

RETHINKING
THE BOUNDARIES

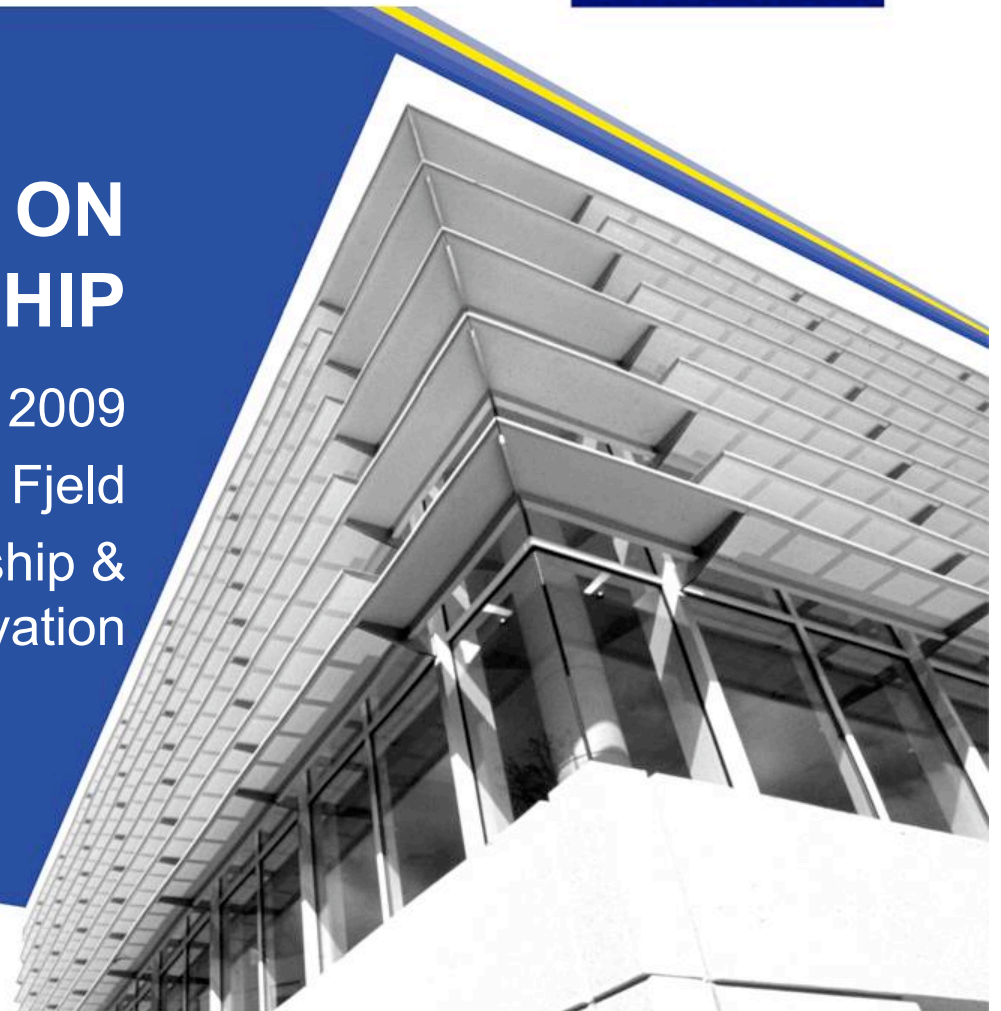


**WORKSHOP ON
ENTREPRENEURSHIP**

August 25, 2009

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Center for Entrepreneurship &
Innovation



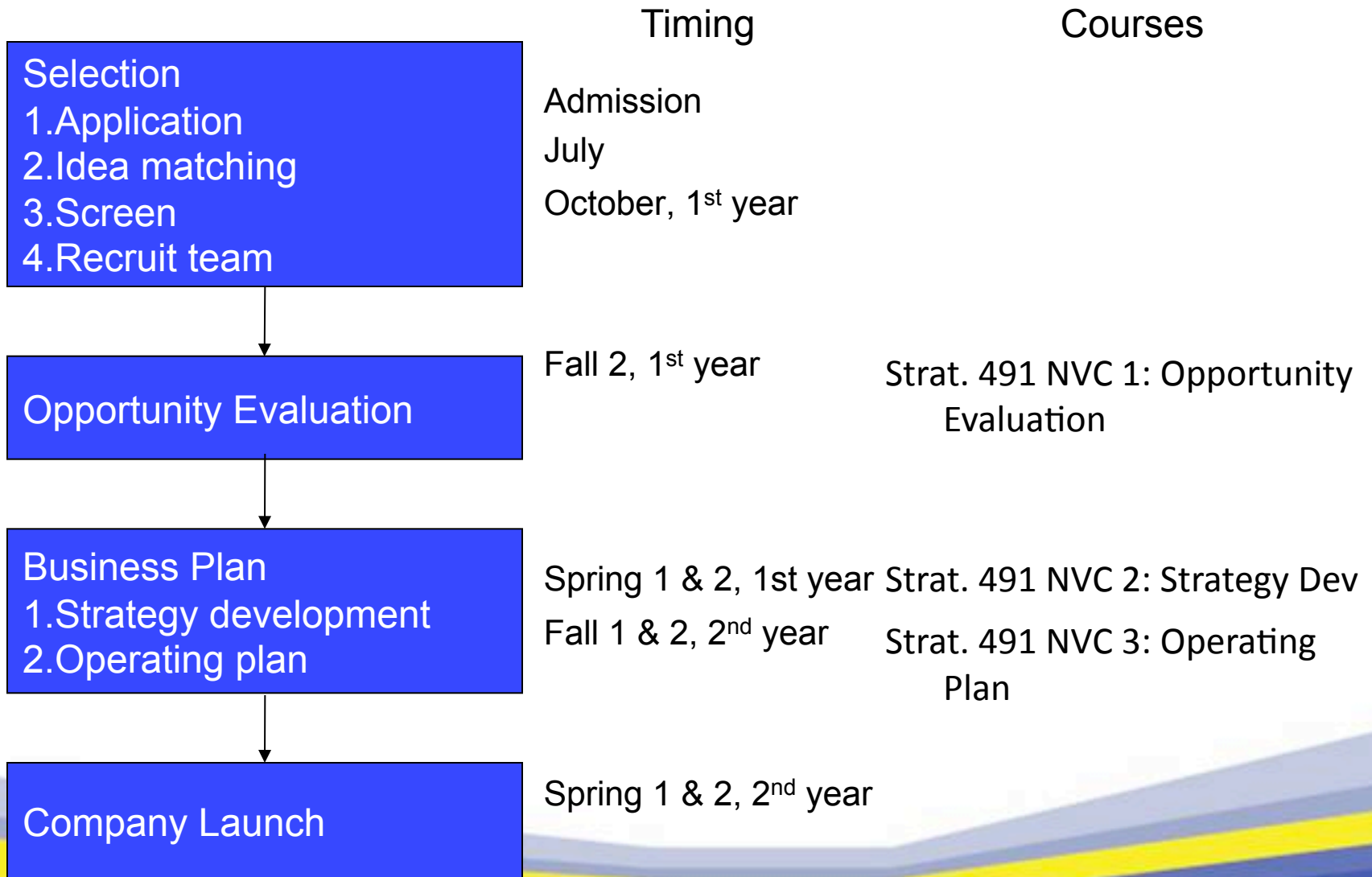
Agenda

- Sample projects:
 - Entogenetics
 - Uro-innovation
- Program for Entrepreneurs – overview
- Entrepreneurial process & background
- More projects:
 - FitEd
 - PTP (wind energy)
 - Innovation Education International
 - Hog Waste / Carbon aggregation

PROGRAM FOR ENTREPRENEURS – OVERVIEW



P4E Process



ENTREPRENEURSHIP OVERVIEW



So you been introduced to an interesting idea – now what?

Is it worth pursuing (investing more time, energy & money)?

What do you do next?



Framework

Opportunity evaluation:

- Team
- Opportunity
- Solution
- Competitive advantage
- Risk / return

Company's plan:

- Strategy:
 - Target customers
 - Business model
 - Position
 - Objectives
- Operating plan:
 - Competencies
 - Plan for each functional area
 - Budget
 - Financing

Execution:

- Market Research
- Strategy development
- Marketing
- Business development
- Sales planning
- R&D Management
- Operations management
- Process and infrastructure management
- Budgeting
- Financing
- People management

OPPORTUNITY EVALUATION



Evaluation of an Opportunity

1. Is there a sufficiently attractive **market opportunity**?
2. Is the proposed **solution** feasible, both from a market perspective and a technology perspective?
3. Do we have an **team** that can effectively capitalize of this opportunity?
4. Can we **compete** (over a sufficiently interesting time horizon)?
5. What is the profile **risk and return** of this opportunity?

Entrepreneurial Opportunity

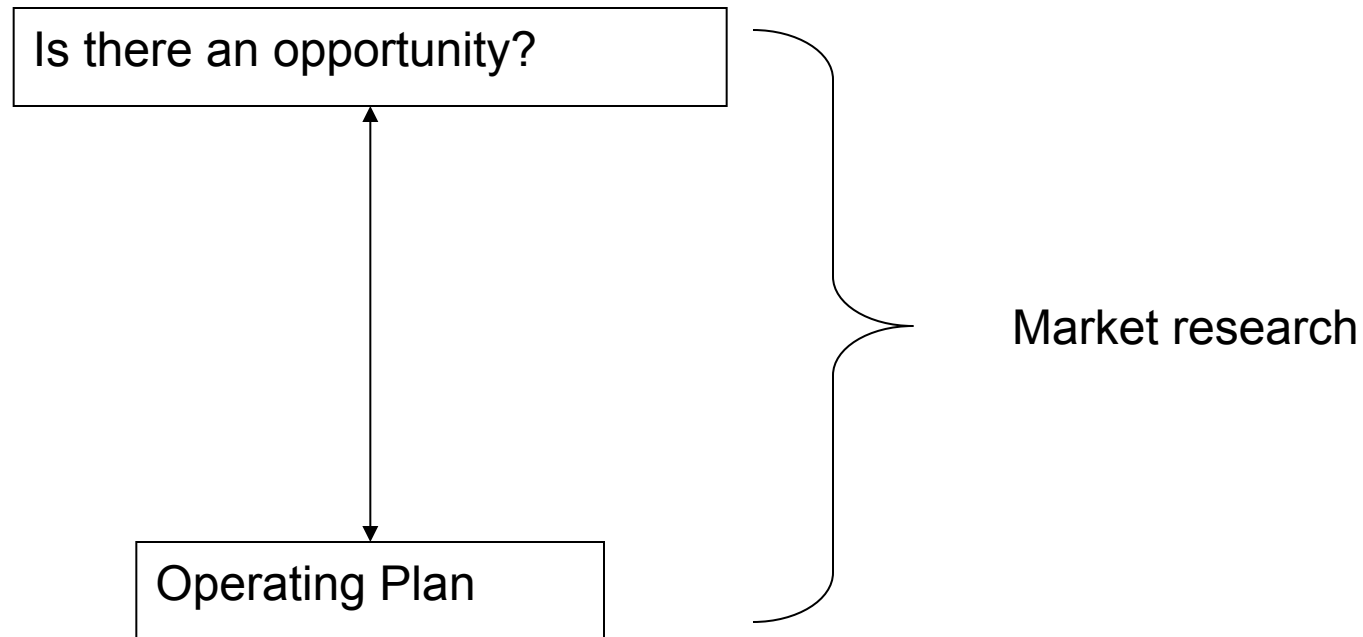
- Problem currently not solved
- Potential for change in consumption

Requires:

- Innovation
- Capability to exploit the innovation

Not every idea is an opportunity

Market Research

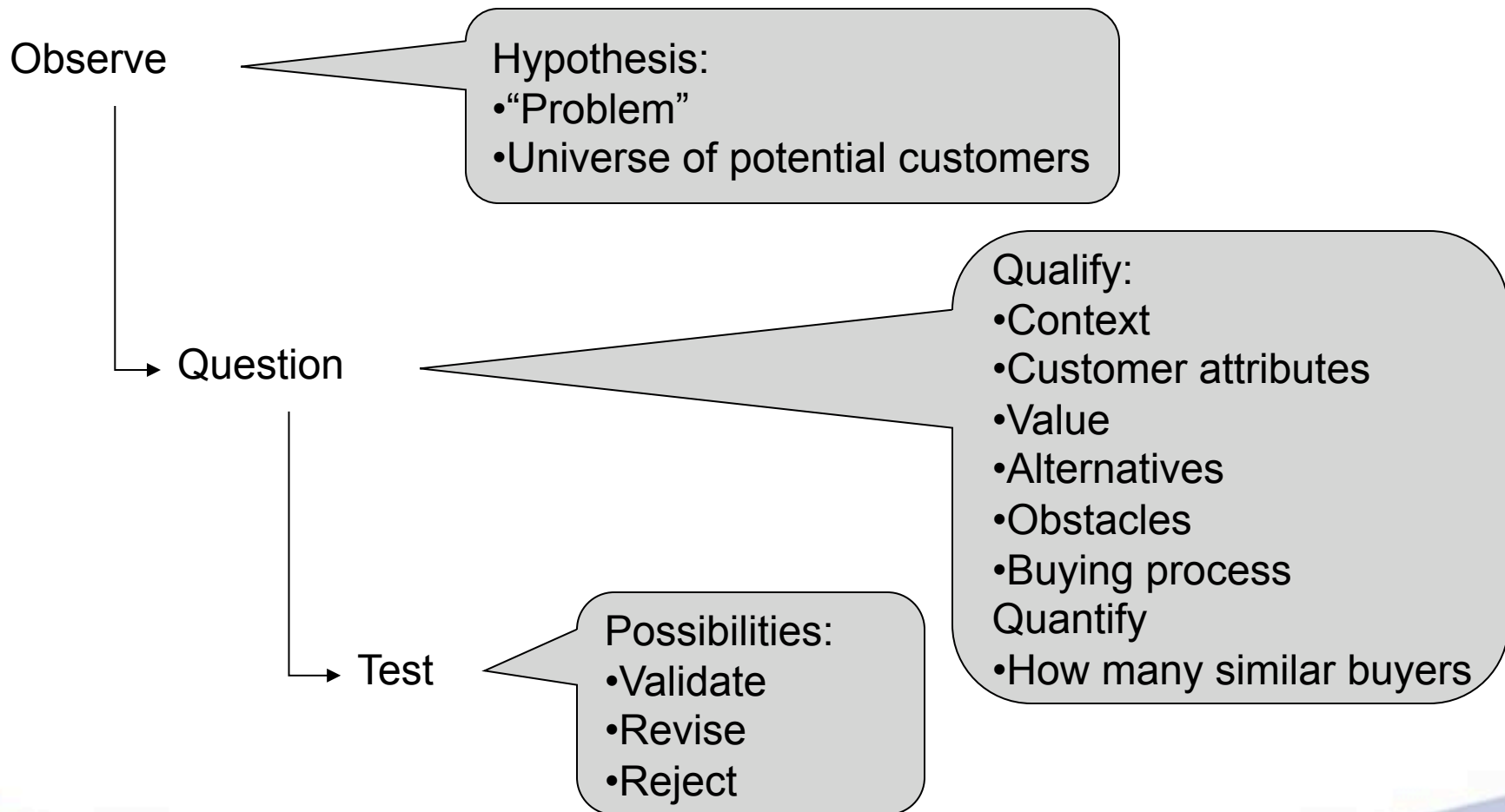


How Do you Start?

“You can observe a lot by just watching.”

(Paraphrase of a famous philosopher)

Method



What Is a Need or Problem?

Pattern of behavior + Purpose

Some deficiency:

- Unsatisfactory result
- Too long / too hard
- Too expensive
- Unpleasant / not enjoyable
- Unwanted consequence

Framework

Opportunity evaluation:

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- Financing
- People management

PLANNING: STRATEGY



Strategy

1. Target customers

- Who are the candidates?
- How do you choose?

2. Business model

- How will the venture make money? Product? Service?

3. Position

- How is the venture positioned?
- How can it compete over the long term?

4. Objectives

- Foundation for operating plan

These questions are all linked.

The process is iterative and piecemeal, not sequential

Target Customers

Start with formulating a choice:

- Who are potential targets?
 - XYZ corp. & ABC corp.
- What do they represent?

Considerations:

- What is the required solution? Can we deliver? Does it strengthen us?
- Ease of implementation for the customer
- Decision process
- Size of opportunity represented

Business Model

- How will you make money?
- What will the customer pay for?
- What is the “whole product”?
 - How will it get to the customer?
 - What will your role be?
- What is the perceived value?

Competitive Position

Objective: Sustainable competitive advantage

What is competitive advantage?

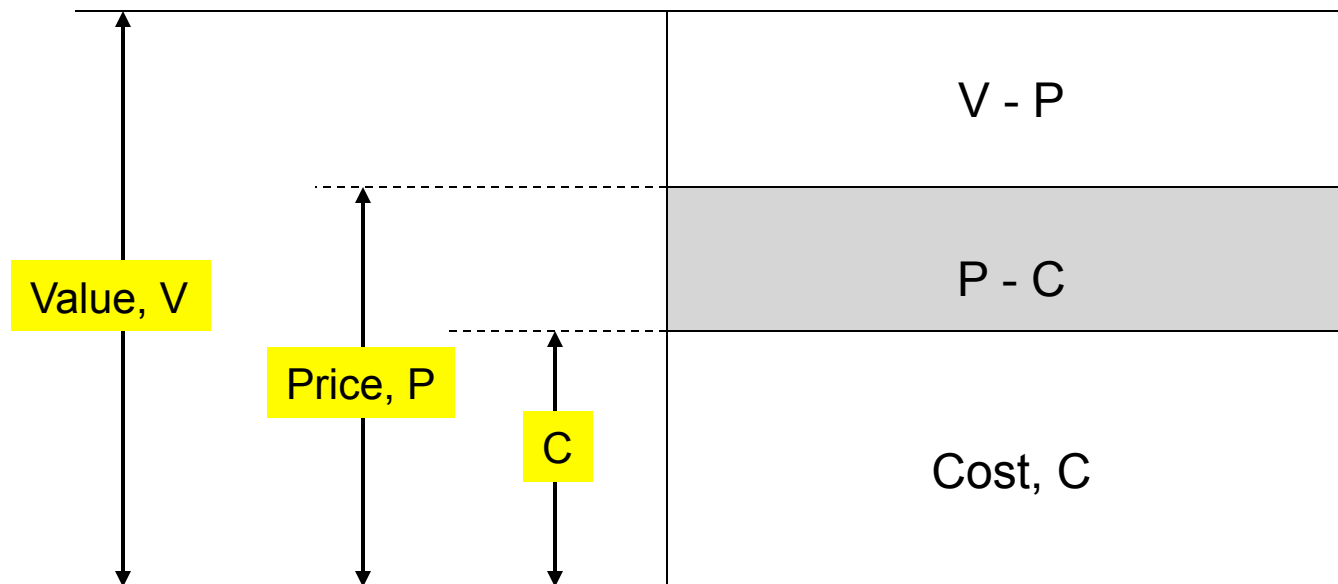
- Something that allows the firm to deliver value to the customer profitably
- (implies that the firm does it better than competitors)

What is *sustainable* competitive advantage?

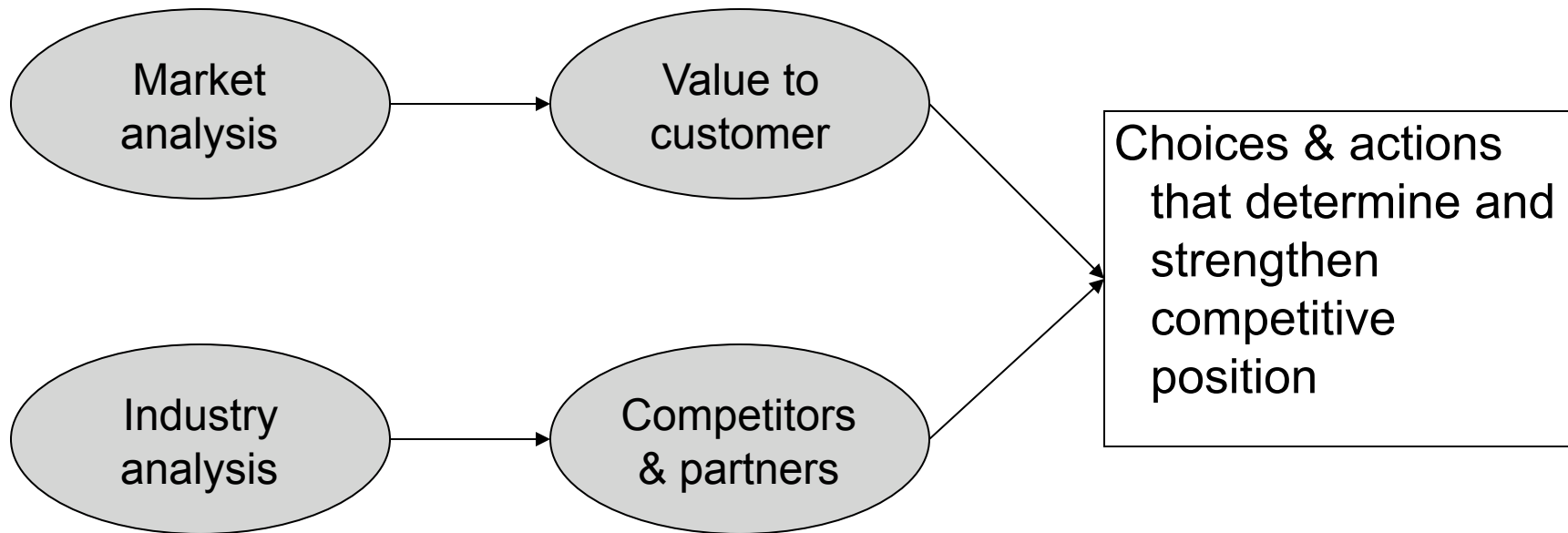
- A competitive advantage that is hard to imitate or innovate around

Value & Return

Competitive advantage is ability to deliver value profitably



Competitive Strategy



PLANNING: OPERATING PLAN



What is an Operating Plan?

- Set of activities
- In a schedule or timeline
- That achieve the objectives of the strategy
 - Contemplated product or service
 - For the target customers
 - Creating sustainable competitive advantage
- With associated revenue and costs
- With a way to pay for the costs



Operating Plan Elements

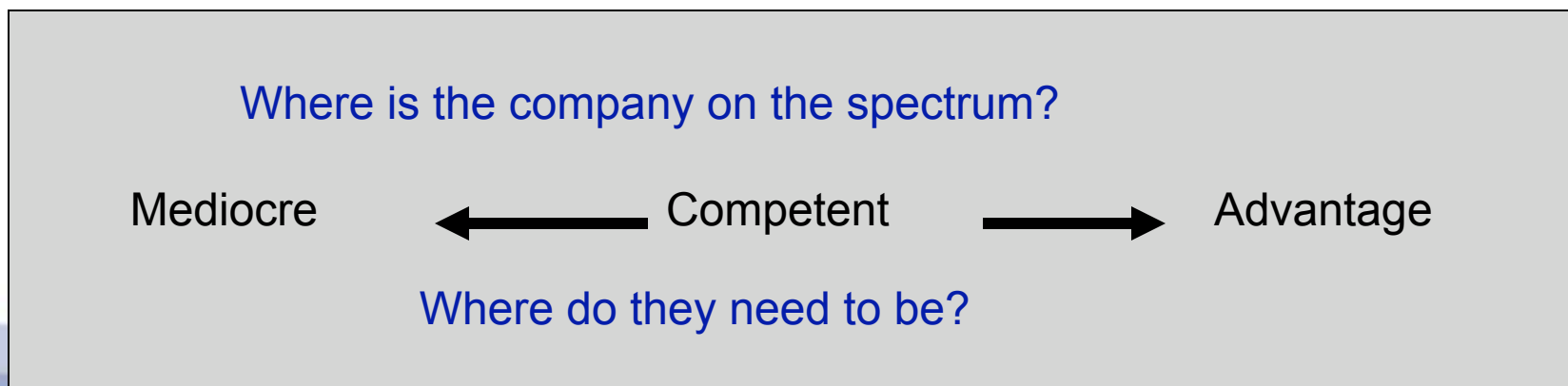
- Core competencies
- Operating plan detail:
 - Sales forecast
 - Gross margin analysis
 - Sales and marketing plan
 - Research and development
 - Operations and manufacturing
 - General and administrative
- Budget
- Financing plan



Competencies

Firms do many things

- Design / develop
- Manufacture
- Market
- Sell
- Service
- Hire
- Innovate
- Strategize
- Plan
- Respond to changes



Financial Analysis for a Start-up

Income Statement

Revenue
- COGS

Gross profit

Sales & marketing
Research & development
General & administrative

- Expenses
Net profit

What is a Forecast?

Projection of future revenue

Revenue = # of customers X ave. revenue/customer

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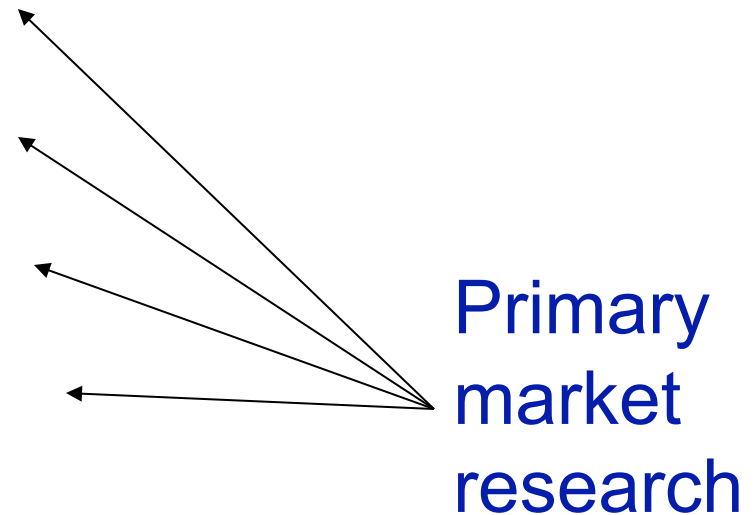
Role of Market Research

Revenue =

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A Model

Products & Marketing

“Possible” customers

Decision points

A

B

C

Deal

Probability & Duration

Selling effort



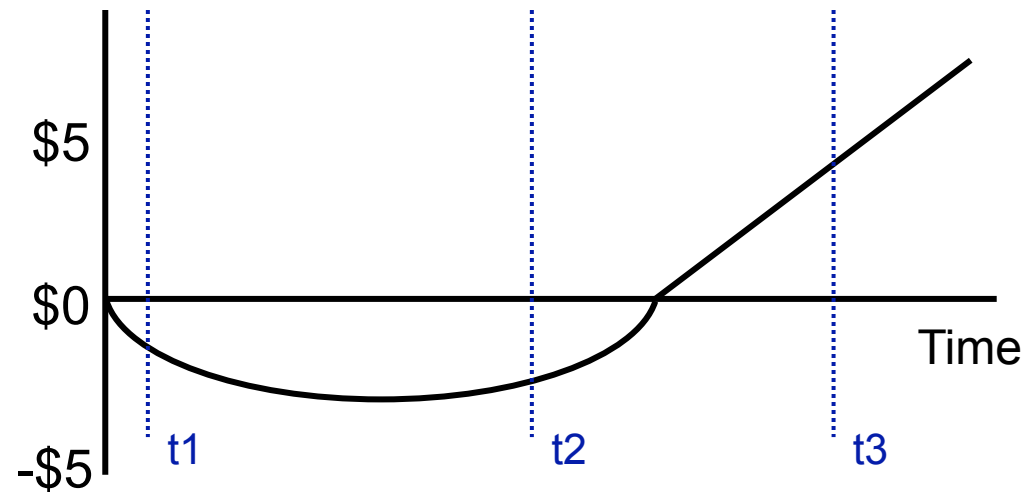
Building a Budget

Sales & marketing
Research & development
General & administrative

$$\begin{array}{r} \text{Revenue} \\ - \text{Cost of goods sold} \\ \hline \text{Gross margin} \\ \\ - \text{Operating expense} \\ \hline \text{Net profit} \end{array}$$

- Build a model that captures everything
- The plan must close

How much Money Do You Need?



- Should you raise the total amount of cash needed (according to projections) in a single investment?

Usually not

- How much is the business worth?
- What increases the value of the company?

Reduction of uncertainty

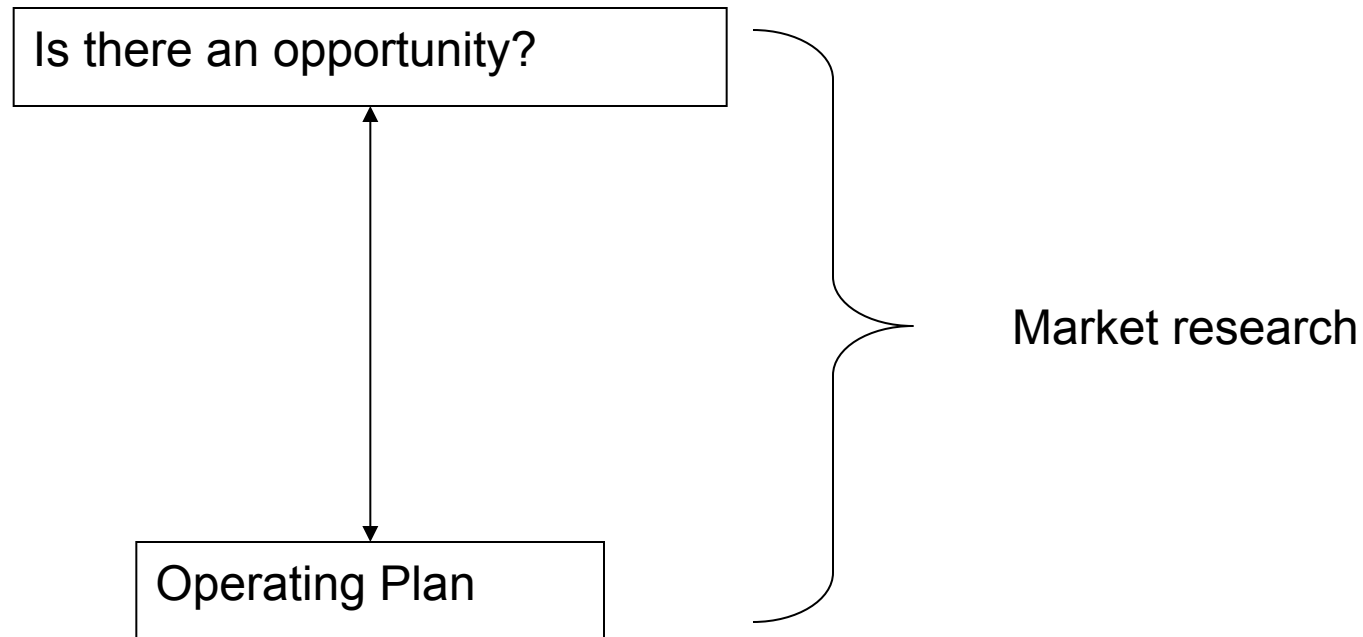
BACKGROUND



MARKET RESEARCH



Market Research

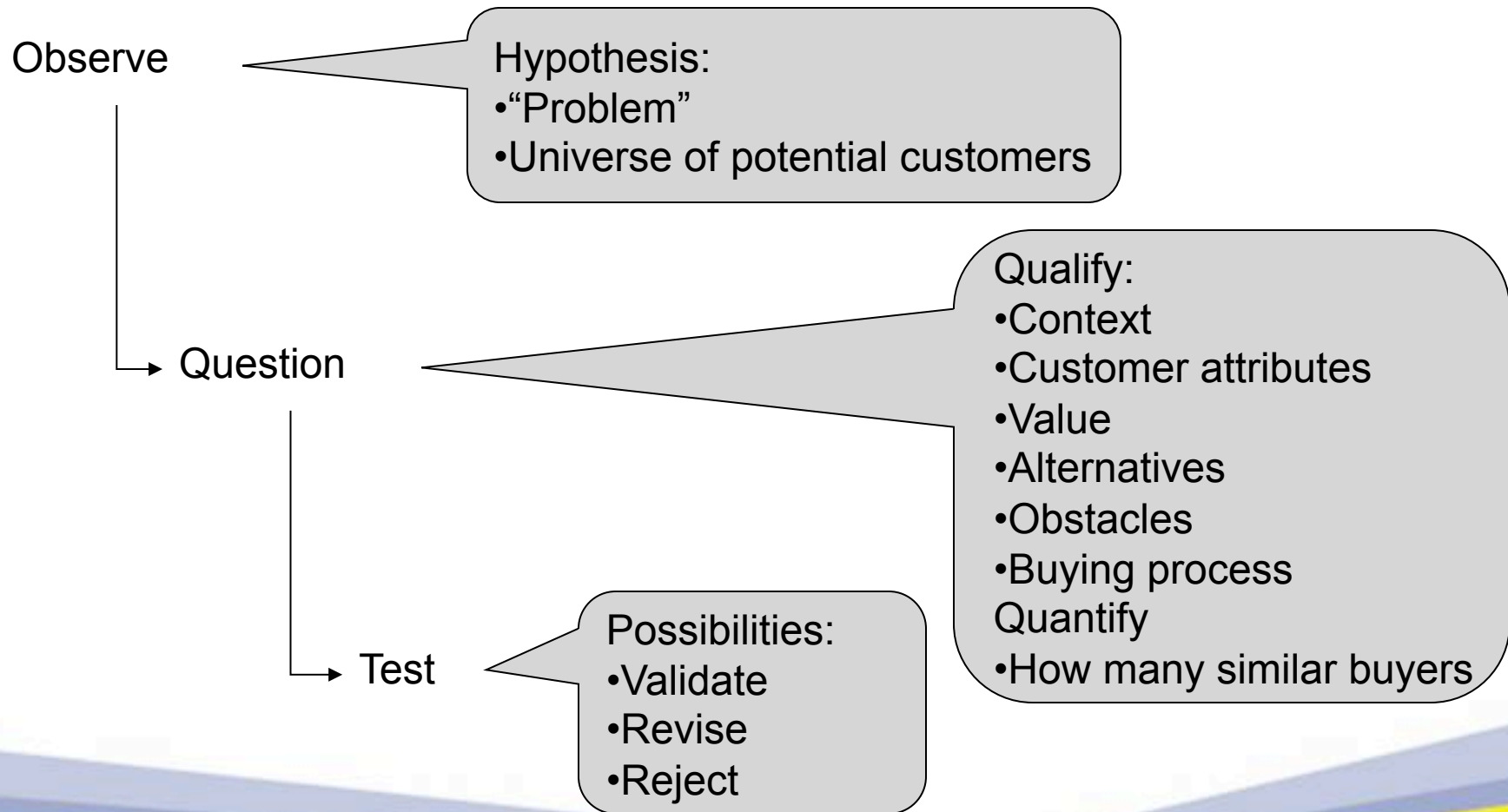


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Two Perspectives

Demand side:

- Some needs are obvious but not satisfied, e.g., diseases, need for fuel efficiency
- Technology does not exist

Supply side:

- Some needs are satisfiable but not recognized, e.g., social networking?
- Technology exists but is not applied

Hybrid:

- Sometimes the need/solution insight requires a “leap of integration,” e.g., iPod / iTunes?

Qualitative Understanding

Context:

- What is the business process?
- What processes does this relate to and how does it relate to the organization's goals?

People:

- Buyer / user / influencer
- What are their interests & aspirations? How do they affect decisions

Environment:

- "Value chain" - network of suppliers of products & services into which your solution must fit
- Other?

Organization:

- Competitive position
- Strategy
- Culture / values
- Financials

Qualitative Analysis

Suppose you have found an opportunity

Solution

Drives:

- Marketing
- R&D
- Business development

Customer attributes

Drives:

- Marcom & sales approach
- Addressable opportunity

Buying process

Drives:

- Sales plan & forecast

Solution

- Definition:
 - Product characteristics
 - Must have / nice to have
- Value:
 - Quantification
 - Why? E.g. cost reduction, revenue enhancement, other?
- Obstacles:
 - Unwanted consequences
 - Impact on processes
 - Impact on people
 - Implementation problems



Design around or
sell around

Customer Attributes

If you find someone who will buy your solution to the problem at hand,

What is it about them that makes them a willing buyer?

An answer to this question is a hypothesis about a target customer.

This hypothesis can be tested through further research.

Customer Attributes

A good hypothesis

- (Can be captured via the methodology of personas)
- Is the basis for marketing activities
- Is the basis for quantifying an addressable market
 - Find how many others share the relevant characteristics
 - This is done through “secondary market research,” web, reports, consultants, ...

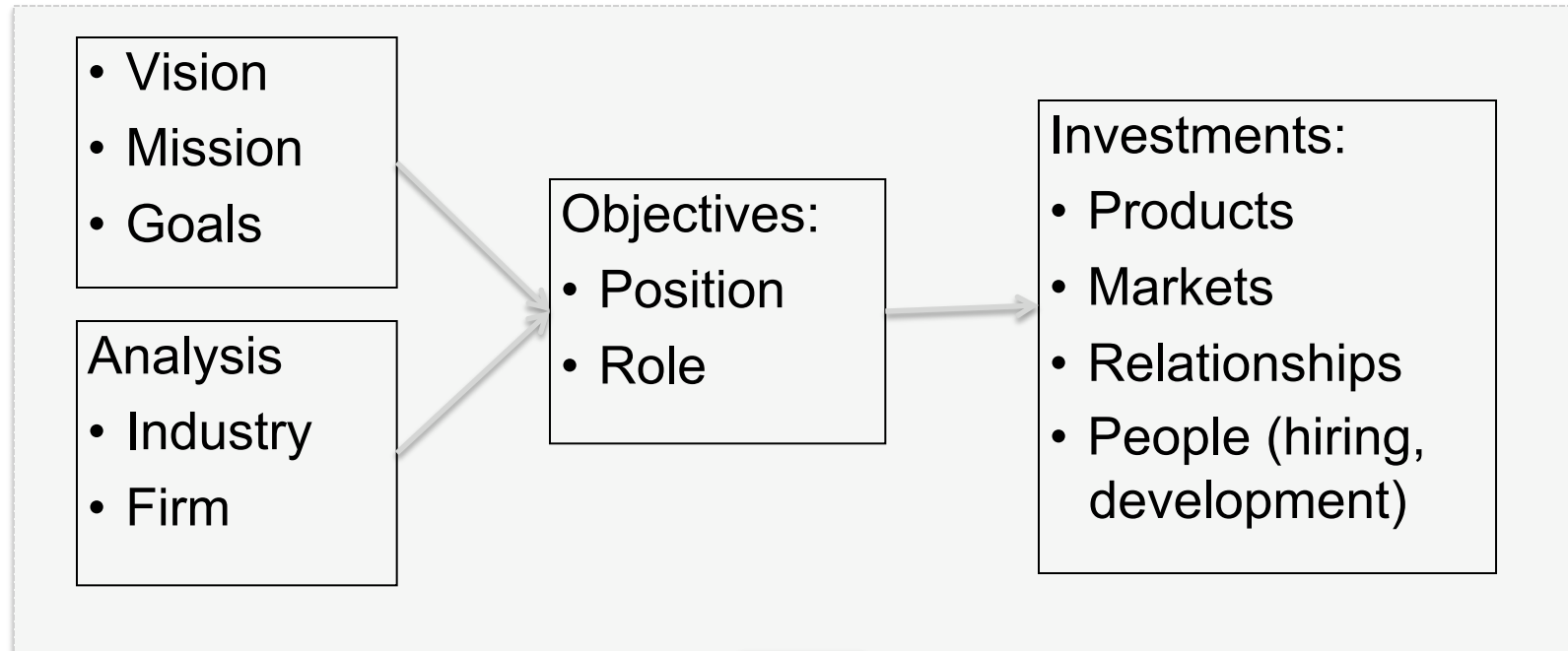
Buying Process

- Allocation of resources
 - Budgeting cycle
 - Approval process
- Decision makers
 - Objectives / measurements
- Influencers

STRATEGY



What is Strategy?



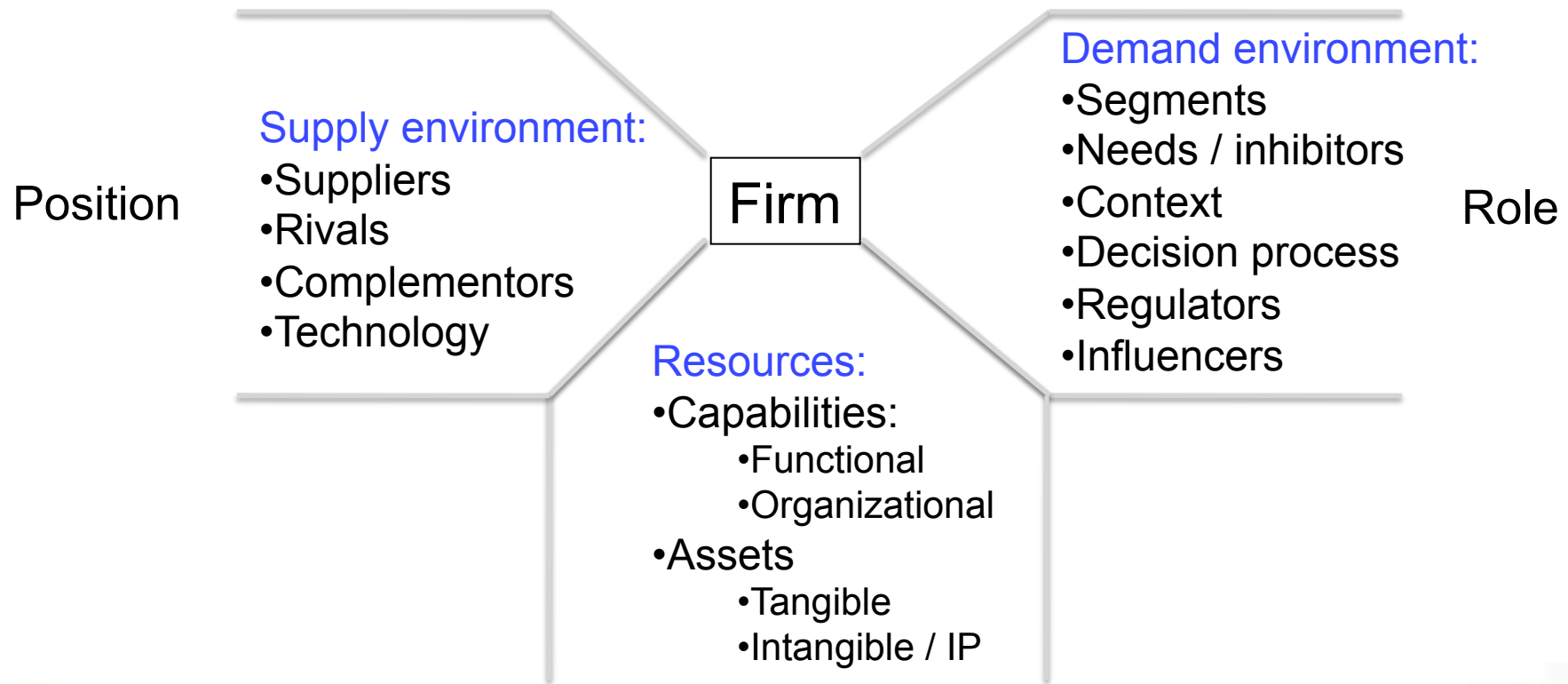
Creating value

- Industry / market attractiveness
- Sustainable competitive advantage: differentiation / cost leadership

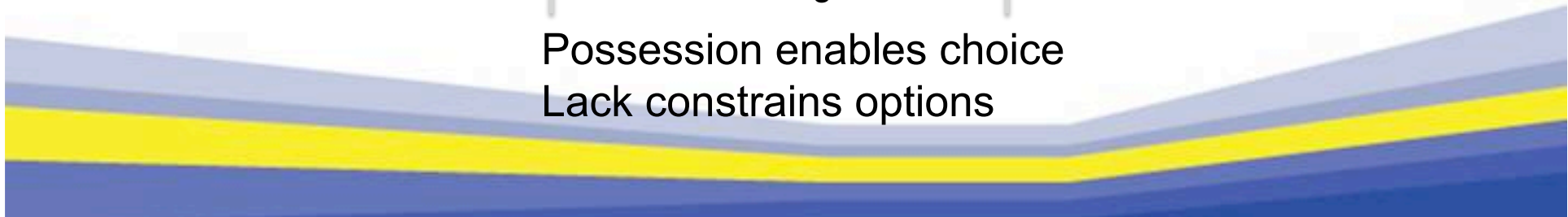
Strategy Framework

Static:
•How is it?

Dynamic:
•How is it changing?



Possession enables choice
Lack constrains options



Strategy in a New Venture

- Similar but different
- More and less freedom

Compared to corporate strategy



Strategy

1. Target customers

- Who are the candidates?
- How do you choose?

2. Business model

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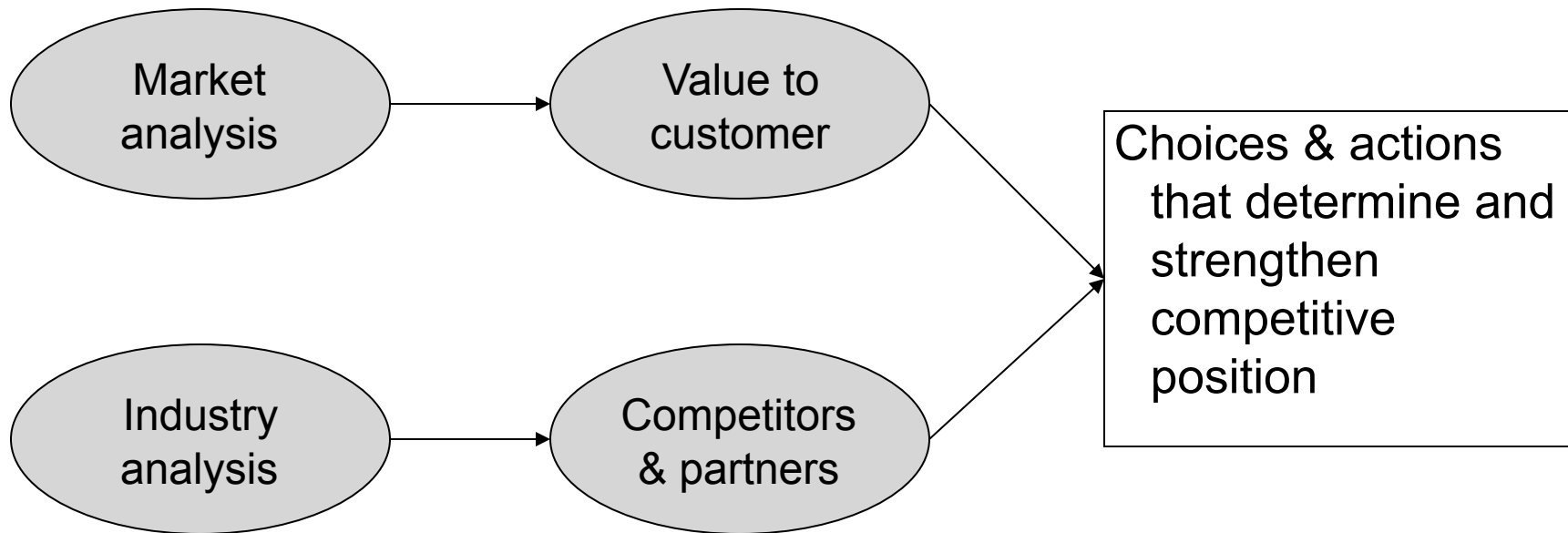
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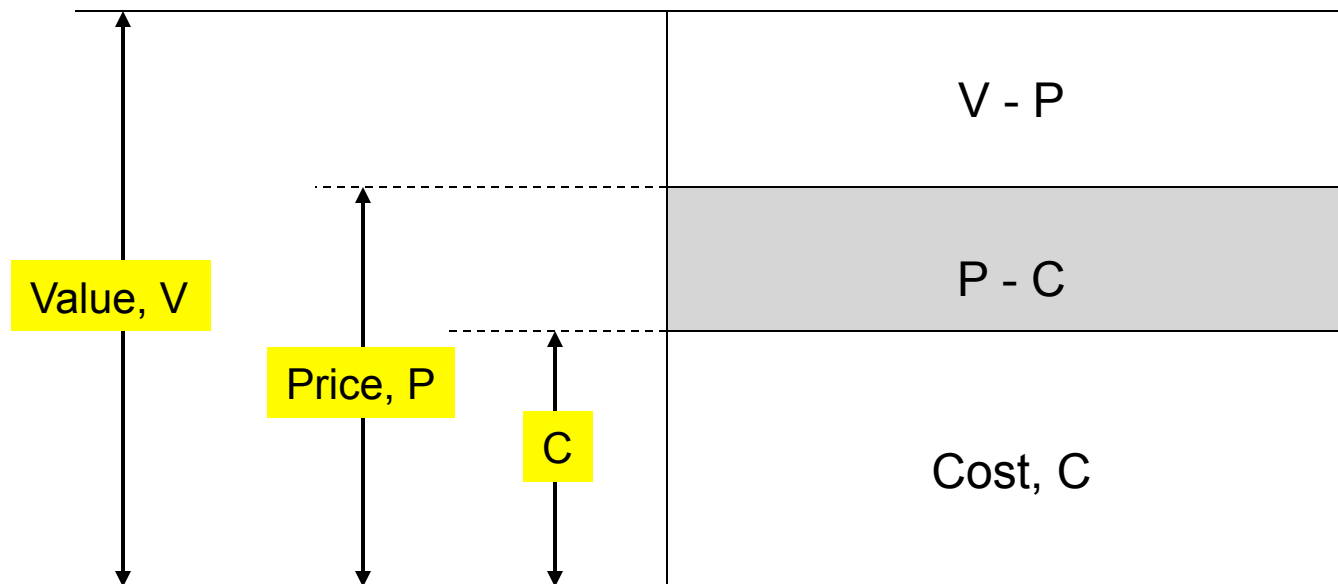
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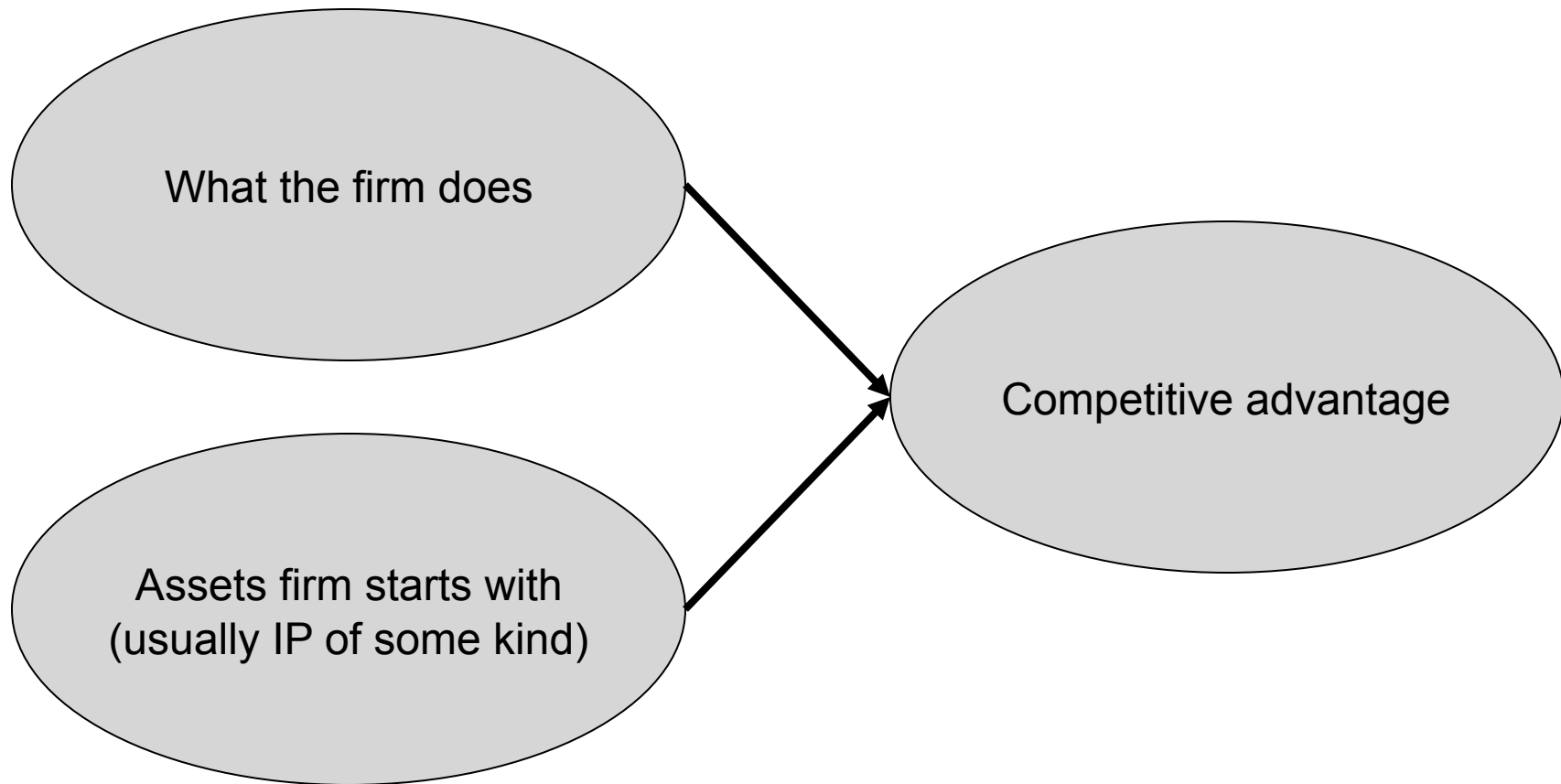
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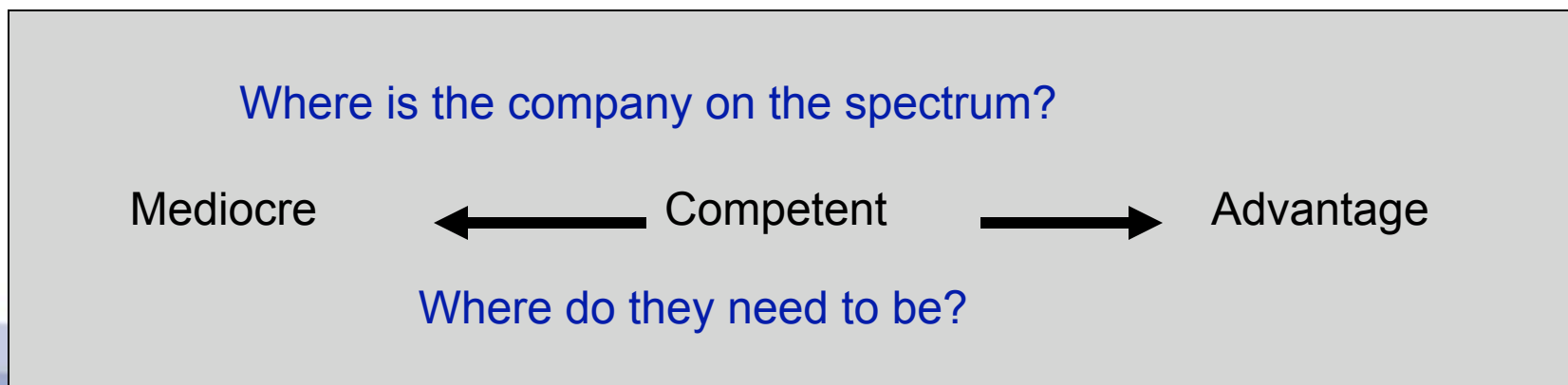
Sources of Competitive Advantage



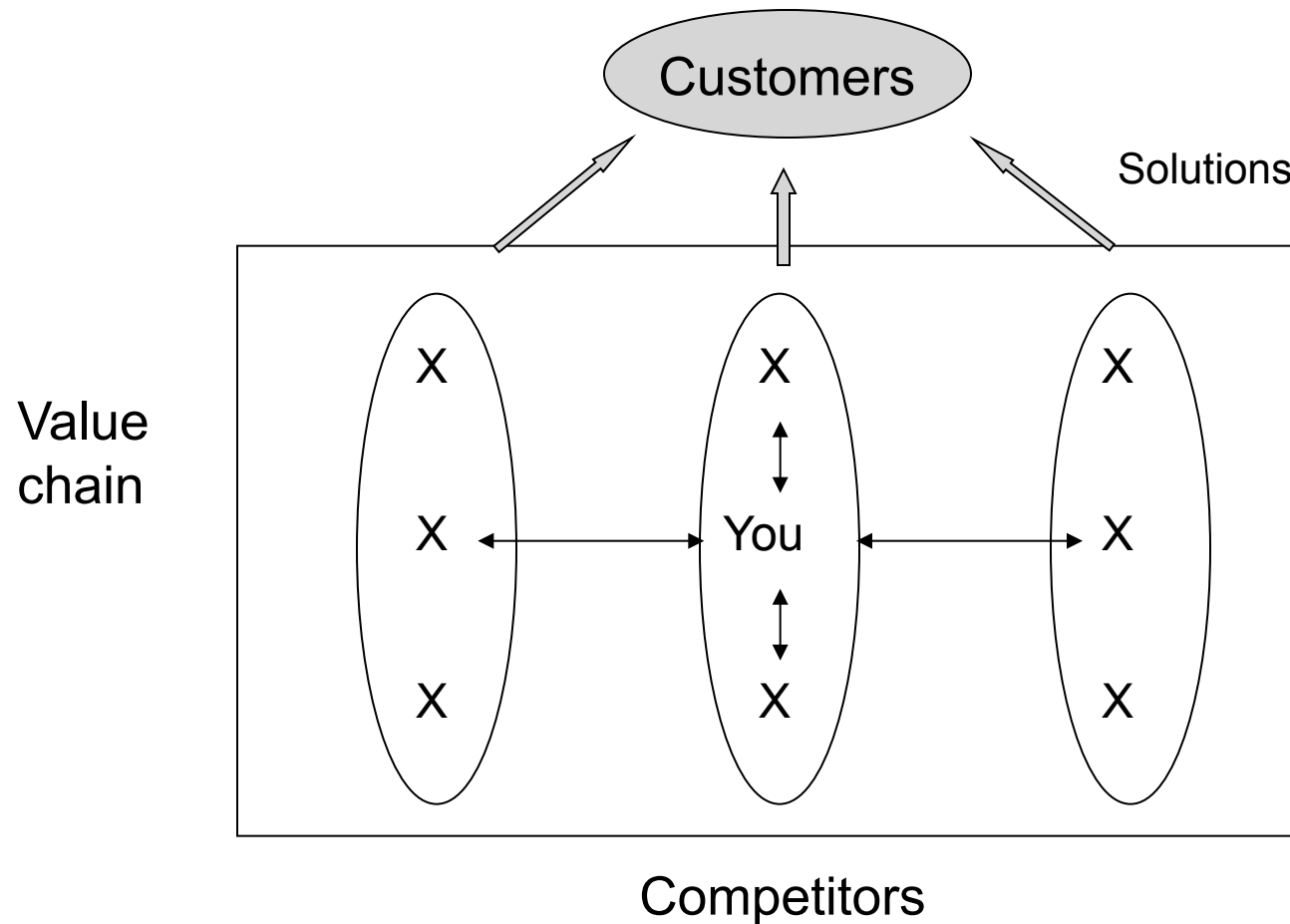
Competencies

Firms do many things

- Design / develop
- Manufacture
- Market
- Sell
- Service
- Hire
- Innovate
- Strategize
- Plan
- Respond to changes



Position & Role



Position

Role in the value chain:

- How much and what part of the solution will you provide?
 - Core competencies
 - Business relationships

Position versus competitors:

- How are you uniquely identified?
- What is defensible?
 - Core competencies
 - Messaging
 - Plans

How to Analyze Industry Players

RPV Analysis

Resources:

- People
- Equipment
- Technologies
- Cash
- Product designs
- Information
- Relationships

Processes:

- Patterns of
 - Interaction
 - Coordination
 - Decision making

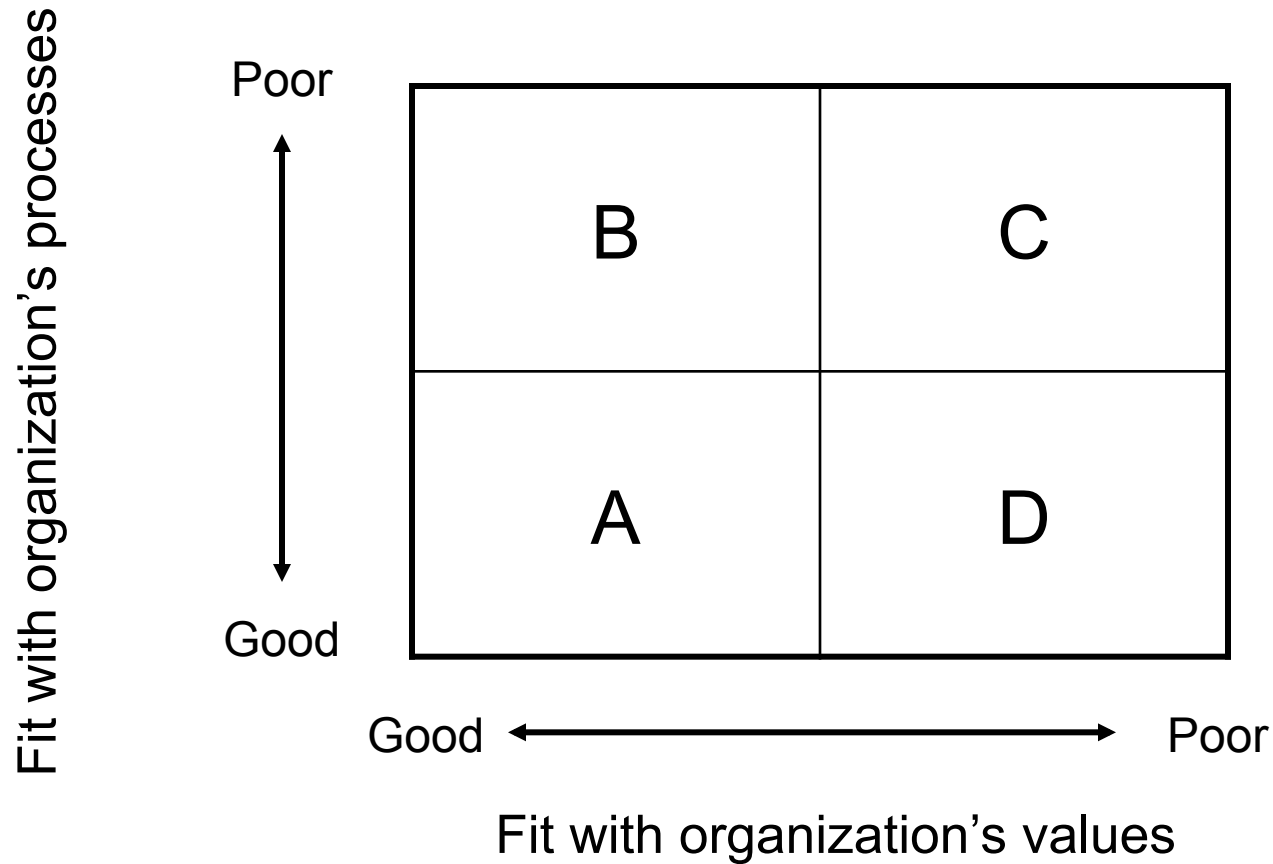
Values:

- Standards by which employees set priorities

Key Values

1. Acceptable gross margin
 - E.g., Toyota, Digital
2. Size of opportunity that warrants investment
 - E.g., Pharma
3. Core customers
 - E.g., Cisco
4. Position and strategy

Coping with Change



Market Structure

Customer

- attributes
- processes

Industry

- players
- products & services

- Customer segmentation
 - Target customers
- Position:
 - Uniqueness in industry
- Product segmentation
 - Solution definition

Ideally

- You can define
 - A unique product category and
 - A specific customer segment
- Which constitute a high growth market and
- For which your particular assets and competencies are uniquely suited.

- Your strategy becomes to dominate this market.
- Your plans aim to strengthen your position.



FINANCIAL ANALYSIS



Financial Analysis for a Start-up

Income Statement

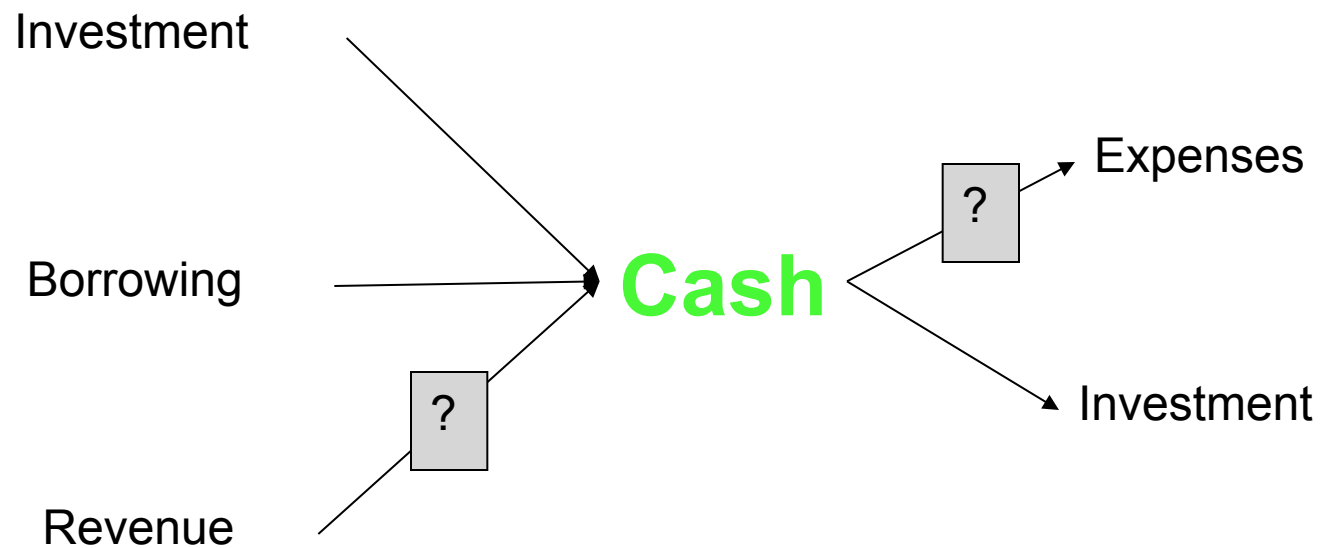
Revenue
- COGS

Gross profit

Sales & marketing
Research & development
General & administrative

- Expenses
Net profit

Cash is King



Balance Sheet

Assets:

Current

Cash

Receivables

Inventory

Property & equipment

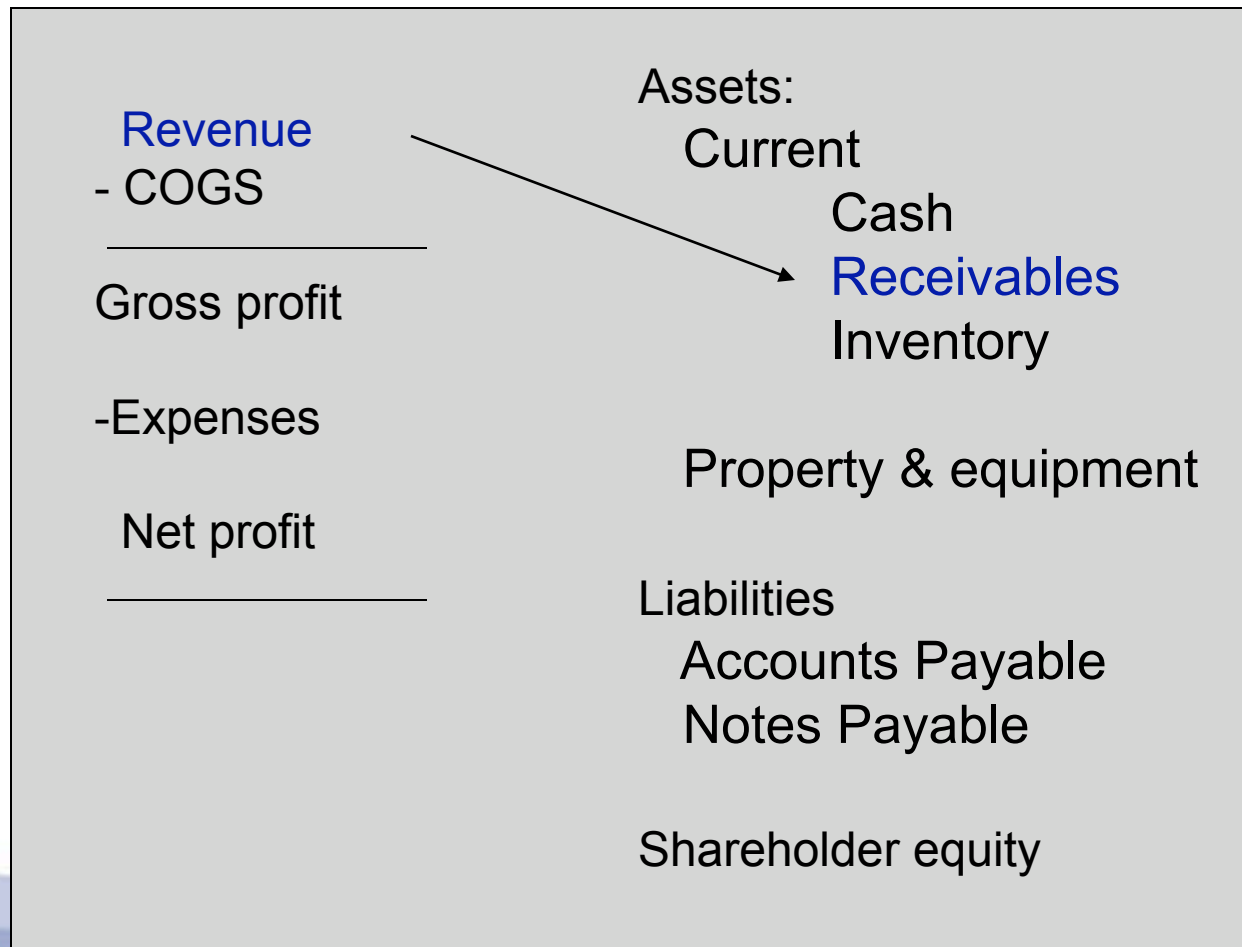
Liabilities

Accounts Payable

Notes Payable

Shareholder equity

Revenue Considerations



Issues:

1. Value to the customer
2. First stop: receivables, then cash
3. Timing of recognition

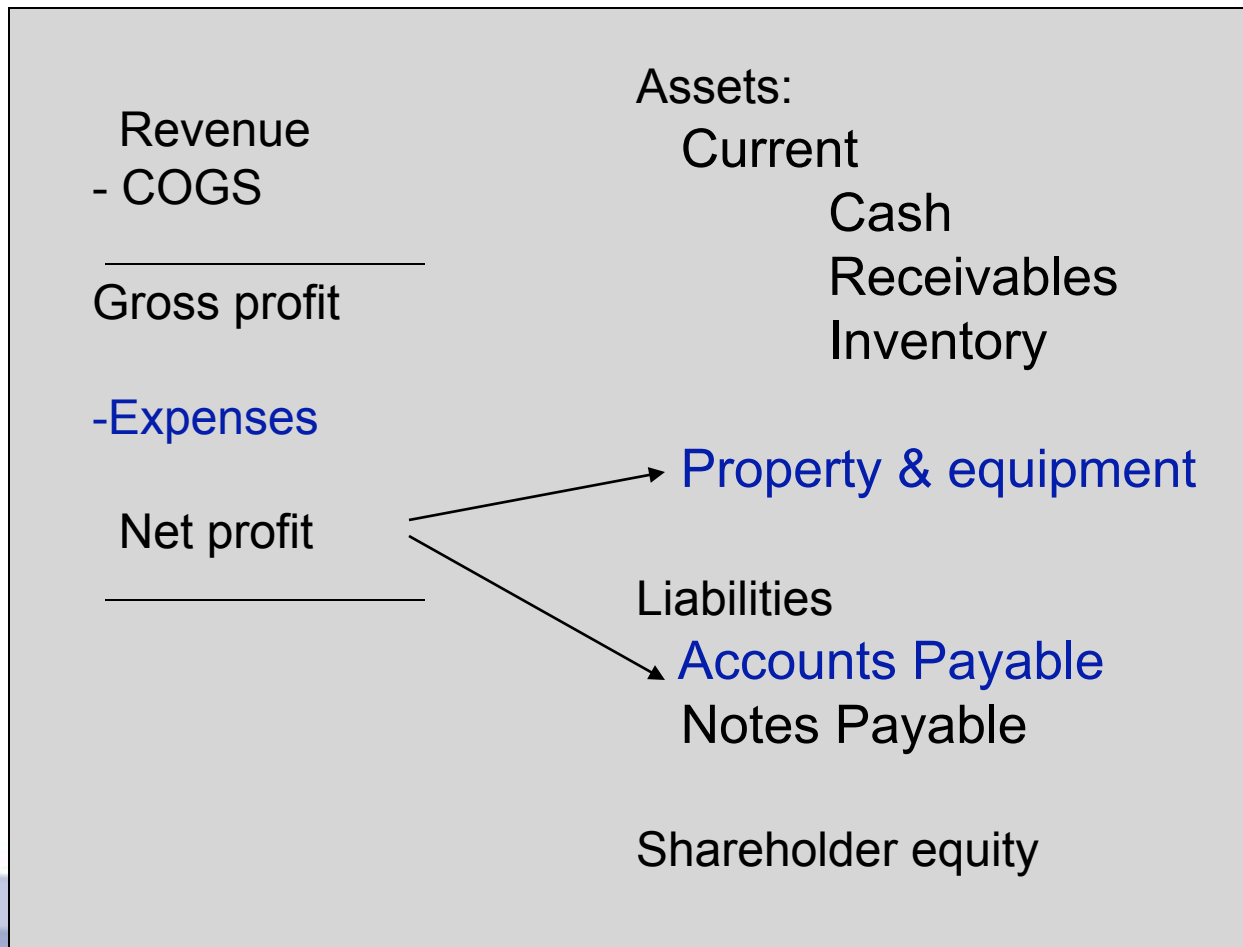
Cost of Goods

Revenue	Assets:
- COGS	Current
<hr/>	Cash
Gross profit	Receivables
	Inventory
-Expenses	Property & equipment
Net profit	Liabilities
<hr/>	Accounts Payable
	Notes Payable
	Shareholder equity

Issues:

1. Fixed & variable
2. Outsource?
3. Build to plan?
4. Financing of assets

Expenses



Issues:

1. Internal staffing vs. outsourcing
2. Make / buy
3. Cash vs. equity compensation

SALES FORECAST



What is a Forecast?

Projection of future revenue

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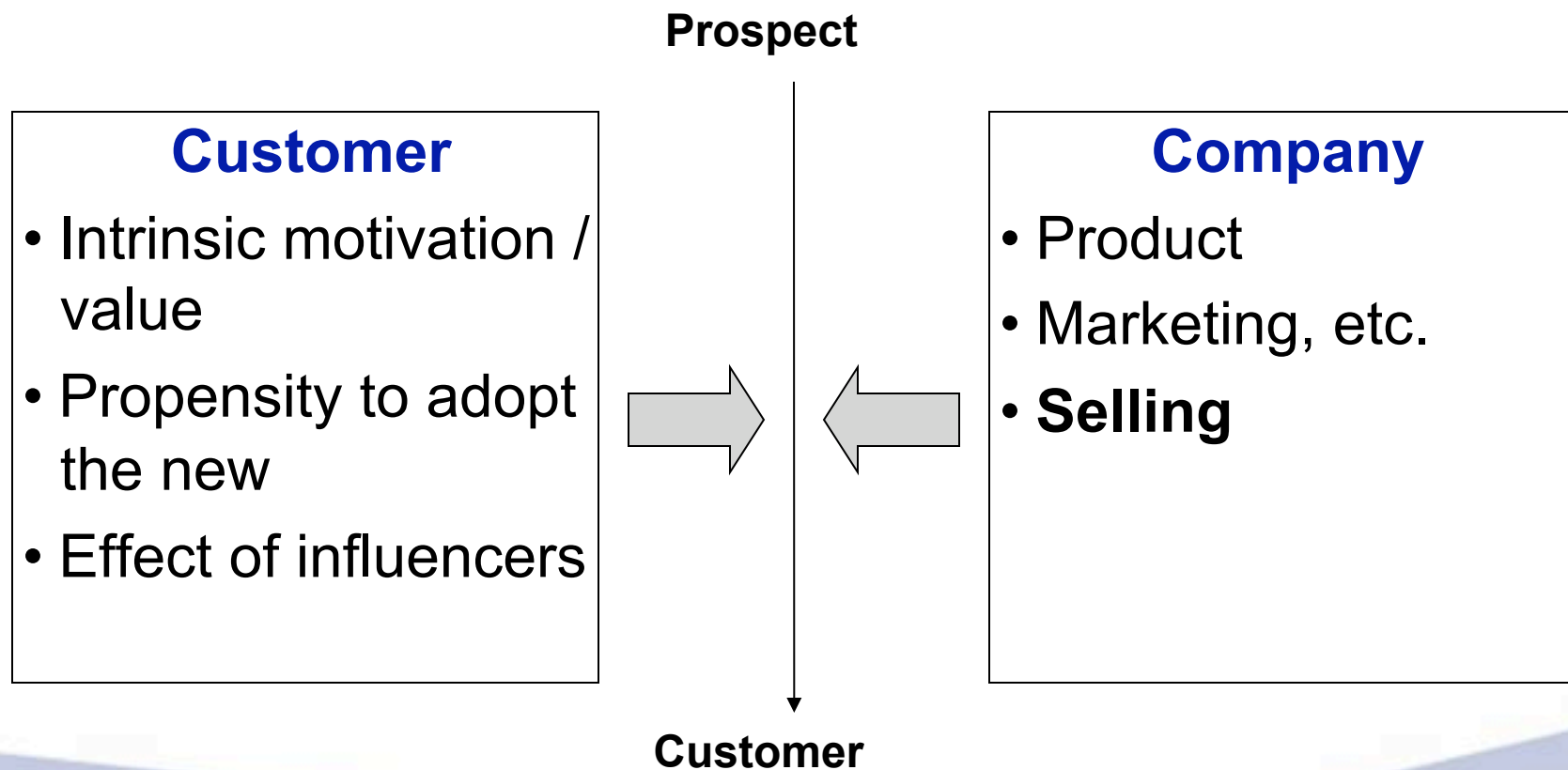
The Basic Questions

1. How many prospects?
 - Changes over time
2. What is the probability of conversion?
3. How long does the conversion take?
4. What is the average revenue per customer?

What Is a Prospect?

- A prospect (or 'lead') is a customer who fits a profile that you have created.
- Your business may have different profiles, so different classes of prospects.

What Determines Probability?



Length of Time

- This is primarily determined by the customer's
 - Buying process / cycle
 - Degree of urgency / strategic alignment
- (The length of time will be influenced by your selling effort.)
- In the case of a corporate customer, the decision process involves a set of discrete steps.

Average Revenue

- Easiest of many hard things to estimate, but still not easy
- If not a single discrete decision,
 - Value
 - Pace of adoption
 - Organizational issues

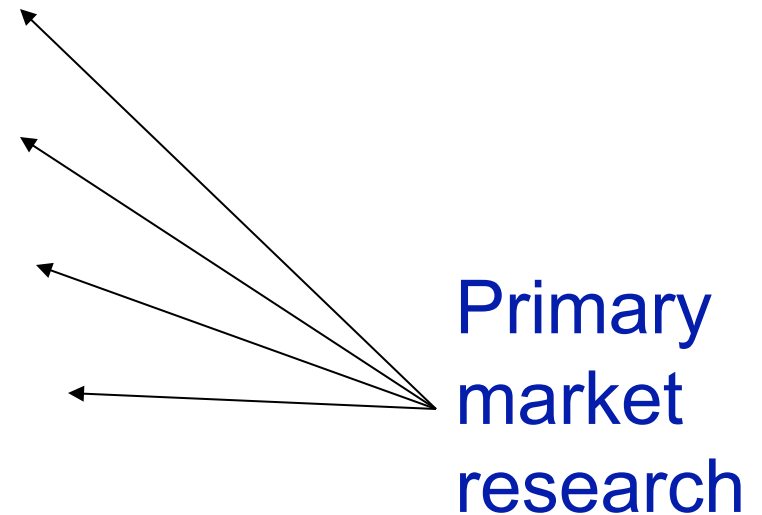
Role of Market Research

Revenue =

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X probability of success

X ave. revenue/customer



Selling Process

1. Establish a customer profile
2. Identify leads (as economically as possible)
3. Qualify leads (as economically as possible)
4. Move the potential customer through the process in a structured fashion

This is best managed by a professional.

A Model

Products & Marketing

“Possible” customers

Decision points

A

B

C

Deal

Probability & Duration

Selling effort



A Couple of Principles

- Build a model
- This drives your budget.
- **Measure and revise!!**

Agenda

- Discussion: building and operating plan
 - Budget
 - Revenue projections
 - COGS
 - Expenses
- Align

BUILDING A BUDGET



Building a Budget

Sales & marketing
Research & development
General & administrative

$$\begin{array}{r} \text{Revenue} \\ - \text{Cost of goods sold} \\ \hline \text{Gross margin} \\ \\ - \text{Operating expense} \\ \hline \text{Net profit} \end{array}$$

- Build a model that captures everything
- The plan must close

Revenue

- Detailed plan
- Bottom up
 - Number of customers
 - Groupings / segments (e.g. quintiles or deciles)
 - Rate of use
 - Expected conversion rate
 - Good comparables?
 - Reconcile with projected sales activity
- Accounting issues - timing of revenue recognition, reserves



COGS

Variable:

- Material, including associated expenses
- Direct labor
 - Wages + training
- Shipping & other direct costs

Fixed:

- Overhead
 - Facilities, management
- Capital
 - Product manufacturing equipment & systems



People

- By month
- Personnel – timing and salary
 - Benefits (18% - 20%)
 - Training
 - Travel, etc.
 - Computer, office, etc.

Marketing Program Expenses

- Market research
- Creative
- Production
- Advertising
- Events / shows
- Speakers
- Consultants
- PR

Other

- Facilities
- Supplies
- Licenses
- Capital
 - Systems
 - Software
 - Furniture, etc.
- Regulatory?

Key Principles

- The basis of the plan is what you have to accomplish.
- The elements of the plan should tie together and be in support of a strategy.
- The basis of the plan should be your best estimates and include issues of:
 - Time to hire
 - Learning curve, start up issues, etc.
- Forecasts should be based on best available evidence.
- You should continually monitor and make adjustments as necessary.



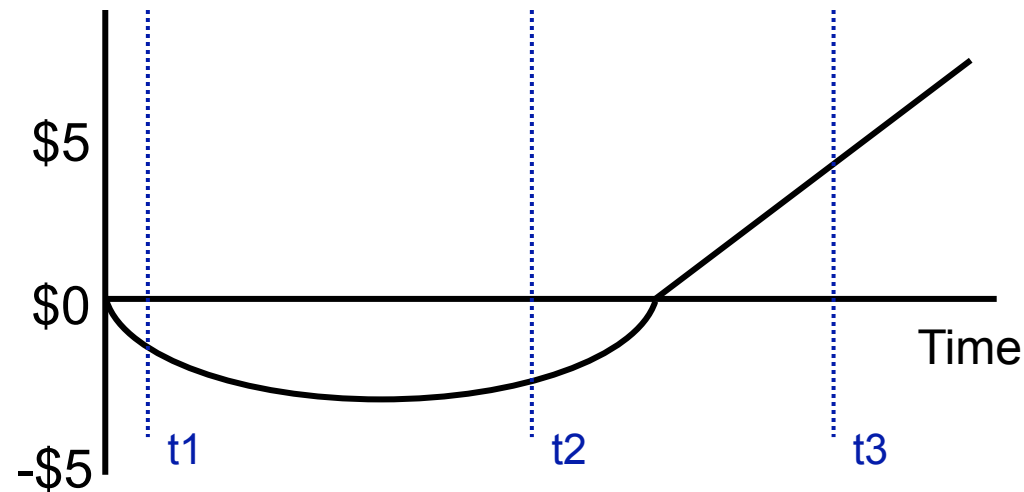
Understanding the Market

- What are you trying to achieve?
- Complete and accurate financial projections
 - How many customers?
 - How much will they pay you?
 - For exactly what product?
 - How will you convince them to buy?

FINANCING



How much Money Do You Need?



- Should you raise the total amount of cash needed (according to projections) in a single investment?

Usually not

- How much is the business worth?
- What increases the value of the company?

Reduction of uncertainty

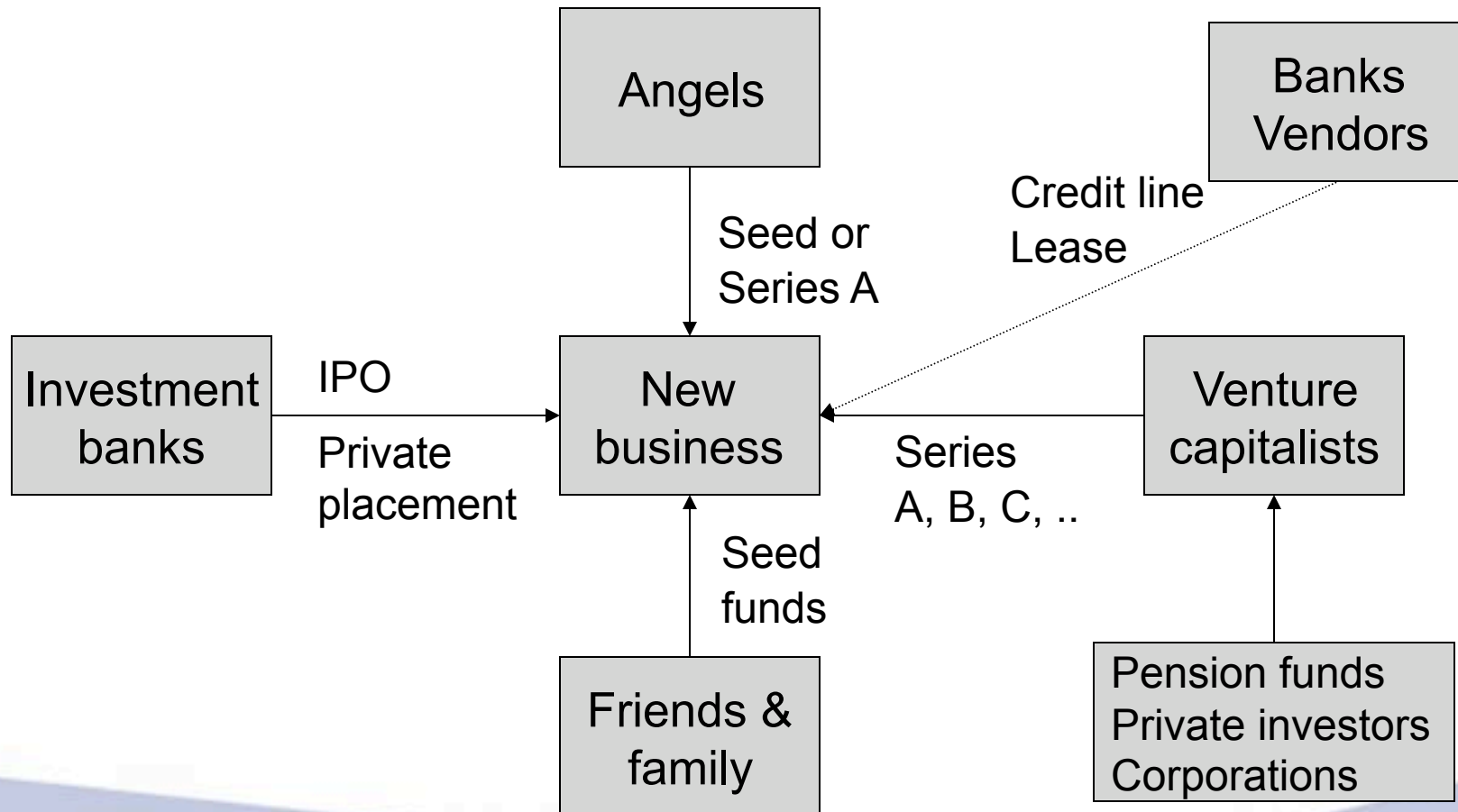
How Much Money Should You Raise or Invest?

1. Establish a plan (which you will end up revising):
 - Operating plan for functional areas
 - Revenue projections
2. Determine a milestone that produces a step up in valuation - what will remove the (a?) main source of uncertainty?
 - (Keep in mind that investment may be tranced)
3. Determine cash needs
 - Including asset based financing to reduce requirement for equity based financing

Financing Guidelines

- Enough to get you to the next milestone that would cause step up in valuation (+ small cushion, if possible)
- Possible milestones:
 - Team & business plan
 - Technology validation / IP
 - Product
 - Initial customer acceptance
 - Broader acceptance

Sources of Financing



Source: Dorf & Byers

Comparison of Financing

	Founders / Friends & family	Angels	Venture capitalists
Advantages	<ul style="list-style-type: none"> •Control •Upside 	<ul style="list-style-type: none"> •Understanding of the process •Not personal •Expertise •Contacts 	<ul style="list-style-type: none"> •Capital •Validation •Contacts •Expertise
Disadvantages	<ul style="list-style-type: none"> •Risk •No help 	<ul style="list-style-type: none"> •Attention required, interference •Impediment to future financing 	<ul style="list-style-type: none"> •Mismatch of objectives •Loss of control •Care & feeding

From Whom Should You Seek Financing?



- Find investors whose objectives are aligned with your own
- Try to find investors who can fill some of the company's needs (in addition to capital)
- Find people you can work with

What Terms Should You Expect?

- Control issues
 - Amount of investment
 - Timing of funds (& any conditions)
 - Valuation
 - Liquidation preference, dividends, conversion, anti-dilution,
...
- Control issues
 - Board seat
 - Management changes
 - Strategic issues

VC Considerations

- VC expected returns
 - ^ 50% / year
 - = 7.56X in 5 years
- “Dry powder” - VCs expect to make additional investments (pro rata)
- VC want downside protection:
 - Liquidation preference, conversion terms, anti-dilution, ...
 - Control: board, strategy, management, ability to block some transactions
- Comparable companies set expectations

