



TECHNOLOGY COMMERCIALIZATION

Ed Kase

Strategic Marketing / Business Development Consultant

Technology

1. the branch of knowledge that deals with the creation and use of technical means and their interrelation with life, society, and the environment, drawing upon such subjects as industrial arts, engineering, applied science, and pure science.



Commercialization

1. to make commercial in character, methods, or spirit.
2. to offer for sale; make available as a commodity.

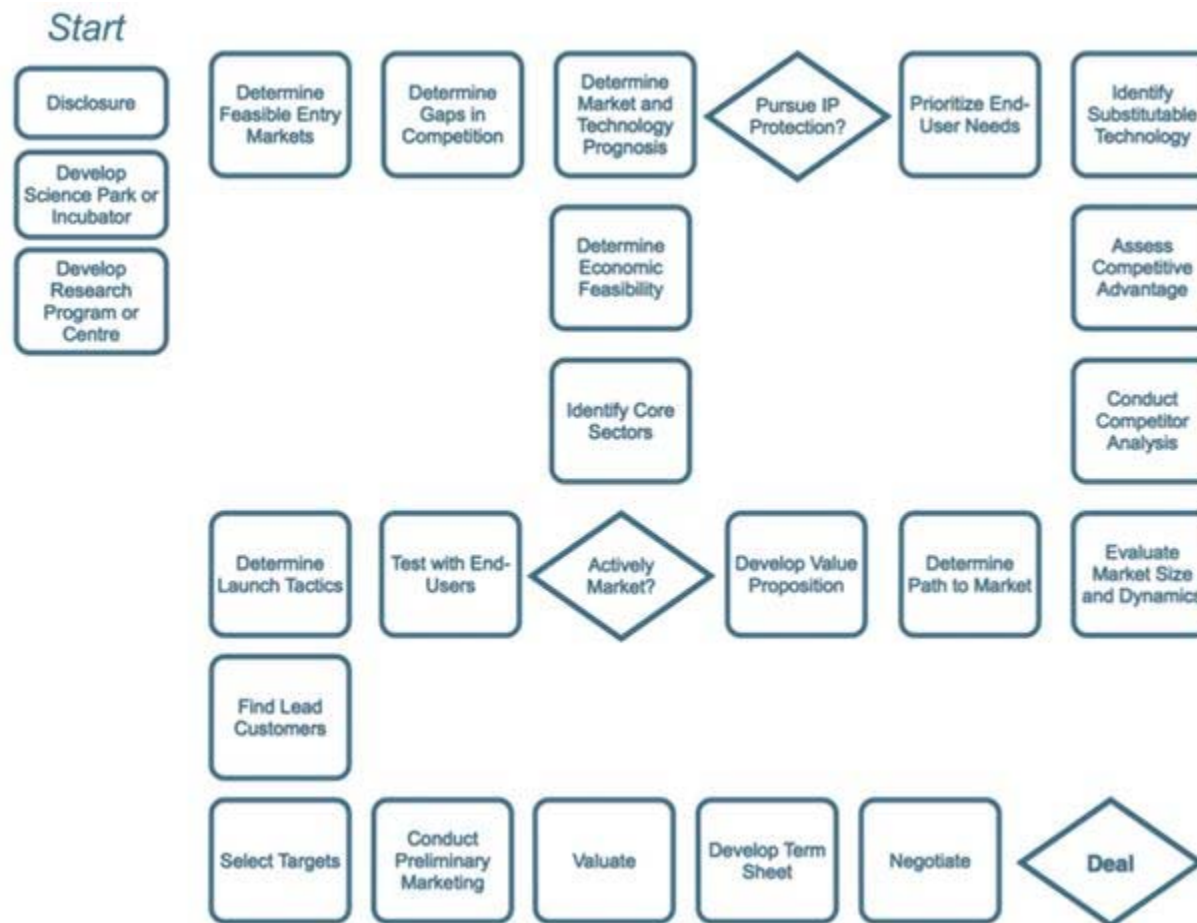
ASSESSING THE TECHNOLOGY



Use a Robust Process

- Adopt a framework
- Rigorously execute all of the steps
- Objectively evaluate results

Technology & Market Assessments



TECHNOLOGY DESCRIPTION

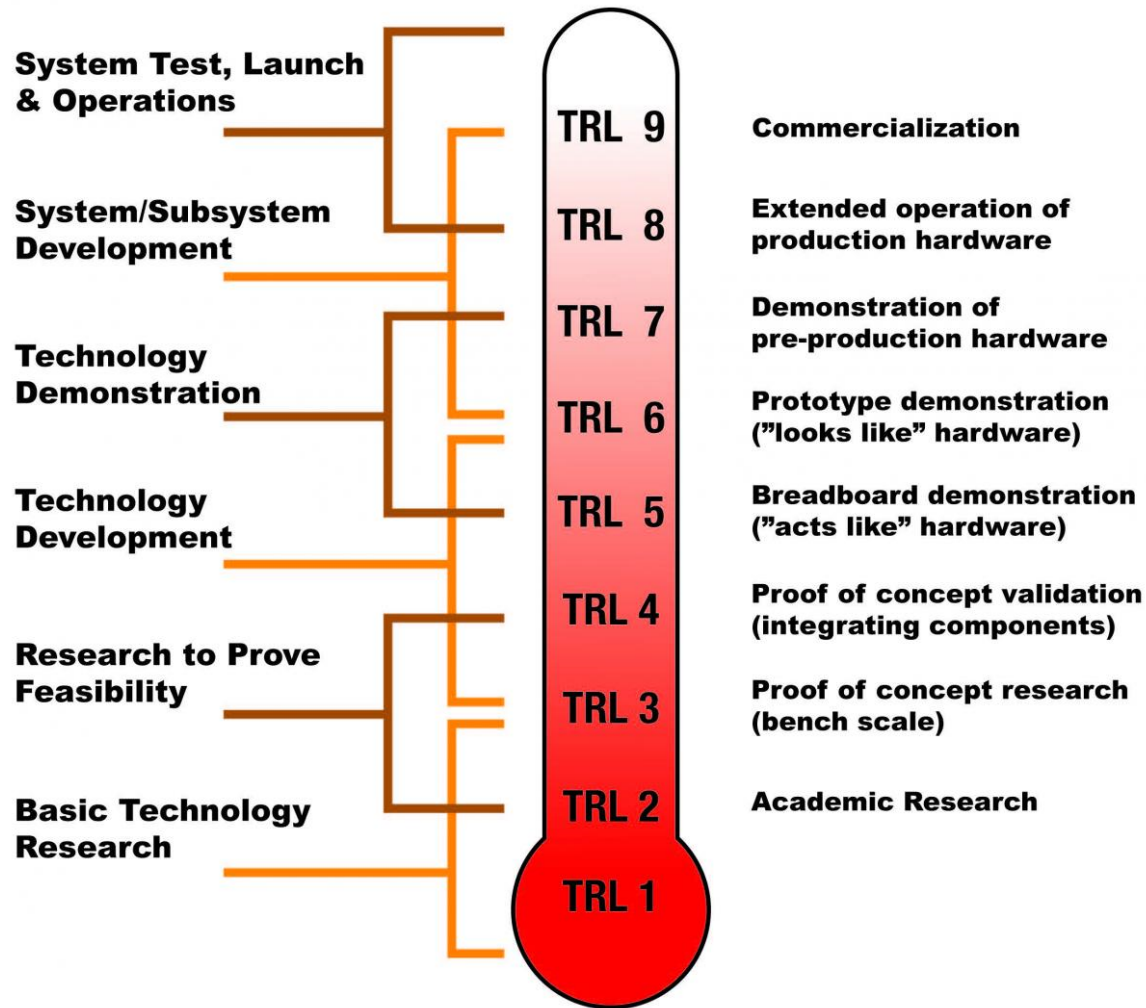
What is your Technology?

- Describe it in terms of the problem it solves or the need it meets
 - What it does, not what it is
- This is the first step towards creating the value proposition

Who Has the Problem?

- Answer this for your original idea
 - What prompted the idea?
- Broaden it to describe other applications
 - What are similar problems?
- Name specific potential users
 - Companies or organizations
 - Functional area
 - Job title

Maturity of the Technology



GATHERING MARKET REQUIREMENTS

Contact Experts and End-Users

- Understand the need being addressed
- Gather market requirements
- Assess competition
 - How do they solve the problem today?
 - Commercial products
 - Home-grown solutions
 - Substitutable products
 - Are there emerging technologies?
 - How are you differentiated from these other solutions?
 - Better
 - Cheaper
 - Faster
- Establish value-based price
- Understand impediments to market entry

Regulatory Requirements

- Is technology regulated by a government entity?
 - Identify steps and timeline
 - Determine costs
 - Factor impact on commercialization timeline
 - Consider outside resources to make the process easier and faster

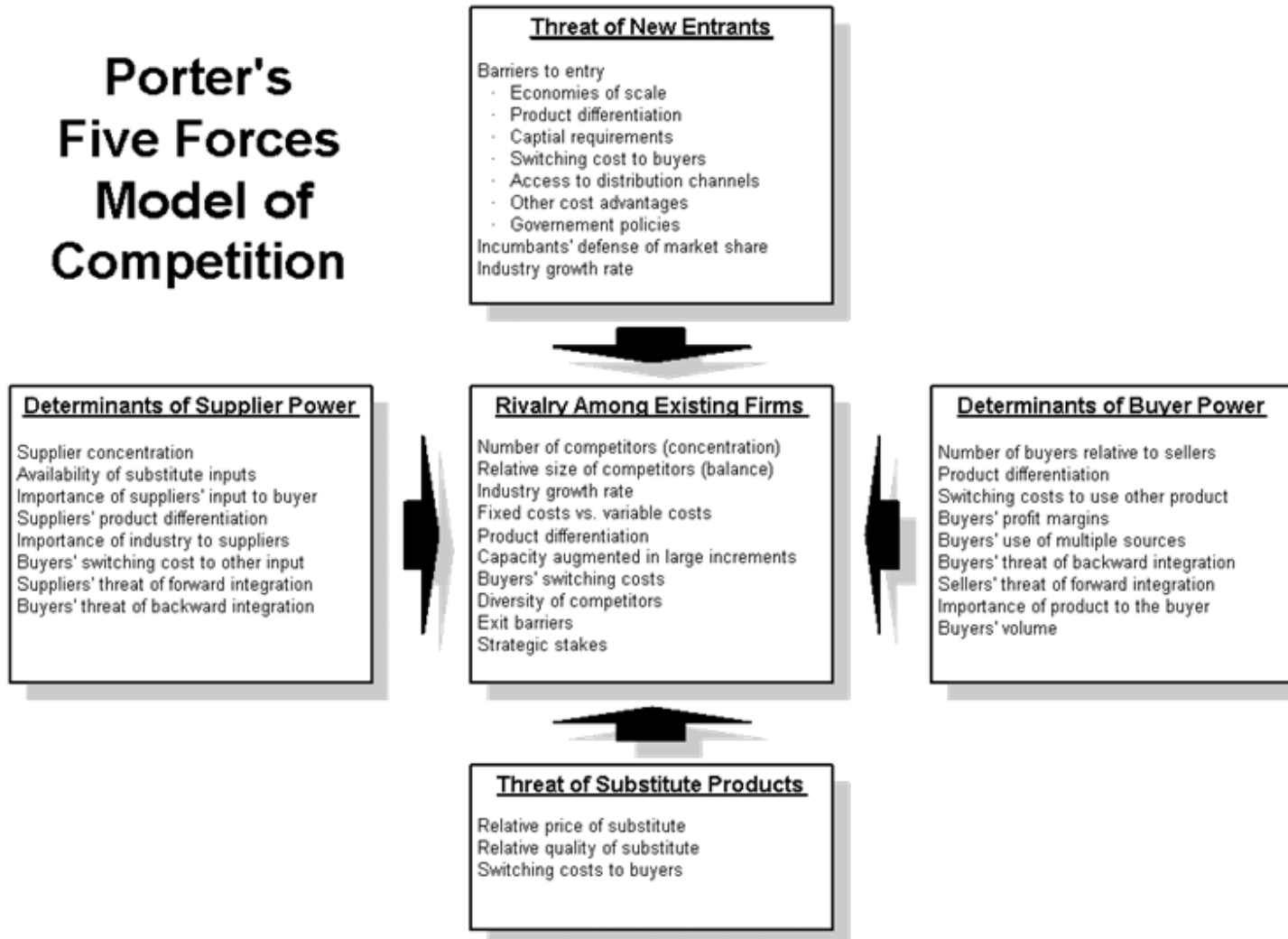
Pricing

- Establish a price based on the value
- Assess price relative to current & future competition
- Develop strategies that anticipate price objections

ASSESS THE COMPETITION

Porter's Five Forces

Porter's Five Forces Model of Competition



Commercial Competitors

- Explore existing commercial offerings
 - Key features & benefits
 - Value proposition
 - Pricing
- Differentiate your technology from current solutions

Patents

- Potential source of future competition
- Possibility of needing to license IP to bring your technology to market
- Provides an indicator of active research in an application area

Speaking of Intellectual Property Protection...

- Patents
 - Usually provides protection for 20 years from application date
 - Estimated cost ranges from \$5,000 to \$25,000
- Trade Secrets
 - Protected as long as the secret is maintained
 - Have a well-crafted non-disclosure agreement (NDA)
- Copyrights
 - Protection is automatic and immediate
 - For works made for hire, the employer and not the employee is considered to be the author
 - Protected for author's life plus 70 years
- Trademarks
 - Protection is automatic and immediate



Current Research

- Source of future competition
- Also a possible source of partners
- Understand who is doing research where

Competitive Landscape

- Result yields an overall picture of competition in the market
 - Current commercial entities
 - Possible IP conflicts
 - Potential future competition

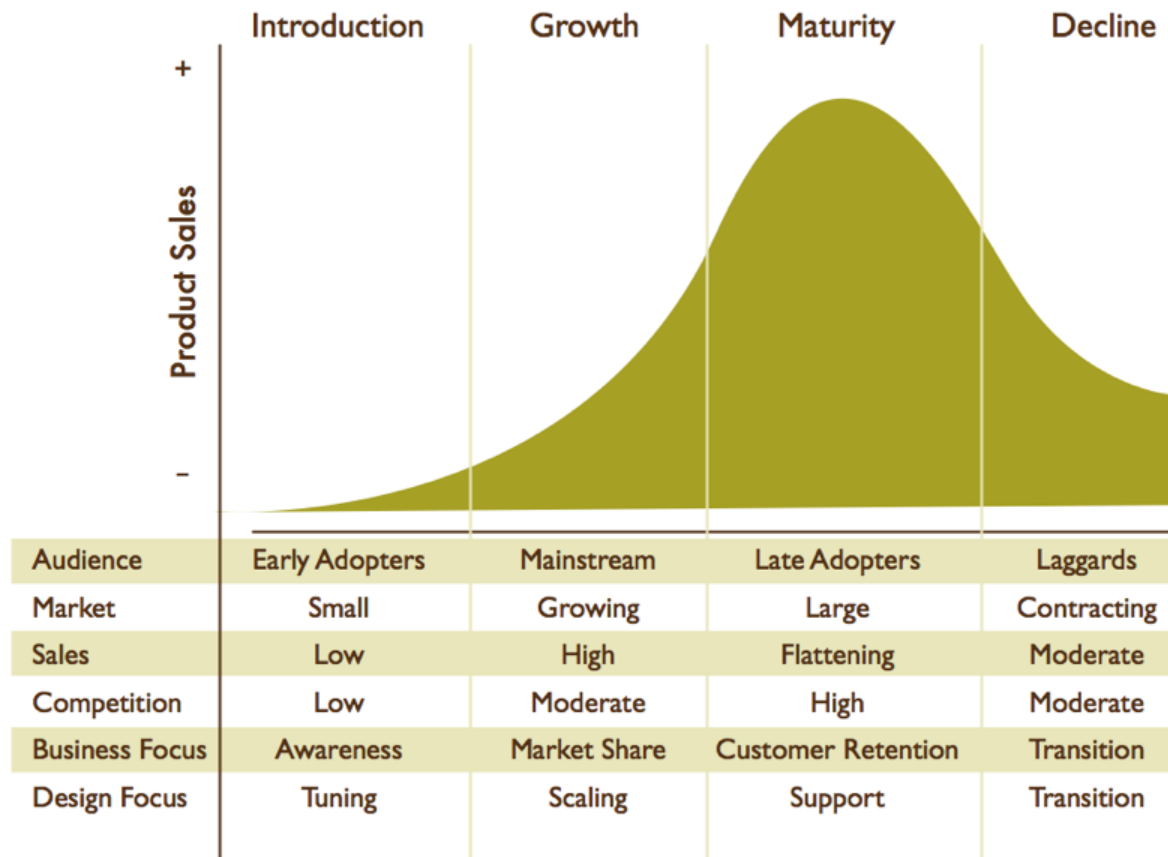
MARKET RESEARCH

Market Characteristics

- Size of the market
- Growth potential
- Stage of the market
- Market drivers
- Barriers to entry
- SWOT analysis
- Window of opportunity
- Sources of market intelligence
 - Meetings / conferences
 - Journals / publications
 - Associations
 - Blogs, LinkedIn groups

Product Life Cycle Stages

Life Cycle: Four Basic Stages



Re-drawn from the book "Universal Principles of Design" © 2003 Rockport Publishers

idea-sandbox.com

SWOT - TOWS

Internal elements External elements	Organizational strengths	Organizational Weaknesses
	Strategic options	
Environmental opportunities (and risks)	S-O: Strengths can be used to capitalize or build upon existing or emerging opportunities	W-O: The strategies developed need to overcome organizational weaknesses if existing or emerging opportunities are to be exploited
Environmental threats	S-T: Strengths in the organization can be used to minimize existing or emerging threats	W-T: The strategies pursued must minimize or overcome weaknesses and, as far as possible, cope with threats

ENTRY STRATEGY

Objectives

- List the market characteristics that matter to you
 - Market size
 - Market growth
 - Stage of the market
 - Current competitive landscape
 - Product differentiation
 - Channel strategy
 - Investor interest
 - Potential exit strategies

Define your Core Competencies

- Based on the technology, what can your organization bring to bear?
 - Technology
 - People
 - Knowledge
 - Service
 - Efficiency

Obstacles

- Competition
- Organizational “gaps”
- Barriers to entry
- Access to prospective customers
- Infrastructure requirements
- Regulatory hurdles
- IP issues

List Market Segments

- Be specific
 - Try not to lump things together
- List customer requirements for each segment
- Match your core competencies against market requirements



Building a Strategy

- Rank market requirements
- Rank your market characteristics
- This creates a prioritized list

S.M.A.R.T. Goals

- Action plan projected on a timeline
- Goals
 - Specific
 - Measurable
 - Attainable
 - Relevant
 - Time Bound
- Always measure / assess
 - Understand why a goal was not achieved
- Fail quickly and adjust

Commercialization Strategies

Direct to Customer

- Sell a good
- Rent / lease a good

- Subscription models (XaaS)

- Provide answers
 - Consulting

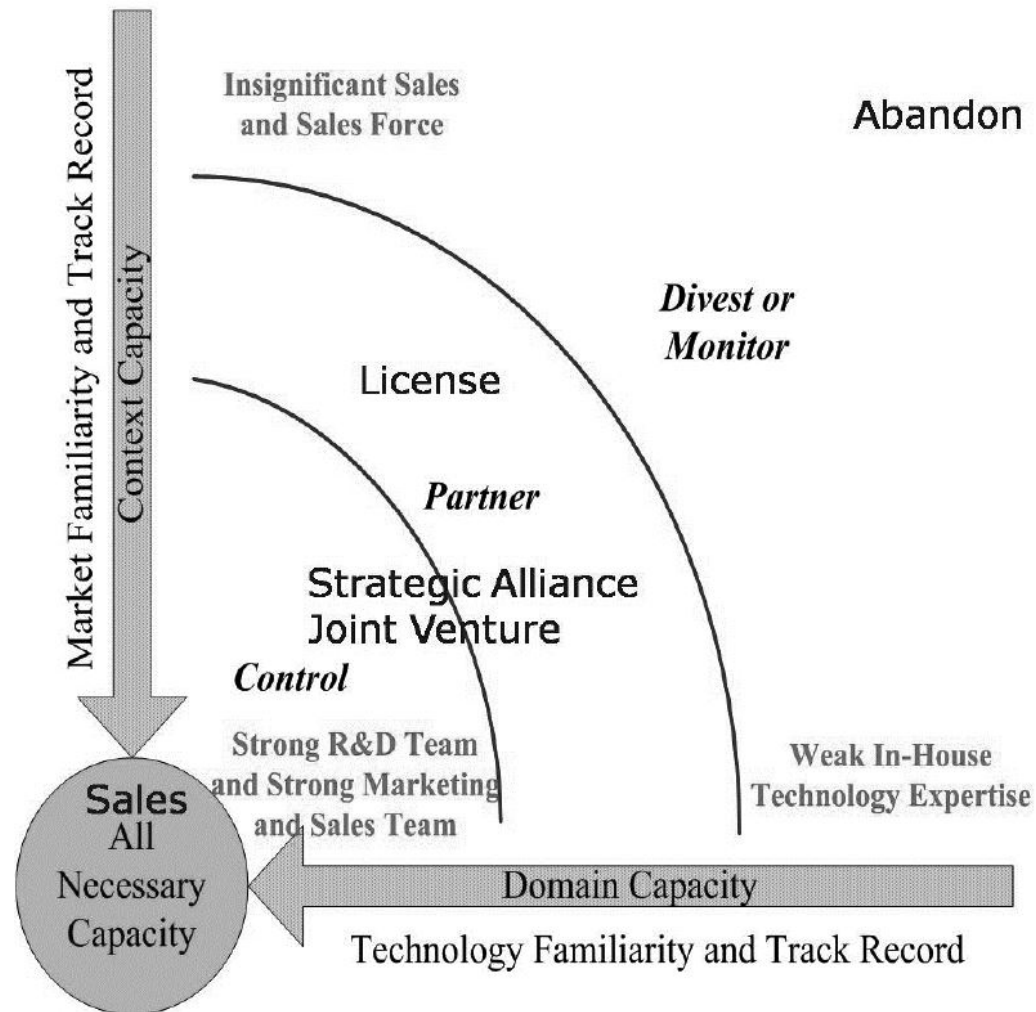
Indirect to Customer

- Outright sale
 - Single transaction to transfer ownership of IP

- License
 - On-going relationship with periodic royalty payments

- Partner
 - Commission or percentage of revenue retained by partner

Absorptive Capacity



Questions?

- EKase Consulting
- Ed Kase
- 303-641-3645
- ed.kase@ekaseconsulting.com
- <http://ekaseconsulting.com/>
- <https://www.linkedin.com/in/edkase80301>