Guidebook of IP/Technology Transfer

## Track 1 Entry-level Tech Transfer Professional

### **Topic 1.5.7**

Identifying Potential Invention Applications, Market Relevance, and the Value Proposition

### Identifying potential applications, Market Relevance, the Value Proposition

Technology assessment & characterization Market applications and potential competitive advantages

## Identifying Applications & Market Relevance

- Characterize the invention technically
  - What are its' inventive features
    - How does it work?
      - How does it compare with existing methods
        - Is it faster, harder, cheaper?
        - Does it create new opportunities?
- Assess its economic relevance
  - What problems does it solve?
    - Is that problem economically important?
      - How important?

## Identifying Applications & Market Relevance

- Determine its applications and assess its potential impact in one or more applicationa:
  - agriculture
  - human medicine
  - food processing
  - energy
  - information technology
  - communications
  - transportation
  - etc., etc., etc.

- What is the invention exactly?
- How does it work?
- What makes it unique?
- Is it superior in some way?



- What problems does it solve? What opportunities does it create?
- Are these problems of economic importance?
- What applications are important and why?
- Is the marketplace potentially profitable?
- Any inherent flaws that will make commercialization difficult?

Study the disclosure, do your own homework Make a list of questions. Meet with the inventor, Ask ??s

#### The IP/invention Commercialization Process

# Assessing technical and market attributes: performing invention triage

- What is it? How exactly does it work?
- What are its inventive features? How do they compare with current solutions?
- What problems does it solve? Is it important? What is the economic basis of that importance?
- Is the inventive solution economically feasible?

# Assessing technical and market attributes: performing triage

• What are its superior attributes?

Faster? More accurate? Cheaper? New capabilities, more durable? Etc., etc,...

- How do these attributes translate into economic benefits? Quantify benefits whenever possible
- What is the stage of development (where in the R&D continuum?)

- Understand the economics of the problem solved
- What are its market applications?
- What are the market characteristics?
  - Size
  - # of companies
  - Typical profit margins
  - What is the innovation landscape? Are there any dominant companies?
- Are there significant regulatory hurdles?
- How does it compare with current alternatives Different is usually not sufficient... you need superiority
- Quantify performance superiority, if possible

Always be on the alert for "show-stoppers": a fatal flaw that will prohibit a successful commercialization outcome

Examples:

- Can't be feasibly or cost-effectively scaled-up
- The solution was tried and abandoned years ago
- Too dangerous, serious ethical issues
- Doesn't work

• Is the technology:

a paradigm shift (truly disruptive)?a significant improvement?a minor improvement?no better than the alternatives?

 Can the invention be commercialized as a "stand-alone.....or are other components needed?

(will licensing be complicated?)

Is the surrounding technology space in a declining, advancing, or stagnate stage?

## Assessing technical and market attributes: precursor to developing the Value Proposition

What will be sold? Who will buy it? Why and how much will they pay?

## What portion of the product can be attributed to the invention?

(the "Product Enabling Value")

Car vs. windshield analogy

Are there extraordinary market factors?

(regulatory hurdles, PR issues, unique competitors

What are typical profit margins in the market(s) Pharma vs. Farming

## Assessing technical and market attributes: a precursor to early valuation

Cost of manufacture

(wheat, semi-conductor, human drug)

- Investment required vs. "ROI"
- Is there a development "bottle neck"?
  potential flaws, difficult hurdles (e.g. human safety issues, environmental impacts, unreliable supplies, etc.?
- Consider the "equation": stage of development vs. risk

## **Strengthening the Business Case**

- Define the technical advantages over existing alternatives
- Describe how those advantages lead to economic benefit
- Define who has an interest in the economic benefit
- Quantify the economic benefit

**Strengthening the Business Case:** define a feasible business model Describe how the technology will be turned into a product and/or service? How will the product/service be sold and to who? Why will they buy it? Describe the feasibility of scale-up of manufacture, distribution, and sale

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Thank you