# Innovation ecosystems & mentoring programs for entrepreneurship: MIT history and observations

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## Outline

- MIT Background & Impact
- MIT Entrepreneurship Ecosystem
- Mentoring and ecosystems for entrepreneurship

#### Acknowledgements

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Innovation and Entrepreneurship Initiative Director

#### Catarina Madeira

 Innovation and Entrepreneurship Initiative Program Manager

#### MIT

#### Charles L. Cooney

- Robert T. Haslam Professor of Chemical Engineering
- Founder and Faculty Director, Deshpande Center for Technological Innovation

#### **Edward B. Roberts**

- David Sarnoff Professor of Management of Technology
- Founder and Chairman, Martin Trust Center for MIT Entrepreneurship

#### Luis Perez-Breva

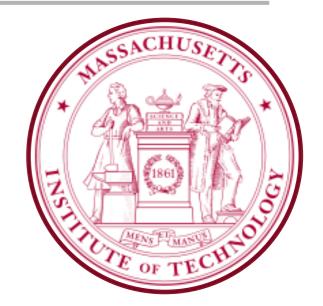
Lecturer and Research Scientist





## **MIT**

- Founded 1861
- Motto: Mens et Manus
- 5 Schools + 1 College (HST)
- 32 Academic departments
- 21,051
  - 1,017 Faculty (1,714 total teachers)
    - 76 Nobel Laureates (9 currently teaching)
    - 21 MacArthur Fellows currently teaching
  - 10,566 Students
    - 2,731 International Students
  - 8,771 Staff



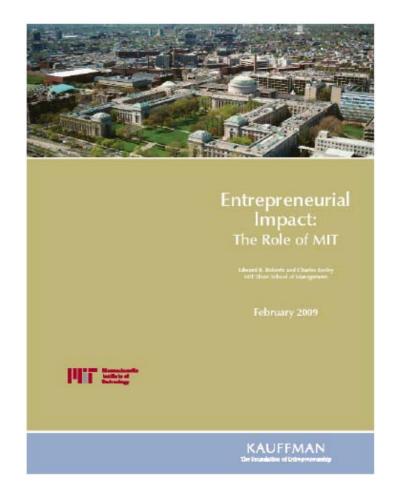




## Dramatic impact

- MIT annual research: \$650M
- 500+ disclosures/year
  - ~ Split between Physical & Life Sciences
  - ~ 200+ filed per year
- \$70M-90M yearly license revenue

- 33,600 companies founded by living MIT alumni\*
  - 76% active, employing 3.3M
- Annual revenues of \$2 trillion\*
  - GDP between Italy and India/Russia

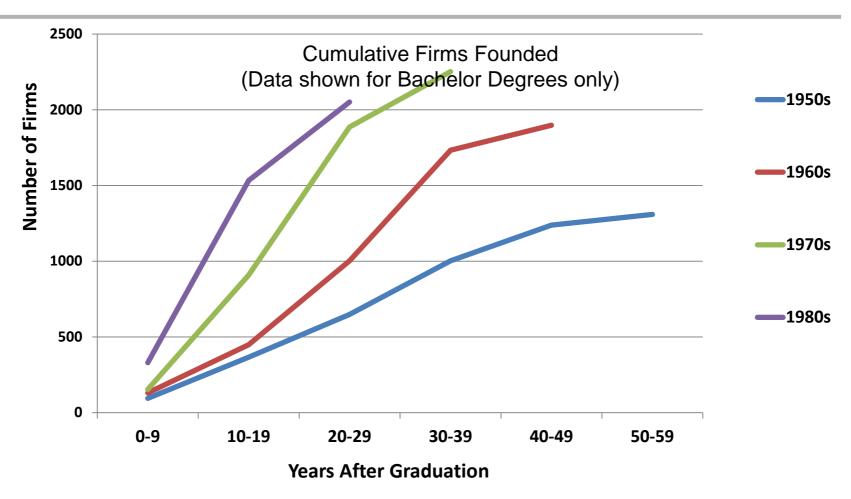


\* Edward Roberts and Charles Eesley





# Increasing Rate of NewCo formation after MIT



More entrepreneurs have emerged from each successive decade of graduates, and have started their companies sooner and at younger ages.





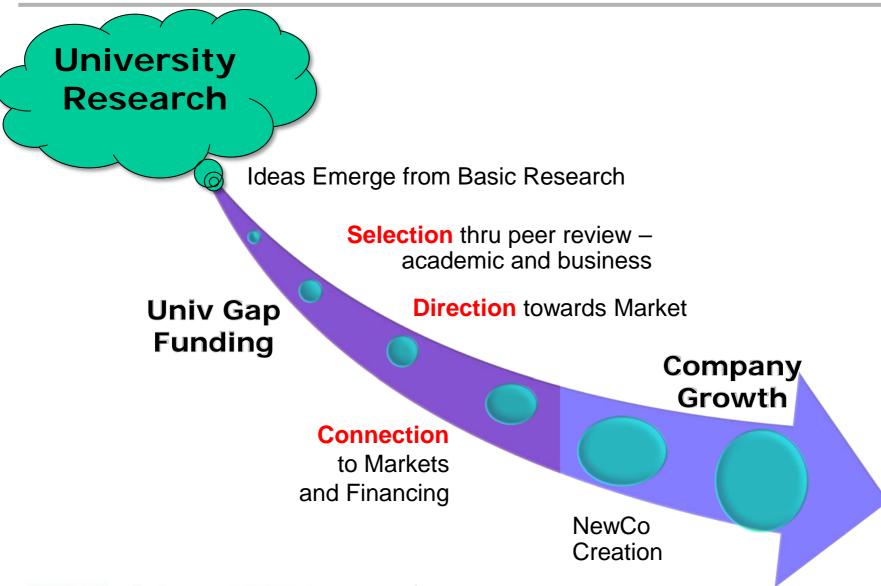
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- Mentoring and ecosystems for entrepreneurship
  - Education
  - Innovation
  - MIT Portugal





#### **Evolution of an Idea**







# Strong engagement of Entrepreneurs and VCs

- Speaker/panelist invitations to classes, clubs, conferences and celebrations
- Involvement of entrepreneurs, VCs, and senior officers as mentors, catalysts, and judges
- 3. Heavy linkages with local and global firms via our Entrepreneurship Lab (E-Lab) and Global E-Lab subjects
- 4. Network events each semester to "honor" company collaborators, with invitations to the major participants of the external entrepreneurial ecosystem

#### 5. "Level playing field" VC access to potential MIT-based investments

Growing recognition over time of MIT's critical role in creating and building the Greater Boston ecosystem





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## MIT: major international initiatives







## MPP Innovation: Motivation and Goals

#### Motivation:

- To grow a community around a shared interest in research, technological innovation and entrepreneurship
- To strengthen Portuguese university programs in technological innovation and entrepreneurship
- **Main Goal**: Promote the creation of new ventures, emerging from MIT Portugal Program

#### Sub goals:

- Bring together a significant number of innovative projects, at the yearly competition
- Attract the interest of investors, both VCs and BAs, Portuguese and from overseas





## MPP Innovation Main components

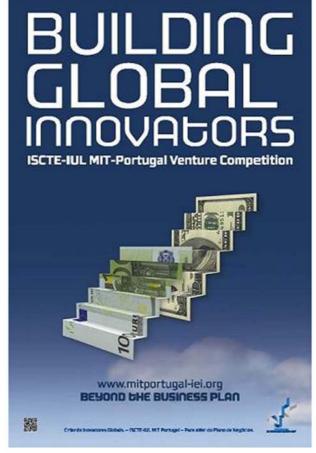
#### Action-based Curriculum



**Juried Final Presentation** 



#### Venture Competition



Awards €1,000,000 in prizes Mentors MIT ecosystem

Collaboration
FCT (Gov)
ISCTE (Business School)
MIT Portugal (Research)
Caixa Capital (VC)





## Two Educational Thrusts

• (2008)



- Adaption of MIT I-Teams into Bioengineering program across multiple schools and schedules
- (2010) ISCTE-IUL MIT PORTUGAL INNOVATION AND ENTREPRENEURSHIP INITIATIVE
  - 5 year "intervention" into Portuguese ecosystem
  - Triple Helix
    - Min. of Science/FCT
    - ISCTE-IUL, MIT
    - Caixa Capital/Catalysts

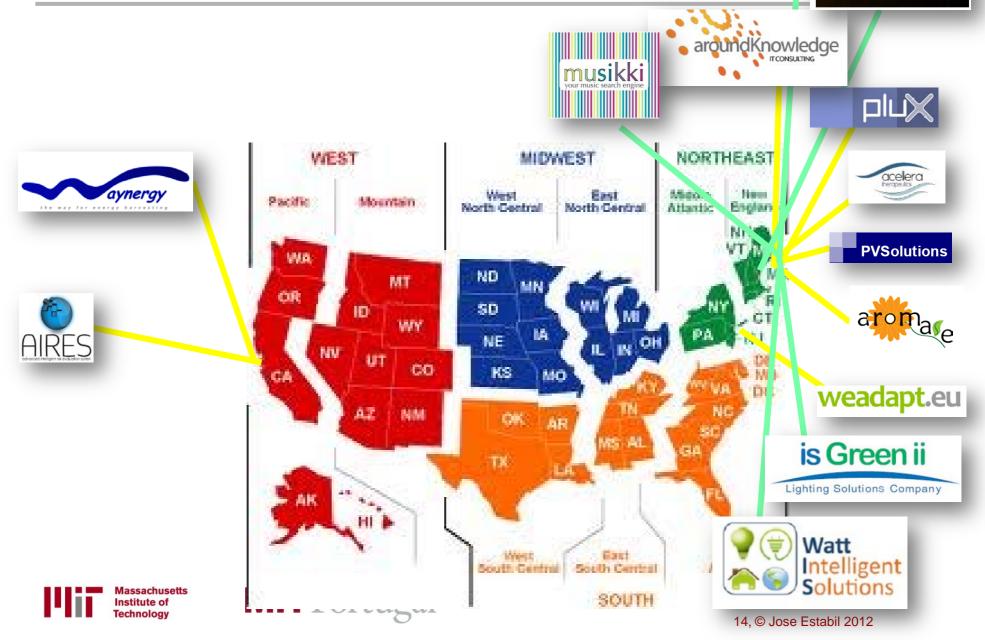




# alphaSIP

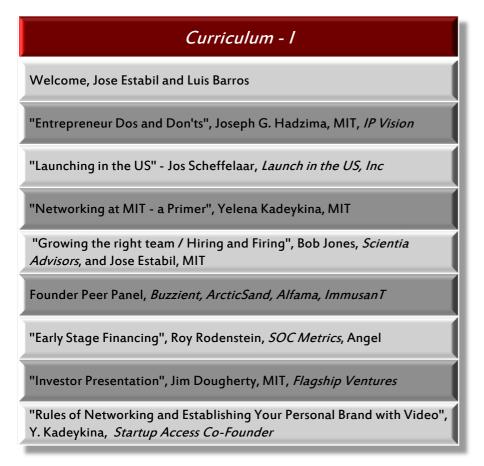
# **US Catalyst program**





## eTeams III @MIT

# 16 startup founders5 MIT thought leaders





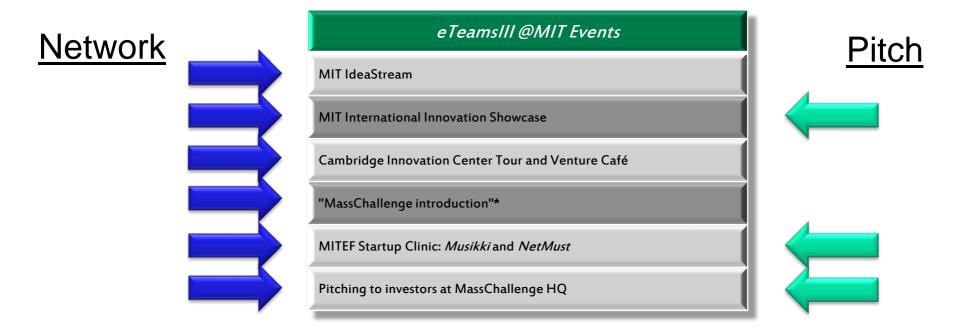
All lecturers are engaged in startups... they have networks





## eTeams III @MIT

# ~300 VCs, Angels, Strategic Investors and Founders







# **2010 Venture Competition Impact**

MIT Portugal-affiliated early stage ventures (as of 8/2011)	MPP Total	BioTeams	ΙΕΙ
Companies	22	3	19
Business Plan awards	190,000 €	30,000 €	160,000 €
Venture investments and loans	4,400,000 €	750,000 €	3,650,000 €
Subtotal	4,590,000 €	780,000 €	3,810,000 €
Proposed venture investments	5,600,000€		
2015 Revenue Potential*	3,000,000,000 €		

<sup>\*</sup>Based on venture business plans





## Future powerhouses

- Thomas Friedman, author of *The World is Flat*, New York Times columnist
  - "The best of these ecosystems will be cities and towns that combine a university, an educated populace, a dynamic business community...These will be the job factories of the







#### **Observations**

- Innovations & innovators happen everywhere
- University research can impact commerce
  - New products/paradigms for established industry
  - Startup/spinouts are an engine for job creation
- Tech transfer mechanisms
  - Industrial licensing
  - Gap funding/translational research grants
  - Competitions
  - Mentoring
- Unprecedented societal impact, opportunity, and economic activity







## Thank You





