthusiastic and reliable partner for community organizations and institutions pursuing collaborative research, development and learning experiences that grow our state's digital

economy and address the needs of our community, particularly in the area of health and well-being. (SP 1, 2, 3)

Engagement Goal #3: Within two years, our school will be recognized throughout Indiana as an inclusive and welcoming destination for student populations who are traditionally under-represented in higher education and in informatics career paths. (SP 5, 7)

Engagement Goal #4: Within one year, our school will recruit three diverse external advisory boards of professional and civic leaders who help guide and support our departmental initiatives as we continuously align our research, teaching and engagement strategies with the demands and opportunities of our local, national and international communities. (SP 3, 4)

Engagement Goal #5: Within three years, our school will be recognized by local, national and international companies and institutions as a source of top-quality graduates able to succeed in the challenging business and professional environments of the 21st century. Employment data for our students will be comparable or superior to national standards. (SP 3)

Engagement Goal #6: Within two years, faculty from each department of our school will be recognized as leaders in service to their professions and disciplines at the local and national levels. (SP 3, 6)

OUR GOALS: BEST PRACTICES

Best Practice Goal #1: Within two years, our school will be fully staffed with qualified personnel to help plan, implement and support the various initiatives and programs to fulfill our goals in research, teaching and engagement. (SP 6, 10)

Best Practices Goal #2: The SoIC will be recognized throughout the university as a school that provides a welcoming and inclusive environment for staff, and as a school in which a diverse staff is valued for its partnership in creating an inclusive and welcoming environment for faculty and students, especially those from other countries and diverse cultures. (SP 4, 5, 6)

Best Practices Goal #3: Within one year, every faculty member in our school will have begun an ongoing relationship with at least one faculty mentor who can provide guidance and advice as mentees progress through the stages of their academic careers. (SP 6)

Best Practices Goal #4: Within two years after the adoption in 2013 of new SoIC governance documents, our school will have established a collegial and effective culture of academic self-governance in partnership with school administration, including a promotion and tenure system that effectively encourages and rewards faculty excellence. (SP 6)

Best Practices Goal #5: Within two years, our school will create a knowledge base of post-graduation employment of our students, correlated to analyses of undergraduate and graduate majors, certificates and degrees, and also correlated to analyses of the local and national career marketplace. (SP 3, 7, 8, 10)

Best Practices Goal #6: Within two years, our school will design and implement a community communications platform that systematically delivers news and information of our school to the appropriate audiences (including alumni, collaborators, employers, donors, etc.) and also circulates relevant input from the community. (SP 3)

