Technology Transfer for MBTs and their Role in Stakeholder Communications

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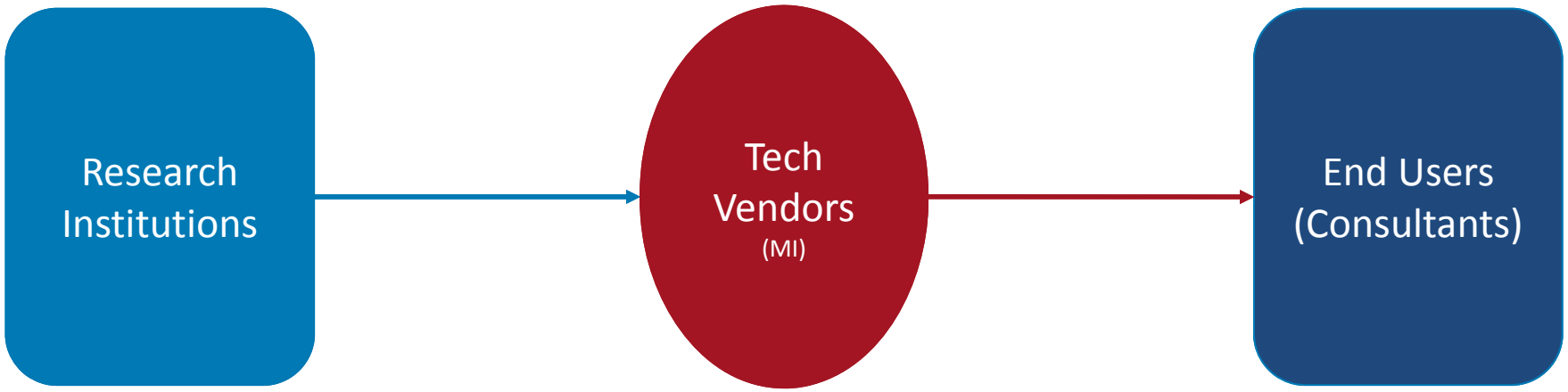
Technology Transfer

- Process of transferring (disseminating) technology from the places of origin to wider distribution
- …inventions are transformed into products…
- …bringing technologies to the marketplace…

Simplistic Paradigm

Reviews of tech transfer end at “licensing”



- Discovery
- Innovation
- Validation
- Tech Transfer (licensing)

- Commercialization
- Sales

- Use

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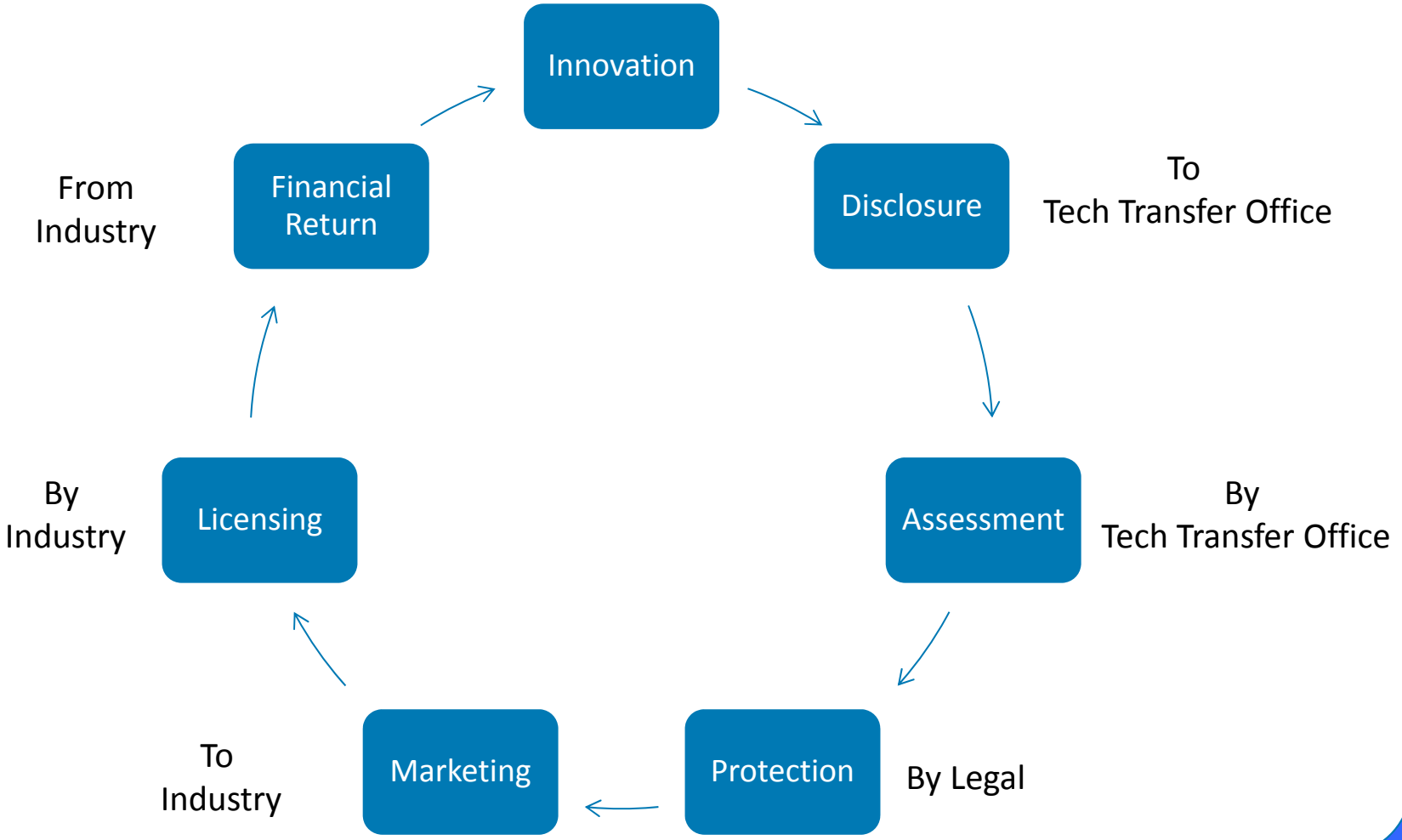
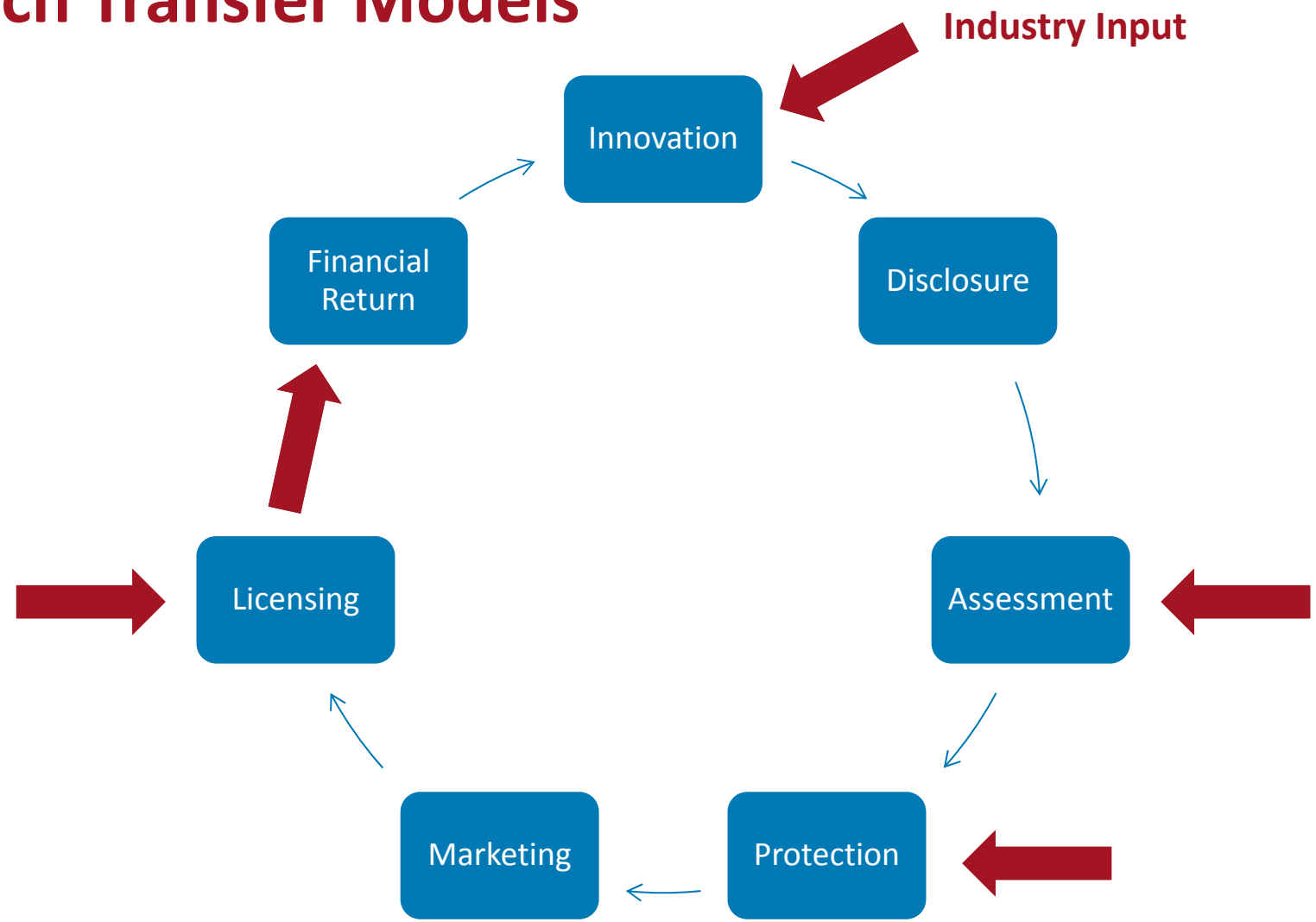
Tech Transfer Models



Tech Transfer Models



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Bayh-Dole Act

Tech Transfer Goal

Successful adoption by consumers who can use the technology

- Research institutions & small businesses can own the innovations developed under federal funding
- Universities encouraged to **partner with industry** to translate **research into products benefiting the public**

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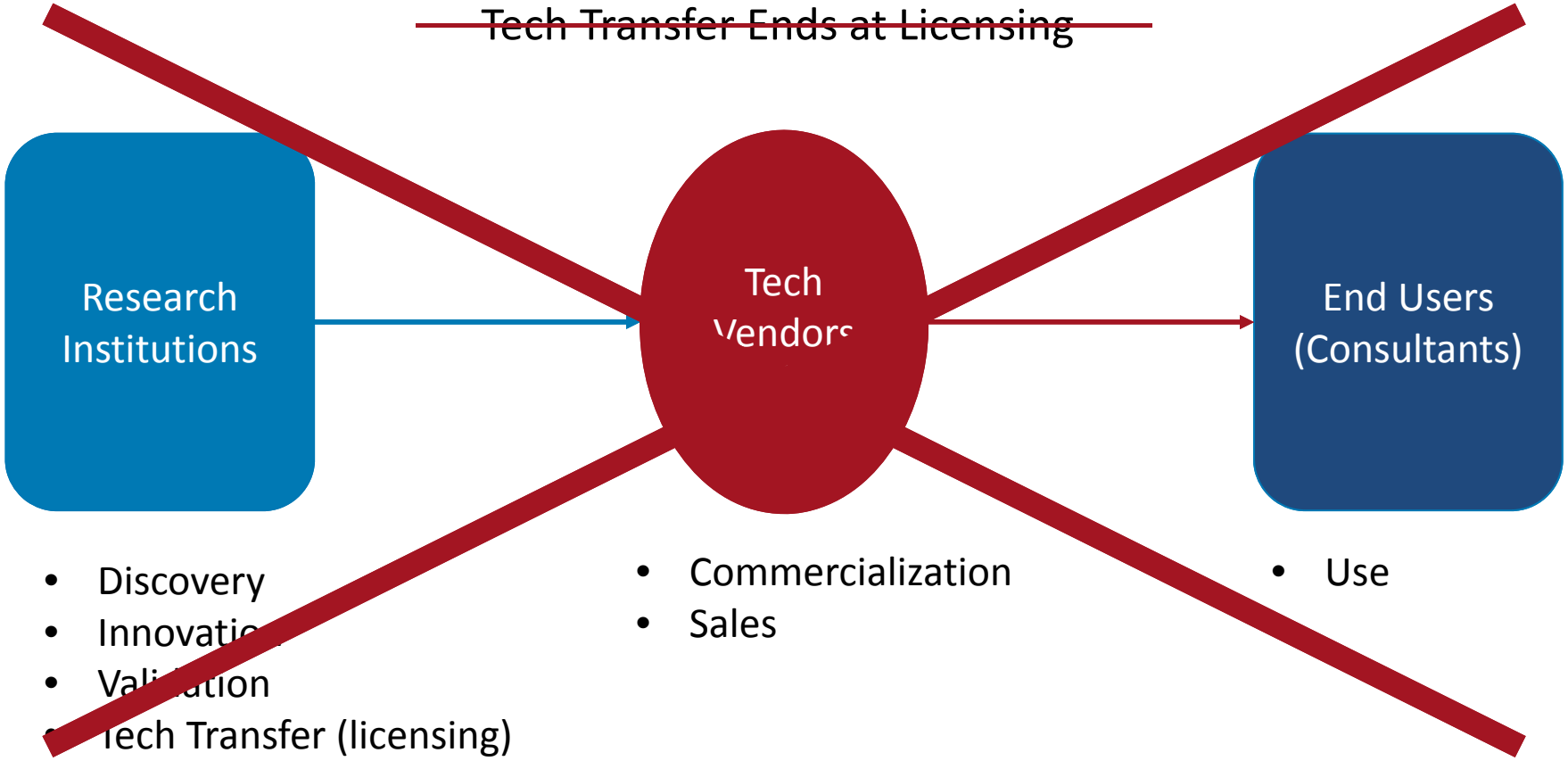
Simplistic Paradigm



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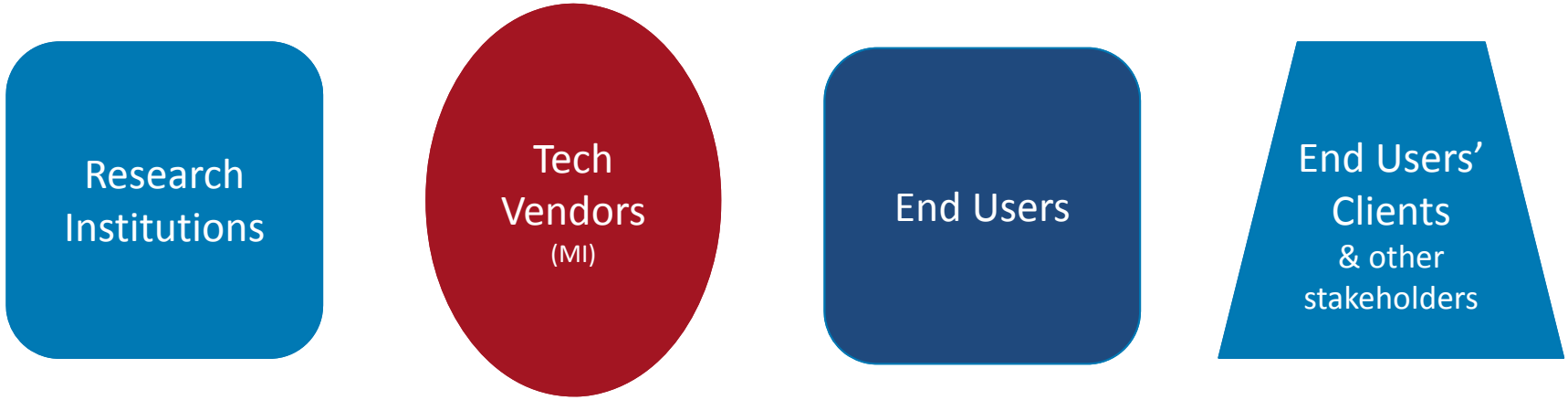
Realistic Paradigm

- Everyone contributes to innovation
- Everyone has multiple roles in technology transfer
- Everyone contributes to commercialization



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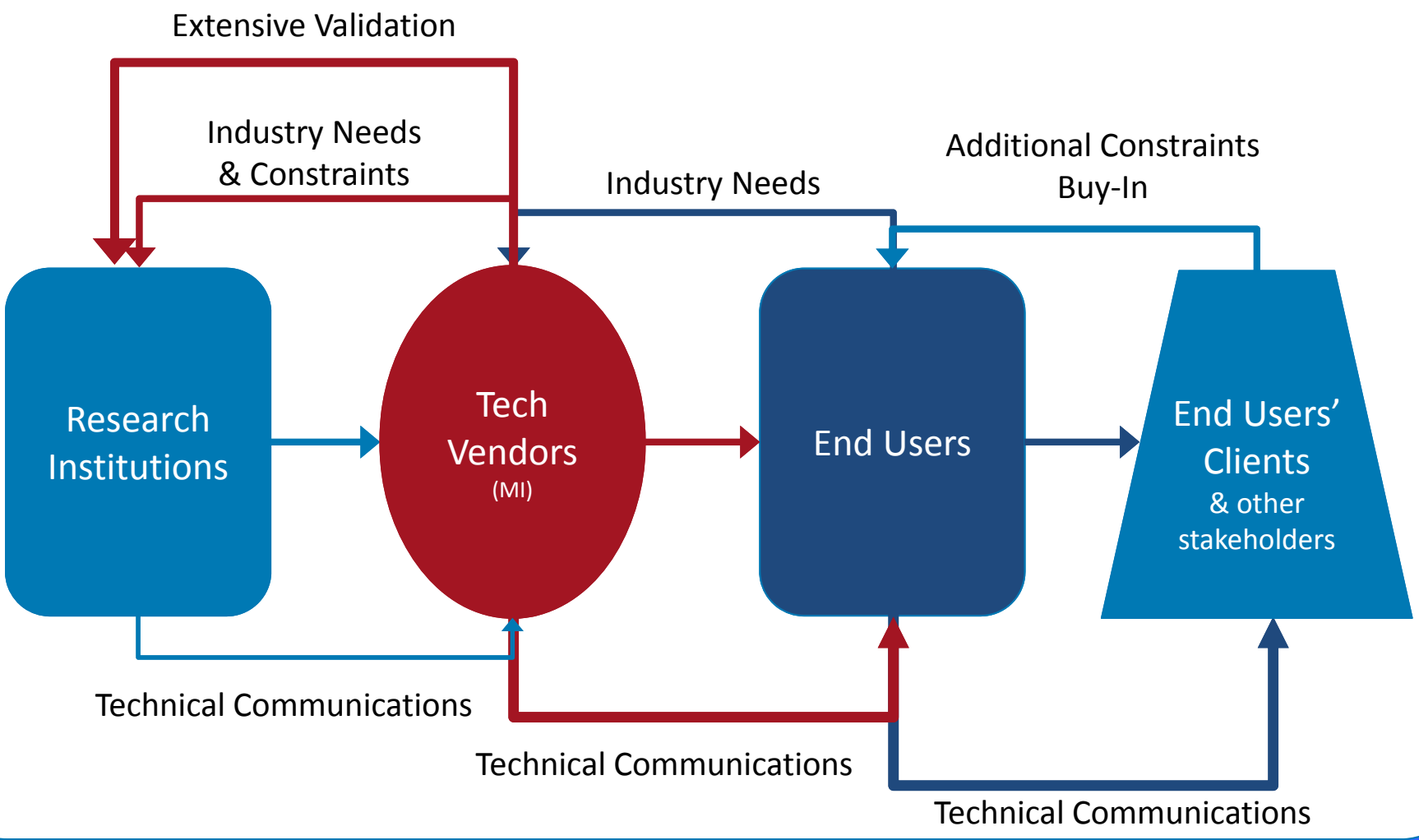
Real Paradigm



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Innovation Strengths

Research Institutions

- Discovery
- Hypothesis Testing & Bench Scale
- Proof of Concept

STTR

Tech Vendors

- Discovery **(SBIR Programs)**
- Scale up & Streamlining
- Field validation
  - >50,000 field samples
  - sites worldwide
  - Microbial Database

The ISME Journal (2017), 1–14

www.nature.com/ismej

ORIGINAL ARTICLE

Grape pomace compost harbors organohalide-respiring *Dehalogenimonas* species with novel reductive dehalogenase genes

Yi Yang[1,2,3], Steven A Higgins[2,3,4,5], Jun Yan[2,3,4,5,6], Burcu Şimşir[1], Karuna Chourey[7], Ramsunder Iyer[7,8], Robert L Hettich[3,7,8], Brett Baldwin[9], Dora M Ogles[9] and Frank E Löffler[1,2,3,4,5,8]

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Innovation Strengths

Tech Vendors

- Discovery
- Scale up
- Streamlining
- Field validation
  - >50,000 field samples
  - Sites worldwide
  - Microbial Database

End Users

- The Need
- Real-world constraints
- Pricing
- Field validation
  - Site access & sample collection
  - Site identification
  - Site data (chemistry & geochemistry)

End Users' Clients

Identify correlations & improve predictive power

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Commercialization Responsibilities

Research Institutions

- Unbiased experts
- Promote conceptual understanding
- Technical communications
  - Publications, agency reports, presentations, etc.
  - Used by vendors, end-users, and end-users' clients
  - Strengths & limitations
  - Tailor to audience

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Commercialization Responsibilities

Tech Vendors

- Getting to good products to the marketplace
- The “Data Bridge”
- Technical communications
  - Publications, presentations, workshops, white papers
  - Inform end-users and their clients
  - Focus on applications & interpretation
  - Openly communicate of strengths & limitations

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Commercialization Responsibilities

End Users

- Continue to seek advances in technology
- Recall newer isn't always better
- Provide data & feedback to vendors
- Technical communications
  - Publications, presentations, **compliance reporting**
  - Communicating the value to their clients
  - Become "Technology Champions"

Commercialization Responsibilities

End Users' Clients

- Also seek technology advances
- Allow use of advances in technology
- Understand upfront costs may be higher
- Look for increased stakeholder confidence, improved efficiency and cost savings over time
- Become "Technology Champions"

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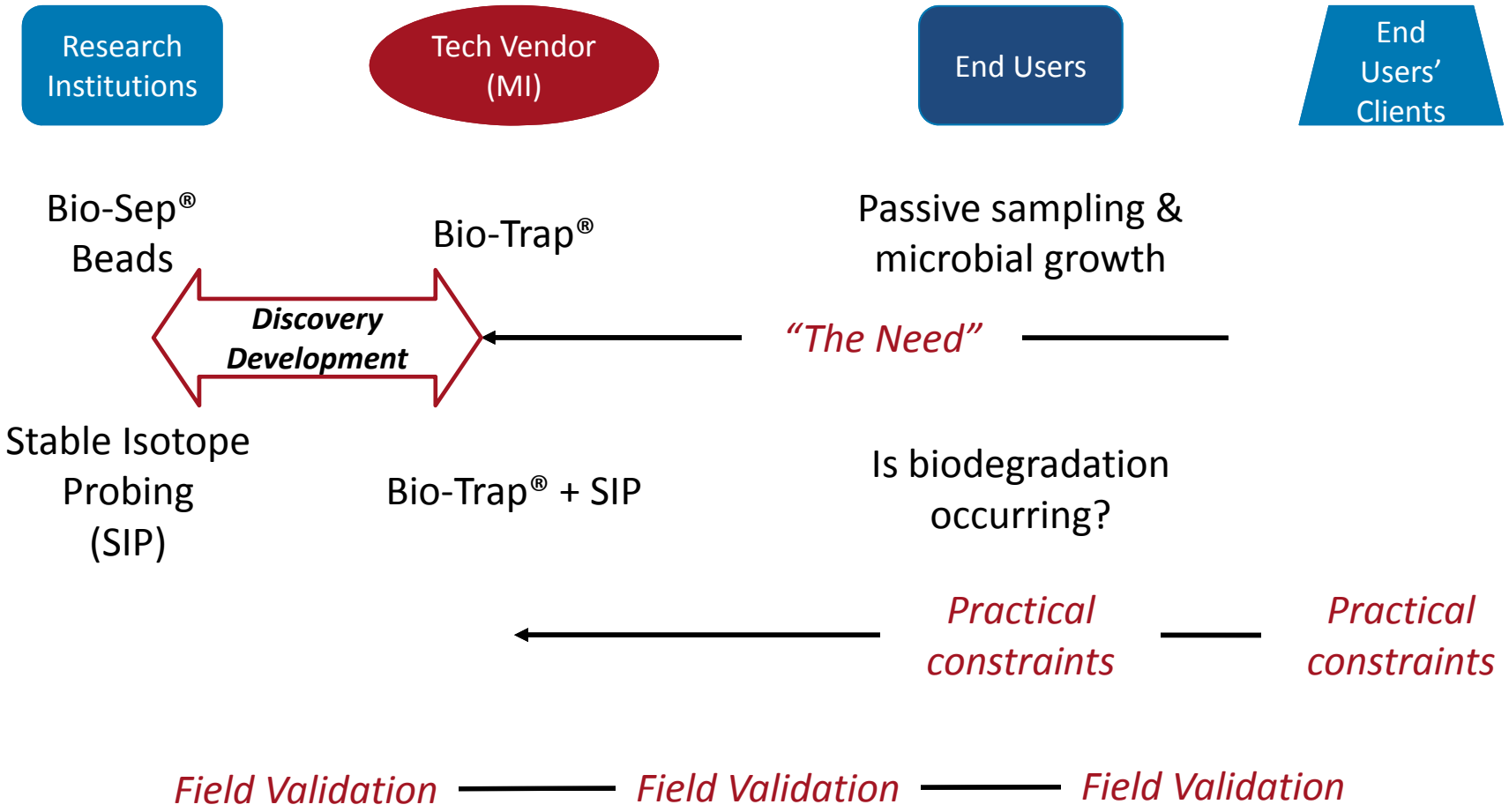
Bio-Traps® & Stable Isotope Probing



Bio-Traps® & Stable Isotope Probing

Research Institutions

Tech Vendor (MI)

End Users

End Users' Clients

Bio-Sep® Beads

Bio-Trap®

Exclusive License

Stable Isotope Probing (SIP)

Bio-Trap® + SIP

Passive sampling & microbial growth

Data & Feedback

Is biodegradation occurring?

Open Communication of Strengths & Limitations

Seeking Technology Advances & Innovation

Technology Champions

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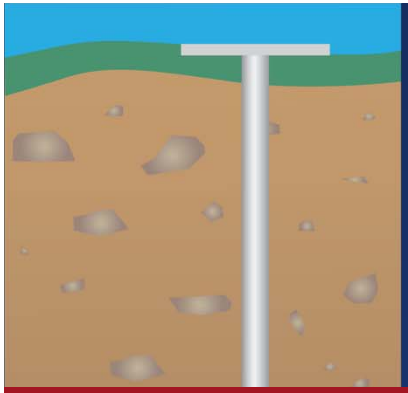
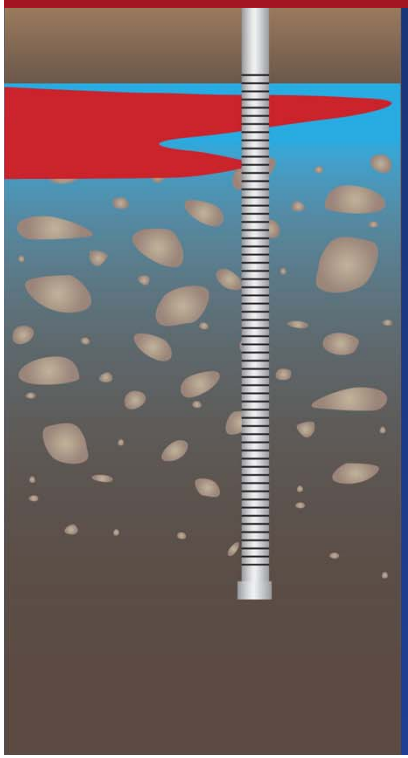


Innovation Issues



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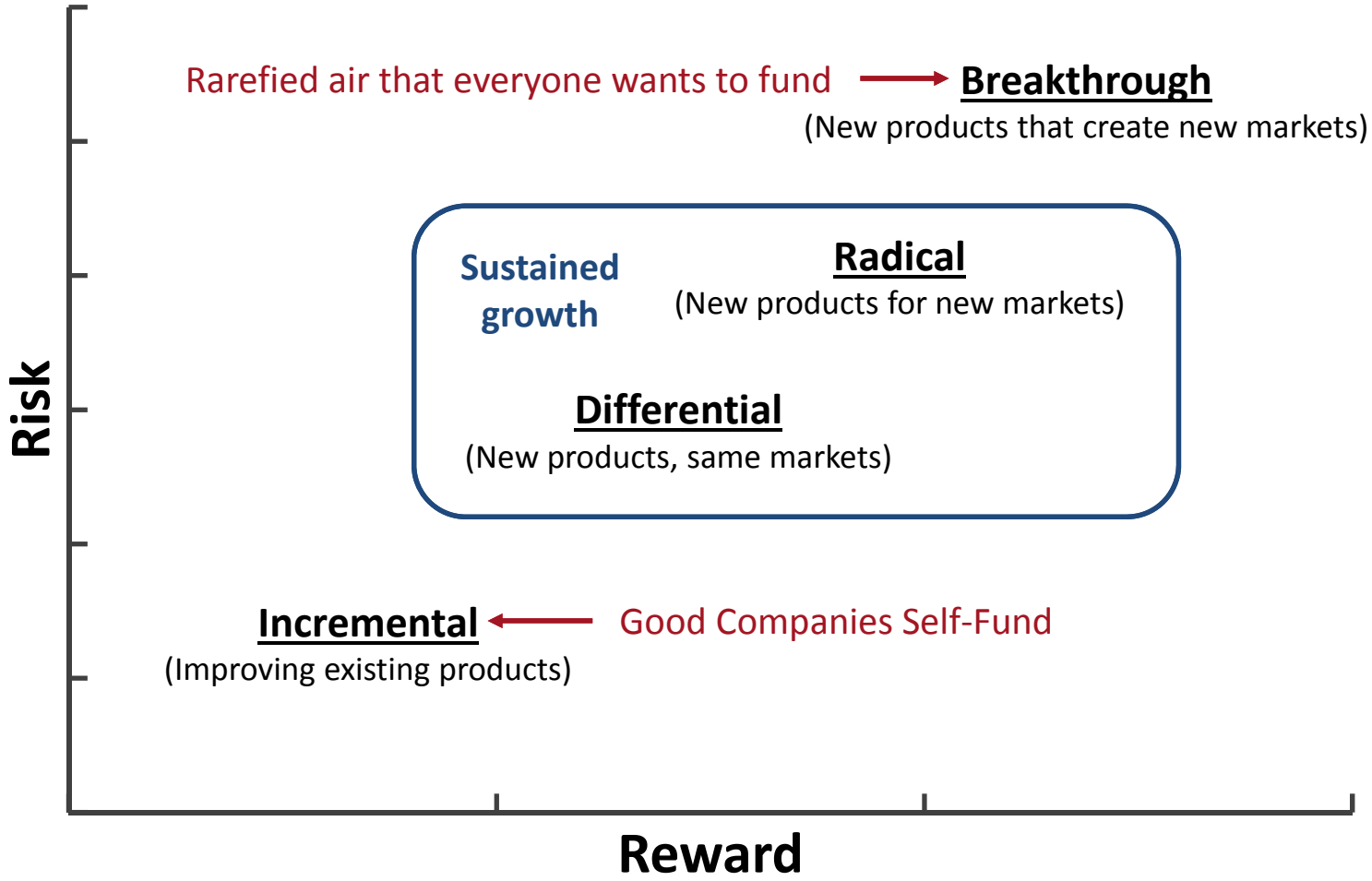
Funding Innovation



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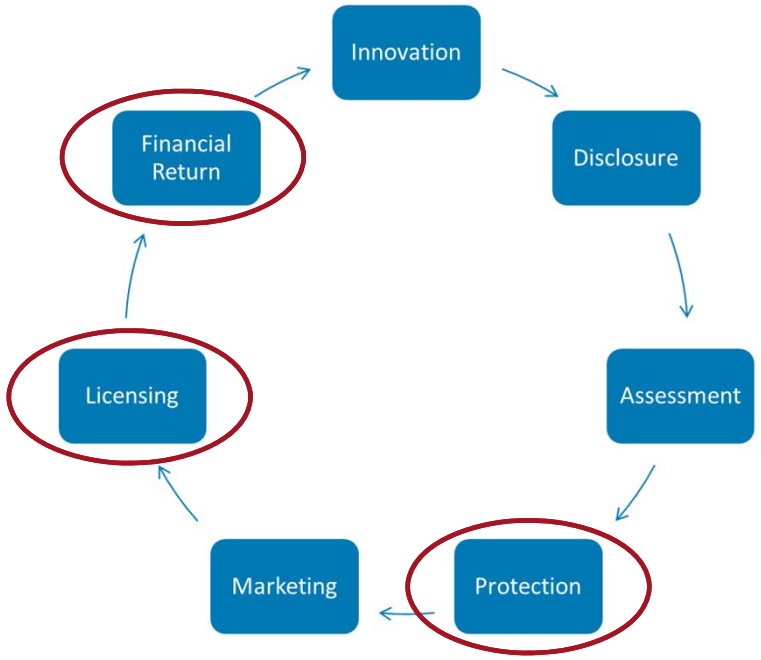
Intellectual Property

- Good companies want ongoing, mutually beneficial relationships with research institutions
- Partner with industry early
- Be flexible
- Have realistic expectations
- Don’t just wait for a check



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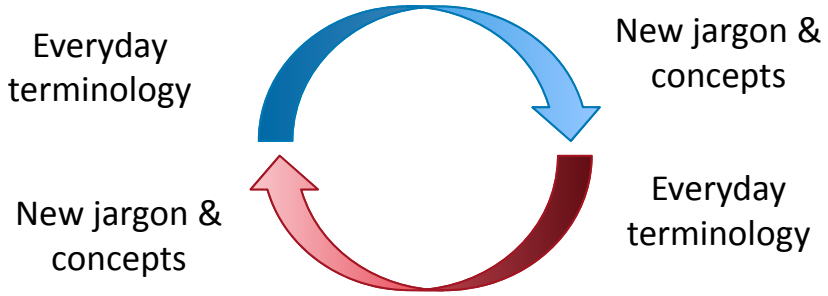
Technical Communications

- Specialization increases the need for and complexity of communication
- Your everyday terminology may contain new concepts and confusing jargon to others

Tailor communication to the audience



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Technical Communications

Seek information **outside** of your area of expertise

Researchers

- Latest developments
- Conceptual understanding
- Data interpretation

Tech Vendors

- New technologies
- Strengths & limitations
- Data interpretation

End Users
& their Clients

- Real world constraints
- Case studies
- Data interpretation

MI EMD Webinar Series Speakers

Frank Loeffler & Terry Hazen
Mike Hyman & Bob Borden
Susan De Long
John Wilson & Todd Wiedemeier
Kerry Sublette

Maureen Dooley
Kirsten Thoreson
John Valkenburg
Robert D'Anjou
Bob Borden

Matt Burns
Jack Sheldon
Stephanie Fiorenza & Glenn Ulrich
Lucas Hellerich &
Matthew Panciera

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Digital & Social Media Age

- Still no substitute for a conversation, but…

  How many are on Linkedin?

  How often do you check in?

  How often do you do a search?

  How many attend webinars?

  Use webinars for CEUs?

- Continue traditional approaches but…
  - Take advantage of new avenues
  - Focus on informative content

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Questions???

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Logos are too much

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