Working with Industry as Part of Tech Triage

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Setting: You're presented with…

- Raw disclosure
  - Detailed Science
  - Light on technology
  - Hints of a product
  - Vacant of a value proposition

Increasing uncertainty

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What's Possible?

What will people buy?

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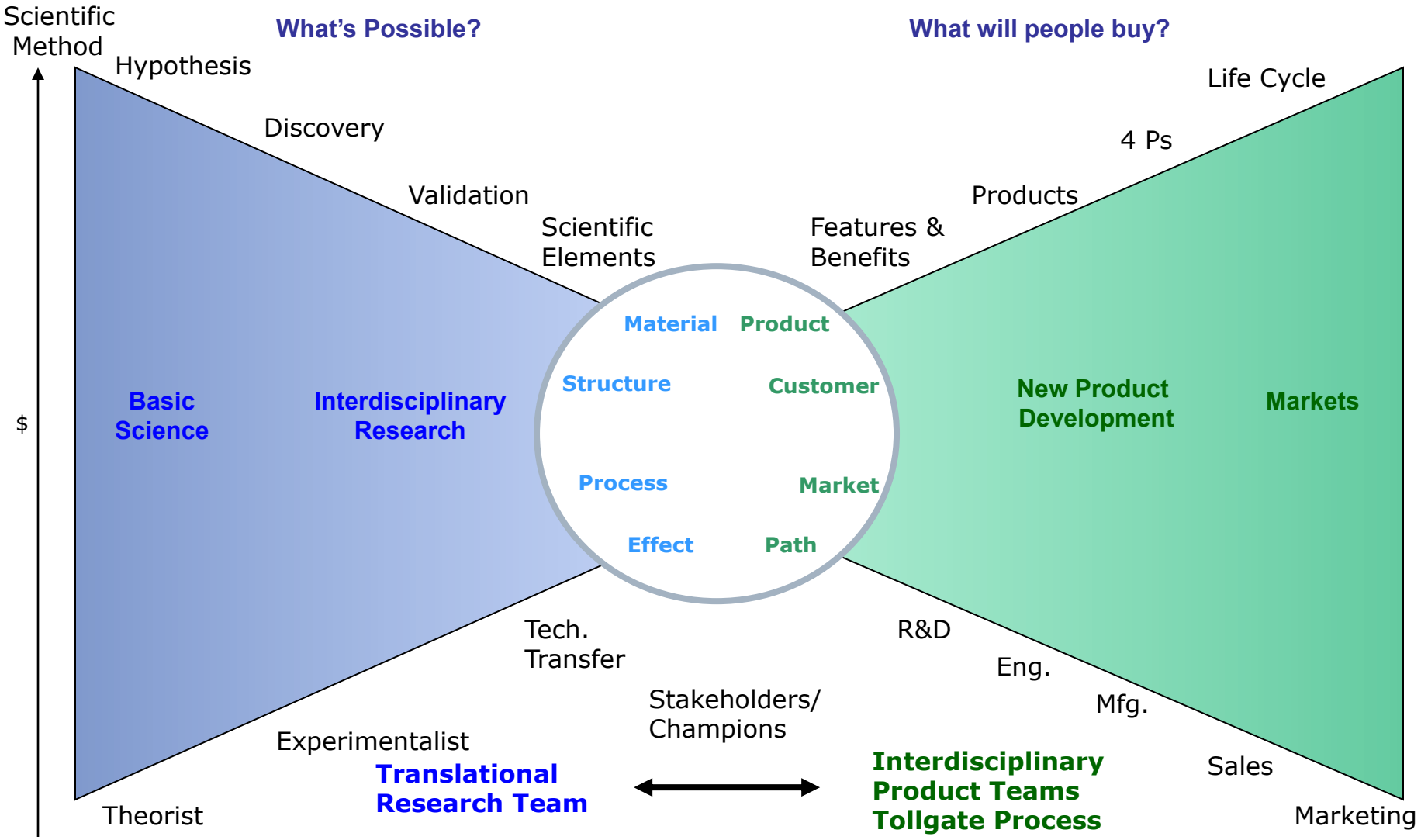

Potential Markets and Market Interest

- Identify potential markets and competing products
  - Ask the inventor or other experts in the field
  - Use internet search engines to identify competing products
  - Competing patents usually indicate competing products
  - Skim abstracts, do a database search
  - Have a team brainstorming session.

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A Two Step Process

- Secondary research ➔ Primary research
  - Secondary research = OPR (Other peoples' research)
  - Primary research = MR (My research)

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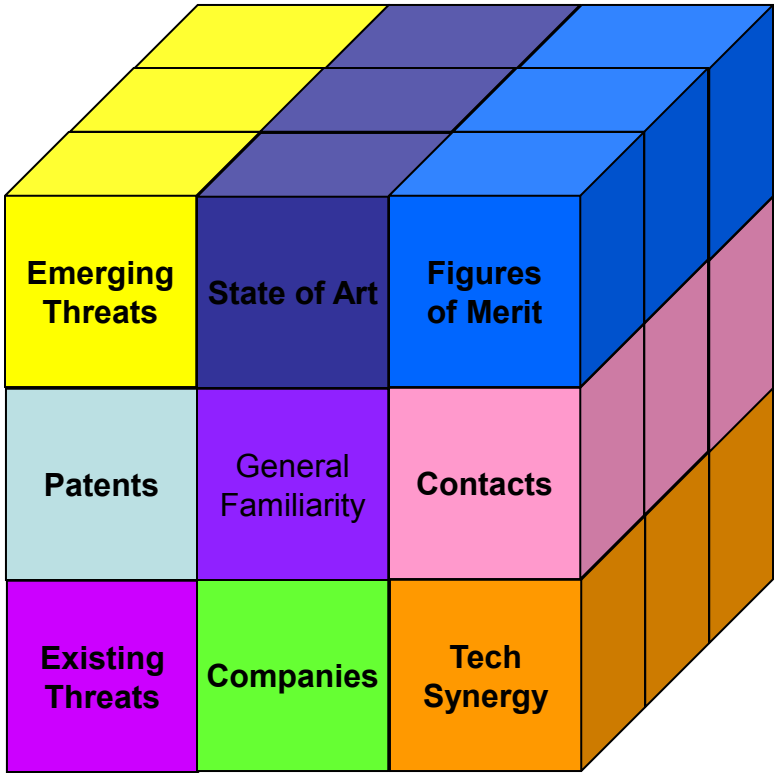

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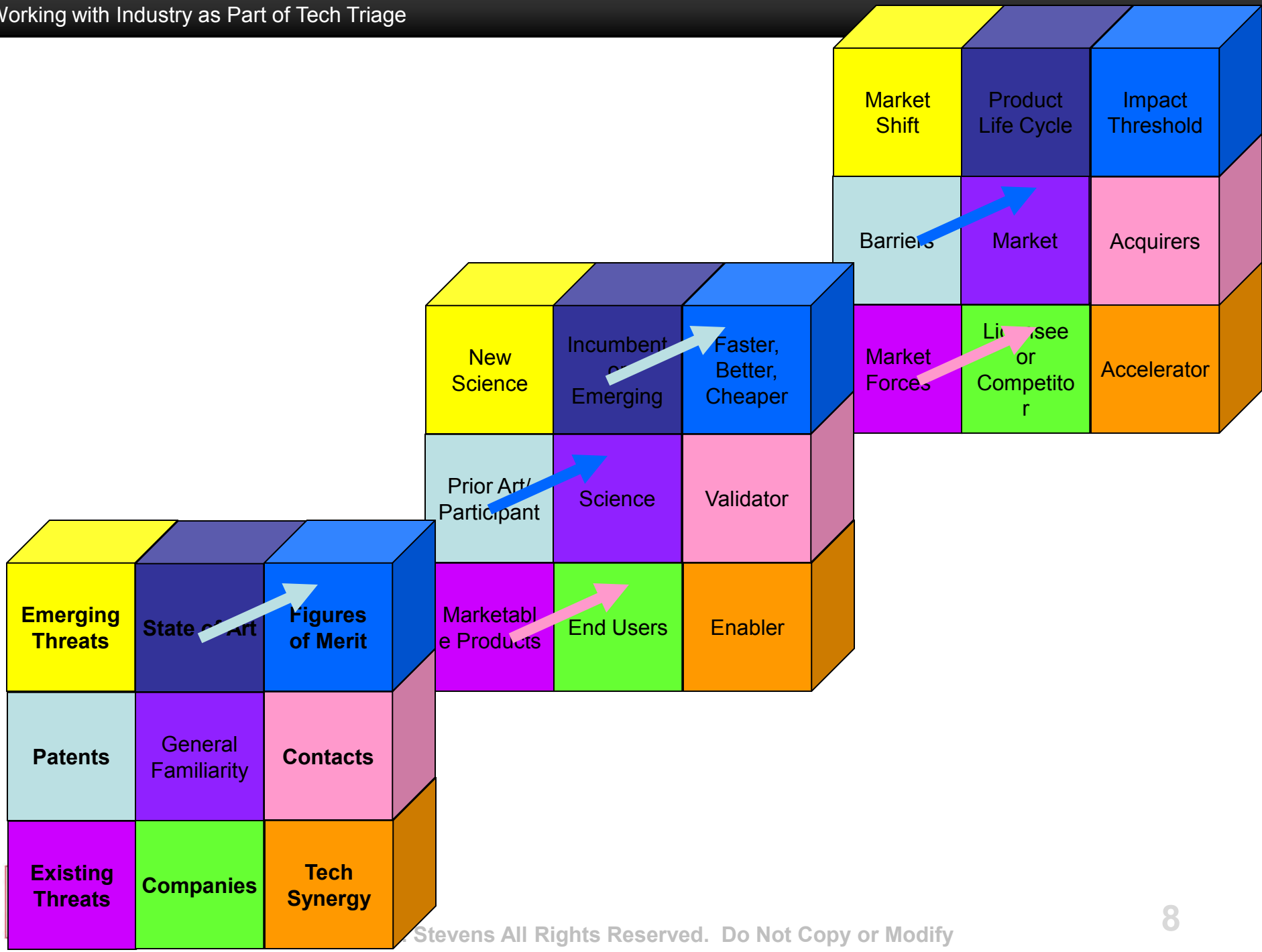

Secondary Research Resources

- Google
- Wikipedia
- Subscription Services
  - Frost & Sullivan
    - https://ww2.frost.com/
  - Venture Source
    - https://www.dowjones.com/products/venturesource-2/
  - Foresight Science & Technology T2+2
    - http://foresightst.com/t22/
  - Clarivate Analytics
    - https://clarivate.com/

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Secondary Research Resources

- Many are quite expensive
  - Many Business Schools have subscriptions
- Many commercial studies of specific markets and technologies
  - Expensive
  - Frequently summaries available to market the study that have useful information

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Primary Research

What Is the Real Market Interest?

- What is the real market = who is the real customer?
- What does this market really care about?
- How will the *real* customer really benefit?
  - Better / faster / cheaper?
  - If (better / faster / cheaper), is it enough for the customer to switch?

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The Market Cares about its Benefits and Needs, not the Features

Feature	Benefit	Need

Quantify

- How big is the addressable market?
- How many competitors?
- How much money will be saved?
- How much will customers benefit from the new product?
- How much will the product effort patients, clinicians, hospitals, & payers?

or?

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Finding Contacts

- Social media make it much easier
  - LinkedIn
  - Licensing Executives Society International

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Contact Experts and Companies

- Call identified contacts for their expert opinion
- Emphasize invention's potential benefits to them
- The best contacts usually are in marketing or R&D or Open Innovation…..
  - Why is this????
- Don't forget about the Trade Press

Contact Both Scientific & Business Experts

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Example

- G-TEC in Japan
  - Two week intensive course
  - 1-2 days to do market research
- One team was researching a technology to remove *trans* fats from cooking oil
  - Biggest need is for soybean oil
  - U.S. market
    - Four massive soybean processors
      - Cargill, Archer Daniels Midland, Bunge, Louis Dreyfus
- Team all Japanese, strong accents
  - 12 hour time difference from U.S.
- In 1 night:
  - Made 45 calls
  - Got an appointment to talk to President of Research of ADM
    - Whimped out – "We are only humble students….."

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Personal Interview Advantages

- Provides background data on the marketplace
- Answers specific questions
- Ensures the right experts are contacted
- Examines corporate buying behavior
- Validates novelty of technology
- Identifies industry trends
- Has a flexible structure that can be modified
- Identifies other players to contact
- Ensures various viewpoints are pursued

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Goals of Personal Interviews

- Better understanding of the problem
- Use open ended questions and conversations to uncover:
  - Perceptions, opinions, beliefs and attitudes
- Understand the motivating buying factors
- Qualitative data that informs the quantitative research

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Learn the Customer's Language

- Never assume you know what they are talking about
- Question every nebulous term
- Don't be afraid of asking the obvious
- They are the experts, acknowledge that and use it to your advantage

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Listen to the Voice of the Customer

- Understand what is really important
- Understand customer motivations
- Understand the buying cycle and how decisions are made
- Provide a sanity check to the internal perceptions of the technology
- Begin to understand the value of your technology and what it is worth

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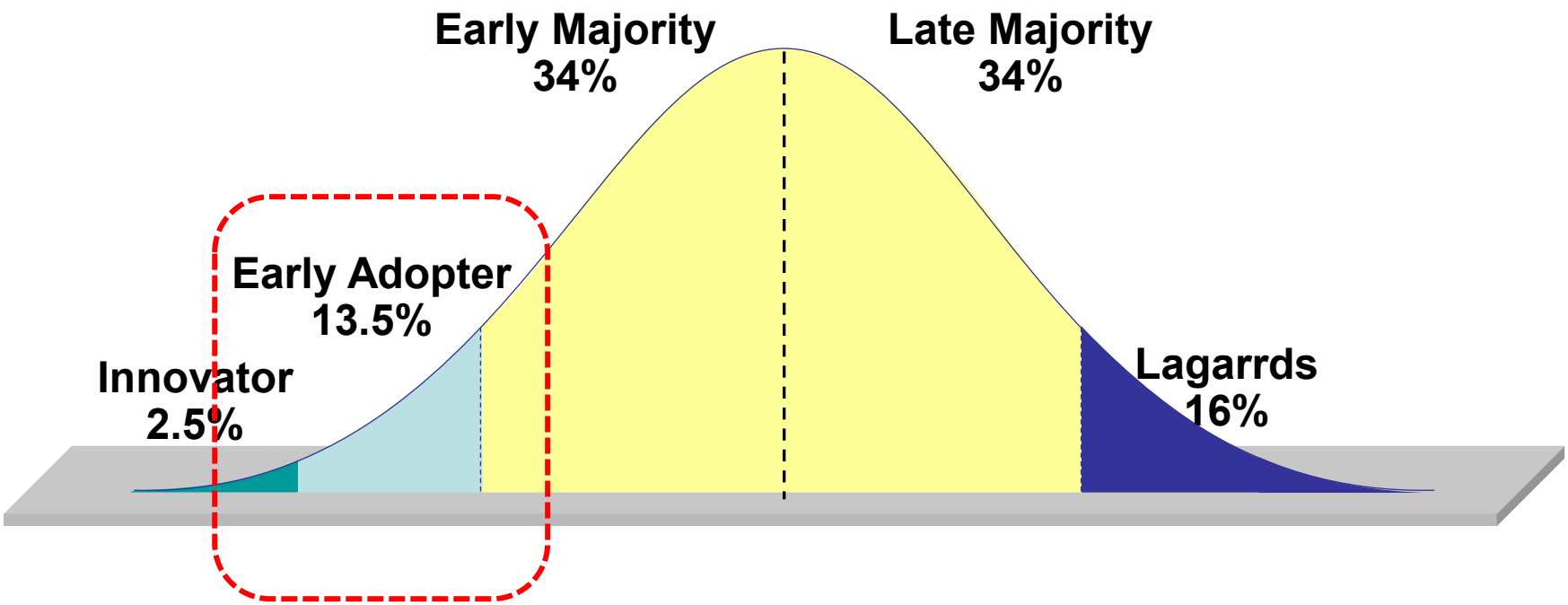
Dos and Don'ts

- *"If I had asked my customers what they wanted, they would have said: a faster horse`"*

Henry Ford

Innovation Adoption Lifecycle by Rogers



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Do's and Don't's

- Emphasize the potential benefits of the invention not just the features
- **It is rarely necessary, and usually impossible, to describe how an invention works**, but you must be able to describe why it would be important in the marketplace
- Talk about what technology can do, not how it works
- Sample questions
  - Would a product that had these performance characteristics be important?
  - Is there a large market for products like this? Who would use it?
  - How do similar products on the market currently solve this problem? Who makes them?
  - What is an appropriate price point?

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Types of Responders

- Yeasayer - Only tell you the good
  - Ask them to pin down why it is good
  - What would a benefit mean to them?
- Naysayer - Only tell you the bad
  - Ask why a benefit or feature isn't important
  - Ask for suggestions on how to make it better
  - Use them to identify barriers and improvements to the technology

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Stay skeptical

- Assume everything already exists
- First search for things that destroy your opportunity, then search for things that support it.
  - A quick kill of a project early in the process is preferable to wasting time on a dead end.
  - People (mistakenly) tend to focus their attention on supporting evidence
  - Investors look for ways to say NO

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Information Collection Tips

- Reconfirm data collected from secondary research
- When asking about potential market size, offer scale examples based on an educated guess
- Test your current knowledge beliefs against theirs
- Usually only 7 to 10 *productive* calls are needed for a First Look study.

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Healthcare

- Much easier than physical sciences/IT/Software
  - Need is more obvious
  - Addressable market size is easier to estimate
  - Range of possible products is usually constrained

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Healthcare

But… horizons vary

- Drugs
  - Stage of development is earlier
  - Leads to far reaching assumptions about performance
- Devices
  - Returns are usually much lower than drugs
  - Therefore risk must be much lower
  - Translation: 510K, replace an existing therapy, has an established reimbursement code
- Diagnostics
  - Market is highly competitive (many solutions, many entry points…)
  - Incumbents require compelling data
  - Expectations on performance are much higher (clinical samples)

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Physical Sciences & IT

- Many possible products
- Many possible markets
- Varying levels of competition
- Value chains not clearly defined
- Market data harder to identify

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Physical Sciences & IT

- But…horizons are usually within reach

- Must act quickly
- Time to market is critical
- Promise or Performance?

Barriers to Entry

Identify Barriers and Opportunities

- Define the hurdles that the technology must overcome
  - Market barriers
  - Technology barriers
- Outline potential ways to overcome the barriers
  - Resource requirements
  - Cash requirements

In many cases, these turn into milestones

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Barriers to Entry

- Long and hard regulatory path?
- Market reluct
- Reimbursem
- Entrenched p
  - Need an o
  - Who would
- *How many ri our product to be bought?*

Barriers to Entry

- Scalability
  - *How easy is this technology going to be to scale up?*
- Professor may not have considered this
- Critical to success

Other Forces

- Macro forces beyond your control
  - Small and/or shrinking market?
  - Highly competitive?
  - Litigious?
  - Lethargic to new technologies?
  - Active investments?

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Ouch… Development

- Too long to market (Clinicals? FDA path?, etc.)
- Too expensive to develop (will investors make their money?)
- Lay out development milestones and timelines
  - What are the first steps to reduce technical and market uncertainty?

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Report about Market interest & Barriers to Entry

- Write the report
  - Market interest: 7~10 productive comments
  - Barriers to Entry: Including Negative comments: Potential competition, Regulatory issues …

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Thank you for listening.

Questions?

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