

Turning Researchers into Innovators, Inventors and Entrepreneurs

The Journey from the Bench to the Marketplace



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1st Leg: Traveling the Road From Researcher to Innovator

- ***Innovator***: a definition
“Someone who opens a new line of research or technology or art: a pioneer, trailblazer, groundbreaker”



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1st Leg: Traveling the Road From Researcher to Innovator

- **Innovators: Are they Born or Made?**
 - Even if born – the “innovation-gene” rarely flourishes in a vacuum – many factors play a role including environment, intellectual motivation and reward



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1st Leg: Traveling the Road From Researcher to Innovator

- The complex route to innovation is often misunderstood and underestimated by knowledge managers and is marked by choices made or forks in the road taken by investigators along the way



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1st Leg: Traveling the Road From Researcher to Innovator

- **1st Fork: Selecting the intellectual problem**
- Motivations for selecting research that leads to innovation - a matter of environment and disposition for intellectual pursuit
 - **The Culture – Choosing problems that involve innovative solutions often depends upon stars aligning; i.e. how far outside the box will the researcher find collegial and institutional support**



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1st Leg: Traveling the Road From Researcher to Innovator

- More motivations:
 - **Mentors - close by or is the researcher a pioneer**
 - **Qualities of the problem (intellectual disposition of researcher)**
 - **Funding available or not, from whom, strings attached**
 - **Rewards – academic/financial recognition or other**
-



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1st Leg: Traveling the Road From Researcher to Innovator

- **2nd Fork: Recognizing the innovative concept when it occurs**
 - *Innovation* . . . “the introduction of something new, a new idea, method or device”
 - o Interaction with colleagues makes a difference
 - o Understanding related industries – a feel for what’s new



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2nd Leg: Traveling The Road from Innovator to Inventor

- **From Innovator to Inventor**
 - Inventor . . . “to produce something ‘as useful’ through the use of the imagination, or of ingenious thinking and experiment”



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2nd Leg: Traveling The Road from Innovator to Inventor

- **3rd Fork: Recognizing development for the marketplace as a desirable end**
 - **Requires awareness of intellectual property as a property right with its own value**
 - **Influenced by past and present interactions with technology transfer**
 - **Relationships and interactions with colleagues/industry as positive reinforcement – or not**
 - **Interest in promoting “the public benefit” through the marketplace in addition to advancing science, new knowledge etc.**



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2nd Leg: Traveling The Road from Innovator to Inventor

- **4th Fork: Choosing which “transfer” pathway to follow**
 - **Public dissemination through publication**
 - Collegial appreciation
 - Tenure considerations if university faculty
 - **Choosing the backdoor (acting alone)**
 - Lack of confidence in the tech transfer system
 - **Doing nothing and continuing with research**
 - No interest in commercialization
 - **Taking the path to commercialization through disclosure of innovation = invention**



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2nd Leg: Traveling The Road from Innovator to Inventor

- **Factors contributing to choosing “invention” and commercialization**
 - **Understanding institutional policies and procedures**
 - **Prior experience with the process**
 - **Seeing value in patenting**
 - **Incentives and rewards**
 - **Expected outcome – positive or negative**



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3rd Leg: Traveling The Road from Inventor to Entrepreneur

- ***Entrepreneur*** . . . “one who organizes, manages, and assumes the risk of a business or enterprise”
- **5th Fork: Becoming an Entrepreneur – three requirements**
 - Invention suitable for a new business start-up
 - Inventor’s disposition
 - Availability of resources



3rd Leg: Traveling The Road from Inventor to Entrepreneur

- **Becoming an Entrepreneur: What does it take?**
 - Understanding the “business” of starting a company
 - Vision
 - Passionate determination
 - Candid self-appraisal



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Encouraging Inventorship and Commercialization: The Institution's Role

- The environment: a major factor in the inventor's choices
 - **Factors that contribute to choosing commercialization**
 - o Is technology commercialization a priority for the institution
 - o Does the organization support commercialization and start-ups financially and through its policies
 - o Are there "rewards for faculty inventors who choose to follow the road to commercialization



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Encouraging Inventorship and Commercialization: The Institution's Role

- Other factors contributing to choosing commercialization/entrepreneurship
 - **Is the process of disclosure, patenting, licensing, or starting a company informative and user-friendly?**
 - **Are communication lines open and responsive between the inventor and administrators**



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Encouraging Inventorship and Commercialization: The Institution's Role

- Other factors contributing to choosing commercialization/entrepreneurship
 - **Does the organization provide materials/mentors to “inform” researchers on processes**
 - **Whether the technology transfer office is professionally staffed**
 - **Are commercialization and start-up efforts successful - e.g. is there a “poster child”**



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Encouraging Inventorship and Commercialization: The Institution's Role

- And, factors that cause the innovator to disengage
 - **Ambivalence on the part of the administration**
 - **Lack of understanding of the process creating investigator apprehension**
 - **Non-responsiveness from the TTO**
 - **Failure to file patent applications**
 - **One bad experience**
 - **Policies that erect barriers**



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Encouraging Inventorship and Commercialization: The Institution's Role

- A partnership that makes a difference
 - **Setting institutional goals that investigators are comfortable with. If culture is not supportive work with researchers to change it.**
 - **Establishing the tech transfer priority as “service to the public” not revenue generation helps to convert the fence-sitters. If revenue is the goal, being honest about it avoids faculty dissatisfaction**



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Encouraging Inventorship and Commercialization: The Institution's Role

- A partnership that makes a difference
 - **Like minds respect like minds – staffing the TTO appropriately makes a difference**
 - **“Walking the halls” adds a commercial perspective to research and establishes a partnership from the beginning of an investigator’s line of scientific inquiry.**
 - **Providing institutional resources necessary to encourage and support technology commercialization and start-ups sends a positive signal**



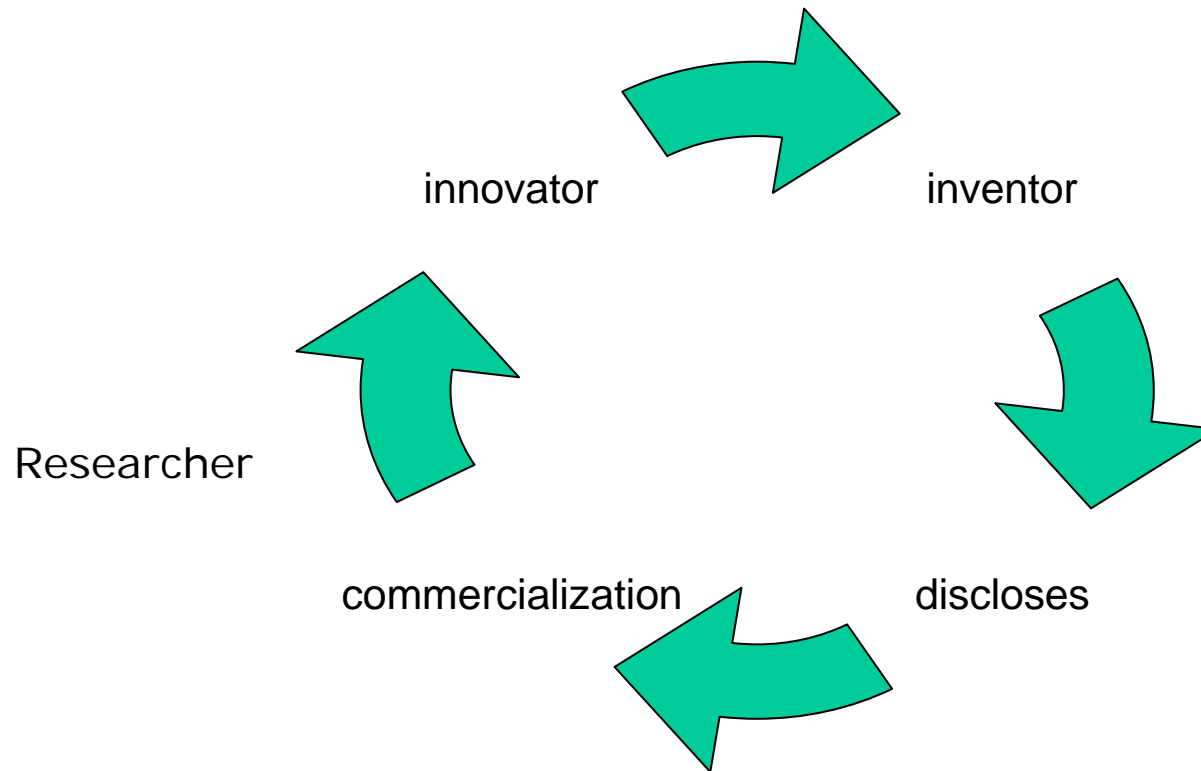
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Traveling the Road



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