

# Final Assessment Report

## Business, Entrepreneurship & Technology (MBET), Business & Entrepreneurship (GDip), Undergraduate Option & Minor

### August 2022

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#### Executive Summary

External reviewers found that the Business, Entrepreneurship & Technology (MBET), Business & Entrepreneurship (GDip), Undergraduate Option & Minor programs delivered by the Conrad School of Entrepreneurship and Business were in good standing.

*The Conrad School of Entrepreneurship and Business provides an innovative and value-added offering at the graduate level (primarily in its flagship MBET program) and at the undergraduate level (primarily in its experiential opportunities and electives). It is delivered in a high-quality way with intense faculty student interaction. Faculty and student cohort relationships, networking, and mentoring begin early in the program and continue far beyond the close of the MBET program.*

A total of 11 recommendations were provided by the reviewers, regarding evaluating the curriculum to optimizing two different student pathways, adding resources for research support, and adding a year of incubation or acceleration support for graduating students. In response, the program created a plan outlining the specific actions proposed to address each recommendation as well as a timeline for implementation. The next cyclical review for this program is scheduled for 2025-2026.

#### Enrollment over the past three years

	MBET	GDip	Minor	Option
2021-2022	93	0	26	9
2020-2021	77	1	21	14
2019-2020	107	1	15	6

Based on Active Students Extract accessed on November 10, 2021

#### Background

In accordance with the University of Waterloo's Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response of the Business, Entrepreneurship & Technology (MBET), Business & Entrepreneurship (GDip), Undergraduate Option & Minor delivered by the Conrad School of Entrepreneurship and Business. A self-study (Volume I, II, III) was submitted to the Associate Vice-President, Academic and Associate Vice-President, Graduate

Studies and Postdoctoral Affairs on August 27, 2020. The self-study (Volume I) presented the program descriptions and learning outcomes, an analytical assessment of the programs, including the data collected from the Canadian Graduate and Professional Student Survey (CGPSS), along with the standard data package prepared by the Office of Institutional Analysis & Planning (IAP). The CVs for each faculty member with a key role in the delivery of the program(s) were included in Volume II of the self-study.

From Volume III, two arm's-length external reviewers were selected by the Associate Vice-President, Academic and Associate Vice-President, Graduate Studies and Postdoctoral Affairs: Dr. Ted Zoller, T.W. Lewis Clinical Professor of Strategy and Entrepreneurship, University of North Carolina, and Dr. Francine Schlosser, Professor, Executive Director, Entrepreneurship, Practice and Innovation Centre, University of Windsor.

Reviewers appraised the self-study documentation and conducted a virtual site visit to the University from November 2, 2020, to November 5, 2020. An internal reviewer from the University of Waterloo, Dr. Suzan Ilcan, Professor of Sociology and Legal Studies, was selected to accompany the external reviewers. The visit included interviews with the Vice-President, Academic & Provost; Associate Vice-President, Academic and Associate Vice-President, Graduate Studies and Postdoctoral Affairs; Dean of the Faculty of Engineering; Faculty of Engineering Associate Dean of Graduate Studies; Director of the School, as well as faculty members, staff, current undergraduate and graduate students, and alumni. The review team also had an opportunity to meet with representatives from the library, and Co-operative Education.

Following the site visit, the external reviewers submitted a report on their findings, with recommendations. Subsequently, the program responded to each recommendation and outlined a plan for implementation of the recommendations. Finally, the Dean responded to the external reviewers' recommendations, and endorsed the plans outlined by the program.

This Final Assessment Report (FAR) is based on information extracted, in many cases verbatim, from the self-study, the external reviewers' report, the program response and the Dean's response. There was a substantial delay in the completion of this FAR due to the impact of the COVID pandemic.

## **Program Characteristics**

### **Graduate programs**

**Master of Business, Entrepreneurship and Technology** (Full-time and Part-time option): The [Master of Business, Entrepreneurship and Technology program](#), draws on the technological, innovative and entrepreneurial energies that are the foundation of the University of Waterloo's reputation to distinguish itself from other universities. Degree Requirements for the MBET program include ten graduate-level (.50 unit weight courses), including a commercialization practicum.

**Non-credit Graduate certificates:** Conrad offers MBET students co-curricular opportunities to complete two optional certifications – a Technical Sales certificate and the academic content required for the Certified Management Consultant (CMC) designation. While these certifications are not required for the MBET degree, almost all students choose to complete them and they often later display these

accomplishments publicly in their LinkedIn profiles alongside their MBET degrees.

**Graduate Diploma in Business and Entrepreneurship:** The Graduate Diploma in Business and Entrepreneurship was designed for ambitious students who want to enhance their degree with practical business skills needed to attract potential employers in the fields of business and entrepreneurship.

### **Undergraduate programs**

**Enterprise Co-op:** A signature program at Waterloo, Enterprise Co-op (E Co-op) allows students to pursue an entrepreneurial co-op work term in which students start their own business while earning a co-op credit. A successful E Co-op term is one where the student has built the foundation of a successful business; understands their market, their customers and competitors. They have developed a value proposition which is clear and can articulate their product/service to any stakeholder.

**Bridging Entrepreneurs to Students:** The Bridging Entrepreneurs to Students (BETS) program is a specialized co-op program established to support two key groups: first year engineering co-op students, and early-stage start-up companies that are often associated with UW but who would not otherwise have the resources to hire full-time staff or co-op students for 16 weeks. The BETS program brings these groups together by pairing teams of two entrepreneurial co-op students with companies for project-based micro placements of 5 weeks each.

**The Minor in Entrepreneurship (core courses BET 100, 320, 310/340):** The minor is designed for students who wish to enhance their academic and technical background with the business skills required to move ideas from concept to commercial, organizational, or social success. It is open to all students in Arts, Environment, Math, Science, and Applied Health Sciences. Engineering students are eligible to pursue the Entrepreneurship Option. The eight courses in the minor are designed to equip students with the skills and domain-specific knowledge they need to pursue their entrepreneurial ambitions, while the entrepreneurial experience presents an opportunity to apply classroom learning in real-time.

**Entrepreneurship Option in Engineering (core courses BET 100, 320, 310/340):** The entrepreneurship option is designed for students who want to explore entrepreneurship by taking courses to enhance their technical background with business skills. The option consists of six academic courses in business and entrepreneurship and an entrepreneurial experience.

Any undergraduate student currently enrolled in an engineering discipline in the Faculty of Engineering can pursue the entrepreneurship option (students in other faculties are eligible to pursue the Minor in Entrepreneurship).

### **Summary of Strengths, Challenges and Weaknesses based on Self-Study**

#### **Strengths:**

Conrad's teaching and classroom experience is highly valued by its students and alumni. Student experience surveys over the last eight years and an alumni survey in 2018 confirm this. The majority

of Conrad's teaching activity is now in elective courses at both the undergraduate and graduate levels. Where Conrad engaged with a total of approximately 70 students through its programming in 2010, that number will be well over 2,500 in 2020. No student has to take these courses; they take them because of Conrad's reputation for outstanding teaching and educational experiences.

Unencumbered by many of the traditional constraints on programming, Conrad is able to deliver a highly flexible, integrated experience in the MBET program. This is facilitated by control over their own classroom space and flexibility and commitment on the part of program faculty.

Conrad strives very deliberately to create and nurture a positive, entrepreneurial culture – a community valued by students, staff and faculty. It has made structural choices – like a balance between tenure and teaching stream faculty, and the design of its new physical space around a hub – that enable enhanced community by most university department standards. Asked in the Fall of 2019 about “why they choose to be at Conrad”, 100% of staff and faculty reported the community and culture were key. Recent staff and faculty engagement surveys conducted by the University revealed results that support Conrad “standing out” where the engagement of its staff and faculty are concerned.

Though Conrad has only relatively recently begun to build its research capacity, its tenure stream faculty are highly productive and widely cited. Conrad has further invested discretionary resources in initiatives to enhance the research community at Conrad with high profile guest speakers, support for visitors, small grants for emerging projects, and an internally funded research excellence chair. Moreover, every SSHRC application made by Conrad faculty in the last five years has been successful.

Although *not* being a traditional business school has its challenges, one of its great advantages is that Conrad recruits people based on being unique, and the people who join them for that reason. This results in an uncommonly robust sense of shared purpose and collegiality.

#### **Challenges/Weaknesses:**

Most of Conrad's weaknesses are connected in some meaningful way to matters of scale. Visibility of programs inside and outside of UW is related to scale. The ability to support and maintain a robust, world-class research enterprise and culture are also in part about scale. Conrad's greatest weakness, therefore, is that it is small. The solution to that problem is straightforward; it needs to grow.

More than 15 years of experience has confirmed that MBET is a niche program. Though Conrad remains hopeful that they can grow from approximately 45 students to 60 in the full-time program, and from intakes of 18 students to 25 in the part-time program, it seems unlikely that they can grow it further. Even their current steady-state enrolments defy the market forces that have prompted top-tier US universities to shutter in-person MBA programs (e.g., Illinois, Purdue).

There is room for growth to meet internal demands at UW. This is demonstrated in part by growing undergraduate elective and graduate elective programming.

Most robust and healthy departments are financially sustained by at least one anchoring undergraduate program. Even major business schools like Ivey at Western University, have increasingly come to rely on growing undergraduate programs to carry their operations financially. Conrad's lack of such a program is a liability at this point. Conrad believes there is room for a unique, Waterloo-branded undergraduate offering in business, entrepreneurship and technology, and they have taken early steps to explore this. Indeed, one of their potential strategic advantages is that they do not have a program at this time, and therefore have few legacy systems to overcome.

The reliable income from an undergraduate program of this type can support faculty hiring, and a larger faculty will better support a new doctoral program (under early review), which in turn can address the size of Conrad's research output. This can further support institution-level objectives for greater intensification of scholarly output in the entrepreneurship and innovation fields.

### **Summary of Key Findings from the External Reviewers**

A total of 11 recommendations were provided by the reviewers, regarding evaluating the curriculum to optimizing two different student pathways, adding resources for research support, and adding a year of incubation or acceleration support for graduating students.

### **Program Response to External Reviewers' Recommendations**

1. The reviewers both consider that Conrad's path in building a distinctive and differentiated School of Entrepreneurship and Business is the highest and best path forward as opposed to a traditional business school. While the conventional form of a business program that most universities follow the accredited business school form, Waterloo is among a unique set of institutions that can pioneer a new model for entrepreneurship programs fused with leading engineering and science training.

#### **Program response**

Conrad is gratified by the reviewer's assessment in this respect. As recommended, it is committed to a differentiated approach in its own programs, to supporting differentiated entrepreneurial business programming across campus, and to resisting the isomorphic pressures in business education except where they clearly determine they are in the interests of students or the institution.

#### **Dean's response**

Having the Conrad School of Entrepreneurship and Business as part of the Faculty of Engineering allows for many unique opportunities for both the faculty and the School, creating a relationship which is mutually beneficial. The blending of tech and entrepreneurship is a hallmark of Waterloo Engineering and is embodied by the Conrad School of Entrepreneurship and Business.

2. The reviewers remain concerned about the resources available to support a tenurable record among assistant professors. Heavy teaching loads and the Conrad school's commitment to high quality teaching is commendable but needs to be carefully considered when recruiting research active junior faculty. Because of the lack of availability of PhD students to serve as graduate assistants working with the junior faculty, assistant professors are at an increased disadvantage relative to those at other research universities. In lieu of the Ph.D. program partnership, the Conrad School

should consider additional resources for research support and perhaps a postdoctoral program to support junior faculty.

### **Program response**

The reviewers identify a legitimate and important concern when they highlight the importance of supporting success for Conrad's junior research faculty, and they make some interesting suggestions worthy of consideration.

The reviewers are correct that Conrad places a high level of importance on excellent teaching. That is part of the differentiation strategy alluded to in point one above, and indeed encouraged by the reviewers more generally. Conrad is mindful that its existence and growth is contingent upon the resources generated by differentiated and excellent academic programs that offer world class education experiences to its students. Delivering on Conrad's brand promise does not allow for compromises in classroom expectations. It is important that all faculty, at all career stages, understand the very high expectations and standards attached to teaching at Conrad. However, they are correct that, given this, Conrad must ensure robust success pathways for junior faculty who can meet tenure standards. Conrad is committed to this.

The reviewers refer to Conrad having heavy teaching loads. Conrad's tenure-stream faculty teach 4 courses a year, which is quite standard for business schools, and for many units across campus at UW. New Conrad faculty are given a teaching release in their first year, and the Director seeks to reduce administrative burdens associated with teaching in a number of ways. These currently include scheduling flexibility, finding ways to minimize course preps, the provision of extra TA time, RA support, research funding, etc. Further, Conrad's leadership is particularly mindful that not all courses make equal demands on instructors. MBET courses, for example, by virtue of programmatic structure and student expectations, often demand a different kind and length of engagement with students than some undergraduate electives. Course sizes also matter, obviously. These matters are all weighed by the Director with junior faculty success in mind.

But the absence of research graduate programs is a real, material challenge to scholarly productivity compared to peer institutions, as the reviewers note. That is true for junior faculty as noted, but also for establishing the kind of track record that supports promotion. That is why Conrad is planning to launch a doctoral program in the next 18 months. It has a proposal currently well under review.

However, for current junior faculty, that program will not be able to support their track records pre-tenure decision. That will necessitate consideration of unique Conrad challenges when evaluating their records and comparing their records to those at institutions without such challenges. The Director is committed to ensuring these factors are not missed at critical moments in evaluation.

The Conrad school has also implemented a set of research excellence initiatives, some of which offer special assistance to junior faculty. These include internal grant funds, travel grants and a visiting scholar and speaker program that privileges the support of junior faculty research interests. At this time, all research support requests from junior faculty have been granted utilizing Conrad's financial

trust resources. The idea of a post-doctoral fellow program is an interesting one to consider, but the resources required may be prohibitive.

#### **Dean's response**

The Faculty of Engineering is fully committed to supporting the launch of a PhD program in the Conrad School of Entrepreneurship and Business. A PhD program will also facilitate greater opportunity for all faculty members to engage in scholarship and research activities.

3. The reviewers also believe that resources in building the undergraduate program would be best placed in building both Plus Business and Minor relationships with established departments throughout the University prior to tackling and entrepreneurship concentration. This would provide a natural funnel to the MBET and Diploma programs for supplemental credentialing, especially given the likelihood of a concentration competing with other academic programs at the University.

#### **Program response**

Conrad agrees with the reviewers that the Entrepreneurship minor and related activities across campus create natural connections with Conrad's graduate programs. Indeed, every year Conrad accepts a handful of MBET students who were first exposed to its courses through undergraduate electives. Conrad continues to nurture supporting relationships and to invest in information sharing across campus. Robust annual growth in undergraduate elective registrations year over year since they were introduced is evidence of considerable success in that respect.

Examples of Conrad's relationship building across campus include course work supporting the Recreation and Sports Business degree students in the Faculty of Health and the recently launched Entrepreneurial Mindset Career Specialization that is available to students in the Applied Financial Management degree program in Arts. Conrad continues to explore connections with partners across campus and look for opportunities to do even more.

However, none of those activities preclude pursuit of a new undergraduate degree program in Conrad's view. Though Conrad appreciates the concern noted regarding potential competition with other academic programs at the University, the planned focus for that program is unique and they do not, therefore, perceive this risk in the way the reviewers do. The focus of the planned program is to explicitly combine engineering technology with business and entrepreneurship in a distinctive fashion. Students with these interests are not likely to be candidates for the programs offered in other faculties. This program should no more be a direct competitor for other programs on campus than Science + Business is to Arts + Business, for example. Further, the program would not be an accredited Engineering program, and is therefore not a likely direct competitor to existing Engineering programs. This is a natural extension of Waterloo's model of "+business" at the undergraduate level. Conrad is also convinced the uniqueness of the program being considered will position Waterloo, once again, to lead globally in rethinking traditional education approaches, as it did at its founding with co-op.

The energies Conrad faculty and leadership have for a new undergraduate program are significant. At time of writing, a dozen faculty members from inside Conrad and elsewhere in Engineering are

actively working on curriculum development with plans to propose the program formally in the 2022/23 academic year.

**Dean's response**

No additional comment from the Dean.

4. The reviewers would suggest that the Conrad leadership consider the development of a partnership with an elite research university in building their PhD program as opposed to implementing it independently. An international partnership would complement university-level strategy. This would yield advantages such as the ability to recruit highly qualified students as a combination with the partner university and provide ample supervisory capacity for PhD students by sharing responsibilities with the partner university faculty for doctoral advising and committee membership. This PhD program would be distinctive among its peers as opposed to just attempting to position as an undifferentiated offering with existing programs at scale.

**Program response**

Along with the whole University of Waterloo, Conrad remains open to any collaborations that are a clear net gain for Conrad, the university, its faculty and students. Conrad's proposed program is not, in fact, "undifferentiated"; it would be the only doctoral program specifically in Entrepreneurship and Organization in Canada. Since the reviewers visited, Conrad has added two additional tenured research faculty with impressive records and clear domains of strength. The school is mindful of the challenges of building up a strong doctoral program, but they are confident in their ability to do so with highly motivated world-class researchers, requisite financial resources, and the power of the Waterloo brand to aid them.

Making the doctoral program collaborative in its essence was considered at length at the outset, and it was rejected as an organizing strategy for many reasons. These reasons include a lack of evidence that such programs are successful elsewhere (i.e., attract additional student interest, attract stronger students, yield better outcomes for the students participating, etc.), the significant coordination costs involved and the governance challenges of joint degrees. Conrad did not perceive the potential gain to be worth the additional complexity and costs. The school is not interested in revisiting that strategic decision at this time.

**Dean's response**

The Faculty of Engineering at the University of Waterloo is one of Canada's largest engineering schools with ample experience in successfully creating new graduate programs. As such, the Conrad School of Entrepreneurship and Business will have all the resources and support structure needed to be successful in the development and launching its own doctoral program.

5. The reviewers also would recommend moving the current undergraduate courses in social innovation into the core curriculum to complement the existing strategy course and recast this course to focus on problem-solving skills leveraging design and systems thinking. This would strengthen the offering and be reinforcing of the training path of the students in the Waterloo's engineering programs.



### **Program response**

The core interest expressed by the reviewers – the desire to see social innovation and social enterprise as an integrating opportunity for students that is central to students’ learning, particularly with respect to design – is one well-aligned with Conrad’s own judgment and plans, particularly in our planned undergraduate program. In that program, early curricular plans are aligning very well with the reviewers’ suggestion.

In Conrad’s existing undergraduate programs, including the minor and option, the specific recommendation does not work as well in our judgment. Relatively few of the students who take Conrad electives pursue the minor or option. The minor and option are designed for maximum flexibility based on student interests given that they serve students from every discipline on campus. Consequently, by design, there is a minimal 3 course *requirement*, and moving the social enterprise into the required category would mean adding a requirement. Although many students naturally gravitate to that content and course, a much larger number of students who *could* take these courses opt not to do so. Therefore forcing students to do so may further reduce minor and option students, or require students to pursue courses of lesser interest or utility to them than the ones they prefer.

### **Dean’s response**

No additional comment from the Dean.

6. The reviewers received considerable feedback that there was interest in an additional year of incubation or acceleration support among graduating and that students. This would also be of great interest to international students who are seeking to bolster their visa case. The Conrad administration should consider developing formal linkages to (1) existing accelerator programs in the area, (2) formalizing their incubation program as an add-on practicum and (3) developing significant post-graduation supports for those building and launching ventures. This could likely be built as a hybrid offering with a combination of outside partners and internal faculty and staff resources.

### **Program response**

Conrad is not surprised by this domain of feedback. It is a topic that arises annually, and has been considered formally and informally by the faculty of the Conrad School for at least a decade.

*Existing accelerator programs.* There is no question that the majority of MBET student ventures worthy of continued pursuit after the program benefit from further participation in accelerator programs. Conrad is fortunate that their students have access to Velocity, to the Accelerator Centre programming, to Communitech programming, and even to programs in Toronto. It is not precisely clear what a “formal” linkage would be, or what additional linkages such programs would entertain. However, Conrad actively supports and encourages accelerator participation for students who are ready and interested. Conrad does not believe new formal arrangements are required, but continuing to strengthen their relationships and connections with all these programs is worthwhile.

*Formalizing incubation support as an add-on.* MBET students and graduates are a diverse group, and whether or not they have ventures worthy of incubation is not something that is generally clear until

well into the program, by which time they have supported access to apply for incubation. In establishing clear boundaries between “what Conrad does” and “what Velocity does”, Conrad has agreed not to act as an incubator, and Velocity in turn does not engage in academic program delivery or curriculum. Any formal “Conrad incubation program” would run afoul of that very important delineation of activities and responsibilities at UW.

*Post graduation supports.* Conrad has decided that formal incubation supports are best provided by others, and the School and its faculty frequently act as match-makers in helping students with those connections. Informally, however, Conrad often provides office space and the supports of co-location to alumni in their first year after graduation.

*International Students and a lengthened program.* On the one hand (as noted in the reviewers’ report elsewhere), Conrad’s students – both international and domestic – are often drawn to the high-intensity one-year format of MBET. Indeed, every year a significant number of incoming students will explicitly indicate that format was key to their decision-making. However, as international students near the end of their program, they frequently ask for co-op work terms and program extensions. This is typically not motivated by academic interests, but rather by the specifics of the Canadian immigration system and work visa program. The interests are understandable – International students could guarantee a longer work permit if MBET was even a few months longer than a year, and various aspects of immigration law in Canada make the need to find work, and quickly, paramount in the consciousness of an international student who has decided they would like to stay in Canada. Over the years, Conrad has concluded repeatedly that it is not practical to offer “two kinds” of MBET, and that the 12-month nature of the MBET program is part of its appeal – especially to domestic students. Informal engagement with domestic students suggest that if MBET were longer than twelve months, Conrad would lose almost all domestic students. That is clearly not a strategy Conrad can, or will pursue.

However, as the reviewers note, for a certain kind of international student, a longer program with more Canadian employment training (e.g., co-op) might be highly appealing. Conrad would go further and suggest it might be a huge benefit to Canada as it seeks entrepreneurially oriented, technically skilled immigrants ready to participate fully in the Canadian economy. There, Conrad is in the early stages of considering a new Master’s program, built on a spine of existing graduate course elective offerings and possible co-op experiences. That program would serve a different fundamental purpose than MBET, and would have to be designed differently. It might look like a more intrapreneurially focused “Master of Management” style degree. This is a project being led by the Director, with a feasibility analysis currently under way and planned program design in the 2022/23 academic year.

#### **Dean’s response**

No additional comment from the Dean.

7. The reviewers acknowledge the tremendous success of Conrad’s successful co-op programs. With a very thoughtful track for those interested in launching a new venture and those pursuing entry-level opportunities in existing ventures, we would suggest that the curriculum could be optimized along those two tracks throughout the student journey at Conrad. The faculty should also consider ways

to scale these programs to offer co-ops to a wider number of students graduating from Waterloo. The MBET team should also evaluate whether a similar practicum structure could be built for graduate students that parallels the undergraduate design.

### **Program response**

As noted by the reviewers, Conrad offers highly differentiated programs in the entrepreneurship space. Conrad has learned “on the job” over time is that some of the most intuitive and obvious things they “should do” in principle, do not work in practice. The idea of multiple tracks in their existing programs fall into this category. The undergraduate minor and option used to be organized this way, in fact, precisely because it felt so intuitive to them, as it did to the reviewers. However, experience taught Conrad this was less effective for students, and led the faculty to abandon that structure, focusing instead on an integrated but adaptable approach.<sup>1</sup>

Conrad most often talks about “entrepreneurs” vs. “intrapreneurs”. There are three significant challenges in streaming in this way that they have learned because they have engaged in the curriculum design ideation process multiple times. The first challenge is developmental and all about the learner: budding entrepreneurs rarely know which stream is the right one for them until they have engaged meaningfully in our programming over time. For a university that prides itself on work-integrated learning, this, of course, should not surprise us. The second challenge is that it quickly becomes unclear how the two relevant curricula would differ. To be an effective early-stage employee, it is not clear what different skills or frameworks you should have than to be a founder, for example. You still need to know how to lead, how to talk business, how to frame and engage in robust strategic analysis, etc. The difference between good entrepreneurs and good intrapreneurs is rarely about the requisite skills and habits of thought (i.e., curriculum) and more about mindset and individual differences, and perhaps even more often about random situational variables (e.g., did you happen to be working in the lab of a faculty member with a ripe technology ready to commercialize). Finally, students who start their own ventures often end up exiting through sale of their business, and becoming intrapreneurs in a bigger organization. Similarly, intrapreneurs often find challenges in their own firm which they decide to leverage into independent new ventures. Students need to have skills related to both.

Where Conrad agrees whole-heartedly with the reviewers is with the sentiment that these two paths are both valid, real, and have some unique challenges. Conrad will continue to work to ensure that both paths get attention in the examples offered, and how they validate different paths for students at both the undergraduate and graduate levels.

*Scaling Enterprise Co-op.* As suggested by the reviewers, Conrad is ready to scale enterprise co-op. There are two challenges. One challenge is that demand from students does not currently merit adding capacity. This might be addressed by scholarship and funding support to students, but it is not clear where that money would come from. The second challenge is the ongoing tenuous nature of funding for enterprise co-op. Currently, the program is funded as a partnership between the Provost and the faculties, and funding agreements of two to three years at most have been the

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<sup>1</sup> It is worth noting that there is research in the entrepreneurship and careers literature that would suggest Conrad’s current, less streamed but still adaptable, approach is what makes most sense for young people.

norm. Given the centrality of this program to Waterloo's positioning as Canada's leading innovation and entrepreneurial university, Conrad thinks a case can quite easily be made that this funding be an on-going base budget program. Indeed, that case has now been presented and is awaiting decision.

#### **Dean's response**

The University of Waterloo and the Faculty of Engineering have identified Work Integrated Learning (WIL) as a key area of growth in their strategic plans. Implementing WIL at the graduate level is of special interest to the Faculty, with the view that the development and implementation of any WIL initiative must be in the best interest of the program and the students.

8. The faculty of Conrad should carefully evaluate their curriculum to identify potential sequences that would more clearly define the course offerings supporting two different student product profiles, namely intrapreneurship (those seeking employment in high-growth ventures after graduation) and a founder track (those pursuing start-ups immediately after graduation). Moreover, there may be a potential for an ongoing continuing education mentoring program for graduates of Conrad who decide later in their careers to pursue founding a new venture, which might represent a new revenue stream for the program.

#### **Program response**

See prior discussion of the intrapreneurship vs entrepreneurship curriculum streaming idea.

To that earlier discussion, Conrad would add that, in the school's experience, there is a meaningful overlap between international students who want a longer degree to facilitate immigration considerations and ultimate intrapreneurship (vs. entrepreneurship). Therefore, it may be that the best way to address both needs is with a purpose-built "intrapreneurship" degree as opposed to streaming within MBET.

Conrad provides a great deal of informal mentoring of alumni. However, Conrad has concluded that it does not make business sense to be in the "post grad mentorship" business. That is better done by organizations purpose built for that end, specifically the incubators and accelerators with which Conrad has relationships.

#### **Dean's response**

No additional comment from the Dean.

9. The reviewers see an opportunity to expand considerably cross-curricular partnerships with Engineering Departments and to offer distinctive training in advanced technologies fused with market awareness of innovation trends. The Conrad school could offer a revolving set of elective courses in core technology and innovation areas that correspond to the specializations in the engineering departments with which they partner.

#### **Program response**

Developing and nurturing cross-curricular partnerships inside of Engineering is a priority for Conrad in several ways. Conrad is working to establish and support graduate specializations in MEng

programs across the faculty. At the undergraduate level, they anticipate their new degree programming having a dynamic, integrated technology core that is designed in partnership with our Engineering colleagues.

In MBET, this is more difficult. Given the intensity of the 12-month program, there is no room for “curricular technology training” per se. Instead, the focus is on technology awareness and its potential entrepreneurial applications. Continued evolution of this facet of their programming is of course merited. Conrad might also consider curating a list of resources that are more tailored to the individual interests of particular students.

#### **Dean’s response**

There is already a substantial amount of engagement across Departments in the Faculty of Engineering with the Conrad School of Entrepreneurship and Business. Many undergraduate and graduate students avail of Conrad’s suite of courses to augment their studies in the form of electives. As Conrad prepares to move forward with their doctoral program, there will also be further opportunity to develop partnerships over interdisciplinary research.

- 10.** The Conrad school administration should carefully consider the implications of admitting international students interested in pursuing a new venture given Canada’s current policies toward workpieces. Expectations should be set at the beginning that courses should focus primarily on gaining employment with Canadian companies following graduation or leading to the international students return to their home country if not employed in Canada.

#### **Program response**

This has been a challenging area for Conrad over time. Through the interview process and facilitated contact with international student alumni, significant amounts of information about launching new ventures in Canada are shared. They are also discussed early in the program. Our experience is that the problem is not with international students knowing, or not knowing, this information, but rather that they come to view the information and its implications differently as the year progresses. Further, a significant proportion of international applicants profess an intention to return to their countries of origin at the time of application, but change their mind as the year progresses. As their intentions change, the attention they pay to important challenges also changes.

Having said all of that, Conrad takes the reviewers’ comments to heart, and will formally revisit the question of how best to ensure understanding by all, which is clearly different from the sharing of information that currently happens.

Because MBET is not an MBA, Conrad does not engage in extensive career service supports. All the students who come to the program profess to want to start their own ventures. However, in practice, students take many different paths and most traverse employment with someone else’s venture or a large corporation along the way. To support this, personalized career coaching is made available to students, along with resume review and the like.

#### **Dean’s response**

The University of Waterloo has a well-established Center for Career Action (CCA) which supports graduate and undergraduate students from across campus. Specifically, CCA offers resources to international students looking to find employment in Canada, and 2 full-time career advisors dedicated to supporting graduate students and their unique needs.

- 11.** The reviewers acknowledge that active and engaged culture that has been built at the Conrad school since its inception. We recognize that there exists a considerable opportunity to develop a formalized alumni network to take advantage of the goodwill that exists among graduates of the program and to systematically involve them in the support and development of currency at Waterloo. While program actively engages alumni to course activities, additional programmatic supports could be put in place to create a lifelong learning model to support Conrad graduates. This would also serve to make the Conrad curricular offerings relevant to graduates when they transition later in their careers as entrepreneurship and found new ventures.

#### **Program response**

There are two dimensions to the reviewers' comments that point to worthwhile future work. The first is the general, continued investment in Conrad's alumni community. Conrad is grateful for the many ways their alumni support one another, their students and their program. Yet Conrad is also mindful that there remain exciting ways to further engage with and support them, and also ways alumni might more effectively engage with current students who are charting entrepreneurial paths. Work on alumni relations – possibly with some staff support – is an important consideration going forward.

The second dimension is the possibility of Conrad engaging with its alumni (and likely others) as lifelong learners. Here, Conrad will investigate partnerships with Waterloo's recently launched [WatSPEED](#) initiative in the lifelong learning space – looking for opportunities to profitably meet needs of those pursuing entrepreneurial business outside our regular degree program offerings.

#### **Dean's response**

The University of Waterloo is committed to “[leveraging] diverse learning experiences by creating more flexible learning pathways.” In this spirit, there is an invested interest in developing and expanding micro and stackable credentials across graduate studies. In partnership with the faculties and support units like WatSPEED, the University seeks to reach out to alumni and other professionals to build new and existing competences in an increasingly demanding and competitive workplace.

#### **Recommendations Not Selected for Implementation**

We are not acting on reviewer recommendation #1. It was a comment more than recommendation.

Conrad is also not pursuing reviewer recommendation #4. Rationale is presented in the section devoted to recommendation #4 above.

**Implementation Plan**

	<b>Recommendations</b>	<b>Proposed Actions</b>	<b>Responsibility for Leading and Resourcing (if applicable) the Actions</b>	<b>Timeline for addressing Recommendations</b>
1.	The reviewers both consider that Conrad's path in building a distinctive and differentiated School of Entrepreneurship and Innovation is the highest and best path forward as opposed to a traditional business school.	This is a comment rather than a recommendation from the reviewers. This is the path the Conrad School is on. No specific new actions are required.		N/A
2.	The reviewers remain concerned about the resources available to support a tenurable record among assistant professors. In lieu of the Ph.D. program partnership, the Conrad schools should consider additional resources for research support and perhaps a postdoctoral program to support junior faculty.	<ul style="list-style-type: none"> <li>• Move forward with the proposed doctoral program.</li> <li>• Make special funds available to support research</li> <li>• Continue to exercise flexibility in junior faculty's other responsibilities to ensure success is possible</li> <li>• Ensure that all junior faculty tenure cases are contextualized in relation to peer institutions where there are disadvantages</li> </ul>	Eyton Director	<p>Doctoral Program launch 2023.</p> <p>Special funds already available, along with flexibility.</p> <p>First junior tenure case will be managed in this context in 2022.</p>
3.	The reviewers also believe that resources in building the undergraduate program would be best placed in building both Plus Business and Minor relationships with established departments throughout the University prior to tackling and entrepreneurship concentration.	<ul style="list-style-type: none"> <li>• Continue internal marketing efforts and relationship building across campus. Continued effort of a kind already that have proven successful and are ongoing (e.g., targeted advertising, social media engagement, guest speakers, events, faculty presentations in classes across</li> </ul>	Eyton Director	<p>2021-2023 Undergraduate degree proposal submission anticipated 2022. Likely first intake in Fall 2024.</p>

		<p>campus, etc.), rather than new activities, are required here.</p> <ul style="list-style-type: none"> <li>• Conrad is committed to moving forward with an undergraduate degree proposal.</li> </ul>		
4.	The reviewers would suggest that the Conrad leadership consider the development of a partnership with an elite research university in building their PhD program as opposed to implementing it independently.	<ul style="list-style-type: none"> <li>• Although always open to collaborations with others, as a central strategy, the suggested approach is not being pursued by the Conrad School</li> </ul>		N/A
5.	The reviewers also would recommend moving the current undergraduate courses in social innovation into the core curriculum to complement the existing strategy course and recast this course to focus on problem-solving skills leveraging design and systems thinking.	<ul style="list-style-type: none"> <li>• For reasons identified, Conrad will not make this course a required course for the minor. However, addressing the curricular considerations identified and ensuring access to all students are a priority. They are present in existing courses and are central to new courses in the design phase.</li> <li>• In new programming, as in MBET, these skills and these topics will be central to core curriculum.</li> </ul>	Eyton Director and Faculty	2021-2023
6.	The reviewers received considerable feedback that there was interest in an additional year of incubation or acceleration support among graduating and that students. The Conrad administration should consider developing formal linkages to (1) existing accelerator programs in the area, (2) formalizing their incubation	<ul style="list-style-type: none"> <li>• Conrad will continue to build relationships and referrals to the rich web of incubation supports at UW and in Waterloo Region</li> <li>• Lifelong learning initiatives will be considered with viability, available resources, and profitability as criteria. We will be opportunistic in this space. It is not our primary near-term strategic focus, and will therefore be considered only as it</li> </ul>	Eyton Director	Discussions in 2022-2023



	<p>program as an add-on practicum and (3) developing significant post-graduation supports for those building and launching ventures. This could likely be built as a hybrid offering with a combination of outside partners and internal faculty and staff resources.</p>	<p>makes sense in relation to other strategic commitments and objectives.</p> <ul style="list-style-type: none"> <li>• Consideration is being given to a new Masters program that might be appealing to a subset of international MBET students and others.</li> </ul>		
7.	<p>The reviewers acknowledge the tremendous success of Conrad's successful co-op programs. With a very thoughtful track for those interested in launching a new venture and those pursuing entry-level opportunities in existing ventures, we would suggest that the curriculum could be optimized along those two tracks throughout the student journey at Conrad.</p>	<ul style="list-style-type: none"> <li>• Promotion of both tracks as viable and worthy options in all programming</li> <li>• For reasons outlined above (pp. 8-9), Conrad will not pursue formal streaming in its existing programs, but may instead consider new programs to address intrapreneurship, specifically a new Masters program.</li> </ul>	Eyton Director and Faculty	<ul style="list-style-type: none"> <li>• 2021-ongoing</li> <li>• New Masters program consideration in 2022/23</li> </ul>
8.	<p>The faculty of Conrad should carefully evaluate their curriculum to identify potential sequences that would more clearly define the course offerings supporting two different student product profiles, namely intrapreneurship (those seeking employment in high-growth ventures after graduation) and a founder track (those pursuing start-ups immediately after graduation).</p>	<ul style="list-style-type: none"> <li>• For the reasons identified above (pp, 9-10), Conrad will not pursue two formal tracks in existing programming</li> <li>• However, sensitivity to two emergent student profiles will inform ongoing course and curricular refinement</li> </ul>	Eyton Director and Faculty	2022/23 as part of larger portfolio of programs evaluation

9.	The reviewers see an opportunity to expand considerably cross-curricular partnerships with Engineering Departments and to offer distinctive training in advanced technologies fused with market awareness of innovation trends. The Conrad school could offer a revolving set of elective courses in core technology and innovation areas that correspond to the specializations in the engineering departments with which they partner.	<ul style="list-style-type: none"> <li>• Continue to pursue specializations with Engineering Departments</li> <li>• Revisit and refine treatment of technology in technology focused courses</li> <li>• Engage Engineering colleagues in the design of the “technology core” for a new undergraduate program (Fall 2022)</li> <li>• Consider curating resources (e.g., Linda.com and other similar online learning resources) students might take advantage of that are aligned with their specific ventures and interests</li> </ul>	Eyton Director and Associate Directors	2021-2023
10.	The Conrad school administration should carefully consider the implications of admitting international students interested in pursuing a new venture given Canada’s current policies toward workpieces.	<ul style="list-style-type: none"> <li>• Revisit and formalize a system to support better understanding among international students. (Information is already shared. See notes)</li> <li>• Consider the merits of a new Master’s degree to better meet needs of international students seeking immigration who are not <i>really</i> interested in founding a venture</li> </ul>	Eyton Director, Associate Director MBET, Marketing Manager	2021-2022
11.	The reviewers acknowledge that active and engaged culture that has been built at the Conrad school since its inception. We recognize that there exists a considerable opportunity to develop a formalized alumni network to take advantage of the goodwill that exists among graduates of the program and to systematically involve	<ul style="list-style-type: none"> <li>• Develop and implement new alumni engagement strategies</li> <li>• Consider the development of lifelong learning program offerings, potentially in partnership with WatSPEED</li> </ul>	Eyton Director, Associate Directors & Marketing Manager	2022-2024



	them in the support and development of currency at Waterloo.			
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The Department Chair/Director, in consultation with the Dean of the Faculty shall be responsible for the Implementation Plan.

**Date of next program review** \_\_\_\_\_ **2025-2026**  
Date

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**Signatures of Approval**

  
Chair/Director \_\_\_\_\_ Date 11/25/22

**Mary Wells** Digitally signed by Mary Wells  
Date: 2023.01.04 10:35:22 -05'00'

Faculty Dean \_\_\_\_\_ Date

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AFIW Administrative Dean/Head (*For AFIW programs only*)

**Note:** AFIW programs fall under the Faculty of ARTS; however, the Dean does not have fiscal control nor authority over staffing and administration of the program.

 \_\_\_\_\_ January 31, 2022

Associate Vice-President, Academic \_\_\_\_\_ Date  
(For undergraduate and augmented programs)

 \_\_\_\_\_ January 31, 2022

Associate Vice-President, Graduate Studies and Postdoctoral Affairs \_\_\_\_\_ Date  
(For graduate and augmented programs)

## UPDATE AND PROGRESS REPORT – FEBRUARY 2023

It is my pleasure to provide an update and progress report on the Implementation plan laid out in the Conrad School's latest Final Assessment Report (FAR). Alongside each heading is reference to the item number from the FAR Implementation plan.

***Supporting tenurable record for Assistant Professors (#2)***

Ensuring reasonable potential for the tenure success of Conrad's Assistant Professors is a very high priority. As noted in the FAR, the Director provides special resources and flexibility in support of junior faculty success. We have our first data point: our very first Assistant Professor to go up for tenure passed both departmental and faculty tenure and promotion committees with unanimous support in Fall 2022.

***Undergraduate Degree Proposal (#3)***

The letter of intent for Conrad's planned undergraduate degree program has been approved by the Associate Dean Undergrad and Dean of Engineering. Conrad will continue along the path laid out by UW's Quality process for new programs. A multi-disciplinary committee representing 3 departments inside Engineering has been working on program design for over a year and is making steady progress. Although Fall 2024 for first intake is not off the table, we are mindful that Fall 2025 may be more realistic.

***New Professional Masters Program (#6, #7, #8 & #10)***

Conrad is making modest progress on the idea of a new master's program that might better address the interests of some students than MBET. The student profile that would align well with the new program concept is one the reviewers noted might be less well served by MBET. Conversations with other players inside Engineering continue. A letter of intent is expected before summer.

***Access and Awareness for Undergraduate Electives / Minor / Option Across Campus (#3)***

Word-of-mouth among students along with our formal efforts at raising awareness have yielded positive results. In 2013/2014 Conrad had approximately 100 total elective enrolments at the undergraduate level. In the current academic year that is on-target for closer to 2,800 total enrolments. Many current course offerings are operating at maximum enrolment. Instructors and their courses are very positively perceived by students in formal assessments, which we believe contributes to this success.

***Social Enterprise and Social Innovation as Central (#5)***

Conrad has expanded undergraduate offerings in this space, embedded key elements in MBET, and seeks to work collaboratively with partners across campus in supporting these interests for UW students. The Faculty of Environment, United College, Conrad Grebel University College and others have been key collaborators and conversation partners.

***Specializations (#9)***

Two graduate specializations have been launched with Engineering Departments and two more are at early stages. Enrolment patterns suggest Masters of Engineering students are eagerly pursuing these specializations.



***Alumni Engagement (#11)***

Conrad is actively working to engage its alumni more deliberately and effectively. Good will and receptivity seem abundant, which is a great sign. One piece of evidence of this was the 200+ alumni and friends of Conrad who came to its full-day 20<sup>th</sup> Anniversary celebrations in Fall 2022. A senior staff role has been redefined to focus more energy and resources on engaging with alumni, and capitalizing on the positive contributions they can make to our programs.

***PhD in Entrepreneurship and Organization (#4)***

In Fall 2022, Senate approved the new PhD in Entrepreneurship and Organization program. It is currently under review by the Quality Council and Ministry. We hope to admit our first students in Fall 2023. We have had encouraging early signs of interest in the program.

I am, of course, happy to answer any questions regarding the Conrad School, its direction, and its progress towards the objectives and opportunities laid out in its most recent FAR.

Respectfully submitted,



J. Mark Weber  
Eyton Director and Professor