Proposal to Establish

The Ohio State University

Center for Software Innovation

Contents

I. Mission

The mission of the Center for Software Innovation (CSI) is to advance the learning, career, and entrepreneurial opportunities in digital innovation for campus and community. The CSI achieves this aim by equipping individuals with the skills, knowledge, resources, and opportunity to thrive in the growing digital economy. This is particularly relevant as digital and software technology becomes an increasing part of all industries and sectors. The need is urgent, as the growth in software products and services creates demand for a workforce skilled through interdisciplinary learning, at the intersection of not only how products are built, but the problems they solve, how they are launched, and their related impact.

The CSI aims to achieve this mission through initiatives across four pillars: Learning, Career, Entrepreneurship, and Community. Each of these areas and their supporting programs align closely with the University's Strategic Plan:

- **Pillar 1: Learning.** The CSI aims to be a pioneer in deeply interdisciplinary, experiential, and differentiated learning opportunities, highly aligned with the Strategic Plan theme to *Educate the next generation of citizens*. As software and AI continue to grow in adoption and impact, it is critical that our students are equipped to both understand how this technology works and also understand how it can be applied. To achieve this, we are collaborating across campus to develop offerings covering both depth and breadth:

    - **Cohorts.** Tight-knit cohort-based programs going through shared curriculum. One current example of a launched program is the Integrated Business and Engineering-Software Innovation (IBE-SI) honors track (related proposal in Exhibit B). This program is a partnership with the College of Engineering and Fisher College of Business in which, as a cohort, engineering majors complete a business minor and business majors complete a computer science minor.

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Together they also participate in co-curricular, extracurricular, and work opportunities

- o **Courses.** New or edited course offerings in the subject areas of building and launching digital products. One related new course being piloted is CSE5889: Intro to Software Startups
- o **Curriculum.** Scalable, modular curricular content. Given that topics such as data, implications of technology, rapid prototyping, and more are increasingly relevant across domains, the CSI aims to make available the slides, case studies, and more from CSI-related initiatives for any faculty interested in utilizing or including in their courses

- **Pillar 2: Career.** As the workforce and related roles rapidly evolve, the CSI aims to support students, community, and alumni with the resources to grow in careers in technology. Initiatives and work in this space span: education - providing visibility into tech-related roles and what they entail; exposure - bringing new opportunities to campus through corporate partnerships and alumni outreach; success- delivering related resources and preparation for the application and interview processes. For these areas we also partner with and complement career service teams. We have been delivering some of this content through the format of Thursday informal seminars, called "Dig Ins."

  Additionally, we aim to secure and create internship, co-op, capstone and other opportunities, embracing the Strategic Plan theme to *Build a model working and learning environment*. We are actively piloting a learn + work program where students are working to build and launch products alongside instruction. The CSI is also building relationships with companies to list new opportunities.

- **Pillar 3: Entrepreneurship.** CSI supports the entrepreneurial spirit across students, faculty and researchers, and community in an effort to, under the Strategic Plan, *Advance research, creativity and innovation that improve and save lives*. The CSI collaborates heavily with the Keenan Center for Entrepreneurship, the Technology Commercialization Office, as well as numerous departments and efforts across campus to provide instruction, mentors, resources, connections and more to support new venture and innovation development in software.

  Additionally, in 2023 the CSI launched, in partnership with the Techstars entity, the Techstars Columbus powered by The Ohio State University accelerator, which provides resources and funding to early-stage software ventures that qualify.

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- **Pillar 4: Community.** Underpinning the work across all pillars is: cultivating and growing community in digital innovation. This includes students, faculty, staff, alumni, and the broader community, upholding the value to ***Embrace our land grant mission***. These relationships are essential components and the fuel to support the learning, career, and entrepreneurial initiatives and also drive a thriving tech ecosystem in Ohio.

  A few examples of initiatives in the Community pillar include:
  - Construct I/O: The Builder's Summit- An annual conference hosted by the CSI that is open to the campus and broader community. The conference is highly differentiated in its deeply integrated approach to combining the perspectives of industry builders, students, researchers, faculty, entrepreneurs, investors, and other domain experts. Construct I/O combines both main stage talks as well as laptops-up workshops, with a goal of creating a tangible new skill, connection, or insight to have immediate constructive impact to attendees.
  - CSI new space- The new CSI space, planned for Carmenton, aims to be a place for collaboration, co-working, and workshops inclusive of the community. n

A. **Missions of the university (research, teaching, and service/outreach) relevant to CSI**

The CSI and its related mission and focus areas are highly aligned with the mission statements of the University, as described in the outline of the ***Education for Citizenship 2035*** plan, with some key theme areas noted above in bold italics in the CSI pillars.

B. **Interdisciplinary nature of the center**

At the heart of the CSI and its founding is interdisciplinary education and collaboration, combining principles across subject areas such as computer science, data analytics, design, marketing, finance, and more.

The CSI will work across all colleges and already has deep partnerships with the College of Engineering and Fisher College of Business, including providing funding for faculty and programming. The CSI will also work across areas of the university and already has work in flight with the Wexner Medical Center, Keenan Center for Entrepreneurship, OHI/O student organization, and more.

C. **Goals of the center that cannot be met with existing academic units**

As a university center, the CSI is highly collaborative across academic units, other areas of the university, and also across the broader ecosystem off campus. The CSI's curricular programming, as described, is highly interdisciplinary and aims to collaborate with all colleges as well as other

The Ohio State University Center for Software Innovation

centers and units of the university. We are running mult-disciplinary programming and plan for a minor or similar curricular pathway that includes courses across colleges. Further, initiatives such as the startup accelerator have unique structures to allow for funding provided to ventures spanning campus and global community.

II. Faculty

Faculty are essential to the CSI, which is why the CSI is provides funding to colleges to assist in the hiring and support of faculty. Faculty have a multitude of avenues to engage and be part of the CSI mission:

- Teaching courses that are part of the CSI's programs or pathways
- Collaborating to include components of relevant subject matters into existing curriculum as is relevant
- Mentoring or advising student, faculty, or accelerator startups
- Collaborating on new programs such as IBE-SI, learn + work programs, and more
- Attendance at or participation in the CSI conference

A. Criteria for selection of faculty membership

The CSI provides a variety of ways for faculty to be engaged depending on level of interest and match of needs and skills. While all faculty, staff, and students are welcome and encouraged to attend CSI informal seminars, conference, and events, the following criteria define potential categories of faculty membership in the CSI, which may be adjusted as we test out formats:

Fellow (or a similar term to represent deepest engagement):

- Significant knowledge, expertise, and demonstrated interest in the academic areas of building or launching digital products and/or the understanding or experience in the industry application
- Willingness to engage with and collaborate deeply with the CSI and/or further the mission of the CSI through a meaningful time investment, estimated >20%
- As available, CSI will provide resources and/or funds to these faculty or the related college. Opportunities for deeper engagement will be subject to CSI funding available and ensuring the breadth of subject matter expertise is represented in faculty fellows

Affiliated Faculty:

- Willingness and interest to engage and collaborate deeply with the CSI and/or further the mission of the CSI through one of the CSI initiatives
- As available, CSI will provide resources relevant to the initiative to support

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B. Faculty expressing interest in associating with the center

A listing of faculty, dean, department, and external letters of support are located in Exhibit A.
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C. Student/Staff involvement

The CSI frequently interacts and engages with students through courses, career development workshops and opportunities, seminars, conference planning and execution, selected invitations to participate in the Advisory Council, in learn + work programs and more. The CSI communicates to students and staff through regular newsletters, the CSI website, targeted outreach, and social media updates.

Some current opportunities available to students and staff:

- **Learn + Work opportunities:** The CSI is piloting a format of hiring students to build digital products and providing accompanying instruction on building and launching the products. Throughout Spring '25, three students are working directly in the CSI to develop a product and gain the experiential learning experience. Over the Summer '25, we plan to grow this model to cover a project completed in partnership with the Wexner Medical Center. In time, we aim to continue to grow this model

- **Courses and IBE-SI:** A core component of the CSI is to develop and deliver learning experiences and curriculum in building and launching software. Some examples of current offerings for students include the Integrated Business and Engineering (IBE-SI) program for honors students in the College of Engineering and Fisher College of Business and the CSE Intro to Software Startups course. The CSI plans to continue to grow these initiatives to meet student need and demand

- **"Dig In" informal learning seminars:** Weekly during the school year, the CSI offers informal sessions called Dig Ins, short for digital innovation, and brings in a topic expert, often from industry, to dive deep into their work and/or career journey. These sessions are open to the campus

- **Construct I/O conference:** The CSI runs Construct I/O: The Builder's Summit. The conference brings together industry experts to demonstrate and dive into the latest in building and launching high impact products. Construct is open for registration from students, faculty, staff, and community. At Construct 2024, students, staff, and faculty participated as liaisons and moderators paired with the industry experts, providing valuable networking opportunities

- **Accelerator:** Students, staff, faculty, and the broader community are invited to apply to be part of the CSI startup accelerator and receive associated funding and resources. They are also able to participate in related events and mentorship if applicable, regardless of if part of the accelerator

III. Administration

The Ohio State University Center for Software Innovation

CSI Administration:

A. Executive Director and Responsibilities

The CSI is led by an Executive Director, Shereen Agrawal.

Responsibilities Overview:

The Executive Director of the CSI is responsible for implementing strategies for carrying out the vision of the Center, overseeing its daily operations, fostering industry partnerships, expanding experiential learning opportunities, and supporting entrepreneurial activities, in collaboration with the software innovation incubator.

Key Responsibilities:

- **40%** Provides leadership, coordination, development, and execution of the vision of the Center
- **30%** Foster industry partnerships, expand experiential learning opportunities, and support entrepreneurial activities, in collaboration with the software innovation incubator; coordinate with CSI faculty members to support curriculum and research project development; support software innovation activities by faculty, students and staff and the OSU community; foster and support entrepreneurial activities; grow internship and experiential learning opportunities
- **30%** Oversee the Center's daily operations; set and implement the strategy for a sustainable, effective, well-funded center; recruit key staff, and build a dynamic administrative leadership team; manage CSI space, facilities, and administrative/operational functions

B. Functions and Composition of the Oversight Committee

The CSI's oversight committee will have a minimum of 2/3 faculty represented on the committee. The committee will tentatively be called The CSI Builders Council (CBC).

Format and Composition:

- CBC will meet 2x per year. Initial faculty terms are one year.
- CBC will be comprised of a minimum of 2/3 faculty, with potential for students, staff, or other relevant stakeholders up to 1/3
- Faculty will represent at minimum the College of Engineering, Fisher College of Business, and the College of Arts and Sciences, with an effort to include other colleges

Functions:

- Support the CSI team in the development and implementation of the CSI's strategic plan and mission

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- Support initiatives across one or more of the CSI pillars (Learning, Career, Entrepreneurship, and Community)
- Engage in outreach within the university community and the broader ecosystem
- Provide annual input and feedback to the CSI's performance

C. Reporting Line:

The CSI directly reports to the EVP of the Enterprise for Research, Knowledge, and Innovation (ERIK) and dotted line reports to the Provost and Executive Vice President of the University

D. The main components of a pattern of administration for the CSI

To ensure a well-run Center and consistent transparency across key stakeholders, the CSI utilizes the following formats:

- Executive Director meeting check-ins with EVP of ERIK and EVP and Provost of the University
- Executive Director and CSI team will provide written updates and a shared KPI dashboard for key stakeholders
- Executive Director and/or team will hold regular meetings with leaders of related CSI initiatives
- For the purposes of advancing the CSI's mission and including industry perspectives, the CSI has an Advisory Council, comprised of a mix of University leadership and external individuals with relevant industry, competency, or ecosystem experience or networks. The Advisory Council will meet 1-2x per year

IV.   Budget/Funding

The establishment of the CSI is supported by a $110M gift from the Timashev Family Foundation. This gift provides essential funding for establishing key components of the CSI and also recurring endowment income to support the sustainability of operations. Additional sources of funding have been and will continue to be secured to support the growth of the CSI.

A. Funding sources and one-time and recurring costs

Funding:

- **Timashev Family Foundation gift:** This gift provides the following funds of capital, which follow a 10-year cash schedule of when the University will receive the related funds:

  - **Endowed Funds, $40M in total:**

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- $18,850,000 to establish the *Timashev Center for Software Innovation Support Fund (the "Center Fund")*
- $2,475,000 to establish the *Timashev Professorship in the Max M. Fisher College of Business (the "Business Professorship Fund")*
- $2,475,000 to establish the *Timashev Professorship in the College of Engineering (the "Engineering Professorship Fund")*
- $8,100,000 to establish the *Timashev Center for Software Innovation Assistant Professors Support Fund (the "Faculty Fund")*
- $8,100,000 to establish the *Timashev Center for Software Innovation Student Support Fund (the "Scholars Fund")*

  o **Current Use Funds, $70M in total:**
  - $30,000,000 to establish the *Timashev President's Discretionary Fund to Support OSU Incubator Programs and to Provide General Operating Support (the "President's Fund")*
  - $40,000,000 to establish the *Timashev Center for Software Innovation Building Fund (the "Building Fund")*

- **Additional capital sources:**
  o ERIK funding from corporate gift
  o OAA general funds - In order to support the initial costs of Executive Director salary, administrative support, faculty hiring, and initial curricular programming while Timashev Family Foundation cash grows in the endowment and tuition revenue scales, OAA is contributing the following:
    - $1M per year from FY25-FY29 towards faculty and curricular programming
    - $253,283 total towards operations team salary and administrative support across FY25-FY27 until endowment income fully supports
  o Tuition revenue from related classes offered to support faculty salaries

- **Other potential sources of funding:**
  o External sponsorship of Construct I/O conference
  o Corporate partnerships

One-time and recurring costs:

The following section IV.B. illustrates an estimated categorization of related costs for the CSI. The cost to build the new CSI space will be one-time, however maintenance, rent, and operations will be ongoing. In general, most costs are planned to be recurring in the following buckets:

- CSI operations team compensation
- CSI conference
- Marketing
- Faculty funding
- Supporting instruction - Executives in Residence (XiRs), adjunct lecturers
- Startup accelerator spend and investment capital
- Space rent and operations
- Events and travel - conferences, university visits, etc

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- Misc. operating - office supplies, etc

B. The expected budget for the first year(s) of operation

Below is the budget and related funding sources for FY25 and FY26

	FY25 Use	FY25 Source	FY26 Use	FY26 Source
Summit and Events	$150,000	$150,000 ERIK gift fund	$150,000	$150,000 ERIK gift fund
Website	$5,000	$5,000 ERIK gift fund	$5,000	$5,000 ERIK gift fund
Curriculum, scholarship, IBE-SI, and faculty hires	$1,471,793	$122,512 Tuition Revenue $36,784 Business Professor Fund $36,784 Engineering Professor Fund $120,384 Faculty Fund $155,329 Endowed Scholars Fund $1,000,000 OAA support	$1,905,069	$381,148 Tuition Revenue $55,176 Business Professor Fund $55,176 Engineering Professor Fund $180,576 Faculty Fund $232,933 Endowed Scholars Fund $1,000,000 OAA support
Executive in Residence, Adjunct Faculty, and Lecturers	$100,000	$100,000 ERIK gift fund	$100,000	$100,000 ERIK gift fund
Techstars	$5,700,000	$5,700,000 President's Fund	$3,480,000	President's Fund
Building	$1,260,000	$1,260,000 Building Fund	$2,000,000	$2,000,000 Building Fund
Center Operations Team Compensation (incld benefits), administrative support, and office expense	$663,062	$270,864 Center Fund $170,313 OAA Support $221,885 ERIK gift fund	$682,654	$406,296 Center Fund $48,116 OAA Support $228,242 ERIK gift fund

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Events and Travel	$7,500	$7,500 Erik gift fund	$7,500	$7,500 Erik gift fund
Total	**$9,389,848**		**$8,374,809**	

C. Existing or new equipment, space, and facilities needed to establish the CSI

The CSI is currently operating out of University Square South and will eventually move into a new space, supported by $40M from the Timashev Family Foundation gift, in Carmenton.

D. The sustainability of the CSI

Given the Timashev Family Foundation gift and structure of the endowment income, the CSI is well positioned to sustain and maintain base operations. The additional capital provided by the other sources is allowing the CSI to stand up initiatives sooner and generate more opportunities for corporate partnership and other sources of revenue. Activating the other potential sources of funding listed in IV. A. will also allow for future growth. The CSI is already actively partnered with Advancement and Corporate Partnerships to explore these opportunities.

V. Evaluative Criteria and Benchmarks

The CSI is measured on both reach and depth of impact. The following are specific KPIs for the CSI:

- **Learning:**
  - # of students in CSI related programs or cohorts
  - # of students enrolled in courses developed in collaboration with CSI
  - # of students reached by curricular materials, guest lecturers, or other learning enhancements for the classroom generated by the CSI
- **Career:**
  - % of students in CSI programs that graduate into full-time roles; secondary metric is % of students in technology related roles post graduation
  - % of students in CSI programs that have internship or co-op experience (for undergraduates, after their 2nd years)
- **Entrepreneurship:**
  - # of ventures in accelerator program per year
  - # and % growth in student ventures that are digital or digital-enabled
  - # and % growth of software or digital related research projects translated or further validated for commercialization
- **Community:**
  - Total audience across CSI programming
  - Progress to CSI space completion

VI. Supporting Materials

a. Exhibit A- Supporting Letters
b. Exhibit B- Integrated Business and Engineering- Software Innovation proposal document

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Exhibit A Supporting Letters

Farhang Pourboghrat Professor and Chair College of Engineering	**Andrea Contigiani** Assistant Professor Fisher College of Business
Keely Croxton Associate Dean of Undergraduate Programs Fisher College of Business	**Paul Sivilotti** Associate Professor, Computer Science and Engineering College of Engineering
Adam Carberry Professor and Chair College of Engineering	**Trevor Brown** Dean, John Glenn College of Public Affairs Interim Dean, Fisher College of Business
Walter Zinn Professor and Chair Fisher College of Business	**Arnab Nandi** Associate Professor, Computer Science and Engineering College of Engineering
Roger Bailey Assistant Clinical Professor of Marketing Fisher College of Business	**Andy Jenks** Partner Drive Capital
Monique Ross Associate Professor, EED Director, Center for Computing Education College of Engineering	**Anil Makhija** Dean's Distinguished Professor of Finance Fisher College of Business
Kristina Kennedy Associate Professor Senior Director, Integrated Business and Engineering Program College of Engineering	**Ayanna Howard** Dean, College of Engineering Monte Ahuja Endowed Dean's Chair
Jeff Dotson Associate Professor of Marketing Fisher College of Business	**Michael Leiblein** Professor of Strategic Management Fisher College of Business
Jeff Schumann Co-Founder and CEO Aware, Inc (acquired by Mimecast)	
Ben Blanquera VP of Technology and Sustainability Rackspace Technology	

The Ohio State University Center for Software Innovation

THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

College of Engineering

Department of Integrated Systems Engineering

210 Baker Systems
1971 Neil Avenue
Columbus, OH 43210-1271

614-292-6239 Phone
614-292-7852 Fax

ise.osu.edu

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

RE: Proposal to establish The Center for Software Innovation

I am writing to express my enthusiastic support for the establishment of the Center for Software Innovation at The Ohio State University. As the Chair of the Department of Integrated Systems Engineering (ISE) in the College of Engineering, I see significant opportunities for collaboration between the Center and our department, which will ultimately enhance the educational and research opportunities available to our students and faculty.

The ISE department is committed to preparing our students to excel in a world where technology, data analytics, and system optimization are increasingly important. The Center for Software Innovation will complement and augment our existing programming by providing access to cutting-edge software tools and fostering interdisciplinary collaboration that integrates software development with systems engineering.

Our faculty and students are already engaged in a variety of projects that would benefit from the resources and expertise that the Center will offer. Whether in the areas of manufacturing systems, human factors engineering, or operations research, the integration of advanced software solutions is key to addressing the complex challenges that define our field. The Center's focus on software innovation will not only support these efforts but also inspire new approaches and solutions.

Moreover, the Center will serve as a catalyst for partnerships between our department and industry, providing our students with unique opportunities to work on real-world problems and collaborate with industry leaders. This aligns with our mission to deliver an education that is both rigorous and relevant, equipping our graduates with the skills and experiences they need to lead in their chosen careers.

In conclusion, I fully endorse the creation of the Center for Software Innovation and look forward to the many ways in which it will enhance our department's programs and contribute to the broader university community.

Sincerely,

Farhang Pourboghrat
Professor and Chair

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

RE: Proposal to establish The Center for Software Innovation

I am writing to express my support for the formal establishment of the Center for Software Innovation at The Ohio State University. As the Associate Dean of Undergraduate Programs, I am particularly excited about the center's programming, which align perfectly with our mission to provide cutting-edge curricular and co-curricular opportunities that prepare our students for the evolving demands of the workforce.

As a Professor at the Fisher College of Business, I have had the privilege of observing the evolving intersection of technology and business operations, which is impacting every aspect of how business is done. The creation of this center is a crucial step towards positioning Ohio State and the state of Ohio as leaders in the rapidly expanding global digital economy. The provisional status of the center has already demonstrated its potential to significantly enhance the learning experience for our students, particularly those in business and technology fields. The center's plans for innovative programming and interdisciplinary curriculum have sparked a great deal of interest among our undergraduates, and I believe that its full establishment will further solidify Ohio State's reputation as a leader in technology-driven education.

The Center for Software Innovation is set to become a pivotal resource for the university and the broader community, with its focus on empowering future digital leaders, fostering innovation, and driving impactful solutions. By bringing together the bright creative minds of our students with expertise across multiple disciplines, the center will facilitate the development of cutting-edge software solutions that can address the complex challenges faced by businesses and society today.

Thank you for considering this important initiative.

Sincerely,

Keely Croxton

Keely Croxton
Associate Dean of Undergraduate Programs
Fisher College of Business
The Ohio State University

THE OHIO STATE UNIVERSITY

College of Engineering
Department of Engineering Education

Smith Laboratory
174 West 18th Avenue
Columbus, OH 43210

Office of Academic Affairs   August 20, 2024
University Square South
15 E. 15th Ave.
Columbus, OH 43201

RE: Proposal to establish The Center for Software Innovation

To Whom It May Concern:

I write to express my full support for the formal establishment of the Center for Software Innovation (CSI) as Chair of the Department of Engineering Education at The Ohio State University. This initiative is of paramount importance for the university and the field of engineering and computing education. CSI will serve as a critical hub for advancing software development and interdisciplinary collaboration.

Our department is deeply committed to the mission of integrating engineering education with cutting-edge research and innovation. CSI will provide an unparalleled platform for our faculty and students to engage in transformative projects that bridge the gap between theoretical knowledge and practical application. By fostering a collaborative environment, CSI will empower our students and faculty to develop new classroom innovations, assessment techniques, and research methodologies that are vital to the future of engineering and computing education.

My extensive background in engineering education and leadership in co-creating and overseeing engineering education scholarship and programs has given me the experience to recognize the immense value that this center will bring to Ohio State. CSI's focus on software innovation will provide our students, specifically within the Integrated Business and Engineering program, new opportunities to explore innovative educational experiences that will prepare them for high demand future careers.

In addition, CSI's commitment to sustainability and the evaluation of large engineering research centers resonates with the work I have done as part of two NSF-funded Engineering Research Centers: 1) Nanosystems Engineering Research Center for Nanotechnology Enabled Water Treatment (NEWT), and 2) Center for Bio-mediated and Bio-inspired Geotechnics (CBBG). The establishment of this Center will undoubtedly lead to groundbreaking advancements in these areas, further solidifying Ohio State's position as a leader in engineering and computing education.

I wholeheartedly endorse the establishment of the Center for Software Innovation and look forward to the positive impact it will have on our department, our students, and the broader engineering community.

Sincerely,

Adam R. Carberry, Ph.D., FASEE
Professor & Chair

THE OHIO STATE UNIVERSITY

Fisher College of Business
Department of Marketing & Logistics

536 Fisher Hall
2100 Neil Avenue
Columbus, OH 43210

614-292-0797   Phone
zinn.13@osu.edu

August 14, 2024

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

RE: Proposal to establish The Center for Software Innovation

To whom it may concern:

I am writing to express my strong support for the Center for Software Innovation at The Ohio State University. As the Chair of the Department of Marketing and Logistics and a faculty member deeply engaged in both research and teaching at the Fisher College of Business, I am confident that the Center will serve as a vital resource for our faculty, students, and industry partners.

The Center's focus on software innovation aligns perfectly with the needs of modern business education, particularly in areas related to logistics, supply chain management, and customer service—fields where technology and data-driven approaches are increasingly critical. Faculty, staff, and students from our department will undoubtedly benefit from the interdisciplinary opportunities the Center will provide, enhancing our research capabilities and enriching the educational experiences we offer.

Given my background in logistics and supply chain management, I see tremendous potential for collaboration between our department and the Center. The Center's initiatives will not only support our ongoing projects but also open new avenues for research that integrates advanced software solutions with logistical challenges. Moreover, the Center's commitment to fostering innovation will equip our students with the skills needed to excel in an increasingly digital world.

In conclusion, I fully endorse the establishment of the Center for Software Innovation and look forward to the collaborative opportunities it will bring to our department and the broader university community.

Sincerely,

DocuSigned by:

Walter Zinn

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Walter Zinn, PhD
Professor of Logistics
Fisher College of Business

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

RE: Proposal to establish The Center for Software Innovation

I would like to express my fervent support for the formal establishment of the Center for Software Innovation at The Ohio State University. Having studied economics and holding a position as an Assistant Clinical Professor of Marketing at the Fisher College of Business, I am very familiar with the positive economic impact of novel software solutions. Moreover, my years of serving as Academic Director of multiple programs, and teaching interdisciplinary coursework therein, have provided first-hand experience of the many benefits that can be achieved through a formal center advocating for the expansion of software innovation in our mission.

Through both my time as the Full-time MBA Academic director, as well as my time advising 40 Honors Undergraduate Theses as the Director of the Honors Contract program, I have strongly advocated for interdisciplinary coursework and research. Given the cross-functional complexity of the tech industry, the Center for Software Innovation will represent a significant advancement in our university's commitment to interdisciplinary collaboration, particularly in the areas of business, engineering, and technology. By fostering a hub where students and faculty from diverse fields can work together on cutting-edge software projects, the Center will provide necessary opportunities for hands-on learning and research that align with the rapidly evolving demands of the marketplace.

Throughout my career, I have emphasized the importance of integrating theoretical knowledge with practical application, particularly in my teaching of courses in marketing research, product and pricing analytics, pricing strategy, and market development. The gold standard for professional development has always included a learning-by-doing approach. The Center for Software Innovation can further this educational goal by offering a platform where students can engage with real-world challenges, meet and receive live feedback from industry professionals, develop sophisticated analytical skills, and work to build out innovative solutions that have the potential to shape the future of business and technology.

In summary, I fully support the establishment of the Center for Software Innovation and I am confident that it will play a pivotal role in advancing Ohio State's reputation as a leader in both education and profession practice.

With Regards,

Roger A. Bailey, PhD

THE OHIO STATE UNIVERSITY

EED
Department of Engineering Education

College of Engineering

3042 Smith
174 West Eighteenth Avenue
Columbus, OH 43210

(614) 292-7923 Phone
(614) 247-6255 Fax

eed.osu.edu

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

RE: Proposal to establish The Center for Software Innovation

To Whom It May Concern,

I am writing to express my strong support for the formal establishment of the Center for Software Innovation at The Ohio State University. As the Director of the Center for Computing Education, I am excited about the potential for collaboration between our centers, particularly in our shared mission to broaden participation in computing and foster inclusive educational environments.

My research focuses on broadening participation in computing by exploring race, gender, and identity within both the academy and industry, and by informing pedagogical practices that retain women and marginalized populations in computer-related engineering fields. The Center for Software Innovation's commitment to empowering future digital leaders aligns with our efforts to diversify the tech workforce and ensure that all students have access to cutting-edge opportunities in this rapidly evolving field.

The Center for Software Innovation will be a vital resource not only for Ohio State but also for the broader community. Its interdisciplinary approach and innovative programming are set to significantly enhance the educational experiences of our students, particularly those from underrepresented backgrounds. By working together, we can amplify our impact and create a more inclusive and equitable computing landscape.

I am eager to collaborate with the Center for Software Innovation and look forward to the groundbreaking work we can achieve together. The center's full establishment will undoubtedly play a key role in advancing Ohio State's leadership in both technology and diversity.

Kind regards,

DocuSigned by:

Monique Ross

F2DB214CA0A54DA...

Monique Ross, Ph.D.
Associate Professor, Engineering Education and Computer Science and Engineering
Director, Center for Computing Education

THE OHIO STATE UNIVERSITY

College of Engineering
Integrated Business & Engineering Honors Program

3030 Smith Labs
174 W. 18th Avenue
Columbus, OH 43210

937-309-8279   Phone
kennedy.443@osu.edu

August 15, 2024

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

To the Committee on Academic Affairs:

I am writing to express my strong support for the formal establishment of the Center for Software Innovation at The Ohio State University. As the Faculty Director for the Integrated Business & Engineering Program (IBE) and an Associate Professor in the College of Engineering, I have seen firsthand the transformative impact that multidisciplinary initiatives can have on our students and the broader academic community.

The Center for Software Innovation represents a critical step forward in bridging the gap between engineering and business, fostering an environment where students and faculty can collaborate on innovative software solutions that address real-world challenges. The Center's mission to empower digital leaders and drive technological advancement aligns perfectly with the goals of the IBE program, where we emphasize the importance of integrating business acumen with engineering expertise.

Throughout my career, both in academia and industry, I have witnessed the growing importance of software innovation in driving progress across various sectors. My experience as a principal engineer with Honda Research & Development, where I led projects and founded the Women in Engineering Network, has reinforced my belief in the power of cross-disciplinary collaboration and the need for robust support structures to nurture talent.

The establishment of this Center will provide invaluable opportunities for our students to gain hands-on experience, engage with industry partners, and contribute to groundbreaking research that will position Ohio State as a leader in the digital economy. I am confident that the Center for Software Innovation will be a driving force in shaping the future of technology and business at our university and beyond.

I wholeheartedly endorse the proposal to formalize the Center for Software Innovation and look forward to the positive impact it will have on our students, faculty, and industry partners

Sincerely,

DocuSigned by:

Kristina Kennedy

748A53891045431...

Kristina Kennedy, MBA
Associate Professor, Engineering
Senior Director, Integrated Business & Engineering Program
Faculty Advisor, Society of Women Engineers

THE OHIO STATE UNIVERSITY

Fisher Hall
2100 Neil Avenue
Columbus, OH 43210

dotson.83@osu.edu

August 16, 2024

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

To Whom It May Concern:

I am writing to express my enthusiastic support for the formal establishment of the Center for Software Innovation at The Ohio State University. As the first professor hired specifically for this Center, I am deeply invested in its mission and vision, and I believe it represents a significant step forward for Ohio State in becoming a leader in software development, innovation, and education.

The Center for Software Innovation is poised to become a crucial hub for interdisciplinary research, education, and industry collaboration. My academic and research background in marketing, coupled with my interest in the application of Bayesian methods and generative AI in marketing practice, aligns perfectly with the Center's focus on cutting-edge software solutions. The Center will provide a unique environment where students and faculty can work together on projects that blend technical skills with practical business applications, fostering an ecosystem of innovation that benefits both the university and the broader community.

I am particularly excited about the opportunity to develop and teach courses that are directly related to the Center's initiatives. These courses will equip students with the tools they need to excel in the rapidly evolving software and technology sectors, bridging the gap between theoretical knowledge and real-world application. By integrating advanced analytics, AI, and software development into the curriculum, we will prepare our students to lead in the digital economy.

The interdisciplinary nature of the Center, with its connections to various departments across the university, will also provide fertile ground for collaborative research. This will not only advance our understanding of software and its applications but also contribute to the broader field of marketing by exploring how new technologies can enhance consumer engagement and business strategies.

In conclusion, I fully support the establishment of the Center for Software Innovation and am eager to contribute to its success through my teaching, research, and collaboration with colleagues across Ohio State. I am confident that this Center will be a transformative force for the university, our students, and the wider academic and business communities.

Sincerely,

DocuSigned by:

Jeff Dotson

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Jeff Dotson, PhD
Associate Professor of Marketing
Fisher College of Business

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

RE: Proposal to establish The Center for Software Innovation
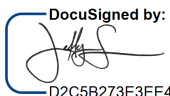
To Whom It May Concern,

I am writing to express my strong support for the formal establishment of the Center for Software Innovation (CSI) at The Ohio State University. As a member of CSI's advisory council and the CEO of Aware, a company deeply invested in the development and deployment of cutting-edge software solutions, I believe that this center will play a pivotal role in shaping the future of software innovation, not only within Ohio but across the entire technology landscape.

At Aware, we specialize in providing contextual intelligence and risk management solutions for enterprise collaboration platforms. Our work at the intersection of technology, data management, and business operations gives us a unique perspective on the importance of investing in the success of a new generation of software innovators. The initiatives that CSI has already undertaken during its provisional phase have shown great promise in creating a dynamic environment where students and professionals alike can develop the skills and insights necessary to thrive in today's digital economy.

The establishment of CSI is critical for fostering collaboration between academia and industry, which is essential for driving innovation. By partnering with companies like Aware, the center will ensure that its programs are aligned with the real-world needs of the business community, thereby preparing students to meet the challenges of an ever-evolving technological landscape. The center's focus on interdisciplinary collaboration, cutting-edge curriculum, and practical applications will undoubtedly position Ohio State as a leader in software innovation.

In addition, CSI's mission to cultivate future digital leaders aligns perfectly with our vision at Aware. We recognize the importance of having a robust pipeline of talent who are not only skilled in software development but also capable of thinking critically about the broader implications of technology in business and society. The center's efforts to bridge the gap between theory and practice will be instrumental in shaping the next generation of innovators who can drive meaningful change in the industry.

I am confident that the formal establishment of the Center for Software Innovation will be a significant milestone for Ohio State, the Columbus tech community, and beyond. I wholeheartedly support this initiative and look forward to continuing our collaboration with CSI.

DocuSigned by:

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Jeff Schumann
Co-Founder & CEO
Aware, Inc.

August 16, 2024

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

RE: Proposal to establish The Center for Software Innovation

To the Council on Academic Affairs:

I am writing to express my enthusiastic support for the formal establishment of the Center for Software Innovation at The Ohio State University. As a member of the advisory board, I have seen firsthand the center's incredible potential to drive technological advancement and foster innovation in our region.

In my role as Vice President of Technology and Sustainability at Rackspace Technology, I work closely with enterprises to architect solutions that drive meaningful business outcomes. My work also involves championing sustainable practices in information technology and promoting the responsible adoption of artificial intelligence. Additionally, my work as cofounder of Techlife Columbus has advanced the culture and ecosystems of entrepreneurism, innovation, and technology.

These areas of focus align closely with the mission of the Center for Software Innovation, and I believe the center's efforts are essential to the future success of our digital economy.

With over three decades of experience across various industries, I have witnessed the transformative impact of technology on business and society. The Center for Software Innovation is poised to be a key player in this transformation, bringing together academia, industry, and community leaders to develop innovative solutions to the challenges we face today. The provisional status of the center has already shown its capacity to inspire and educate, and I am confident that its formal establishment will solidify its role as a leader in technological and entrepreneurial education.

I look forward to continuing to support the center's mission and its contributions to our community.

Best Regards,

Signed by:

Ben Blanquera

37365B949FBE4E8...

Ben Blanquera
Vice President of Technology and Sustainability
Rackspace Technology

THE OHIO STATE UNIVERSITY

FISHER COLLEGE OF BUSINESS

Department of Management and Human Resources

700 Fisher Hall
2100 Neil Ave.
Columbus, OH 43210

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

RE: Proposal to establish The Center for Software Innovation

I am writing to express my support for the formal establishment of the Center for Software Innovation at The Ohio State University.

I am an Assistant Professor in the Department of Management and Human Resources at the Fisher College of Business. I study innovation, with particular emphasis on entrepreneurship, product development, and new technologies. I teach courses in entrepreneurship to undergraduates and Master's students. I organize a variety of programs and initiatives in this domain. Therefore, all of my work is directly aligned with the mission of the proposed Center.

I believe the creation of this Center is an important step for Ohio State. It will be a hub for interdisciplinary collaboration within OSU and between OSU and the local community. I think that the Center's focus on fostering innovation in software development will provide students and faculty with exceptional opportunities to engage in groundbreaking research and hands-on learning.

I would be delighted to contribute to the Center's mission through teaching and research. We could collaborate in offering courses related to the Center's focus areas, including entrepreneurship, innovation, and product development. These courses would be designed to bridge the gap between theory and practice, equipping students with both the technical skills and the entrepreneurial mindset needed to thrive in today's software industry. By integrating the latest research and industry practices into the curriculum, we will prepare our students to become leaders in the software industry. Further, we could collaborate in research projects, studying the key questions in software innovation and entrepreneurship.

I am especially excited about the Center's interdisciplinary approach. From the beginning, the Center's leadership has emphasized collaboration between engineering, business, and other areas. I believe this approach is essential for addressing the complex challenges of today's economy.

In conclusion, I fully support the establishment of the Center for Software Innovation and am eager to contribute to its success through my teaching, research, and service.

Sincerely,
Andrea Contigiani

THE OHIO STATE UNIVERSITY

College of Engineering

Department of Computer Science and Engineering

395 Dreese Labs
2015 Neil Avenue
Columbus, OH 43210

614-292-5835 Phone

sivilotti.1@osu.edu
https://go.osu.edu/sivilotti
https://cse.osu.edu

August 27, 2024

Office of Academic Affairs

University Square South

15 E. 15th Ave.

Columbus, OH 43201

RE: Proposal to establish The Center for Software Innovation

I am writing to express my enthusiastic support for the formal establishment of the Center for Software Innovation at The Ohio State University. As an Associate Professor in the Department of Computer Science and Engineering, my research and teaching focus on distributed systems, concurrency, and fault tolerance—areas that are critical to the advancement of software technologies.

The Center for Software Innovation will provide an invaluable platform for interdisciplinary collaboration, bringing together faculty and students from various departments to address the complex challenges involved in translating sound software engineering principles to applied solutions in the real world. With its emphasis on connecting students, faculty, and industry partners involved in cutting-edge software solutions, the Center will undoubtedly become a focal point for innovation at Ohio State, enabling researchers to explore new paradigms in software design, development, and application.

My research in fault-tolerant distributed systems has always aimed at improving the reliability and efficiency of complex systems, which is increasingly vital in our interconnected world. The Center's commitment to advancing software innovation aligns with these goals, offering new opportunities for collaboration and the application of theoretical research to real-world problems. Furthermore, the interdisciplinary nature of the Center will provide a rich environment for our students to engage in meaningful, hands-on projects that will complement their formal education in principles and foundations of software engineering.

I am particularly excited about the potential for the Center to foster collaboration between our department and other disciplines, including business, engineering, and the sciences. By integrating diverse perspectives and expertise, the Center for Software Innovation will help drive the development of robust, scalable, and secure software solutions that have far-reaching implications across various industries.

In conclusion, I fully support the establishment of the Center for Software Innovation and am eager to contribute to its success through my research and collaboration with colleagues across the university.

Sincerely,

Paul Sivilotti

Associate Professor, Computer Scienc & Engineering

THE OHIO STATE UNIVERSITY

John Glenn College of Public Affairs
Office of the Dean

300 Page Hall
Columbus, OH 43210

614-292-1195 Phone
Brown.2296@osu.edu

August 29, 2024

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

RE: Proposal to establish The Center for Software Innovation

To whom it may concern:

I am writing to express my strong support for the formal establishment of the Center for Software Innovation at The Ohio State University. As the Interim Dean of the Fisher College of Business and the Dean of the John Glenn College of Public Affairs, I recognize the critical role this Center will play in fostering innovation, collaboration, and economic growth across multiple disciplines and sectors.

The Center for Software Innovation was initiated under the visionary leadership of my predecessor, Anil Makhija, during its provisional phase. His strategic guidance was instrumental in laying the foundation for the Center, and I am honored to continue supporting its mission as it moves toward full establishment. The Center's focus on integrating business, engineering, and technology aligns perfectly with the interdisciplinary approach we champion at both the Fisher College of Business and the Glenn College of Public Affairs.

The Center will serve as a vital resource not only for our faculty and students but also for our industry partners, enabling them to collaborate on cutting-edge research and develop innovative software solutions that address real-world challenges. By fostering these collaborations, the Center will enhance Ohio State's reputation as a leader in software innovation and provide our students with the skills and experiences they need to succeed in an increasingly digital world.

In conclusion, I fully endorse the formal establishment of the Center for Software Innovation and am confident that it will make a significant and lasting impact on both the university and the broader community.

Sincerely,

DocuSigned by:

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Trevor Brown, PhD
Dean, John Glenn College of Public Affairs
Interim Dean, Fisher College of Business

College of Engineering

Computer Science and Engineering

395 Dreese Laboratories
2015 Neil Avenue
Columbus OH 43215

614-292-6377 Phone

THE OHIO STATE UNIVERSITY

Aug 23, 2024

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

RE: Proposal to establish The Center for Software Innovation

I am writing to express my strong support for the formal establishment of the Center for Software Innovation at The Ohio State University. As a researcher and educator who is passionate about real-world impact, I am excited about the Center's mission to drive software innovation across multiple disciplines. Given the rapid developments in computer science, software, and AI, this initiative represents a crucial step for Ohio State, paving the way for global leadership in these fields. The Center has the potential to provide a dedicated platform for interdisciplinary collaboration, amplifying Ohio State's expertise in every discipline through software.

The Center's objectives also resonate deeply with my work and the goals of the OHI/O Program, which I co-founded to foster a tech culture through hackathons and informal learning. The synergy between the OHI/O Program and the Center for Software Innovation will open new opportunities for our students to engage in practical projects that bridge the gap between theoretical knowledge and industry practice.

I am particularly enthusiastic about the potential for the Center to support the translation of research to impact. My experiences as founder and CEO of Mobikit, and post-acquisition as Vice President of Data Science at Azuga (Bridgestone), highlighted the need for a robust support infrastructure to bridge academic research with real-world applications. The Center for Software Innovation's plans to support such endeavors will be instrumental in driving innovation and economic growth in our region.

In addition to my ongoing research, I look forward to supporting the Center through teaching courses that are directly related to its focus areas. These courses will equip students with the skills and knowledge needed to innovate in the rapidly evolving field of software development. Drawing on my professional experience as a startup founder and researcher, I am passionate about preparing our students to become leaders in software innovation by integrating the latest research and industry practices into the curriculum.

After over a decade of research and teaching at Ohio State, I view the Center for Software Innovation as a much-needed initiative that addresses a significant gap in our knowledge enterprise. I am confident that it will become a point of pride for the university and am excited to support it through my research, teaching, and collaborations.

Arnab Nandi
Associate Professor, Computer Science & Engineering
The Ohio State University
614-292-6377 | arnab@arnab.org | http://arnab.org

Arnab is an Associate Professor in the Department of Computer Science and Engineering at The Ohio State University. Arnab's work focuses on bridging human interaction and data infrastructure, spanning areas of database systems, human-in-the-loop data analytics, and next-generation query interfaces. Arnab is a recipient of the US National Science Foundation's CAREER Award, a Google Faculty Research Award, and IEEE's TCDE Early Career Award for his contributions towards user-focused data interaction. Closer to home, Arnab received the University's Alumni Award for Distinguished Teaching, and the Early Career Innovator of the Year Award, and the College of Engineering's Innovators Award. At Ohio State, he co-founded the OHI/O Program, that fosters a tech culture through hackathons and informal learning, and The STEAM Factory, an interdisciplinary research and collaboration network. Most recently, Arnab was founder and CEO of Mobikit, a connected vehicles data analytics startup that was acquired by Azuga Inc., a Bridgestone company, where he served as Vice President of Data Science. Arnab holds a PhD in Computer Science & Engineering from the University of Michigan.

August 27, 2024

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

RE: Center for Software Innovation

To the Council on Academic Affairs:

I am writing to express my strong support for the formal establishment of the Center for Software Innovation at The Ohio State University. As a member of the center's advisory board, I have been deeply impressed by its mission and the potential it holds to transform the future of technology and entrepreneurship in the region.

Throughout my career, I have had the privilege of being involved in various facets of the technology industry—from co-founding and leading startups to investing in next-generation companies. My experience has shown me the critical importance of innovation, education, and community in driving technological advancement and economic growth. The Center for Software Innovation embodies these principles, creating a vibrant ecosystem where students, entrepreneurs, and industry leaders can collaborate to develop the next wave of software solutions.

The center's focus on cutting-edge education and interdisciplinary collaboration is precisely what is needed to prepare our future leaders for the challenges of the digital age. By fostering an environment that encourages experimentation, creativity, and the application of new technologies, the center is poised to make a significant impact on both Ohio State and the broader community.

I am excited to continue supporting the center's growth and look forward to seeing the innovative contributions it will make in the years to come.

Sincerely,

Signed by:

Andy Jenks
01C8698750A2496...

Andy Jenks
Partner,
Drive Capital

THE OHIO STATE UNIVERSITY

August 21, 2024

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

To Whom It May Concern,

I am writing to express my continued and enthusiastic support for the formal establishment of the Center for Software Innovation at The Ohio State University. As the former Dean of the Fisher College of Business, I had the privilege of playing a key role in shaping the strategy and vision of the Center during its provisional phase, and I remain deeply committed to its success.

During my tenure as Dean, I witnessed firsthand the importance of this Center in addressing the growing demand for innovative software solutions across various industries. The Center was conceived as a hub for interdisciplinary collaboration, bringing together expertise from business, engineering, and computer science to foster innovation and drive economic impact. I am proud of the progress we made in establishing the Center's foundations, and I am confident that its full establishment will further enhance Ohio State's leadership in this critical area.

Although I no longer serve as Dean, my commitment to the Center's mission remains unwavering. I am confident that the Center will continue to provide invaluable opportunities for our students, faculty, and industry partners, and I look forward to supporting its growth and success in any way I can.

In conclusion, I fully endorse the formal establishment of the Center for Software Innovation and am eager to see the continued impact it will have on both the university and the broader community.

Sincerely,

DocuSigned by:

Anil K Makhija

CA97CC0F05934CB…

Anil Makhija, PhD
Dean's Distinguished Professor of Finance
Fisher College of Business

August 23, 2024

The Office of Academic Affairs
University Square South
15 E. 15th Avenue
Columbus, Ohio 43210

Re: Proposal to establish the Center for Software Innovation

To whom it may concern,

I am writing to express my enthusiastic support for formally establishing the Center for Software Innovation at The Ohio State University. As the Dean of the College of Engineering, I recognize the immense potential of such a center to catalyze innovation and foster collaboration across multiple disciplines, particularly within the fields of engineering and computer science.

The Center for Software Innovation represents a significant opportunity for Ohio State to position itself at the forefront of technological advancement. The Center will serve as a hub for developing cutting-edge software solutions that address real-world challenges by bringing together faculty, students, and industry partners. The center's interdisciplinary nature aligns perfectly with our vision for the College of Engineering, where we emphasize collaboration, creativity, and impact.

Many of our faculty and students will be directly involved with the Center, contributing their expertise in software engineering, data analytics, human-computer interaction, and cybersecurity. The Center's mission to drive software innovation through research, education, and industry partnerships will provide our students with unique opportunities to engage in hands-on projects that prepare them for leadership roles in the tech industry. Moreover, the Center will serve as a valuable resource for our faculty, enabling them to collaborate on groundbreaking research that pushes the boundaries of what is possible in software development.

As a leader in robotics and artificial intelligence, I am particularly excited about the potential for the Center to explore new frontiers in these areas. The integration of AI, machine learning, and software engineering will be critical to addressing the complex challenges of the future, and the Center for Software Innovation is well-positioned to lead these efforts.

In conclusion, I fully support establishing the Center for Software Innovation. I am confident it will be transformative in advancing Ohio State's mission of excellence in education, research, and innovation.

Sincerely,

Ayanna Howard, PhD
Dean, College of Engineering
Monte Ahuja Endowed Dean's Chair

Office of Academic Affairs
University Square South
15 E. 15th Ave.
Columbus, OH 43201

RE: Proposal to establish The Center for Software Innovation

I am writing to express my support for the formal establishment of the Center for Software Innovation at The Ohio State University. As a Professor of Strategy at the Fisher College of Business, a founding co-director of the OSU Food Innovation Center, a founding academic director of the OSU Center for Innovation, and a founding member and the Academic Director of the Integrated Business and Engineering (IBE) Honors Program, I recognize the vital role that innovative software solutions play in driving business success and economic growth.

The Center for Software Innovation is poised to become a critical hub for interdisciplinary research and collaboration, bringing together academic experts from various fields as well as business practitioners to address some of the most pressing challenges in software development and deployment. More specifically, I believe the Center for Software Innovation may contribute to the academic research and teaching mission of OSU by highlighting the unique challenges associated with software development (as compared to other technologies), developing the tools and knowledge needed in an increasingly digital world, and disseminating this knowledge into classroom teaching. By fostering an environment where business, engineering, and computer science intersect, the Center promises to provide a rigorous approach to software development that will benefit students, academic faculty, and our community.

The provisional status of the Center for Software Innovation has suggested its potential, and I am confident that formalizing its establishment will significantly enhance our university's research capabilities and its reputation as a leader in innovation. I have been impressed by the founding executive director, endorse this proposal, and look forward to the positive contributions the center will make to our academic community and beyond.

Michael Leiblein, Ph.D.
Professor of Strategic Management

Exhibit B
Revision to Concentration Track Proposal
Integrated Business & Engineering – Software Innovation

Proposal
Revised Track in the Integrated Business & Engineering (IBE) Honors Program entitled Software Innovation
June 5, 2023
Revised January 30, 2025

1. **Name:** Revised Track in the IBE: Software Innovation
    Initial Start Date: AU23
    Unit / College: College of Engineering & Fisher College of Business

2. **Rationale**

Describe the rationale/purpose of the track.

The proposed Software Innovation track in the Integrated Business & Engineering Honors program (IBE-SI) promises to prepare Ohio State University students to lead the world's software future. The need is urgent, as the growth in software products and services creates demand for a workforce skilled in software business and engineering. The U.S. software industry is projected to grow at a compound annual rate of 4.12% from 2024 to 2029.[1] Global growth is somewhat higher, with a projected compound annual growth rate of 5.01% over this period. Both numbers exceed typical labor market inflation levels, which historically fluctuate between 2% to 4%.[2]

Perhaps more importantly, the nature of the software industry creates distinct business and technical challenges that benefit by linking and integrating business and computer science engineering training. For example, adopting new digital solutions implies increasing vulnerability to cyber threats and challenges maintaining interoperability across multiple digital and analog systems. Both issues imply business challenges to coordinate change efforts. Implementing new "digital" software products and services implies significant initial costs in hardware and infrastructure upgrades that often lead to temporary declines in productivity.[3] At the same time, digital software products and services often create "network effects, " leading to market concentration and atypical competitive dynamics. For instance, the development of software architectures or platforms that facilitate and govern matches between groups of buyers, sellers, and complementary providers creates different sources of

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[1] See https://www.statista.com/outlook/tmo/software/united-states (accessed 11/18/2024).
[2] https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr1126.pdf?sc_lang=en
[3] https://www.brookings.edu/articles/how-digital-transformation-is-driving-economic-change/ (accessed 11/18/2024).

competition (and regulatory concerns) than in "standard" competitive environments. Again, these changes imply a need to guide both economic and technological changes.

The software industry's unique challenges require skills not emphasized in many existing business or engineering programs. Thus, as noted in the business press, there are likely economic and career benefits to customizing education to include additional business expertise and coding skills (e.g., Korudki, 2023; Bogost, 2024).[4] On the business side of the program, this implies adapting and supplementing academically rigorous foundational courses in finance, management, marketing, operations, and strategy to help students develop the skills to deal with the unique challenges imposed in the software industry. A similar exercise will occur on the engineering side of the program with adaptations made to both the first-year IBE cornerstone project course as well as the new IBE-SI senior capstone course. Within these engineering IBE-SI courses, project prompts and technical content will be updated to reflect software applications.

The revised program will substantively benefit from an affiliation with the new Center for Software Innovation (funded by the $110M gift from the Timashev Family Foundation). The proposed IBE-SI track will serve as the pilot academic arm of the Center and exist as a multi-modal cross-college interdisciplinary program for undergraduate students to gain critical business and computer science skills. Moreover, the partnership with the Center will support hiring new faculty in both the Fisher College of Business and the College of Engineering to engage with IBE-SI students and the Center for Software Innovation.

Beyond the core of classroom learning, the partnership with the Center for Software Innovation will provide students with co-curricular and extra-curricular opportunities. These opportunities include internships and exposure to industry leaders and entrepreneurs, enabling Ohio State to prepare students for careers in this space. Additionally, through the Timashev Family Foundation gift, the program will have access to programmatic funding to offer experiential learning opportunities and potentially scholarships. Beyond mere cohort experiences, the combination of rigorous academic courses and pragmatic and powerful interactions with practitioners promises to foster a dialectic between the deep insights provided by academic frameworks and the realities highlighted by practitioners.

The Fisher College of Business and the College of Engineering will lead the program development for the IBE-SI track in collaboration with the Center for Software Innovation. The course directors will model the curriculum from the successful Integrated Business & Engineering (IBE) honors program (see https://engineering.osu.edu/integrated-business-engineering-honors-program and https://fisher.osu.edu/undergraduate/academics/honors/ibe).

Describe how assessment data has served as an impetus for the proposal.

This proposal draws on application and enrollment data from the Integrated Business & Engineering (IBE) Honors program. The IBE program has generated significant demand since its formation in 2014—

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[4] See Korducki (2023). So Much for 'Learn to Code.' The Atlantic. September 26, 2023. See Bogost (2024). Universities have a computer science problem. March 19, 2024.

averaging about 200 applications annually from students already accepted into the honors programs from these colleges. The composition of existing applications is noteworthy—several students indicate they are applying to Ohio State because of the IBE program. This new IBE-SI track will draw from the honors business and engineering applicant pool. Like the IBE program, it may also attract additional student applications.

Industry partners have responded to the IBE program by vigorously recruiting IBE graduates. The program directors are unaware of an IBE graduate without an offer of employment at the time of graduation. Since the program's inception, the starting salaries of IBE students have been 10-25% higher than the starting salaries of the general business or engineering student population and (in the only year where data is available) higher than every established honors program in the college except for the Fisher Futures program.

The historical outcomes from the core IBE program suggest OSU will be able to attract students to fill the IBE-SI program at a maximum student capacity of 36. In addition to the rigorous academic content, the Timashev Foundation funding will provide experiential learning to supplement course work, and the meaningful extra-curricular programs associated with the program will enhance the career prospects of IBE-SI graduates seeking to enter the workforce.

Identify any unique characteristics or resources that make it particularly appropriate for Ohio State to offer the proposed new track.

Modeled after one of Ohio State's most innovative programs, The Integrated Business & Engineering (IBE) Honors program, the IBE-SI track will leverage the existing course structure and faculty leads to deliver an excellent educational experience.

The OSU IBE program was designed to provide students with "exposure to prominent business and engineering problem formulation and solution frameworks as well as experience applying these frameworks in multidisciplinary teams" (OSU IBE Honors proposal, 2014). The program recognized the need for individuals capable of devising economically and technologically sound solutions to real-world problems, identified differences in the types of problems addressed by the business and engineering fields,[5] and proposed a balanced program of study that provided exposure to foundational facts and frameworks alongside the capabilities and skills of practice. The IBE program fosters interdisciplinary learning across the business and engineering disciplines, as well as across academics and practitioners.

The proposed IBE-SI program curriculum emphasizes an interdisciplinary course sequence focusing on the software industry. The Fisher College of Business will provide rigorous finance, management, marketing, and operations courses. After carefully reviewing and pruning topics in these courses, the college has outlined courses that will cover foundational topics in each functional area and topics customized to address primary challenges posed in the software industry. For example, in addition to foundational issues in finance, the course will include emerging issues in digital and entrepreneurial

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[5] Business problems may be defined as ambiguous and ill-defined with "fuzzy" choice sets and unclear decision criteria. This leads to a search for coherent solutions using math _and_ human agency. By contrast, many engineering problems may be complex but tend to be well-specified with clear decision criteria. This leads to a search for precise solutions using math _and_ optimization.

finance. In addition to foundational issues in culture, decision-making, and leadership, the management course will build on an existing MBA elective that addresses topics associated with the design of software platforms and the competitive implications of these decisions. In addition to foundational marketing topics such as consumer behavior and the selection of marketing mix components (advertising, channels, product, pricing, etc.), the customized portion of the course will address topics such as pricing models in software, digital marketing campaigns in software, and customer feedback and sales enablement tools in software. In addition to foundational operations topics such as capacity planning, inventory management, and constraint/lean management principles, the operations course will include topics such as supply chain issues in the digital environment, tools for managing the new product development process (e.g., stage gate, agile, and waterfall processes), and prototyping and forecasting best practices.

On the engineering side, the IBE-SI students will be supported by dedicated faculty to teach the first-year IBE-SI cornerstone project course as well as the new IBE-SI senior capstone. Additional support through industrial connections and mentorship is being provided by the new Center for Software Innovation.

The academic content from the Colleges of Business and Engineering will be supplemented with co- and extra-curricular experiential learning, internships, professional development, and networking activities. The objective of these activities is three-fold. One objective is to allow students to gain experience applying the rigorous academic frameworks and tools from their coursework. A second objective is to enable students to question the assumptions underlying these frameworks and tools—often by working with clinical faculty familiar with the assumptions and techniques of practice. A third objective is to create co- and extra-curricular activities that help students build camaraderie as well as attitudes, beliefs, and values associated with integrity.

Cite the benefits for students, the institution, and the region or state.

Ohio State is one of a few universities that offer this type of interdisciplinary educational programming. The University of California Berkeley (since 2017), Georgia Tech (unknown initial year), the University of Illinois (since 2017), Lehigh (since 1998), and Purdue (since 2021) offer similar "integrated business and engineering" programs.[6] This program raises Ohio State's visibility among companies looking for talent in this region and/or looking to establish operations in Ohio.

3.   **Relationship to Other Programs / Benchmarking**

Describe current major and minor programs in the department(s) and how they relate to the proposed track.

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[6] The University of Pennsylvania reports a program started in 1977, Rensselaer Polytechnic Institute reports a program started in 1987 (with ties to the 1930s), MIT reports a program starting in 1988, and Stanford reports a program starting in 2009.

The nearest comparable offerings for students are the IBE-Core track where Engineering Majors can pursue a Business Minor and Business Majors can pursue an Engineering Sciences minor. Another comparable offering is for Engineering majors to independently pursue a Business minor and Business majors to independently pursue a Computer Science minor. However, these paths do not offer the customized academic content, extracurricular opportunities, networking, professional development opportunities, or the cohort model (small class sizes, etc.) provided by the IBE-Core and IBE-SI tracks.

Identify any overlaps with other programs or departments within the university. Append letters of concurrence or objection from related units.

None.

Indicate whether this track within the IBE program was submitted for approval previously. Explain at what stage and why that proposal was not approved or was withdrawn.

This proposal for the IBE Software Innovation program was first submitted and approved by OAA in Summer 2023.

4. **Student Enrollment**

Indicate the number of students you anticipate will take this track.

There are good reasons to believe that the IBE-SI track will fill a complete honors cohort of *36 students per year,* *with roughly half from the College of Business and half from the College of Engineering*. This expectation is based on demand for the existing IBE-Core program and the overwhelming interest in computer science and software-related majors. In addition, the IBE program attracted and accepted 36 additional IBE incoming first-year students (72 students total) for the 2023 and 2024 Autumn terms. These additional students will be transferred into the IBE-SI track upon approval.

If approved, admission to the IBE-Core and IBE-SI tracks will occur using the following process. Students admitted to the Honors programs in the OSU College of Business or Engineering will be invited to apply to the IBE program. Students will be asked to state a preference for admission to the IBE-Core or the IBE-SI track. Applicants will also be asked to respond to several prompts to indicate their leadership experience, interest in IBE-SI (or IBE-Core), and potential contributions to the IBE-SI or IBE-Core cohort. Application materials are reviewed and scored. Top applicants will be offered admission, and a waitlist will be maintained. The program directors will aim to fill each track with equal numbers of business and engineering students; however, the IBE program has historically received greater interest from engineering majors than business majors. Since its inception, the IBE program has included at least 12 business students (33% of all admissions) in each cohort.

5. **Curricular Requirements**

As with the IBE-Core program, IBE-SI students will pursue the honors program alongside each college's traditional business and engineering majors. The IBE-SI students will pursue a core honors course sequence, as shown in Figure 1 and described below. All core courses in Figure 1 and Section 1 are taken together as a cohort. No changes to the learning outcomes in these courses are proposed, but the topics used to attain the outcomes will be tailored to each track; for example, company-sponsored projects for the new IBE-SI Capstone will be primarily sourced from software companies. The capstone courses for IBE-SI will be developed as honors versions of the CSE capstone design (proposed as CSE 5917H and CSE 5918H) instead of ENGR 5901-02 for the regular IBE track, and will be co-taught by business and engineering faculty.

Figure 1. Core IBE Curriculum Structure.

(1) Six IBE core courses: ENGR 1281H (First-Year Engineering Practicum), ENGR 1282H (IBE Cornerstone), BUSMHR 2400H (Competitive Strategy Seminar), BUSMHR 3400H (Technology Strategy & Innovation Management Seminar), ENGR-CSE 5917H/5918H (Two-Semester Honors Computer Science & Engineering Senior Capstone) with credit hours as noted:
   a. ENGR 1281.01H First-Year Engineering Honors; 5 credit hours
   b. ENGR 1282.03H IBE Cornerstone; 3 credit hours
   c. BUSMHR 2400H; 1 credit hour (2 hours)
   d. BUSMHR 3400H; 1 credit hour (2 hours)
   e. CSE 5916H IBE-SI Capstone; 3 credit hours, co-taught
   f. CSE 5917H IBE-SI Capstone; 3 credit hours, co-taught

For engineering students, the first-year and capstone courses overlap with the curricular requirements of their major.

The fundamental curricular changes are within the *minor course offerings,* as noted in Sections 2-4. All courses are 3-credit hour courses unless otherwise noted. (For reference, BUSFIN is Business Finance,

BUSMHR is Business Management, BUSML is Business Marketing & Logistics, BUSOBA is Business Operations & Business Analytics, ENGR CSE is Engineering Computer Science Engineering.)

(1) IBE-SI Business Majors will earn a Computer Science Minor
    a. Seven required courses:
        i. (4) from Business: BUSFIN 3220H* Business Finance, BUSMHR 3200H* Platform Management, BUSOBA 3230H* Principles of Operations and Product Development, BUSML 4242H Software Marketing. [7] Note: All 4 will substitute for courses in their business core.
        ii. (3) from Engineering: ENGR CSE2122 Programing (Data Structures) or ENGR CSE 2123 Programming (Data Structures; Java Based), and ENGR CSE 2321 Algorithms, and ENGR CSE 3430 Systems 1.5 (4 credit hours).

(2) IBE-SI Engineering Majors will earn a Business Minor
    a. Five required courses: AMIS 2000 Foundations of Accounting, BUSFIN 3220H* Business Finance, BUSMHR 3200H* Platform Management, BUSOBA 3230H* Principles of Operations and Product Development, BUSML 4242H Software Marketing.

Upon completing these requirements along with those of their BS degree program, students graduate with "Honors in Integrated Business and Engineering" on their diploma and either a minor in Business or a minor in Computer Science.

6. Honors Requirements

The new IBE-SI track will meet the updated Honors Program Standards in the following ways:

(1) Offer the standard ***First-Year Survey with Honors Modules*** in addition to a student-led-student-run IBE First-Year Development Program (FDP) offered each Autumn semester. The FPD intends to introduce the extent and opportunities of IBE to incoming first-year students. This program is outside of class and voluntary but supplements the traditional survey course as it offers a near-peer mentor experience for students.

(2) ***18 credit hours of Honors quality courses are required.*** Many of these credits are obtained via the "IBE-SI Core Courses" including ENGR 1281H (5 cr), ENGR 1282H (3 cr), BUS 2400H (1 cr), BUS 3400H (1 cr), ENGR 5917H (3 cr), ENGR 5918H (3cr) for a total of 16 honors credits. In addition, all four business courses will be Honors courses for an additional 12 credit hours.

(3) Experiential learning via the new IBE Treks (company- or alumni-sponsored visits to explore career paths or sponsored team case study competitions), internships, and co-ops will be offered for students to opt in to support their ***ePortfolio requirement***.

(4) ***Honors Reflection*** will be achieved via the mandatory 5916H / 5917H 2-semester IBE CSE Honors Capstone sequence. In this course, students work in teams on company sponsored real-world projects to solve problems, discovery opportunity and create value. The course leverages

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[7] The asterisks indicate that these courses will be new. The current course numbers reflect the courses they are based on, but new courses will be developed for this program. Each will be an enhanced version of the business core courses with additional content focused on the software context.

previous coursework, IBE Trek experiences, along with internships and co-ops and personal experiences.

Appendix: Description of Four New Business Courses

BUSFIN 3220H*: Finance proposes a three-part course. The first part includes classic financial topics like capital budgeting, building proforma projections, and risk. For example, in addition to foundational issues in finance, the course will include emerging issues in digital and entrepreneurial finance.

BUSMHR 3200H*: Management proposes a three-part course. The first part addresses classic topics in organizational behavior, including decision-making. The second part builds on an existing MBA course to describe competition in the digital economy (e.g., the design and management of platform business models and how these models affect competition). The third part returns to classic organizational behavior and human resource issues such as culture, leadership, and morale in a digital context.

BUSML 4242H: Marketing proposes a software marketing course. This course will address foundational marketing and customized digital market topics. The foundational marketing topics include consumer behavior, selection of marketing mix components (advertising, channels, product, pricing, etc.), and customization to the digital context. The customized portion of the course will address topics such as pricing models in software, digital marketing campaigns in software, and customer feedback and sales enablement tools in software.

BUSOBA 3230H*: Operations proposes an operations principles and product development course. This course will address foundational operations and product development topics customized to the digital environment. The foundational topics include quality management, capacity planning, inventory management, and constraint/lean management principles. The product development in the digital environment component includes types of digital innovations, collaboration, and supply chain issues in the digital environment, tools for managing the new product development process (e.g., stage gate, agile, and waterfall processes), and prototyping and forecasting best practices.