DIY Creative
Center for Innovation and Smart Manufacturing
University of Oregon Graduate School of Architecture
Winter Term 2011
Course Description Architecture 484/485
Adjunct Professors: Lloyd Lindley and Shawn Cho

Outside The Box
"It's not a directive on the part of the designer," says the New York-based architect Rafael Vinoly, who has recently designed several high-profile and innovative laboratories. "It's really just a response to the hidden requests of people all over the world, who have been tortured by buildings that have not really changed in 50 years." Peter Dizikes | May 9, 2004

DESCRIPTION
This studio is a collaboration between the City of Portland Bureau of Planning and Sustainability E-TOD Project, the Harvard Kennedy School Living Cities Program and the University of Oregon Graduate School of Architecture. Urban design, development policy research and development and innovation in the architecture of Do It Yourself (DIY) product development and manufacturing will challenge participants to consider a new paradigm for station area development at the Clinton Street light rail transit (LRT) station on the forthcoming TriMet Milwaukie Line.

The Center for Innovation and Smart Manufacturing (CISM) brings together the next generation of Do It Yourself (DIY) research and development, crowd sourcing, global manufacturing, sustainability and E-TOD. As DIY companies grow with success and innovators move products to market, flexible space demands grow at a rate exponentially to output demand and evolution of ideas. A new generation of integrated architecture that combines the power of Web based technology, crowd sourcing, security, collaboration, competitive advantage, on time delivery, and intellectual and hard manufacturing is where design and management are remote to most of the processes that convert raw materials into on-the-self (OTS) items ranging from medical procedures and handheld devices to hybrid transportation solutions. The architectural structure that shelters, organizes, connects and socially supports the next gen economy and employment must be as nimble and adaptable as the products and innovations that are derived from the imaginative minds of the inhabitants.
What special constructs seed creativity and innovation? What environments attract and nurture new ideas and processes? How can architecture balance sustainability and attainability in a startup market? How can architecture accommodate the 21st century definition of the graveyard and swing shift working culture that global innovators and creatives have spawned over the last century? What policies and actions can provide a fertile E-TOD development framework and environment that spawns identifiable, flexible and collaborative architecture and dynamic public spaces? Can a nimble architecture evolve out of recyclable materials and constantly evolving needs for flexibility and market competitiveness? How can live/work, work/live spaces commingle with micro manufacturing where smells and sounds may conflict with residential life? What policies, codes and guidelines enable commingling of nontraditional living and working environments? What adjacencies and what kind of spaces foster collaboration?

This studio is designed to collaborate with the Portland Bureau of Planning and Sustainability E-TOD Project to explore new mixed use employment based architectural typologies through case studies and lectures, tours of some of Portland’s most innovative buildings and rigorous workshops that consider context, urban design and next generation sustainable and attainable building types. The studio will include an intense schedule of weekly and bi-weekly deliverables resulting in a design development package that delivers an E-TOD Urban Design Framework, form based design, tectonics, materials, and functional principles for the development of a Center for Innovation and Smart manufacturing.

GUEST SPEAKERS
Brad Malsin, PHD, MD, Owner of Beam Development co.
Mithun Architects+Designers+Planners TBD
Robert Wood Hastings, TriMet Agency Architect
Sean Batty, TriMet Agency Urban Designer
Eric Hovee, E.D. Hovee & Company, LLC, Economist and Market Analyst
Chris Hoffmann, Inventor and Systems Developer, Developer of the RYANO Mono-Wheel
Ethan Seltzer, PHD Head Urban Studies Portland State University TBC
Daniel Deutch, Developer, Left Bank TBC
Living Cities invitees TBD
Symposium Series and Forum Central City 2035
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Research and development, engineering and communications in a single center can create an energy hog. So, what policies, practices and constructs can bust the inefficiencies of conventional incubators and flex space? Can a physical location become a world center for innovation, design, manufacturing and distribution, and what codes, regulations, materials and systems can deliver an interconnected hub of innovation at the next level beyond the classic home garage or basement lab? Can excess energy be produced and if so can it feed LRT and local residences?

CATEGORIES OF DIY RESEARCH, DEVELOPMENT AND MANUFACTURING.
Consumer Products -- Products that increase quality of life in the workplace, at home, during leisure time, or while traveling.
* Sustainable Technologies -- Products that help reduce dependence on non-renewable energy resources, as well as products designed for other purposes using environmentally friendly materials or manufacturing processes.
* Transportation -- Products that enable movement of people and goods from one place to another.
* Machinery and Equipment -- Products that speed and improve work, manufacturing, or scientific research processes.
* Medical Products -- Products that improve the efficiency and quality of healthcare.
* Safety and Security -- Products that enhance the security or safety of individuals, businesses, communities, or nations.