Evaluation of the Opportunity – Patentability and Marketability Basics

The Research Foundation for SUNY

Innovation and Partnerships

June 17, 2020

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The Integrated Model







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What Is Intellectual Property?

Property that enjoys legal protection and stems from the exercise of the mind.

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Why is IP so Important?

- Creates property assets and adds value to a company from the minds of employees!
- Gives Businesses Exclusivity in the marketplace
- Marketing tool / Notice of ownership
- Revenue Stream
  - Licensing to others - IBM $1.3B annually
- Finance: venture capitalists and banks want to see IP ownership

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IP BIG PICTURE * WHY?

Securing IP Rights

Leveraging IP Rights

Enforcing/Defending IP Rights

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Transferring of Rights

- Assignments
  - Transfer of ownership
- Licenses
  - Right to use
- Contract Law
  - Language/Actions are binding

Types of Intellectual Property

- PATENTS
  - Protect "Functional" and/or "Ornamental" Inventions
  - **Filing Required**
- TRADEMARKS
  - Protect Names, Logos, Slogans, etc.
  - **Filing Optional**
- COPYRIGHTS
  - Protects creative/original works expressed in a fixed medium
  - **Filing Optional**
- TRADE SECRETS
  - Protects secret processes, information, etc.
  - **No Filing**

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Patents

- Obtained by filing with the USPTO
- Each Country/Region has separate system
- Relatively Expensive
  - ($20,000-25,000 to get a granted patent)

- Complicated Process
- Good for 20 years from filing date (Utility)

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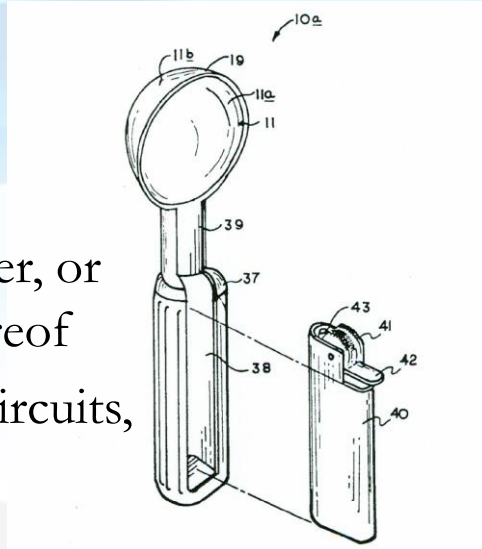
Types of Patents

- UTILITY (primary type of filing)
  - New and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof
  - E.g., mechanical Devices, Electrical Circuits, Pharmaceuticals, etc.



- DESIGN

  – Ornamental configuration, e.g., the shape of object

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Utility Patents

Term of **20 years** from earliest filing date to… **exclude others** from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States, and, if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States, or importing into the United States, products made by that process, referring to the specification for the particulars thereof. 35 U.S.C. 154

*Design – 14 years

EXAMPLE

- ACME Company patents components A, B, C
- You patent component D – which relies on A, B, C
- Can you practice your invention including A, B, C, D?

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Utility Patent Process

1. PATENT SEARCH: Search existing "prior art" to determine if patentable (Optional)

2. APPLICATION PREP AND FILING: (Patent-Pending)

    * Application Components: written description, claims, drawings (where applicable)

3. EXAMINATION AND PROSECUTION:

    * Most Applications are initially rejected requiring response(s)/Amendments to Application

4. PUBLICATION at 18 months from filing date (by DEFAULT)

5. ALLOWANCE / ISSUANCE:

6. MAINTENANCE: 3.5 years, 7.5 years, 11.5 years

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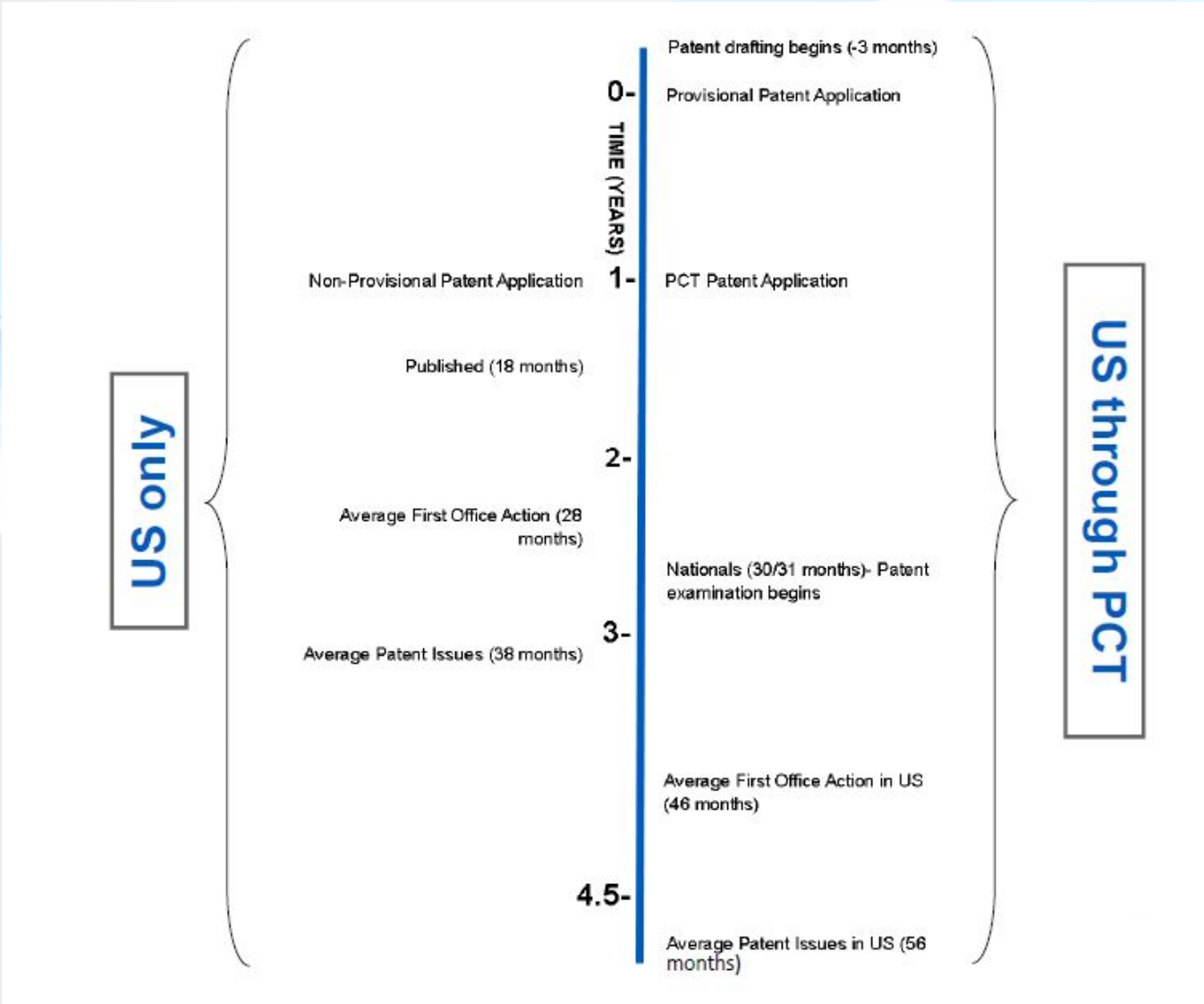
Patent Timeline



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Provisional Patent Applications

- Preliminary Patent Filing
  - Establish Filing Date – "Stake in the ground"
  - Buys the applicant 1 year to file non-provisional (UTILITY) application
- Does NOT get examined
- Lower cost – Less formal
- "Patent-Pending"

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Patents and Disclosure

Invention must be novel and non-obvious to be Patented

- Disclosed = NOT NOVEL (outside of U.S.)

(Almost) the rest of the world = absolute novelty bar

- In almost every other country in the world, as soon as an invention is disclosed, the inventor/applicants lose their right to file a patent Application

What is considered Disclosure?

- "Patented, described in a printed publication, or in public use, on sale, or otherwise available to the public"
- Enable a skilled person to carry out the invention

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Patentability in BIOTECH

Isolated DNA

cDNA

DNA sequences that encode variants

Diagnostic claims

Methods of treating/administering (mixed)

Antibodies

Laboratory/manufacturing techniques

Composition claims that are “markedly different”

Primers

Vaccines live attenuated OK

Life-forms (e.g., genetically engineered “oil-eating” bacteria) along with plants and transgenic animals

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Trademarks

IDENTIFIERS OF SOURCE OF GOODS AND/OR SERVICES

Word Mark v. Stylistic Mark

NIKE v. 

- Rights: PREVENTS others from using confusingly similar mark.
- Examples:

  Name – Microsoft

  Design – Nike's swoosh

  Color – Tiffany Blue

  Sound – Harley Davidson Motorcycle

  Shape – Peeps

  Scent – Play-Doh (granted 2018)

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Trademark Rights

- Rights available by *using the mark in commerce and*/or via Federal Registration with USPTO
  - Federal Registration gives extra rights
  - Rights limited to type of goods and services
    - E.g., Apple Computers vs. Apple Records (1978/2006)
- TM for Common Law or ® for Registered
- Likelihood of Confusion Standard for Infringement
- Scope of protection varies
  - Strength of the mark
    - Generic – Descriptive – Suggestive – Arbitrary – Fanciful
    - Aspirin – Pizza Hut– AIRBUS – Apple - Kodak

AIRBUS

Pizza Hut

KODAK

Apple

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US Trademark Registration Process

- Search
- File application with USPTO
  - Actual Use vs. Intent to Use
- Application is examined
- Respond/Amend
- Allowance Publication
- Issuance
- Maintenance*

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Creating TM Leverage

- Federal Registrations
- Police Your Trademarks
- Use Outright and Often
- Routinely Document Use

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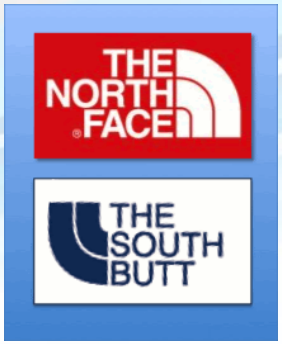
Trademark Infringement



- The key test for trademark infringement is whether the defendant's use of a particular mark creates a likelihood of confusion

- Number of factors depend on circuit – typically 8

  - (1) the similarities of the goods and services involved
  - (2) evidence of actual confusion
  - (3) physical proximity
  - (4) likelihood of product line expansion.

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Copyrights

PROTECT ORIGINAL EXPRESSIONS FIXED IN TANGIBLE MEDIUM

- Exclusive right to distribute (copy), prepare derivative works, perform, and display

- LIMITED TO EXPRESSION, NOT ACTUAL IDEAS!!!

Examples: Poem written on paper, music, **SOURCE CODE**, manuals, marketing material, **website/APP design**, recorded performances, video, mixed media, video games, etc.

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Obtaining Copyrights

- Registration not required to establish rights
  - Just need something recorded in a tangible medium
- © from first publication
- Registration through US Copyright Office gives extra rights … which can be important!!!
  - Registration process is relatively simple
  - Registration important in litigation
- Infringement Standard includes (1) Access and (2) "Material Similarity"
  - Access requirement unique to Copyright

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Creating Copyright Leverage

- Register Your Important Works – early and often
- Always Have Written Agreements when dealing with Contractors
  - By default, contractors own copyrights in created works

Open Source Software/Hardware

- Software is protected by copyright and therefore, similar to plagiarism, no one is allowed to use/copy your software source code without permission

- Two types of Open Source licenses
  - Permissive
    - Apache, MIT, BSD, W3C
    - Permit downstream commercialization of products/services integrating the open source components
  - Viral/Copyleft
    - GPL, LGPL, MPL, EPL
    - Require dedication to public domain of all derivations

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Trade Secrets

Any secret information that gives an economic advantage over competitors that do not have access to the secret

- Potentially perpetual IP protected under International (WTO; TRIPS) US State and Federal Laws, including the Economic Espionage Act, Uniform Trade Secrets Act and Defend Trade Secrets Act (2016; created private federal cause of legal action for TS Misappropriation)
- ONLY GOOD IF YOU CAN KEEP SECRET
  - Is reverse engineering possible? How likely is independent creation?
  - Don't file or register – once once the secret gets it out cannot put it back in the bottle
- Requires protection efforts commensurate with the value of the Trade Secret
  - Employment agreements; non-disclosure agreements, need-to-know access; notices on documents; sign in sheets, key card access, security check points, razor ribbon, etc.
- Examples include, e.g., formulas (Coca-Cola), patterns, compilations, programs, devices, methods, techniques or processes, customer lists, and other confidential technologies
- Misappropriation punishable under law, but damages can be difficult to assess or retrieve
- Best offense is good defensive measure to prevent access and misappropriation

IP Potpourri

- Confidential Information
  - Contracts can be utilized to keep information confidential (NDA's)
- Employee Rights
  - Contracts
  - Work for Made for Hire Rules (Copyright)
  - Shop Rights (Patent)
  - Employee vs. Contractor

Marketability

Measure whether a product or service will appeal to customers and sell at a certain price range to generate a profit

- De-risk the technology
- Understand your customers
- Knowledge about competitors and how they approach the market

What is the goal of market research?

To determine if it makes sense to invest in forming a legal entity, patent attorneys, infrastructure, and hiring personnel if a comparable product or process exists that works and is much less expensive.

IS IT WORTH THE COST?

From: NYS Science+Technology Law Center , Lacey C. Grummons

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Market Research Tools:
Customer Discovery and Desk Research

https://theprauthority.com/market-research-methods/

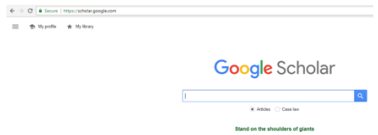
IBISWorld

WHERE KNOWLEDGE IS POWER

2. IBIS World
www.ibisworld.com

Using Google (Google Scholar)

Use Google Scholar to Find Relevant Research



https://scholar.google.com/

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Helpful Websites

- Research Foundation YouTube, Customer Discovery: A Tool for Identifying High Impact Research Objectives Important to Industry and Consumer Markets: https://www.youtube.com/watch?v=PMqYF0zoOX8&t=5s
- Business Source Elite (full text coverage of scholarly management, business, & economic journals, good overview/background resource): http://libezproxy.syr.edu/login?url=http://search.ebscohost.com/login.aspx?authtype=ip,uid&profile=ehost&defaultdb=bsh
- Mergent Online (globally-reaching database of companies): http://www.mergentonline.com/basicsearch.php
- MarketLine Advantage (company & industry profile database): http://libezproxy.syr.edu/login?url=http://360.datamonitor.com/
- Wharton Research Data Services (WRDS is a data research and business intelligence platform for economic, finance, and market research): http://wrds-web.wharton.upenn.edu/wrds/connect/
- BRINT.com (bridges gap between tech & business and practice & theory; articles, analysis, forums, news): www.brint.com
- Onecle (online database with samples of various contracts, agreements, & business forms): http://www.onecle.com/
- University of Nebraska (general market): www.unk.edu/academics/crrd/Market_Research_and_Entrepreneurship_Resources
- Plunkett Research Online (market research & industry statistics): http://libezproxy.syr.edu/login?url=http://www.plunkettresearch.com/login.aspx
- MarketResearch.com Academic (access for academic institutions to market research used by business professionals): http://academic.marketresearch.com/index.asp?prid=996684487
- SimplyMap (demographic, marketing, & business data laid out geographically): http://www.simplymap.com/
- ProQuest Statistical Datasets (web-based research solutions tool giving access to billions of data points in an easy-to-use interface): http://si.conquestsystems.com/statistical/Main.jsp;jsessionid
- U.S. Census Bureau Intro to NAICS (how to use the North American Industry Classification System): http://www.census.gov/eos/www/naics/
- Google Scholar https://scholar.google.com/
- Dun & Bradstreet Million Dollar Database: http://www.mergentmddi.com/index.php/search/index
- Bloomberg Law: www.bloomberglaw.com
- ZoomInfo (industry contacts): https://www.zoominfo.com/
- EDGAR: www.sec.gov/edgar/searchedgar/webusers.htm
- IBIS World: www.ibisworld.com
- North American Industry Classification System (NAICS): http://www.census.gov/eos/www/naics/
- InnovationQ (More than 100 million patents and documents to identify competition/partners): https://ip.com
- Pharma IC from GlobalData (investigational and approved drug universe): https://globaldata.com/
- Frost & Sullivan (in depth market reports): https://www.frost.com/

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Addressable Market Applications

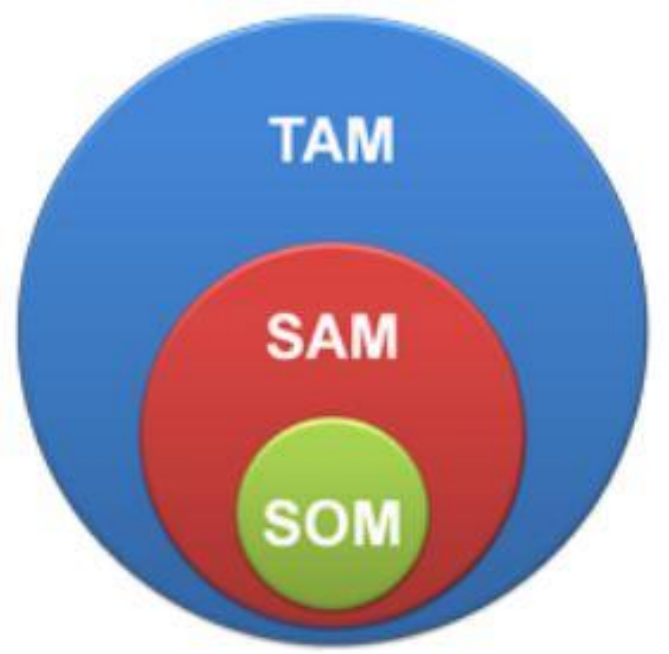
What market applications or segments might this technology address? – think blue sky

Market Structure For Each Application

For each specific market application / segment / indication:

- Is the market share consolidated or fragmented?
  - Number and names of top tier players, mid-tier players, bottom tier players, as well as, their typical marketing, partnering and technology deployment strategies
- Is the specific market segment relatively new or mature?
- What is the M&A (Mergers and Acquisitions) behavior?
- How do startups tend to fare?

Market Size



TAM = $_____
Total Available Market - total market demand for a product or service

SAM = $_____
Serviceable Available Market - segment of TAM targeted by your products and services which is within your geographical reach

SOM = $_____
Serviceable Obtainable Market - portion of SAM that you can capture

Bottom up (# of units and cost per for projected sales) and Top down (market reports)

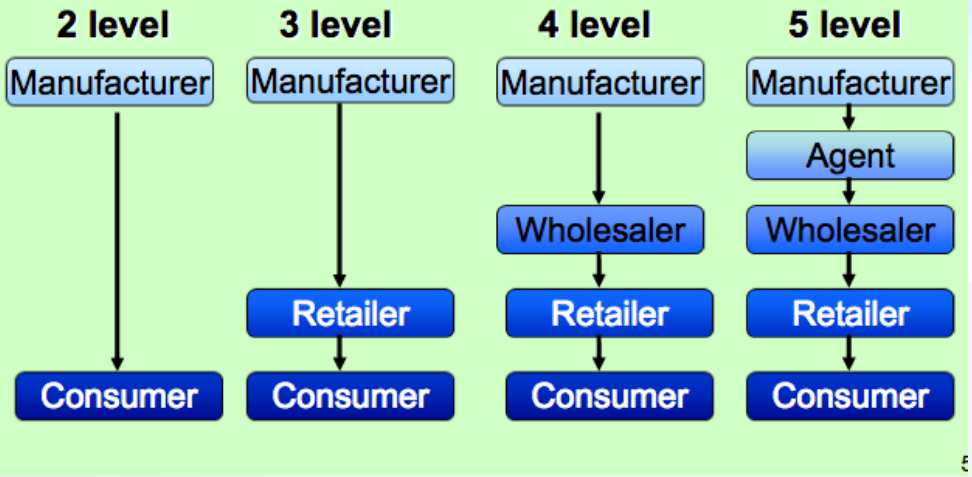
CAGR (Compound Annual Growth Rate)

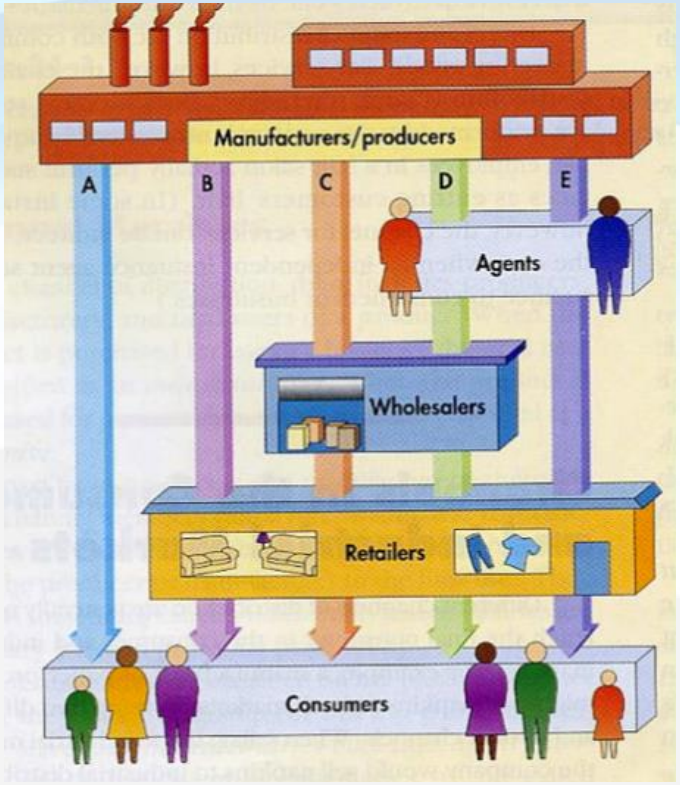
Potential Competitors

- What is the relative financial health of the potential competitor?
- How long have they been in business?
- What does their portfolio of products and services look like?
- Does the company have a formal (or informal) evaluation process for new technologies?
- Is there contact information available for a decision-maker within each company?
- Remember – competition may also be to do nothing
- Any potential competitors that could be partners?

Distribution Channel / Supply Chain

Channel length = number of levels in a distribution channel.





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Technologies and Products Comparison

Comparable IP, Products & Services

- Similarities & Differences
  - Fabrication, construction, components
  - Use, performance, etc.
- Advantages & Disadvantages
- Pricing/cost structure of the competing products
- Stage of Development
  - Research, Clinical Trials, Available for Purchase
  - Timeline for market deployment

Worksheet As a Tool

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SUNY Startup Summer School (S4) 2020 Cohort
Evaluation of the Opportunity – Marketability Basics, June 17, 2020

Name: _____

Brief Description of Concept: _____

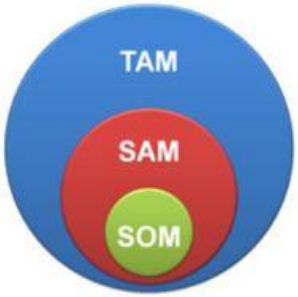
_____

_____

Market: *Identify the potential market(s) for the invention. Quantify current market size estimates, projected market size, market trends, etc.*
Markets: _____

_____

Size:



TAM = $_____ Total Available Market is the total market demand for a product or service.

SAM = $_____ Serviceable Available Market is the segment of TAM targeted by your products and services which is within your geographical reach.

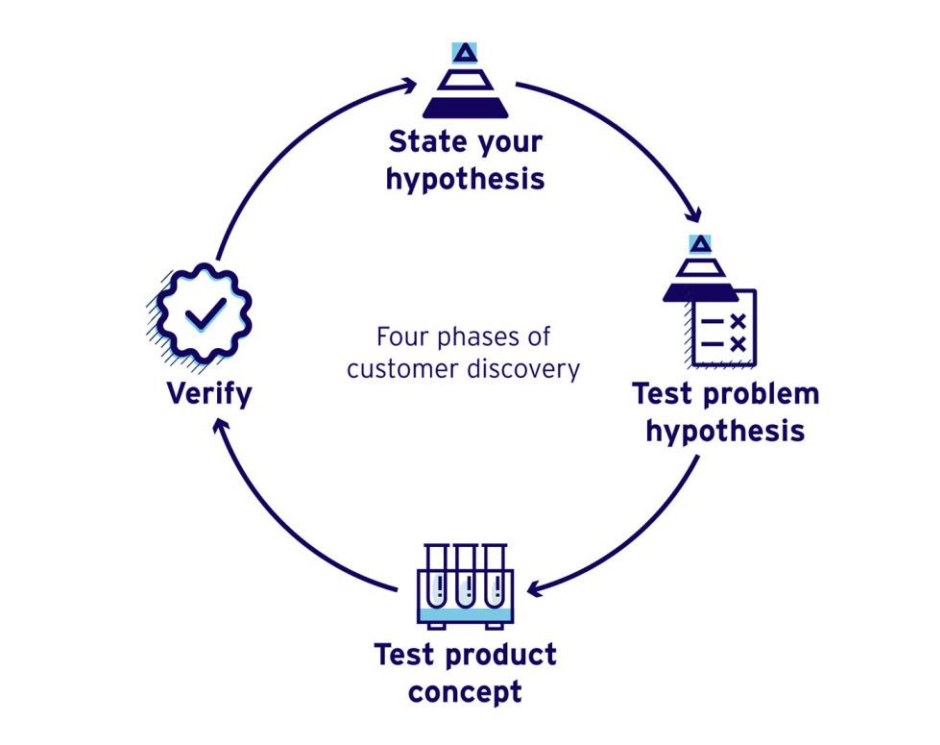
SOM = $_____ or Serviceable Obtainable Market is the portion of SAM that you can capture.

_____

Customer Discovery

- The process of conducting research through customer interviews to identify the specific problem or specific commercial objective a technology solves

- Process used by entrepreneurs to identify and validate scalable, repeatable, and worthwhile business models



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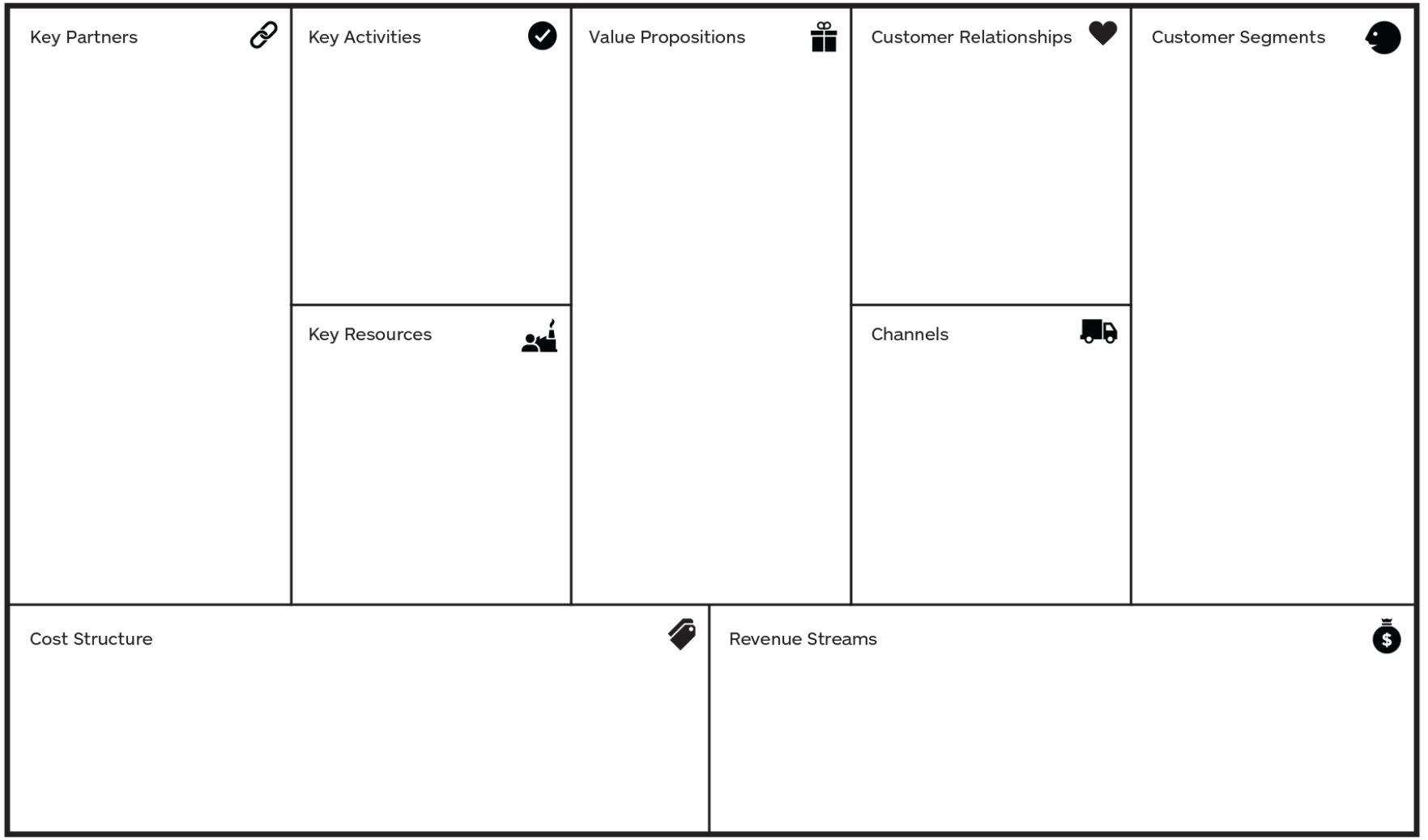
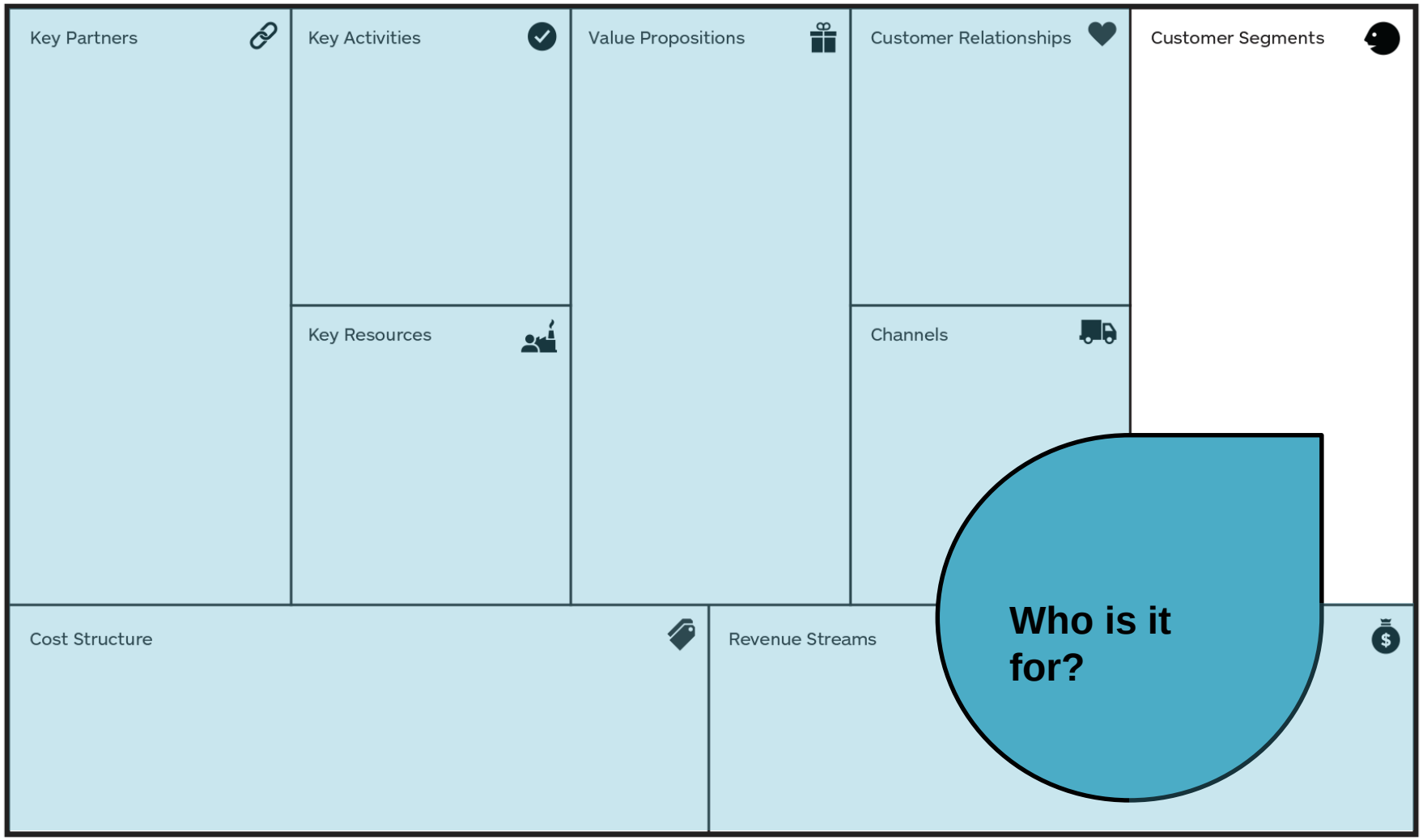
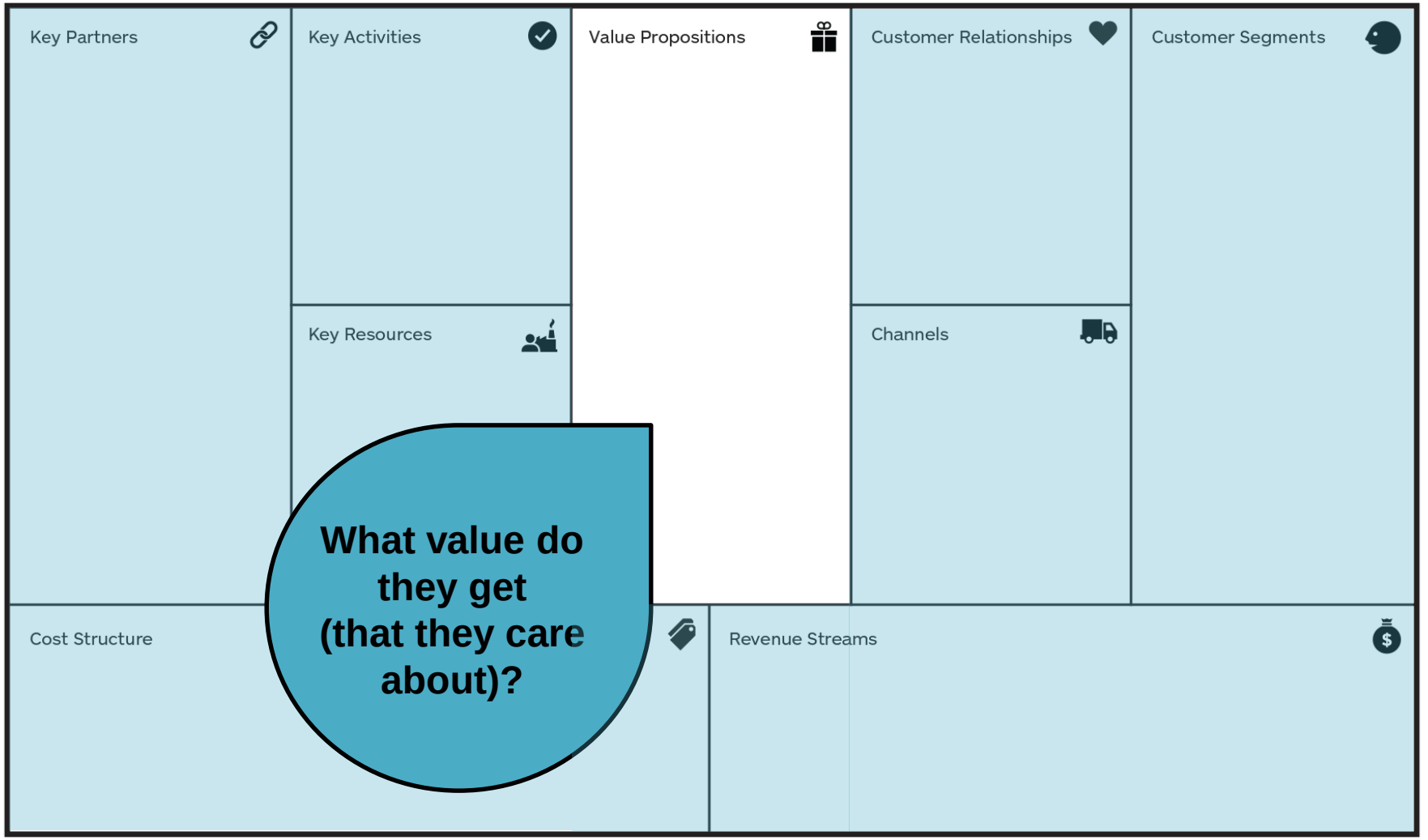

Key Partners
Key Activities
Value Propositions
Customer Relationships
Customer Segments
Key Resources
Channels
Cost Structure
Revenue Streams


Key Partners
Key Activities
Value Propositions
Customer Relationships
Customer Segments
Key Resources
Channels
Cost Structure
Revenue Streams
Who is it for?

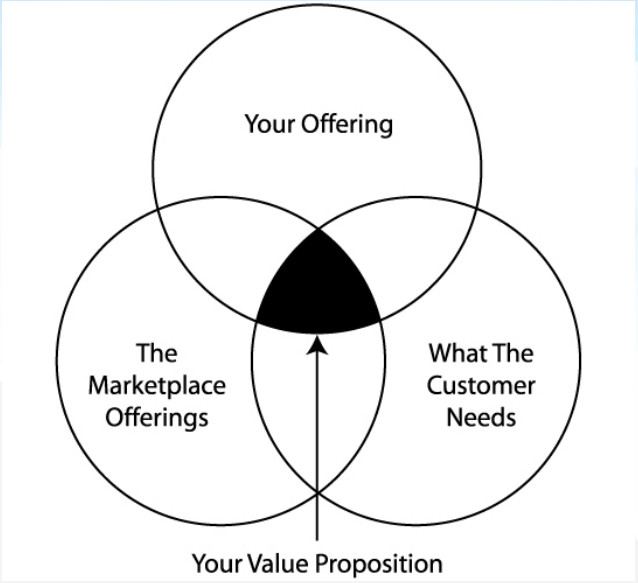

Key Partners
Key Activities
Value Propositions
Customer Relationships
Customer Segments
Key Resources
Channels
What value do they get (that they care about)?
Cost Structure
Revenue Streams

Value proposition

Value Proposition: Single, clear, compelling message that states why you are different and worth paying attention to

Template
For [target customer]
Who wants/needs [compelling reason to buy]
The [product name] **is a** [product category]
That provides [key benefit]
Unlike [main competitor]

Example:
For project managers at drone manufacturing companies that want to minimize their downtime of operating drones, the Wireless Charging Station provides simultaneous charging of multiple drones at a faster rate than currently offered solutions.



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"It is not the strongest or the most intelligent who will survive but those who can best manage change."

– Charles Darwin

NSF I-CORPS

CUSTOMER DISCOVERY APPROACH

Helps determine points of intersection between technology, business concepts, and market realities

Most initial concepts change dramatically in the course of a few weeks when the process is applied with attention and diligence

Some abandon their initial concepts altogether and then use the process to find more productive opportunities

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