

Innovation and an Entrepreneurial Mindset

**Experience from the University of Washington's
Center for Innovation and Entrepreneurship**

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New Vision (Yakima County Development Association)
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Three main topics

- **What does it mean to be an entrepreneur?** Do entrepreneurs do things differently? If so, how?
- **How can you possibly teach something as real world as entrepreneurship at a big research university?** Can you say “Business Plan Competition”?
- **How can we be more innovative in this economy?** Are there secrets to success?



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What is entrepreneurship?

- **Schumpeter's Creative Destruction:** A process, driven by those who are entrepreneurially driven, in which the old way of doing things is replaced by new.
- **Classic:** The entrepreneur is the individual “who organizes, manages, and assumes the risk associated with the enterprise.”
- **US Small Business Administration:** Somebody who sets up a business or enterprise.
- **Heffalumps:** Large and important, albeit “different” and elusive, creatures.



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What we know to be true

An entrepreneur is someone with the DNA to see an opportunity (a problem or need) and do something about it. Entrepreneurs:

- Know who they are
- Have a strong need to achieve (repeatedly!)
- Know they can create value
- Believe they have what it takes to build a business or organization
- Have a proactive personality: optimistic, often visionary and pioneering; passionate, motivated and energetic; action oriented, observant, and incredibly persistent; willing to experiment
- Have a higher tolerance for ambiguity



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University of Washington

At the UW, there are 18 colleges and schools, with 150 departments offering more than 250 degree programs.

- Two major medical centers—UW Medical Center and Harborview
- 4,100 full time faculty; more than 7,000 faculty + researchers
- Six Nobel prize-winning faculty; 11 MacArthur “genius grants”
- 42,098 students at the Seattle campus; 47,361 total UW (2008)
- Top 10 BA degrees: biology, psychology, political science, economics, communications, English, sociology, finance, accounting, history
- Top 10 grad degrees: business, medicine, education, nursing, social work, information, electrical engineering, public affairs, chemistry, computer science

Total UW operating revenue: \$3.5 billion

Newsweek ranks UW among the world’s top 25 universities

US News & World Report 11th best public university, 2008



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UW research context and strengths

Research funding \$1,037,195,021 sponsored grants and contracts (FY2008), including 132 grants > \$1 million

- Since 1974, more funding than any other public institution
- Major awards in 2008: \$12.8 million for HIV prevention (Gates Foundation) and \$10.1 million for ways to reduce clinical time from laboratory discovery to patient care (NCR).

Research strengths in medicine, chemistry, ocean and fishery sciences, public health, engineering, health sciences

- 270 specialized research centers (Alzheimer's and autism to microscale life sciences, water, transportation).



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Seattle and Washington

We've been making Top 25 lists recently.

- **Forbes.** Best States for Doing Business. Washington #3 in 2006, #2 in 2009. Six vital categories for business:
 - costs
 - labor supply
 - regulatory environment
 - current economic environment
 - growth prospects
 - quality of life

1-11: Virginia, Washington, Utah, Colorado, North Carolina, Georgia, North Dakota, Texas, Nebraska, Oregon



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- #1 (#2) America's Smartest City (Bizjournals.com)
- #3 in "Best States for Business" (Fortune)
- #1 in new start-ups (SBA)
- #1 in start-up failures (SBA)
- Top 10 states in patent applications (Kauffman 2007)
- #1 in "100 Best Places to Live and Launch" (CNN Money)
For three years running, more start-ups per capita than any other state
- #3 in "America's Greenest States" (Forbes)



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How do you cultivate entrepreneurs?

- **Entrepreneurial culture.** History of scrappy start-ups.
- **Research powerhouses.** The UW and PNNL, Fred Hutch
- **Support for early-stage entrepreneurs.** NWEN, Seattle Tech Start-ups, nPost, Start-up Weekend, Start-up Day, Six-Hour Start-up, industry associations
- **Sources of capital.** Companies go where there are investment dollars. Angel groups, venture capital firms
- **A talented pool of workers.** And professionals (attorneys, etc.)
- **A strong media.** *TechFlash*, *Xconomy*
- **Business climate.** Easy to incorporate but B&O taxes are rough.
- **“Anchor tenants.”** Nordstrom, Microsoft, Boeing, Costco, Amazon, Starbucks, REI (where’s biotech?)



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CIE's mission

To integrate entrepreneurship into the fabric of the UW.

In practical terms: create an entrepreneurial mindset.

- **Curriculum** (the entrepreneurial toolkit)
- **Activities** (to put their knowledge/tools to use)
Entrepreneurial Law Clinic, LaunchPad Internships (TechTransfer), WRF-ITHS-Coulter Summer Fellows
- **Events** (to learn from others, network)
EntrepreneurWeek UW, “From Invention to Start-Up” series, Springboard
- **Version 1.0**
Business Plan Competition, Environmental Innovation Challenge



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Curriculum

- **Undergraduates** (20 credits)
 - 18 percent of undergrads take at least one ENTRE course
 - Novel feature: “Creating a Company” experience
 - Lavin Entrepreneurial Action Program for incoming freshmen
- **MBAs and Technology Entrepreneurship Certificate** (18)
 - 88 percent of MBAs take at least one ENTRE course
 - Novel feature: Technology Commercialization Practicum
 - 75 TECs (non-business graduate students) in ENTRE classes with our own MBAs
- **PhD in Technology Entrepreneurship**
 - One of a handful of programs in the country training future faculty



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LaunchPad internships

LaunchPad was designed to move **market-ready inventions** through TechTransfer as quickly as possible. Licensing to established firms and, more recently, to start-ups.

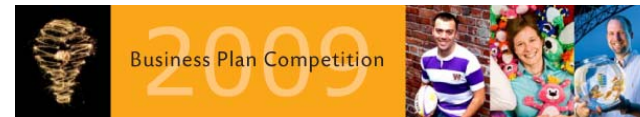
- The inventor, the tech manager, the CIE student
- Feasibility studies (freedom to operate, market research on possible segments, product competition, etc)
- 14 projects in fall 2008: biomarkers for neurodegenerative disorders, active contact lens, air velocity sensor systems, methods for treating obesity, dye-sensitized solar cells, adsorbent systems for water purification, electronics cooling, salivary diagnostics, bacterial hydrogen production
- **32 in fall 2009**



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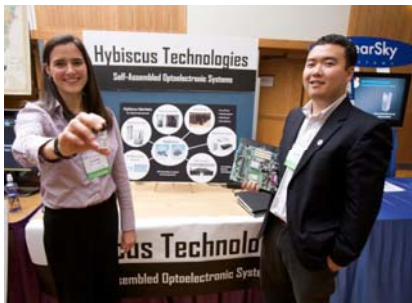
Version 1.0

Business Plan Competition



In **12 years**, 2,094 students have participated in the BPC, and 78 teams have received **seed funding** of \$812,000. More than 26% of competitors have started their companies.

- **NETWORKING:** who can help with your company?
- **Visibility:** 348 judges from the entrepreneurial community
- “entrepreneurship in a safe environment”





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Version 1.0 BPC teams that have made us proud





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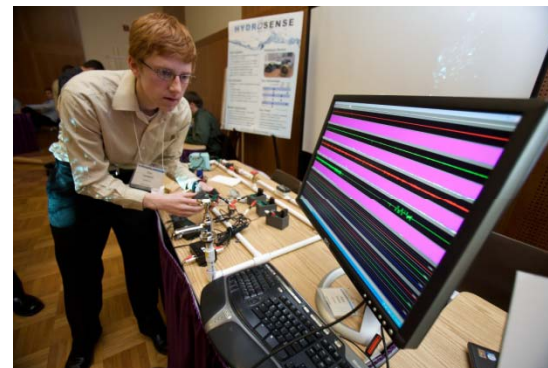
Version 1



UW Environmental Innovation Challenge

Launched in 2009, the UW EIC focuses on the intersection of solutions to environmental problems and entrepreneurship. Collaboration!

- **16 multidisciplinary teams**, 78 judges, \$25,000 in prototype funding, \$22,500 in prize money.
- **Clean-tech** with an emphasis on water, energy
- **Judging criteria:** business summary that outlines market opportunity, pitch, prototype, potential for impact





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Who becomes an entrepreneur?

Company founders tend to be middle-aged and well-educated. They did better in high school than in college.

- Average age is 40 (tech company founders, 39)
- 72 percent come from middle-class backgrounds
- 48 percent come from entrepreneurial families
- 70 percent are married, 60 percent have children
- Main reasons for becoming an entrepreneur: build wealth, capitalize on a business idea, like the start-up culture
- < 1 percent extremely rich or extremely poor
- Nearly 50 percent have 10+ years industry experience

Anatomy of an Entrepreneur, Kauffman Foundation, 2009



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Who becomes an entrepreneur (2)?

Early entrepreneurs are different. Those with an “extremely strong” interest in college start their companies with zero to five years of work experience.

- 69 percent start their companies within 10 years, compared with 47 percent of general population
- 37 percent are married, 27 percent have children
- 47 percent of early entrepreneurs start two additional companies—serial entrepreneurs



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Entrepreneurs have certain characteristics

- **Ability to see opportunity.** And do something about it!
- **Determination to succeed.** Regardless of the odds, the barriers, the risks, the years
- **Observant.** They notice things—patterns, problems, behaviors
- **Not faint-hearted.** Confident, able to thrive on ambiguity, follow their gut instincts.
- **Understand the value of money.** How far can your money go?
- **Optimistic.** “Better than” VS “good enough.”
- **Learn constantly.**



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Where is the pain?

What's the problem you alone can solve? Y Combinator's Paul Graham say there are 30 big ideas that still need solving:

- New business model for record companies
- Simplified browsing for oldsters and youngsters
- New news
- Outsourced IT
- More variants on CRM tools
- Dating
- Photo/video sharing
- Auctions
- Web office apps
- Advertising
- Online learning
- Tools for measuring productivity



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What are the odds that this work?

Every year **600,000** new companies are formed.

- 350,000 are self-funded
- 200,000 are funded by friends and family
- 50,000 are funded by angels
- 1,200 are funded by venture capitalists

60 percent are self-funded

0.2 percent are venture-backed



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Your toolkit in tough times

- **Keep an idea journal.** Keep track of those moments of brilliance by writing them down. Carry your idea journal with you at all times.
- **Network, network, network.** You need to know people—and not just people in your comfort zone. Use this time to meet people who aren't like everyone else you know.
- **Develop your peer group and look for new avenues for collaboration.** Creating something powerful VS who owns what.
- **Learn something new.** What have you always wanted to know?
- **Focus.** There are so many good ideas, so many opportunities. Stay on target. “Your focus determines your reality.”



10 commandments for business failure

Are there secrets to success? Don Keough (Coca-Cola) says “leadership has been studied to death—always inconclusively!” There are, he says, guaranteed ways to lose:

- Quit taking risks
- Be inflexible
- Isolate yourself
- Assume infallibility
- Play the game close to the foul line
- Don't take time to think
- Put your faith in experts and outside consultants
- Love your bureaucracy
- Send mixed messages
- Be afraid of the future
- Lose your passion for work, for life



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