Report of the Dean's Commission on the iConsultancy

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Introduction

In Spring 2023, the Dean's Commission on the iConsultancy was tasked with providing a strategic vision for the next steps in the iConsultancy's development. Dean Marzullo wrote, "The iConsultancy has become the keystone to our programs. By providing opportunities for experiential education for our students, it has proven invaluable in both core education and preparing for post-graduation opportunities.... We're now ready to take the iConsultancy from a venture-funded startup activity to the next stage." This report summarizes our research and findings, and it provides a set of preliminary suggestions as a starting point for the iConsultancy's new leadership.

Background

The iConsultancy Experiential Learning Program oversees the experiential learning projects and courses that are a hallmark of iSchool programs. It was founded in January 2019, running its first 23 projects in the Fall of 2019. During academic year 2022-23, it served approximately 600 students, 110 clients and 15 instructors, with 130 projects. The iConsultancy is recognized across campus as a leader in providing experiential learning at scale - it is the largest (possibly the only) such program on campus. The iConsultancy served as a model for the Center for Community Engagement.

The iConsultancy is expanding the range and impact of experiential learning available to iSchool students beyond InfoSci, HCIM and MIM Capstones. It is preparing to support Capstones for the new programs: Social Data Science and Information Design and Technology. It already supplies projects for selected non-Capstone courses (User Experience Research Methods and, starting Spring 2023, Information Risk Management) and has opportunities to expand into the MLIS program. There are more courses where this could be done, especially at Shady Grove. Other forms of experiential learning like case studies can be integrated into courses. It has piloted a promising cross-disciplinary, cross-institution collaboration with Salisbury University's Computer Science program that could provide pipelines for the iSchool's HCIM and MIM programs.

As the iConsultancy enters its fourth year, it is on the cusp of transitioning from a startup to an established program unit. We need to update the organization's staffing, structure and procedures to support this transition. We need to build our strategic relationships with partners to increase the number of return engagements; improve coordination with Development; update our financial and staffing models; and build a sustainable evaluation capability. We additionally need to assess new experiential learning models and opportunities to continue providing students with exemplary real world experiences.

Commission charge

In February, 2023, Dean Marzullo charged this commission to address the following questions:

- What are the vision and goals for the iConsultancy over the next three years?
- What is the steady-state staffing needed for this to serve all of our demands for capstone projects?
- Are there ways to reduce or reuse capstone projects, or other efficiency measures, with the goal to offer the same quality of capstone experience with lower overhead?
- What is a financial model for the future implementation of iConsultancy? Note that while making the iConsultancy a revenue center may not be possible, we would like to find ways to offset the costs with external funds.
- Given answers to the above questions, what is a three-year plan for achieving the next stage of iConsultancy? This plan should include milestones for staffing, for income, and for the growth of the need for capstones. The plan should cover the time period of Summer 2023 to Summer 2026.

Approach & Methods

Initial discussion and questions

The commission first met in February, and decided upon the research, analysis and synthesis activities.

Research activities

Research activities included:

- Briefing by iC staff
- Survey of iSchool faculty, staff & students
- Interview selected clients
- Environmental scan of comparable programs
- Invite VCU colleague to share their model & experience
- Ad hoc conversations

Analysis and synthesis

These activities included:

- Identify audiences and stakeholders current and desired
- Review research findings
- Review practice areas (the kinds of projects we do), aligned with program & course learning outcomes
- Map iConsultancy contributions to college and university strategic plans
- Efficienciency Explore ways to reduce overhead while maintaining the same quality of capstone experience
- Draft 3-year vision, strategic goals, objectives and success measures

New development: Gift reviews by ORA

As we were conducting our research, we learned that in FY 23 there was a new process established by the University for all research related gifts. These gifts must now be routed through the Office for Research Administration. This could potentially impact our funding and create longer time lines until the gift reaches the iConsultancy account.

Findings

Stakeholders

Stakeholders bring divergent needs, contributions, motivations, expectations, conceptual understandings and even language and terminology. One essential function of the iConsultancy is to translate between them and negotiate compelling beneficial outcomes for all stakeholders. This is critical for long-term success and sustainability.

The primary stakeholders are:

• Students - Undergraduate and Masters

- Instructors and teaching assistants (TAs)
- University
- Partner/clients

University stakeholders include:

- iSchool leadership academic and financial
- UMD Center for Community Engagement
- Other units and organizations, eg. Experiential Learning Working Group, TLTC, etc.

Partner/clients include:

- For profit
 - Enterprise
 - Small/medium businesses
 - Startup/Entrepreneurial
- Non-governmental organizations (NGOs)
 - Large national/international
 - Small/medium national/international
 - Local community-based
- Government
 - Federal
 - State
 - Local
- University units

The target mix of clients is: 35% for-profits; 45% NGOs; 20% government and University. See the projections below.

Survey results

In spring 2023, we fielded two studies via Google Forms. The first targeted the program directors, assistant directors, managers, and coordinators for: 1) BS in Information Science at College Park; 2) BS in Information Science at Shady Grove; 3) BS in Social Data Science; 4) BA in Technology and Information Design; 5) MLIS; 6) MIM; 7) MS in Human-Computer Interaction; 8) MPS in Game, Entertainment, and Media Analytics; 9) MPS in Data Journalism; and 10) PhD in Information Studies¹. The second targeted all INFO faculty (full-time and part-time).² Neither survey received sufficient responses to conduct inferential statistics on the corpus, but the team was able to draw out a number of common sources of both praise and concern:

• Praise:

¹ The first survey, administered via Google forms, included three long-form response questions: 1) How does the iConsultancy support your program goals?; 2) Is there an unmet need in your program that the iConsultancy could be useful for?; 3) Do you have new ideas for the iConsultancy?.

² The second survey, administered via Google forms, included two long-form response questions: 1) If you have experience working with the iConsultancy, what feedback do you have?; and 2) Do you have unmet needs or new ideas that we should consider in planning for future iConsultancy operations?

- Projects create a "professional sandbox," which is integral to preparing students for the workforce;
- Faculty value the work the iConsultancy does to help ensure student projects do not fail (though some would like to see this capacity increased);
- Faculty have worked well one-on-one with iConsultancy faculty and staff to develop stronger courses (e.g. INST380 Do Good Now with Beth Bonsignore, INST756 Information Risk Management with Ido Sivan-Sevilla);
- Concerns:
 - Faculty have raised concerns about the ability of undergraduate students (in particular) to produce professional-quality work, including concerns about students' presentation, communication, and prototyping and development skills.

Client interview

We interviewed one of the iConsultancy's past clients, Shelby Kemp of Royal Farms. Royal Farms participated in two projects - one with an HCIM Capstone team, and one with a team from INST710 User Experience Research. She commented that the quality of work varied depending on the students. It would be valuable to achieve more consistent outcomes for external clients.

Comparable programs

We compiled a list of comparable programs. This list may be a useful starting point for a comprehensive comparison and analysis.

Carnegie Mellon University, Capstones:

https://www.heinz.cmu.edu/employers-partners/propose-project

Cornell University, Master of Professional Studies in Applied Statistics projects are often sponsored by an outside company: <u>https://stat.cornell.edu/academics/mps-projects</u>

Drexel University, Corporate Partners Program: <u>https://drexel.edu/cci/partnerships/corporate/</u>

Georgia Tech, Corporate Affiliates Program: https://www.cc.gatech.edu/about/support-the-college/cap

Indiana University at Bloomington, not sure if this is exactly like iConsultancy, but there is a page about recruiting current students: <u>https://luddy.indiana.edu/career-services/hire-our-students/recruit-on-campus.html</u>

Indiana University, at IUPUI: https://luddy.iupui.edu/careers/employers/

Penn State University, Corporate Field Trips, not exactly iConsultancy-like, but still including: <u>https://www.ist.psu.edu/current/careers/programs</u>

Pratt Institute: https://www.pratt.edu/information/experiential-learning-opportunities/

Rochester Institute of Technology, Co-op Program: https://www.rit.edu/careerservices/employers/rit-co-op-program

Syracuse University, option to hire students as a Career Services Partner: <u>https://ischool.syr.edu/alumni-and-friends/corporate-partnerships/</u>

University of British Columbia, recruiting program for employers: <u>https://ischool.ubc.ca/about/recruit-a-student/</u>

University of Illinois Urbana-Champaign, Business Intelligence Group: https://ischool.illinois.edu/engage/BIG

University of Michigan, Client Based Courses and Programs: <u>https://www.si.umich.edu/host-student-project</u>

University of Pittsburgh, iServe: https://www.sci.pitt.edu/iserve

University of Texas at Austin, Professional Experience Project (capstone): <u>https://www.ischool.utexas.edu/careers/employers#PEP</u>

University of Toronto, Co-op Experiential Learning option: <u>https://ischool.utoronto.ca/current-students/careers/co-op/</u>

University of Washington, Capstone program: https://ischool.uw.edu/capstone

University of Wisconsin, Madison, Practicum information: <u>https://ischool.wisc.edu/post-a-job-or-internship/information-for-practicum-supervisors/</u>

University of Wisconsin, Milwaukee: nonprof-IT: https://uwm.edu/informationstudies/community-engagement/nonprof-it/

Wayne State University, practicum placement info: https://sis.wayne.edu/students/classes/practicum

Notes from VCU experiential learning venture

We spoke with Peter Aiken, who is an associate professor of Information Systems at Virginia Commonwealth University's School of Business. One of Peter's initiatives included the launch of an independent company, Data Blueprint, as a data management consulting firm providing data strategy, data governance, data architecture, and training solutions to its clients. While the company was a separate entity from the university, there was a formal association between the university and the company; VCU spun off Data Blueprint to capitalize on disclosed intellectual property.³

A key feature of the company was its staffing model. While the senior leadership and administrative teams were staffed with industry professionals, the project teams performing the work and, in some cases, contributing to the management of projects were largely populated with VCU graduate students. Peter related that the company provided opportunities for students to apply and hone their skills in real client environments. The company also partnered with experts in the data management world to collaborate on Data Blueprint's client projects. Data Blueprint ceased their business operations during the Pandemic. Since then, Peter Aiken has again partnered with VCU (as part owner) of a new initiative titled "Anything Awesome" which will also connect students with external clients.

Contributions to Fearlessly Forward

The iConsultancy is of strategic importance to the College, and to the University, as well. In particular, it is easy to see how the work of the iConsultancy supports the set of goals put forth in *Fearlessly Forward*:

- *Reimagining learning* The iConsultancy, as a center for experiential learning, promotes many of the subgoals related to reimagined learning; e.g. it provides opportunities throughout the educational journey for internships, research experiences, and other applied learning experiences; it coordinates civic-engagement opportunities and encourages students to engage in work to support the public good; and it connects students with local community members, organizations, and businesses.
- *Investing in people and communities* The iConsultancy invests in the capacity of our students to learn, teach, work, lead, and engage in dialogue across difference, by connecting students with local partners and local causes of concern;
- *Partnering to advance the public good* The iConsultancy ensures that UMD is an engaged and responsive partner with the city of College Park, Prince George's County, and the State of Maryland and creates opportunities for students and faculty to become involved in state and local civic engagement;
- *Taking on humanity's grand challenges* iConsultancy projects have addressed all of the UMD Grand Challenges:
 - Access to clean water stormwater runoff projects with local communities, such as Riverdale Park, Hyattsville, and University Park, among others;
 - *Cities of the future* broadband access project for Prince George's County; data analysis project with Prince George's County Memorial Library to visualize home language use in areas around various branches;
 - *Clean and renewable energy* solar market analysis and sustainable energy projects in Prince George's County;

³ See https://en.everybodywiki.com/Peter_Aiken

- *Climate change* tree canopy and carbon footprint projects with local communities, such as College Park, Berwyn Heights, and University Park, among others;
- *Education of the future* environmental literacy programs for Prince George's County and Greenbelt;
- *Ethical and trustworthy technology* ethical AI projects with Montgomery County and the National Aeronautics and Space Administration (NASA);
- *Food insecurity* projects related to food access, community development, and unhoused populations in local communities, such as Riverdale and New Carrollton County; project with a Burkina Faso non-profit, organizing food and nutrition services;
- *Global health* agroforestry project, with Elemental Impact Solutions, looking at environmental impact of small farms across the world; project with Langley Park, engaging immigrant communities to analyze flooding in low-lying local areas in relation to drought in their home countries (the "Global South");
- *Misinformation* National Association of Criminal Defense Lawyers (NACDL) project on disclosing data related to police misconduct;
- *Pandemic preparedness* College project to redesign the InfoSci capstone project to focus on training students to work in virtual teams during the COVID-19 pandemic's shutdown, as well as a project with Langley Park to develop a database of direct services available to immigrants in the area;
- *Social justice* projects with Black Lives Matter and the College Park Youth Advisory Council, among others;
- *Sustainability* transportation and waste reduction projects for local communities, such as College Park, Hyattsville, and Greenbelt, among others.

The iConsultancy has also partnered outside the College, in a number of ways, including, among others: 1) participation in the Office of International Affairs (OIA) project to develop a common set of learning outcomes for international study and to develop opportunities for students to work with international partners; 2) leadership in the campus-wide Experiential Learning Working Group (ELWG); and 3) collaboration with the Partnership for Action Learning in Sustainability (PALS).

Preliminary recommendations for a 3 year plan

This section provides our preliminary thinking on the 3-year plan. It is not final, and is intended as a starting point for additional discussion by the new iConsultancy leadership.

Vision

The iConsultancy Experiential Learning Program will be a nationally recognized leader in experiential learning programming in information and library science and related fields.

Mission

The iConsultancy Experiential Learning Program provides integrated curricular, co-curricular, and extra-curricular opportunities for students at all stages of the educational career to refine their knowledge and skills. By working directly with businesses, governments, NGOs and academics/researchers, students develop technical, metacognitive, and professional skills through solving authentic, meaningful problems and delivering valued outcomes. The iConsultancy helps strengthen civic and community engagement, building bridges to our diverse communities, alumni and philanthropic organizations that yield project and internship opportunities as well as significant financial support, while advancing the social mission of the College.

Strategic goals and objectives

We have identified five potential strategic goals and associated objectives:

- 1. Transition from a startup to an established, sustainable program unit
 - a. Update the organization's staffing, structure and procedures
 - b. Update financial models (including funding/donation structure and SPAC)
 - c. Update contract/agreement model
 - d. Implement sustainable, ongoing evaluation processes
- 2. Improve operations and delivery of existing capstone projects
 - a. Improve client satisfaction to increase the number of return engagements and build brand/awareness
 - b. Develop repeatable projects
- 3. Build strategic relationships with partners, and build financial resources by strategically targetting organizations that can provide funding
 - a. Improve coordination with Development, Careers & External Relations
 - b. Plan with CDO for types of businesses to target for fund raising
 - c. Raise awareness; build a brand
- 4. Assess new experiential learning models and identify opportunities to provide students with additional real world experience
 - a. New programs IDT, SDSc
 - b. New types of engagements live case studies, extracurricular opportunities, independent studies
 - c. New interdisciplinary and cross-functional offerings eg team with Salisbury CS, Smith School, etc.
 - d. Honors programs
- 5. Work with new Center for Community Engagement
 - a. Get involved in CCE set up so we can ensure it meets our needs
 - b. Leverage CCE contacts and resources to gain new partners

Success measures

- Successful learning outcomes will require revising the current learning outcomes to be meaningful to students; will vary by program
- Student and client satisfaction, eg net promoter score
- Financial targets (revenue producing, revenue supporting) aspirational at 3 years

Projections

We have projected the number of projects needed in 3 years for the following programs and courses:

- Info Sci
 - CP capstone
 - SG capstone, selected courses
- IDT capstone, selected courses
- SDC capstone
- HCIM capstone, selected courses
- MIM capstone

We did not include the following, although they have been suggested as potential opportunities or experiential learning, too:

- MLIS capstone (alternative to field study)
- Professional doctorate (is this still happening?)

The following tables capture the current and projected project needs (in 3 years), along with the desired client mix across types and sizes of clients. These include assumptions about the percentage of clients (by type and size) who can/will provide funds, and the amount that they can be asked to provide. These are aspirational, of course, and the university review of donations introduces additional uncertainty, which will need to be addressed. With this in mind, however, the projections illustrate significant funding potential for experiential education.

	IN	IST490	***	INST710		INST775	INFM737		INST756	
Year 3 Projections	Fall	Sprin g	Summ er	Fall	Spring	Year	Fall	Spring	Spring	
# of Projects	66	83	17	1	1	13	1	9	2	
Current Totals		165				13	10		2	192
Current Est. Totals										
# of Projects	60	75	15	1	1	12	1	8	2	
Current Totals		150	•		2	12		9	2	175

Number of projects - current and projected need in 3 years

*** Includes IDT & SDC capstones			
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Target client mix and income - year 3

Client Break	down - Year 3 Goals					
Sector	Sector Breakdown	Sector %	Est. # of Projects	% Paying	Project Rate	Annual Revenue
For Profit	35%		67			\$223,548.75
	Enterprise	10%	19	100%	\$7,500.00	\$144,225.00
	SMB **	15%	29	50%	\$5,500.00	\$79,323.75
	Startup/Entrpreneurial	10%	19	0%	\$5,500.00	\$0.00
NGO	45%		87			\$112,976.25
	Large National/ International	10%	19	75%	\$6,000.00	\$86,535.00
	SMB National/ International *	10%	19	25%	\$5,500.00	\$26,441.25
	Local Community-Based	25%	48	0%	\$5,500.00	\$0.00
Governmen						
t (incl UMD)	20%		38			\$158,647.50
	Federal *	5%	10	100%	\$5,500.00	\$52,882.50
	State *	10%	19	75%	\$5,500.00	\$79,323.75
	Local *	5%	10	50%	\$5,500.00	\$26,441.25
	100%				Total Annual Revenue:	\$495,172.50

* Must use SPAC rate

** Might need to use SPAC rate - depends on contractual agreement

Local engagement breakdown

Local Engagement	% of Projects
Local/State NGO	25%
Local/State Government	15%
Local/State Businesses	10%
Total Local Engagement:	50%

Notes

1. Enterprise - 200+ employees, eg. M&T, Royal Farms, etc. \$X donation for Y projects / year; coordinate with CDO; 5 companies @ \$30k ea

- 2. SMB Standard university T&C; SPAC cost; coordinate with CDO, iLead, marketing/comms; build alumni relationships, local business
- 3. Startup/entrepreneur university, Discovery, local
- 4. NGO/large Have financial resources; require more formal agreements
- 5. NGO/SMB some resources, eg NACDL

Staffing model

Anecdotal evidence from various forms of data collection indicates clearly that the iConsultancy is understaffed for its current responsibilities, let alone the expansions of those responsibilities looming on the horizon. The team brainstormed ideas about how to bring more faculty participation into the administration of the organization and the development of projects.

Discussions brought us to consider a structure that would retain basic factors of the current iConsultancy staffing ([Interim] Director (40% PTK faculty role), Communications Coordinator (20% PTK faculty role), and Academic Program Specialist (100% staff role)). To this core team, we propose the creation of an additional administrative support staff position, and a set of faculty liaison positions, all of which will fit into the 20% portion of the PTK faculty contract that asks individuals to work on special projects for the good of the College.

The iConsultancy leadership has in the past discussed including students in some role as iConsultancy staff, too. For example, Masters students could serve as project managers, either as part of a course, or as a paid position. This is similar to the VCU approach described above.

Faculty liaisons for different topics, such as data science, visual design, and/or IoT, would be responsible for leveraging networks to recruit projects and for assisting the core iConsultancy team in scoping projects and placing them into the curriculum. The core team will meet with the liaisons at least twice per semester to review progress in all areas and generate new ideas for expansion. Figure (what #?) outlines a proposal for structuring this arrangement.

We propose that the College and the iConsultancy team work to develop the infrastructure to support increased engagement from faculty over the course of AY '23-24, with the objective of launching the new structure in AY '24-25. Once the positions are established, the iConsultancy Director will hold monthly meetings with a committee made up of all faculty and staff associated with iConsultancy, as well as the Associate Dean for Academic Affairs, the Director of Undergraduate Operations, the Director of Graduate Operations, the Embedded Career Services Program Director, and the Chief Development Officer.



In-Kind Contributions