



PEACE & PROSPERITY THROUGH SCIENCE COLLABORATION

Developing Science and Technology Entrepreneurs

Marilyn L. Pifer, Ph.D.

Associate Program Director, CRDF Global

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Moving Research to the Market

- Scientific research can fuel economic development and contribute to meeting MDGs.
- Even “basic” research can yield results that can be translated to the marketplace
- But many scientists lack
 - Awareness of industry and market needs
 - Interest in commercializing their research
 - Understanding of the technology commercialization process

Educating for Innovation

Universities can build innovation capacity by:

- Fostering entrepreneurial culture
- Facilitating university technology commercialization
- Promoting development of relevant skills and expertise among technology transfer professionals, faculty and students
- Supporting creation of linkages with industry, business and investment communities (local and international).

Innovation Glossary

- Technology transfer
- Technology adaptation
- Technology commercialization
- Technology entrepreneurship
- TTOs & TLOs
- Innovation



Supporting Technology Transfer and Commercialization

- Technology commercialization training
- Entrepreneurship training
- Establishing Technology Transfer Offices
 - Train-the-trainer programs
 - Travel programs for technology transfer managers and entrepreneurs



Technology Transfer Offices

Technology Transfer Offices (TTOs) provide services to the university community:

- Training staff and students in technology commercialization
- Conducting technology audits
- Ensuring IP protection
- Assessing market need and market worthiness
- Assisting with patent filing
- Looking for commercialization and licensing opportunities
- Assisting creation of start-ups / spin-offs
- Reviewing contracts

A Training Continuum

Intellectual property protection



Market awareness



Working with industry



Patenting and licensing



Business plan development



Pitching to investors

Commercialization Is Not Linear

“Technology Push” – Driven by Internal Priorities

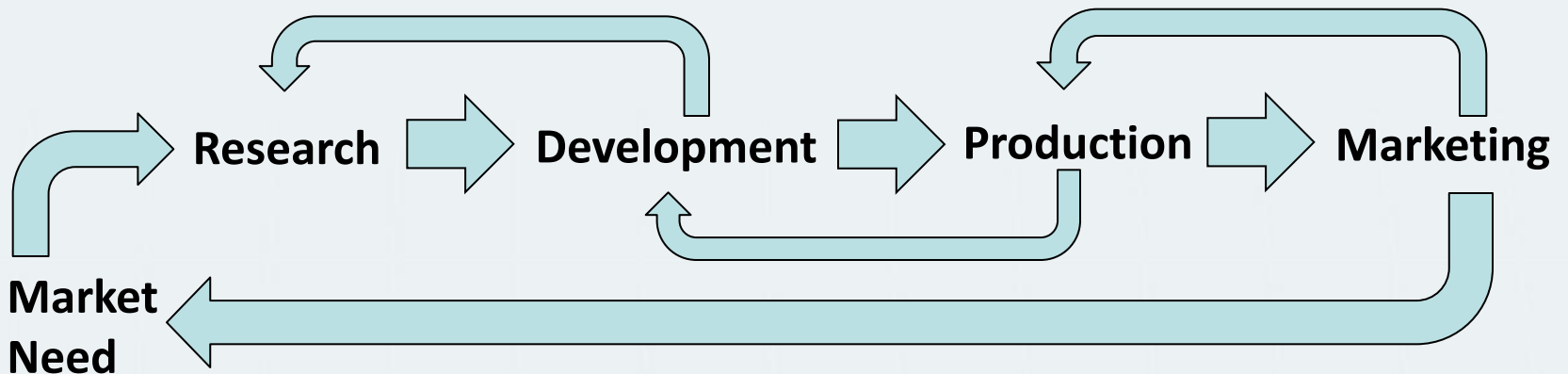


Commercialization Is Not Linear

“Technology Push” – Driven by Internal Priorities



“Market Pull” - Fueled by Market Forces



University-Industry Interaction

- Industry input to research programs encourages researchers to meet market needs
- Contract work creates income for the university
- Industry feedback helps shape university curricula to ensure needed skills are taught
- Industry internships provide employment opportunities for students and graduates

Impact

- A young entrepreneur received a \$100,000 grant for his startup company in March 2011 from the Microsoft Seed Fund as a result of training and connections made during a travel program organized by CRDF Global.



- ✓ The technology, “Pirate Pay”, detects and prevents unauthorized distribution of copyrighted content.
- ✓ CRDF Global’s training prepared the inventor for meetings with American investors and potential partners during a travel program to three major U.S. hubs of technology and business.

Impact

- The TTO at St. Petersburg State University, supported by CRDF Global and the Russian Ministry of Education & Science, has since 2003 facilitated the creation of 22 new spin-off companies, resulting in 100 full-time and 70 part-time new jobs.

For the period 2003-2009, the eight Russian university TTOs reported :

- ✓ 1,398 inventions
- ✓ 1,199 patent applications filed in Russia
- ✓ 647 new contacts with companies
- ✓ 130 new enterprises started
- ✓ Over \$2.5 million in revenue



Impact

- A research team from Georgian Technical University developed a method to manufacture manhole covers from composite concrete - a lighter and more durable alternative to cast-iron covers which are frequently stolen for scrap.
- ✓ CRDF Global's training and business partnership grant facilitated the team's work with a local company
- ✓ 12 new jobs created
- ✓ Three young researchers and students involved
- ✓ Over 20 contracts, yielding revenue of 700,000 Georgian Lari (over \$420,000)





CRDF Global – Who We Are

- An independent, nonprofit, non-governmental “do-tank” authorized by the U.S. Congress and established in 1995 by the U.S. National Science Foundation
- An operating (not endowed) foundation that promotes international scientific and technical collaboration through grants, technical resources, and training
- Headquarters near Washington, DC; other offices in Russia, Ukraine, Kazakhstan, and Jordan





Thank you for your attention!

Marilyn L. Pifer, Ph.D.

Associate Program Director, CRDF Global

1530 Wilson Blvd., 3rd Floor

Arlington, VA 22209

mpifer@crdf.org