University - Industry Relationships at MIT

Skolkovo
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Industrial Liaison Program

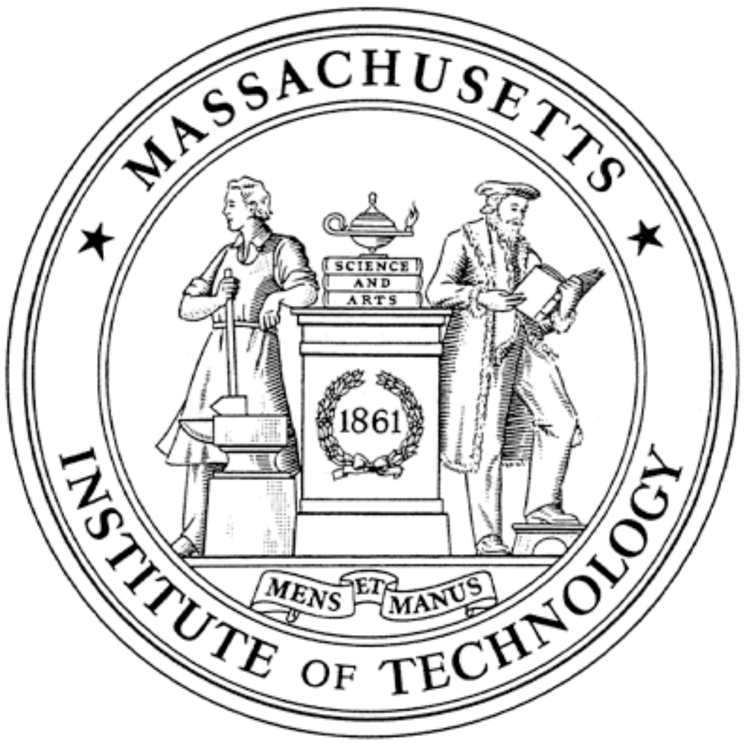
Massachusetts Institute of Technology

MIT = Education + Research

- Private institution founded in 1861
- Education
  - *10,566 students (6267 graduates, 4299 undergraduates)*
  - *2,371 foreign students, 437 visiting/exchange scholars*
  - ***3 undergraduate, 24 graduate students from Russia (2009)***
  - *5 schools (Engineering, Science, Management, Architecture & Planning, Humanities, Arts & Social Sciences)*
  - *24 academic departments, 1000 professors*
  - *76 Nobel Prizes, past and present (9 current faculty)*
- Research
  - *2800 full-time researchers, 2000+ administrative staff*
  - *90+ labs, centers & programs, all fields of science/technology*
  - *FY 2010 research budget $1.38 billion*
    - MIT Campus - $627 million/year in research (**Industry $110.9M-18%)**
    - Lincoln Lab - additional $753 million/year - 99% federal government supported

MIT’s Mission: Technology Transfer…

"Established for the Advancement and Development of Science its Application to Industry the Arts Agriculture and Commerce. Charter MDCCCLXI.”



… and MIT's Economic Impact

- Global: 25,800 companies founded by MIT alumni employ 3.3million with annual world sales US$2 trillion, the world's 11th largest economy [= **Russia**]
  (Source: Kauffman Foundation Study 2009)
- Local: "Economic Engine" for Boston/ New England

THE CAMBRIDGE-AREA INNOVATION ECOSYSTEM

A sample of the rich resources available in the MIT Community and beyond.

EDUCATIONAL INSTITUTIONS

- Harvard University
- Boston University
- Boston College
- Northeastern University
- Tufts University
- Babson College
- Brandeis University
- University of Massachusetts
- Worcester Polytechnic Institute

REGIONAL PUBLICATIONS

- Mass High Tech
- Boston Business Journal
- Xconomy
- Innovation Economy column in the Boston Globe

ENTREPRENEURS/START-UP COMPANIES

- Life Sciences/Biotech
- Energy
- Robotics
- Internet/Web 2.0/Web 3.0
- Gaming
- Information & Communication Technologies

SERVICE PROVIDERS

- Law Firms
- Marketing and Publicity Services
- Accountants and Part-Time CFOs
- HR
- Outsourced IT
- Traditional Office Space
- Incubators
- Consultants

ENTREPRENEURSHIP SUPPORT

- TiE Boston
- 128 Innovation Capital Group
- Boston Entrepreneurs' Network

CORPORATE R&D LABS

- Microsoft
- Google
- Mitsubishi Electric
- Novartis
- Pfizer
- Schlumberger
- Nokia

INVESTORS

- Venture Capitalists
- Angel Investors
- Private Equity
- Corporate Investor Groups

MIT ORGANIZATIONS

- Deshpande Center for Technological Innovation
- Venture Mentoring Service
- MIT Entrepreneurship Center
- MIT Enterprise Forum
- MIT Entrepreneurs Club (e-Club)

MODULAR, ADD-AS-YOU-GROW OFFICES / SERVICES

- Cambridge Innovation Center
- One Kendall Square
- Regus

STATE & LOCAL GOVT. INITIATIVES

- Life Sciences Cluster
- Robotics Cluster
- Clean Energy Cluster
- IT Cluster

REGIONAL TRADE ASSOCIATIONS

- Mass Technology Leadership Council
- Mass Software Council
- Mass Innovation and Technology Exchange
- Mass IT Collaborative Entrepreneurship Committee

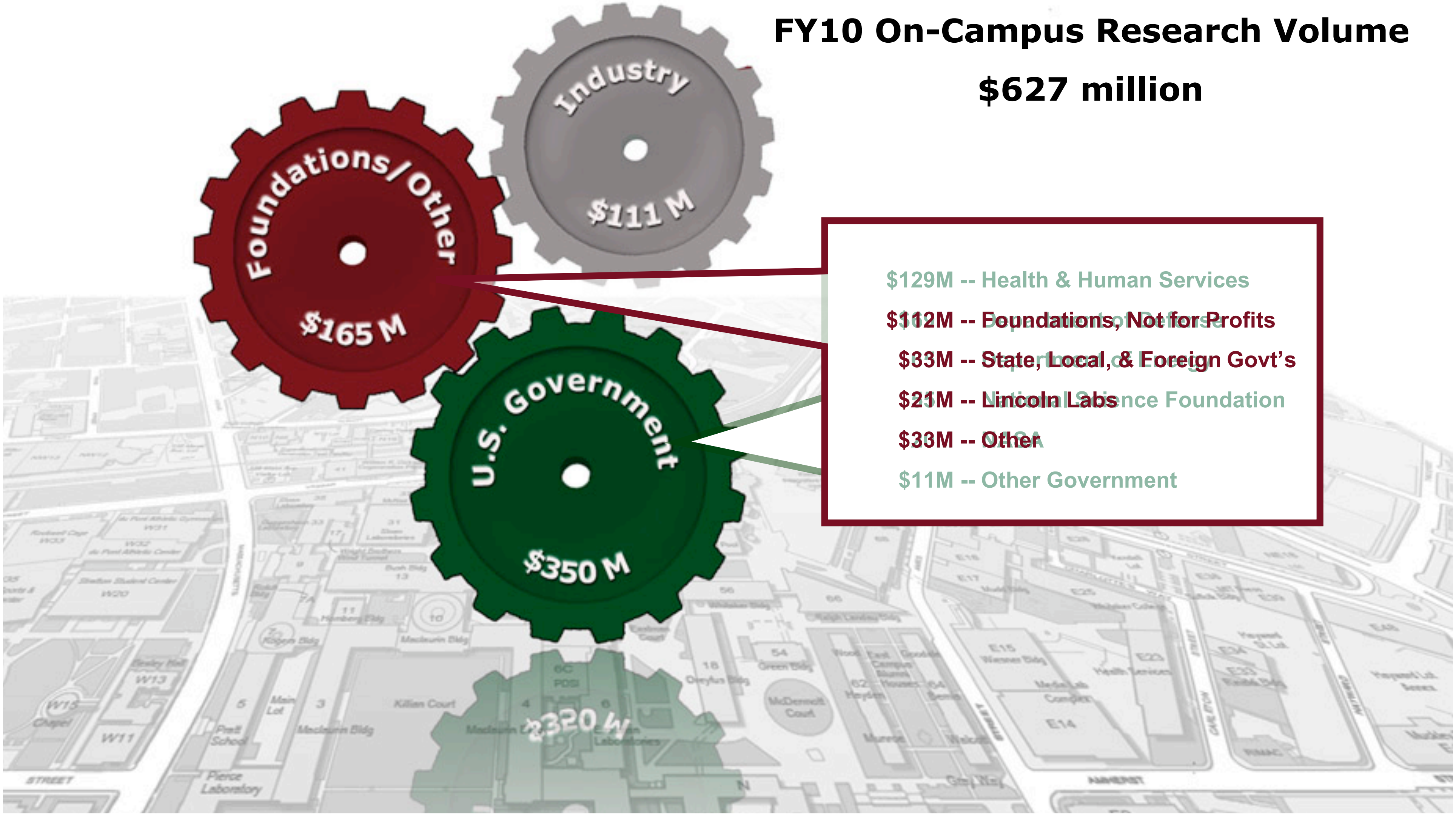
COMPETITIONS

- MIT $100k Entrepreneurship Competition
- MIT Clean Energy Entrepreneurship Prize
- MIT IDEAS
- X-Prize
- MIT and Dow Materials Engineering Contest

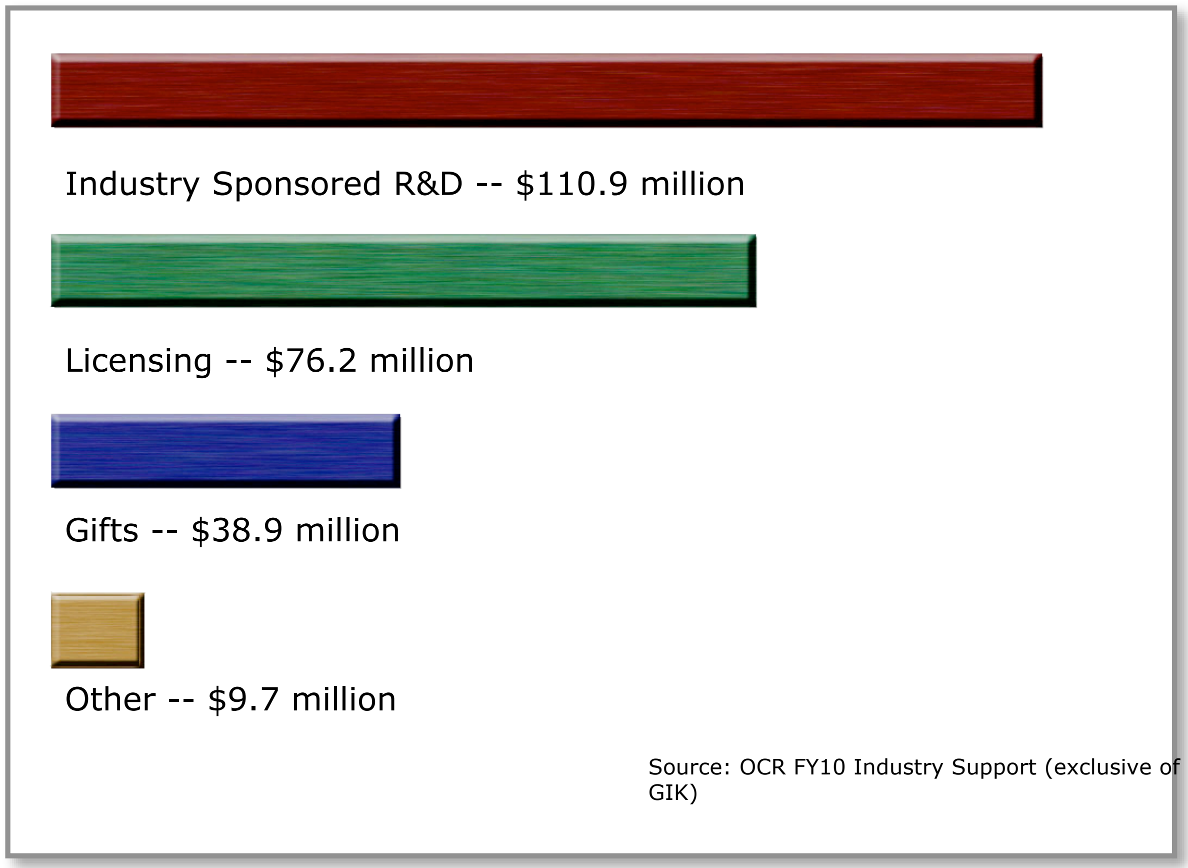
Sources of MIT Research Funding

FY10 On-Campus Research Volume

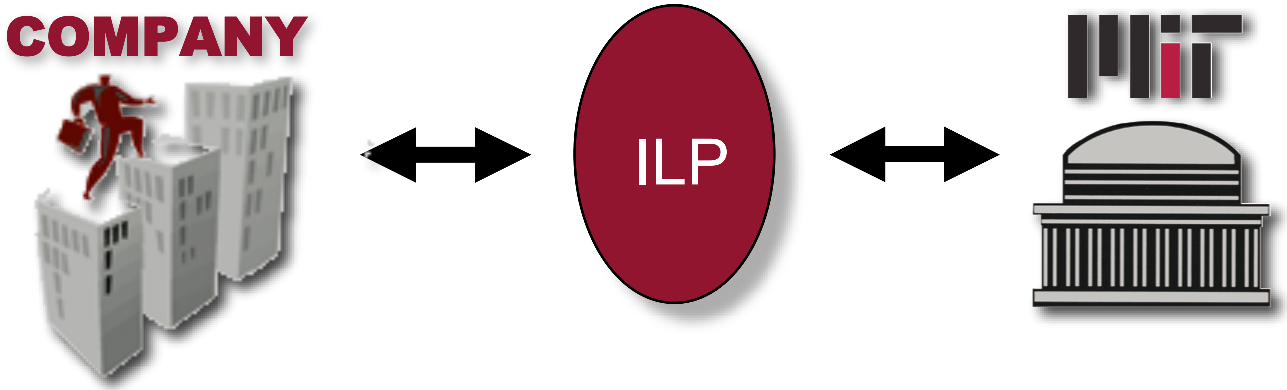
$627 million



Total Industry Support to MIT: $238.3 million



What is the Industrial Liaison Program?



- Gateway and guide for industry to MIT
- Industry partnership creation, support and management
- Technology transfer process - along with TLO and OSP

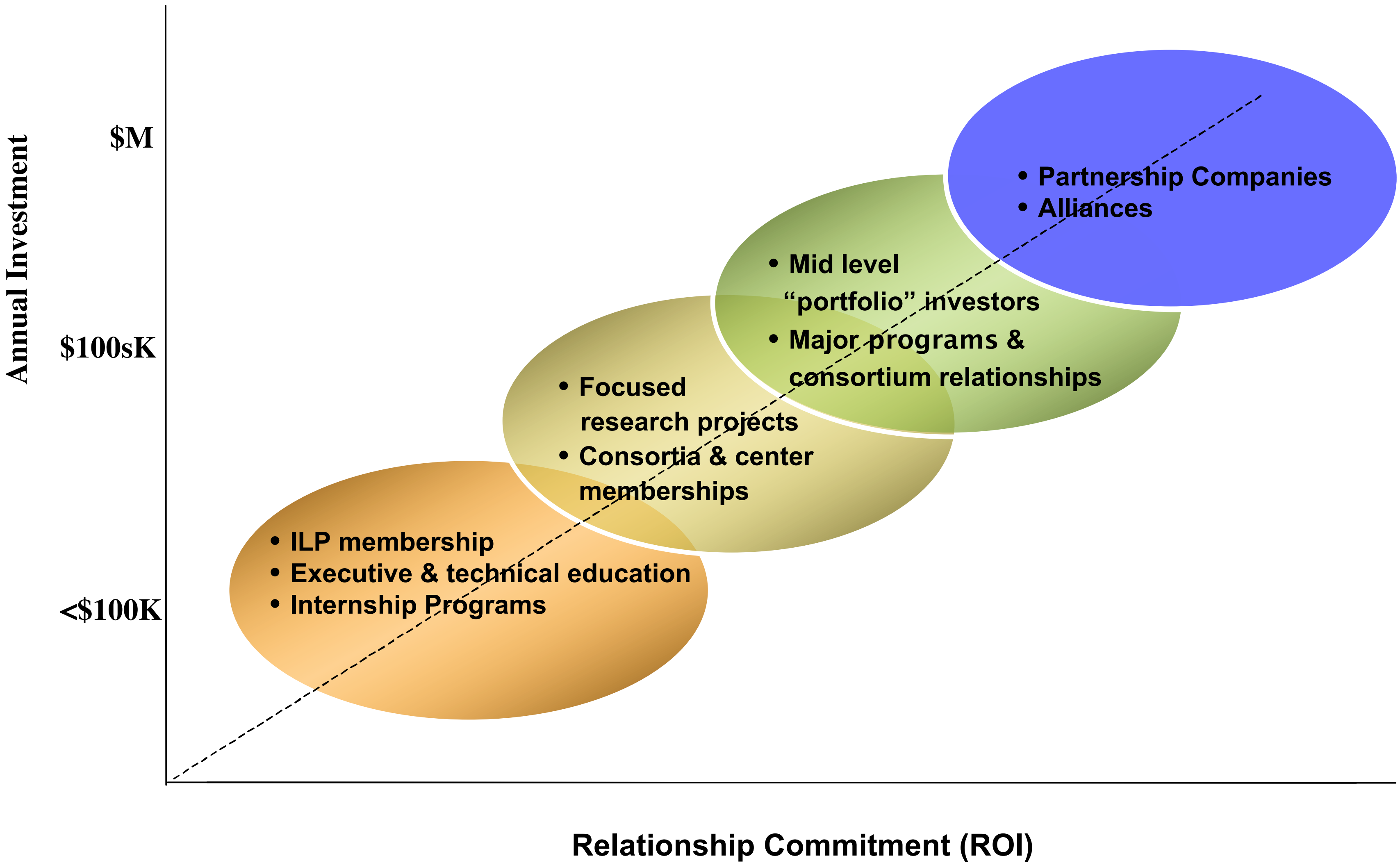
History of the Industrial Liaison Program

- Created 1948 by President Killian
  - *advice from head of Esso R&D: annual grants from selected corporations to maintain / advance research and education at MIT*
- Faculty role
  - *Advisory committee*
  - *Past directors were faculty*
  - *Faculty participate voluntarily; nominal compensation (1970s)*
- Subsequent development
  - *Tech transfer → total relationship management*
  - *International expansion in 1970s and 1980s*
  - *Support of capital campaigns*
  - *Support of changing role of MIT as an institution*
    - Model for innovative ways of working with a university
    - MIT's mission as a world institution

MIT Opportunities for Industry

- Alliance: DuPont
- Major initiative: MITEI
- Academic Chairs
- Sponsored research - single / multi sponsor
- Consortia/ Collegia (Lab affiliates programs)
- Visiting researcher /Visiting scientist
- Special programs (internship)
  - *MISTI*
  - *G-Lab*
  - *Via, UPOP, UROP (→ IPOP, IROP)*
- Entrepreneurial programs (company creation)
  - *TLO - Start-up*
  - *Deshpande Center*
  - *$100K Competition*

MIT's Range of Corporate Relationships



Global Corporate Access to MIT

- 200 of the world's leading companies participate **Industrial Liaison Program** to achieve competitive advantage.

- Members around the world:
  - *1/3 Americas, 1/3 Europe, 1/3 Asia*

- One member from Russian Federation -
  - **Трубная Металлургическая Компания (ТМК)**

Typical ILP Services and Deliverables

- **Facilitated access to MIT people and resources**
- **Guidance by a dedicated ILO**
- On-campus sessions with faculty and research staff
- Faculty visits to company sites
- Conferences at MIT and abroad
- Executive research briefings
- Customized research reports
- Publications

Benefits to Industry from Interaction with MIT

- Exposure to leading-edge technology
- Insight from internationally-recognized experts
- Input for strategic decision-making:
  - development of new products and processes
  - implementation of innovative management practices
  - achievement of effective growth strategies
- Research synergies
- Support in recruiting top talent - future leaders

Case: ENEL

- Research sponsor: combustion engineering, CEEPR
- Deregulation and reinvention of strategic research
- Joined MITEI
- Visiting researchers
- MISTI sponsor
- Exploring new areas: future businesses, reinvention of organization

Case: Pirelli

- ILP introduction to Microphotonics Center
- Joint project in nanotechnology integrated optical systems
  - *improvement in fiber optics for broadband telecom services*
  - *reduction in manufacturing and delivery costs*
  - *increased capacity and spectrum usage*
- $2.5M over several years
- Success of optical division - then sold off

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- Academic Chairs: Finmeccanica
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INDUSTRIAL LIAISON PROGRAM

Thank you / Спасибо за внимание!

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Massachusetts Institute of Technology