

REWRITE  
~~FOLLOW~~  
THE RULES

*The Campaign for  
Applied One*



THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Applied Science

# WE ~~CAN~~ DO IT ~~LATER~~ *must* *now*


We recognize that the massive, complex problems our world faces won't be solved by a few more engineers, architects or planners working on their own. We're at a turning point, where we must work collaboratively or submit to a status quo of waning impact and relevancy. If it doesn't happen now, it will happen too late.

The University of British Columbia Faculty of Applied Science knows that it is our time and our responsibility to rewrite the rules: That's why we are creating Applied One.

Applied One is the launching point for this bold pivot. It is far more than a building—it will be a dynamic, inclusive laboratory. Here, students and researchers will join industry and community stakeholders in bringing together the different perspectives of design, technology and policy. And that's how we'll unlock the solutions the world urgently needs.

Help make Applied One a reality and invest in this bold, optimistic future.





*“If you believe climate change is a human crisis that exacerbates inequity, then you know we need a new kind of professional capable of addressing such world-scale problems. You need more than traditional architects or engineers or planners; you need professionals with shared competencies across design, technology and policy.”*

**James Olson, Ph.D.**  
Dean and Professor,  
Faculty of Applied Science



# IT'S ALL ABOUT ~~DISCIPLINE~~ solutions

We've outgrown the traditional model of academics. Across the world, higher education programs have become hyper-specialized. At the same time, society's problems have become increasingly interdependent and complex.

That's a catastrophic mismatch.

Applied One upends this paradigm by rewriting the career-focused framework universities have been trapped within. Instead of rewarding advancement in insular disciplines, we're focused on combining the varied perspectives of applied science to benefit people across the planet. We're incentivizing researchers to work together in a space that's custom-built for intentional and chance interaction. We're creating experts whose common specialty is solving problems together—problems no one could solve on their own.

Through Applied One, the Faculty of Applied Science is transforming from a place where one collects knowledge to an inclusive group of people committed to shared action. It is a bold new model of what education must be, one that's practical and applied.

Supporting the Applied One project makes you part of this revolutionary pivot. You help us rewrite the rules of what's possible.

*“Solving the problems of tomorrow is a creative endeavour. To come up with the solutions and technology, for that creativity to build, we need to include personalities that break the mold of the stereotypical engineer.”*

*Amanda Clifford, Ph.D.  
Assistant Professor,  
Department of  
Materials Engineering*

## *in this together* **WE'RE ~~ON OUR OWN~~**

At the Faculty of Applied Science, we need to work together—but our existing facilities are working against us. They're built to outdated, ineffective design standards that divide researchers and students by discipline. We need, instead, adaptive spaces ready to serve as far more than just another collection of classrooms. We need a laboratory of collaboration that feeds our collective future. We need a place able to grow with us.

**I** We are committed to this grand-scale pivot, worthy of a grand-scale investment.

Applied One is about far more than physical space; it's about intention and opportunity. For academic concepts to nourish society, we must overcome the barriers of discipline and career path. We need the intellectual room for ideas to expand.

★ Applied One will provide students and researchers with this testing ground, a place that proves their ideas and in which they can prove themselves.

# ~~THIS IS THE WAY IT'S ALWAYS BEEN DONE~~

*just the beginning*

The University of British Columbia Faculty of Applied Science is ideally situated to take on this essential project. We have a long history of leading interdisciplinary work and Applied One further extends that track record of success. Through it, we'll overlap previously confined perspectives in a way that's additive and once again rewrite the rules.

Already, this Faculty brings together perspectives beyond those found at other universities. Here, our School of Architecture and Landscape Architecture (SALA) integrates technology and design, so our built spaces better serve community and sustainability. Applied science at UBC means elevating societal health through our School of Community and Regional Planning

(SCARP) and advancing human health through our Schools of Nursing and Biomedical Engineering. Boundary-breaking programs at UBC Engineering cover everything from environmental engineering to manufacturing and computer engineering.

Applied One melds all these programs in a space designed to drive connections and demonstrate—through its very existence—how new, multidisciplinary solutions can work in practice. It will engage other faculties from across UBC, broader clusters of researchers, industry stakeholders and members of the local, regional and international community. We will all work together to solve the big problems that we cannot solve alone.





# ~~we~~ ~~I CAN DO IT ALONE~~ collectively

Professor Rob Rohling, Director, UBC's HATCH Venture Accelerator, demonstrates how fostering entrepreneurship—and the wide-ranging collaboration it sparks—will help drive progress through Applied One.

"Think about British Columbia's recent wildfires," he suggests. "An individual researcher can't solve that problem. You need to collect forest data—and UBC has a world-class sensors group. Then you need engineers to make those sensors 5G-enabled, and artificial intelligence experts for analysis of the data. Next, someone in forestry has to make sense of the analysis and then what's been accomplished unless BC Wildfire Service puts all that learning into practice? ✈️"

"Even the most exceptional universities don't have the agility to form those kinds of inclusive, collaborative teams. Even if they did, they don't have a history of working that way. That's how entrepreneurs operate."

"At HATCH, this is the kind of practical creativity we're kindling every day. Applied One will take that insight, energy and effectiveness and increase it exponentially."



Zippered 2x4s convert waste wood into inspired architecture.



*"We need to rewrite the rules around what we make, how we make things and where those things end up."*

**Blair Satterfield**  
Associate Professor  
and Chair, Architecture;  
Director, HiLo Lab

# OUR ACTIONS ARE ~~ACADEMIC~~ impactful

Applied One is about building a better future through practical and scalable ways of applying science. That's why we will partner with industry, community and government, adding their pivotal contributions to enact the solutions we need.

Consider the example of mining—to make an electric vehicle, it takes cobalt and lithium. A wind turbine requires tons of iron and copper. A sustainable energy future demands more mining, not less.

What we need, then, are grand-scale ways to make mining lower-impact. We need to work with industry in the energy transition for a sustainable future. It is only when we make that happen, that the future we require will arrive.



bending

# ~~SURVIVING THE~~ FUTURE

toward  
sustainability

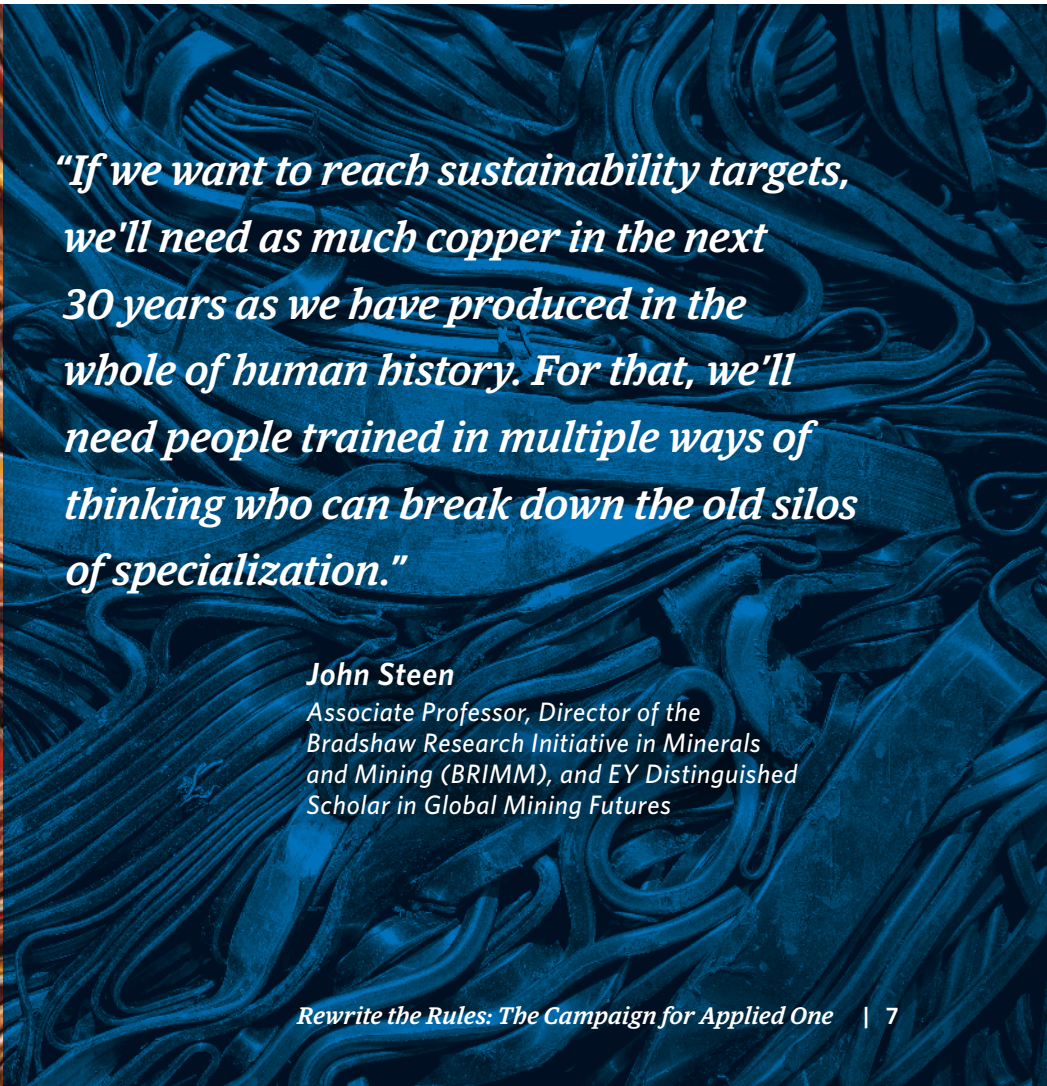
SALA Professor Blair Satterfield offers an example of what Applied One can uniquely achieve.

In the tiny HiLo lab he directs, architecture and engineering students were aghast at how much wood was wasted by Vancouver's rapid real estate turnover. Together, they conceived an inspired technique that transforms scrap lumber into a kind of wooden zipper. This novel process turns discarded 2x4s into elegant curving shapes that make sophisticated, strong architecture

possible. Their collaboration—neither engineering nor architecture, but problem solving—rewrites the rules of construction.

This is what a small interdisciplinary team with limited resources and space already accomplishes. Now imagine what we can make real with Applied One.

Imagine the world's catastrophic problems solved, sustainably.



*"If we want to reach sustainability targets, we'll need as much copper in the next 30 years as we have produced in the whole of human history. For that, we'll need people trained in multiple ways of thinking who can break down the old silos of specialization."*

**John Steen**

Associate Professor, Director of the Bradshaw Research Initiative in Minerals and Mining (BRIMM), and EY Distinguished Scholar in Global Mining Futures

# REWRITE FOLLOW THE RULES

*The Campaign for  
Applied One*

On the simplest level, this \$300-million campaign creates an adaptable, sustainable applied science innovation hub at the University of British Columbia. Yet Applied One will be far more than a fancy building—it will be all that our concentrated, integrated intention makes possible.

Imagine a facility full of flex-space, ready to be purposed and repurposed as new challenges arise.

Picture an engine for solution-focused learning, teaching and research—a test ground for the advances produced within.

Applied One will enable a new curriculum, one that integrates researchers and students across the fields of applied science. It will serve as a central locus for advancement, welcoming industry, community and government as members of solution-focused teams. It will be a focal point for progress, drawing in field-leading faculty, researchers and students—who will in turn support business and industry as critical hires and future leaders.

Applied One will provide more space for more students and more collaborative advancement. It will give us time and space for the deliberate and chance interactions that are the essential ingredients of revolutionary ideas.

★ With all the perspectives encompassed by the Faculty of Applied Science united within Applied One, we will, together, turn the tide on the world's most wicked problems.

Invest in this bold pivot and in the future it makes possible.

**We need you to invest in Applied One.**



*Unprecedented challenges require unprecedented ways of working and learning, but also a reality check: The pace of change at universities has been exceedingly slow. We must change that.*

*The problems are too great, and the stakes too high, to be stuck in our separate fields. Our researchers need an integrated space that puts problems first, enabling them to pilot solutions quickly, at a scale that promises lasting change. Our students need spaces as flexible and versatile as the solutions themselves, allowing them to swiftly redirect their efforts to the next challenge.*

*We can't do this alone. We are inviting other faculties, industries, concerned citizens—we are inviting you—to help us rewrite the rules.*

*Let's make Applied One a reality.*