



D2P Discovery to Product

UNIVERSITY OF WISCONSIN–MADISON

www.d2p.wisc.edu

REDI Committee – Board of Regents

By Paul M. DeLuca, Jr. and Mark E. Cook

February 6, 2014



Paul DeLuca
Provost
Medical Physics

Mark Cook
Chair of D2P Advisory Board
Animal Sciences



D2P **Discovery to Product**

UNIVERSITY OF WISCONSIN-MADISON



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UW-Madison's research engine

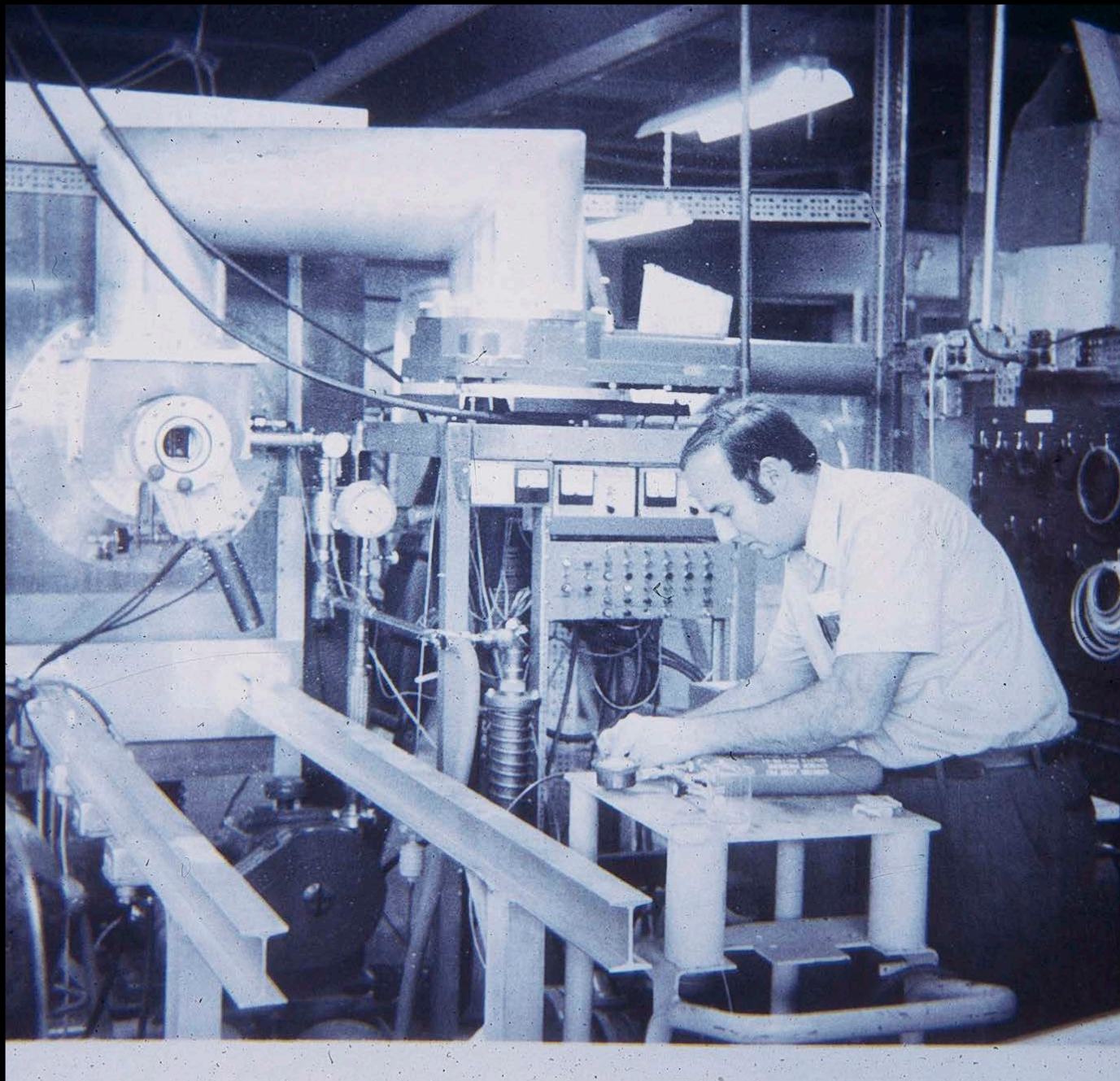
- UW-Madison research expenditures=\$1B
- UW discloses 350 inventions/year to WARF
- WARF applies for 200 patents per year
- WARF has over 50 new license agreements/year
- WARF will help spin out 5-7 new companies this year, impressive but....
- UW-Madison and WARF have identified a gap in technology transfer



Raiders and the Lost Ark

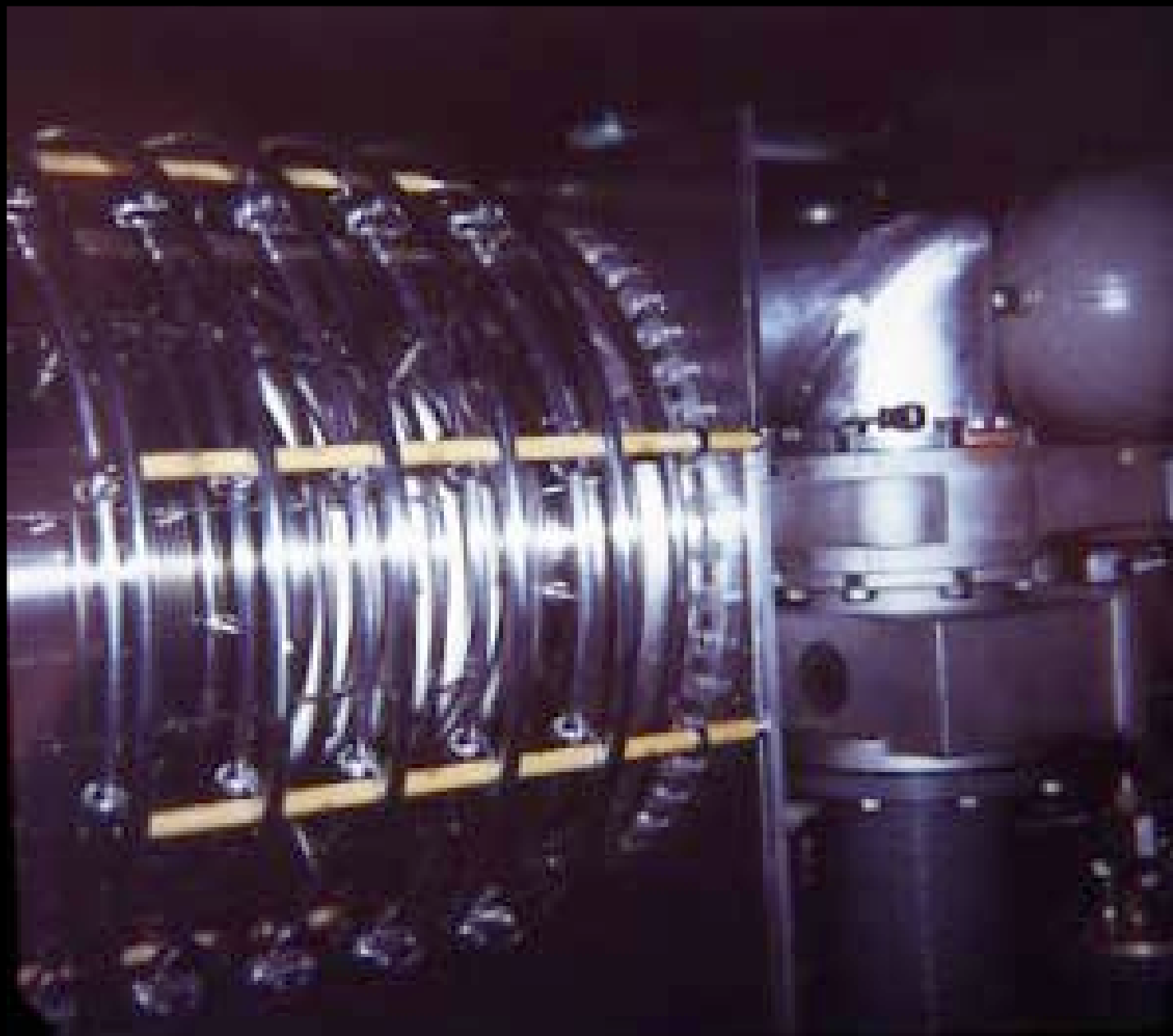


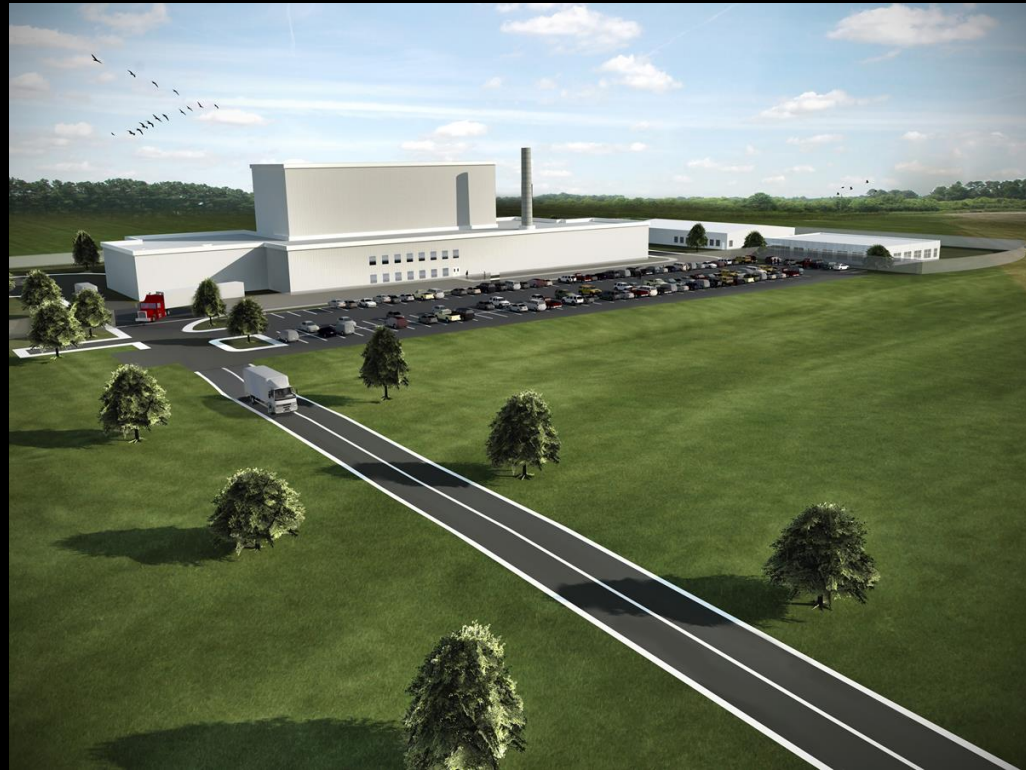
\$1 billion in research expenditures. Are we missing something?



Polywell







SHINE Medical and Phoenix Nuclear Labs

Introduction to SHINE Medical Technologies

Health. Illuminated.

- SHINE Medical Technologies™ is dedicated to being the world leader in safe, clean, affordable production of medical tracers and cancer treatment elements
- Highest priority is safely delivering a highly reliable, high-quality supply of the medical ingredients required by nearly 100,000 patients each day
- Spun out of ideas developed at the University of Wisconsin—Madison
- Will create hundreds of jobs in Janesville, WI, solve a critical global problem facing the supply of vital medical radioisotopes

Examples of Medical Isotope Scans

- Approximately 45 million procedures are performed with medical isotopes each year (> 1 every second)

- Some examples

Stress Test (Cardiac perfusion)

Cancer Screening (Bone scans)

Alzheimer's disease

Lung Perfusion

Kidney Scan and Function

Liver Scans

Brain Perfusion

Gall Bladder Function

Thyroid Scans

Salivary Gland Scans

Meckel's Scans

Sentinel Lymph Node

Localization

New Technology is Accelerator based: Dramatically improves safety, efficiency

- Accelerator generates only neutrons and stable helium
- Uranium target reusable; moly-99 separated after several days and target put back into system
- ***Radioactive byproducts reduced by hundreds of times compared to other production methods***



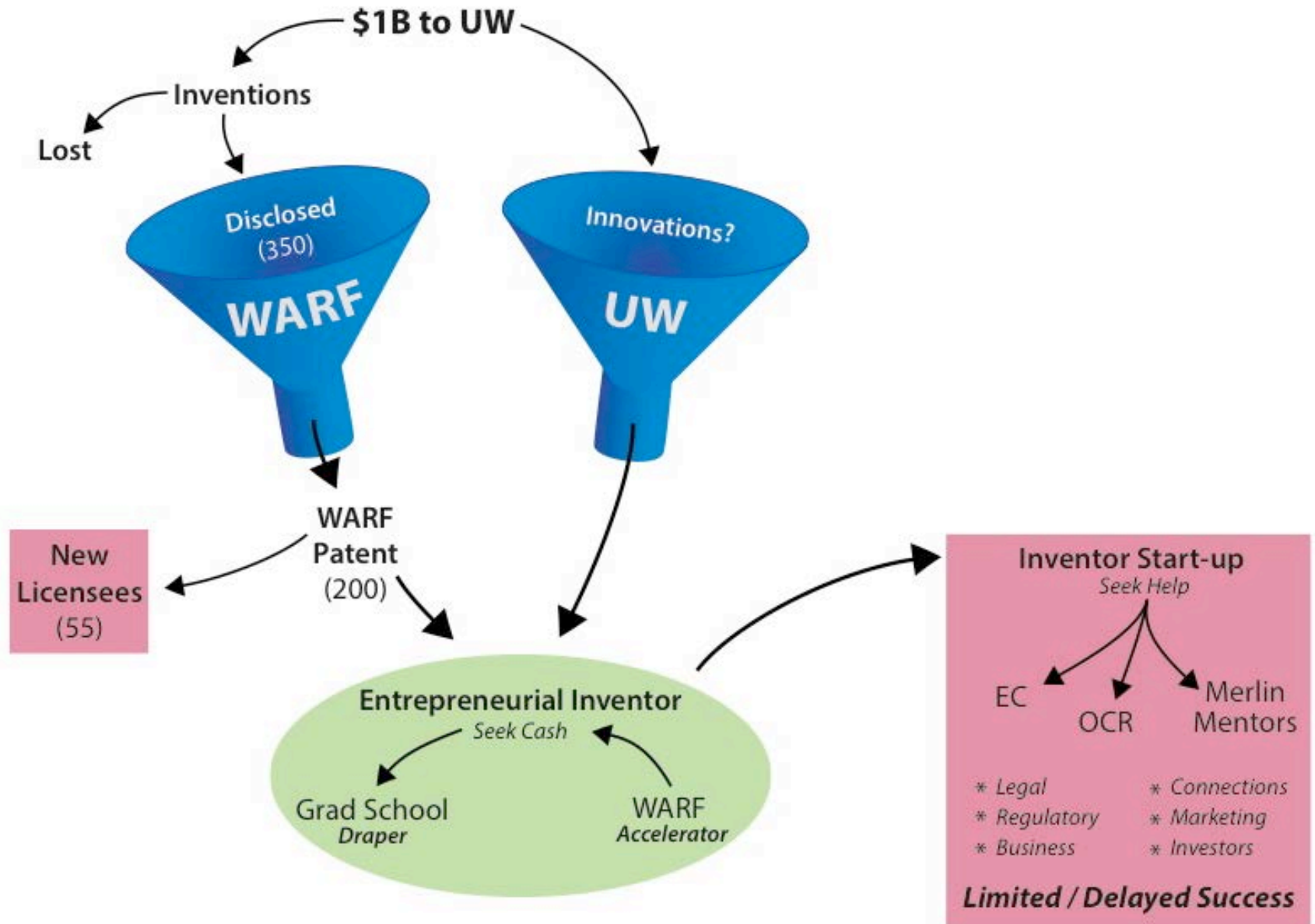
Solid Progress to Market

- Technology: All elements demonstrated at full scale
- Regulatory: Major applications filed and accepted—first since 1961!
- Market: Existing suppliers raising prices, shortages persisting, supply agreements with major customers imminent
- Financing: \$30 M spent on project so far, \$150 M remaining to market





Inventor Initiated





D2P Shepherds

Scout, Connect, Incubation, Launch



WEINERT CENTER FOR
Entrepreneurship
WISCONSIN SCHOOL OF BUSINESS



Law & Entrepreneurship Clinic
UNIVERSITY OF WISCONSIN-MADISON



WISCONSIN ECONOMIC
DEVELOPMENT CORPORATION

UW ACE

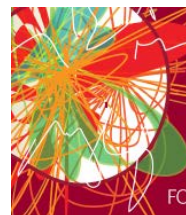
Wisconsin MBA | OPERATIONS AND TECHNOLOGY MANAGEMENT
ERDMAN CENTER FOR OPERATIONS AND TECHNOLOGY MANAGEMENT (OTM)



OFFICE OF
CORPORATE RELATIONS
University of Wisconsin-Madison



WARF
Wisconsin Alumni Research Foundation

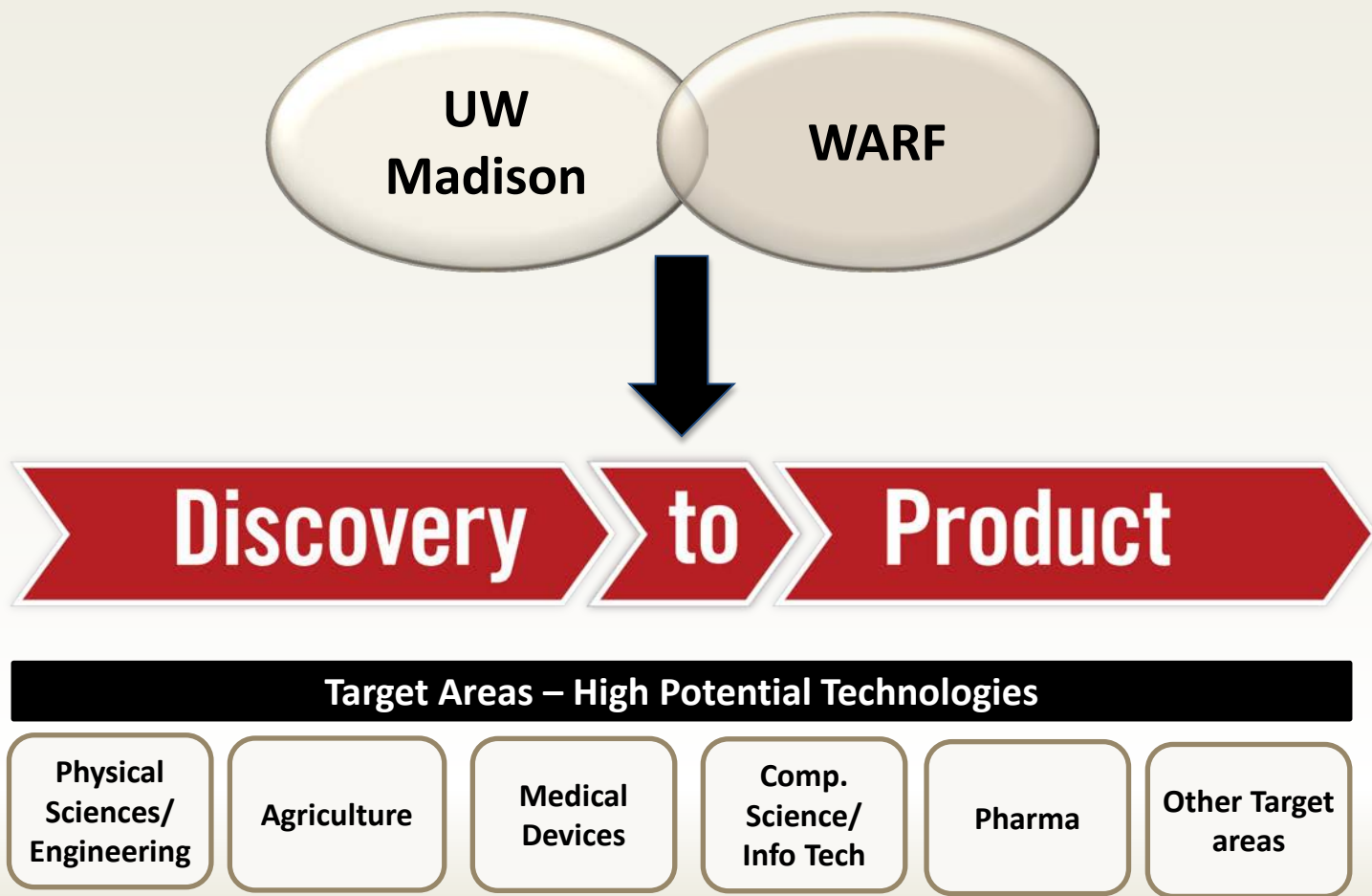


G. Steven Burrill Business Plan Competition
FRIDAY, MAY 2, 2014

FOSTERING INNOVATION THROUGH ENTREPRENEURIAL COMPETITION



D2P Structure





Wisconsin Resources





Mark E. Cook

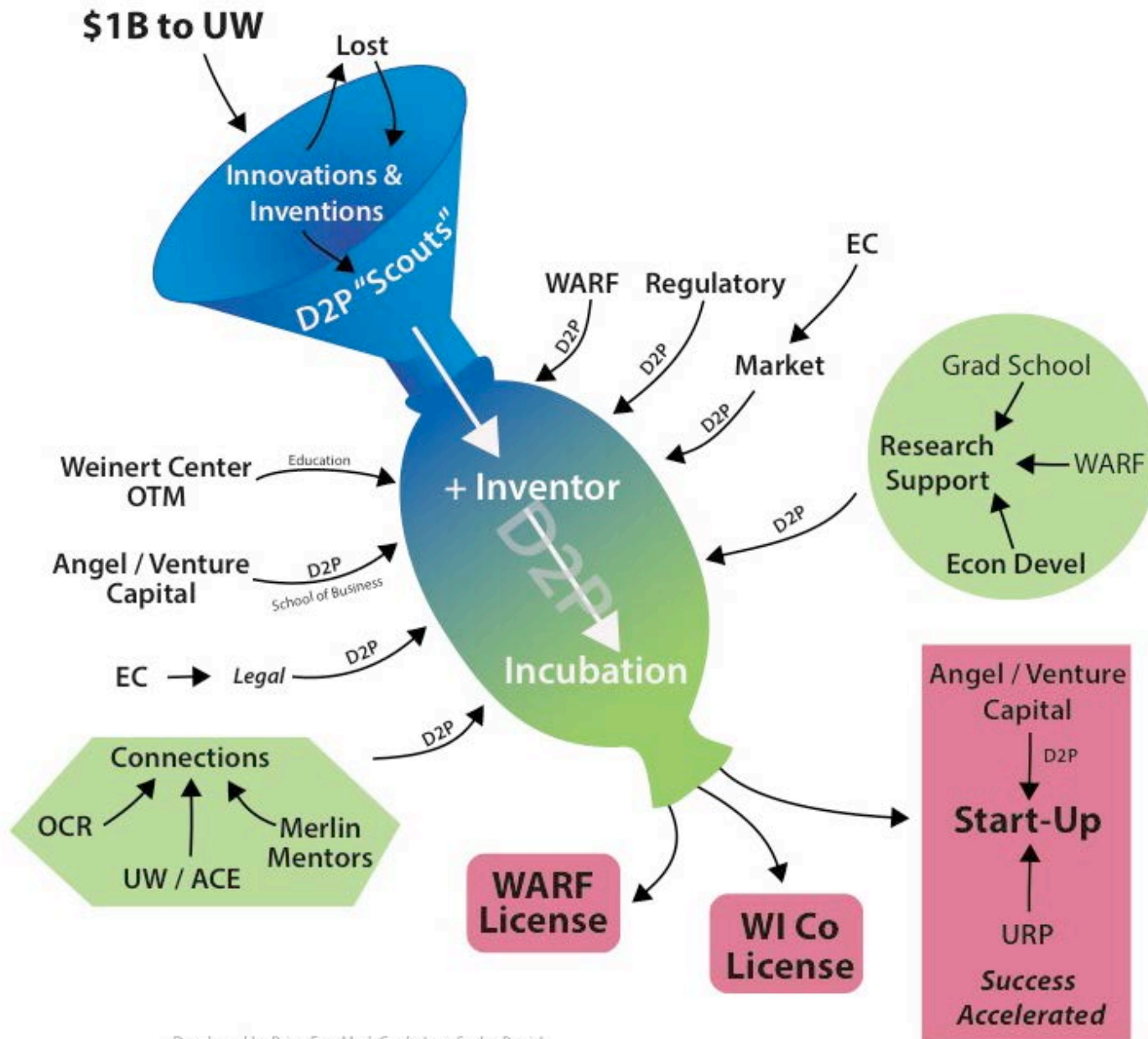


Chair, D2P Advisory Board
Professor of Animal Sciences

Focuses on nutritional regulation of immune function
Founder of several companies, including Isomark, LLC.
Holds patents related to immunity, body mass and composition.

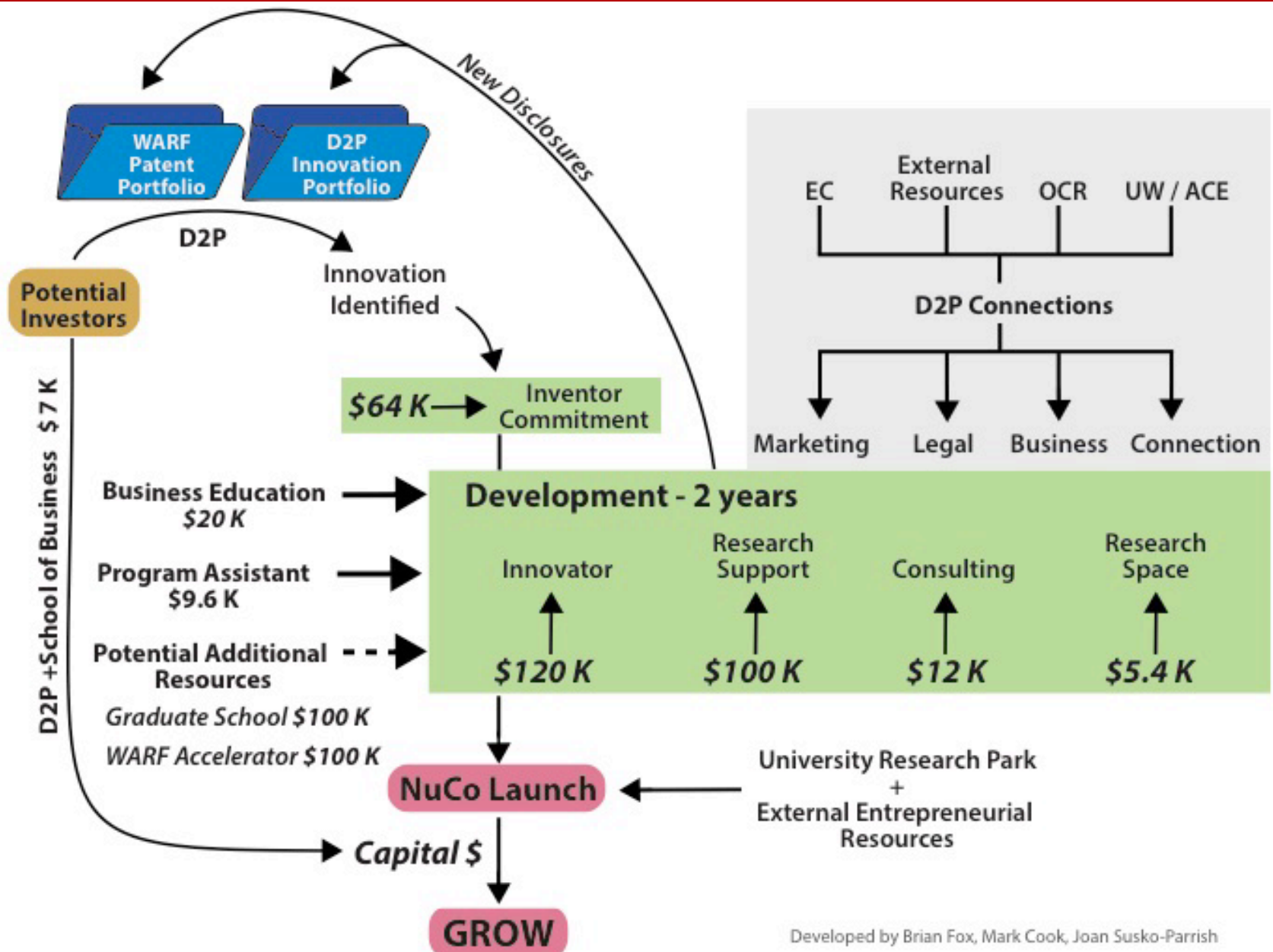


D2P Shepherding





An Example of Use of Funds for Economic Development





D2P Goal

- Enable UW-Madison/WARF to:
 - Create and grow IP
 - That benefits the world
 - Is valued by society
 - » Creates new WI jobs



D2P's Mission

- I. Cultivate entrepreneurship
- II. Secure intellectual property
- III. Accelerate transfer of campus innovations
- IV. Create a sense of urgency in tech transfer
- V. Leverage internal and external resources
- VI. Expand investment capital and entrepreneurial talent
- VII. Improve UW-Madison/WARF's 80+ year collaboration through a new joint venture



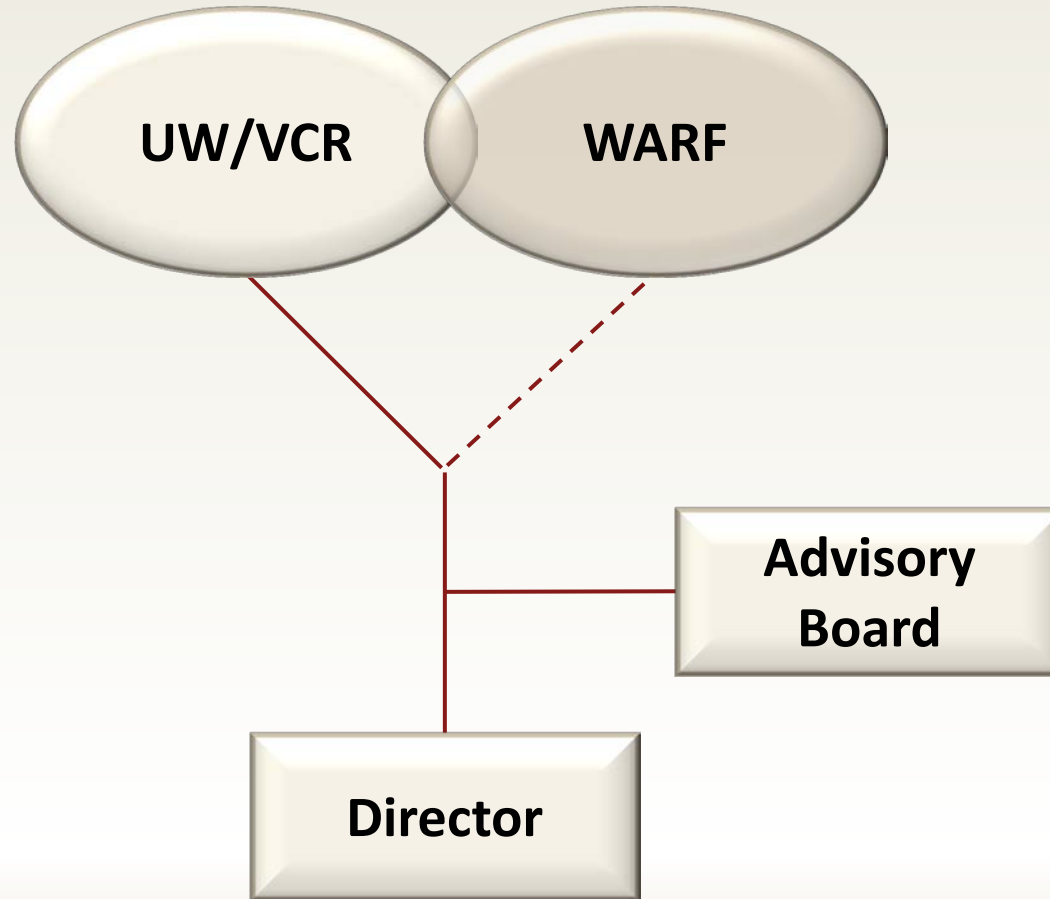
D2P Principles of Operation

D2P expert team will:

- Champion innovation and IP protection
- Serve as “go-to” contact for technology commercialization
- Connect innovators to commercialization resources
- Act as trusted advisor to UW innovators

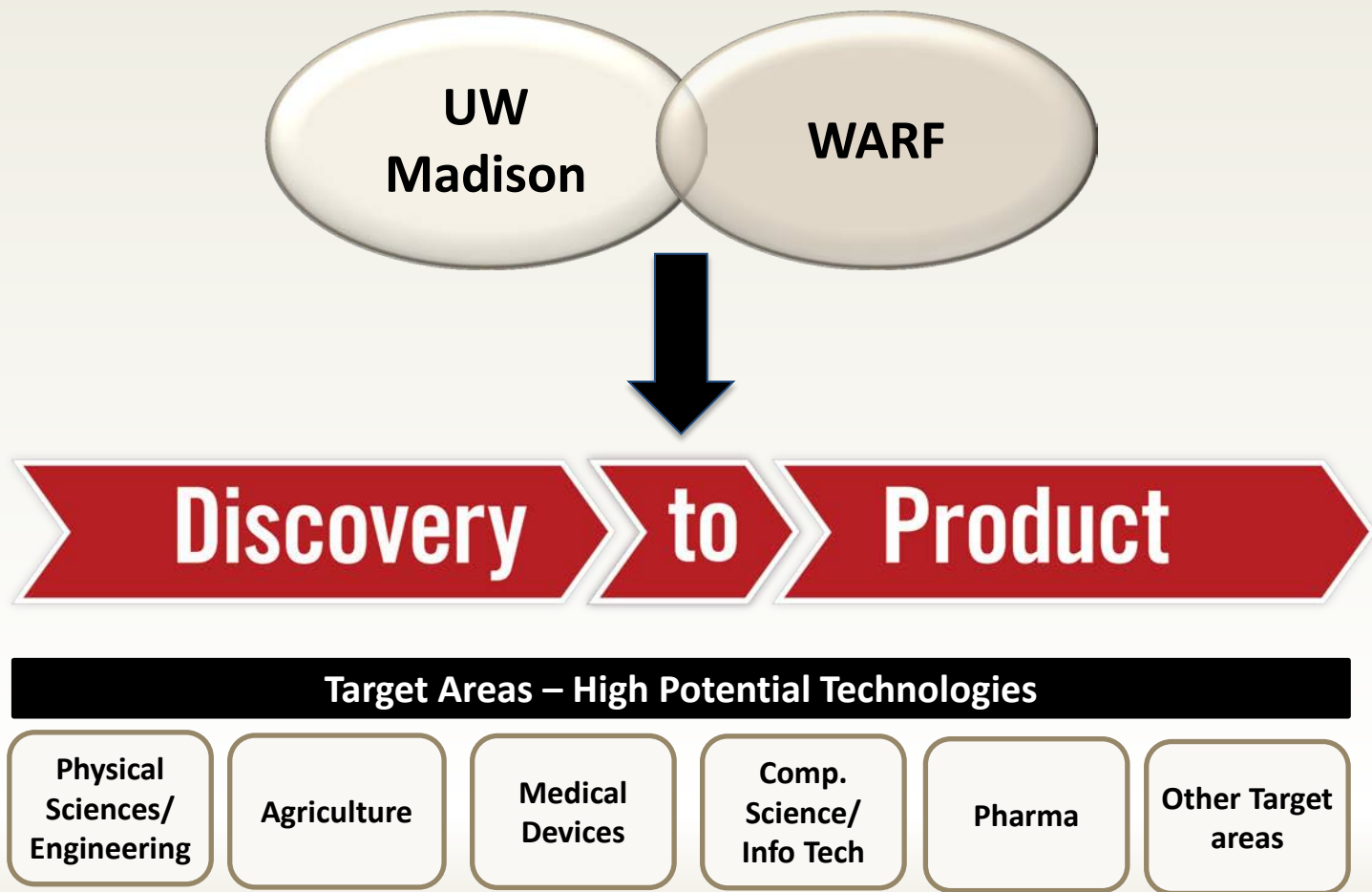


D2P Leadership Structure



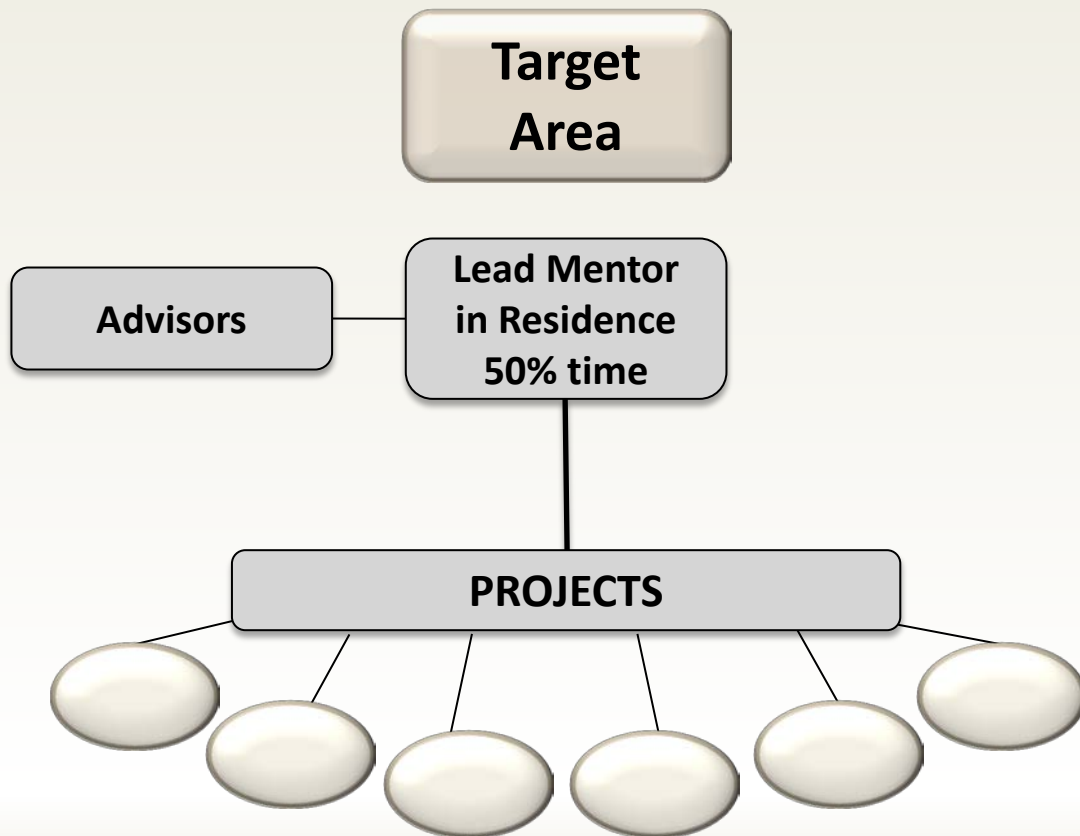


D2P Structure





Structure for Each Target Area





D2P Leadership Understands

- Faculty want to be faculty
- Support is needed to mature an idea
- Advancement of technology must be seamless
- Additional activity must advantage the research laboratory



The D2P Approach

- Targeted technologies
- Collaborative engagement model
- Maximize leverage of existing resources
- Trusted advisor to guide the way
- “House Calls”
- Mentors-in-Residence
- Accounting skills to support pro-forma financials
- Public/Private partnership



Campus exit

- Executable business plan
- Channel through regulatory
- Path to revenue
- Assembled leadership team and board
- Immediate access to capital
- Attractive to venture funding



Igniter

- \$2.4 Million provided to “IGNITE” new companies through D2P
- Funds provided through the System Incentive Grant program. (Thank you!)



IMPACT on Wisconsin

- Economic development for the State of Wisconsin
 - New companies
 - New jobs
 - Better prepared workforce
 - Increased venture funding