Starting a High-Tech Business

This presentation is published at eysu.org

2004

Jim Swanson
Mike Baird
contact info at firstonline.com or eysu.org

Rev. 3/15/2006 10:06:50 AM

About the instructors -Jim Swanson

- Past CEO, CFO Ramtek, Corp. – public co
- Past CEO Los Altos Technologies
- Partner, Los Altos Incubator firstonline.com
- SB Degree MIT, MBA & JD Stanford University
- Peace Corps
- Author: *Engineering Your Start-Up: A Guide for the High-Tech Entrepreneur* (Professional Pubs. Inc., 2nd Ed. 2003) eysu.org

About the instructors -Mike Baird

- Past V.P. Eng. Ask Jeeves, Inc. ask.com
  one of most successful Internet IPOs in history
- Past CTO Snap-on Inc. $2 billion co.
- Partner, Los Altos Incubator firstonline.com
- PhD Computer Science, MBA
- Author: *Engineering Your Start-Up: A Guide for the High-Tech Entrepreneur* (Professional Pubs. Inc., 1992, 2003); *Starting a High-Tech Company* (IEEE Press, 1995) eysu.org

ENGINEERING YOUR START-UP

A Guide for the High-Tech Entrepreneur

Second Edition

JAMES A. SWANSON
MICHAEL L. BAIRD

Professional Publications, Inc. • Belmont, CA

Session I
Basic Entrepreneurship

- Basics for business success for the entrepreneurial engineer
- Writing a compelling business plan
- Getting funded, Q & A

Session II
Advanced Entrepreneurship

- Capitalizing your start-up
- Legal structures
- Stock (restricted, common, preferred…)
- Stock Options (ISO's, NQSO's) , Other wealth building vehicles
- Stock & Option Grants, vesting, §83(b) elections…
- Valuation, Q & A

Today…

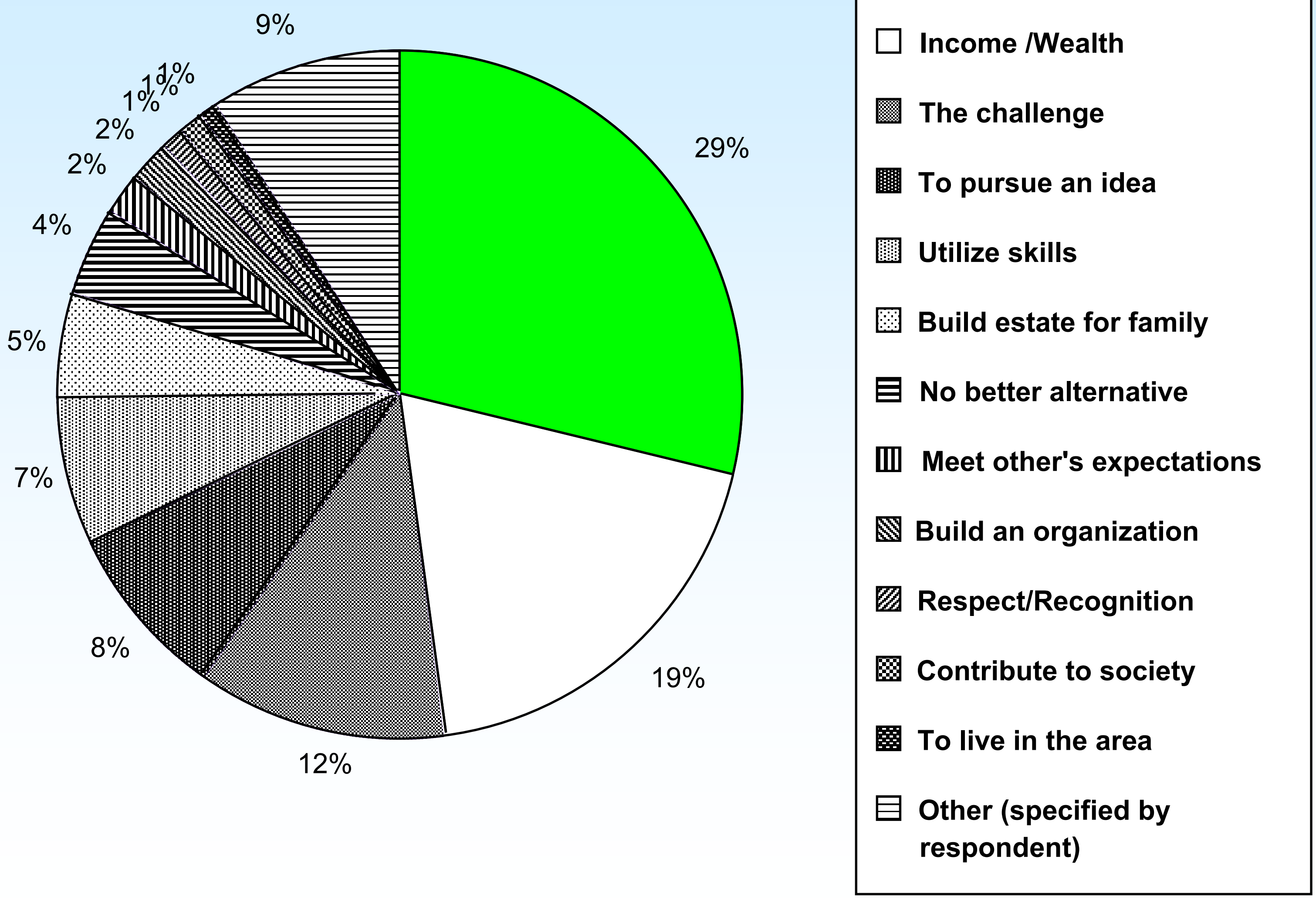
- Is a start-up for you? Are you a "hunter" or a "farmer?"
- Internalizing the *five fundamental success factors* for launching and funding a successful technology-fueled start-up.
- How to identify killer products or services for exploiting growing lucrative protected niche markets.

Your Needs: Who Are You?

- Employed, thinking of starting own business?
- Own a (small) business?
- Looked / looking for / raised funds?
- Written a business plan? funded? rejected?

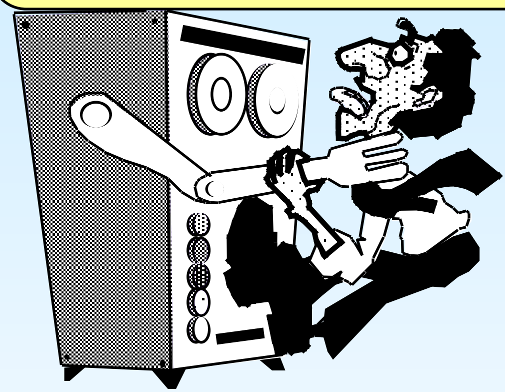
5 Audience Questions?

Reasons Cited for Starting One's Own Business



From Where to Where?

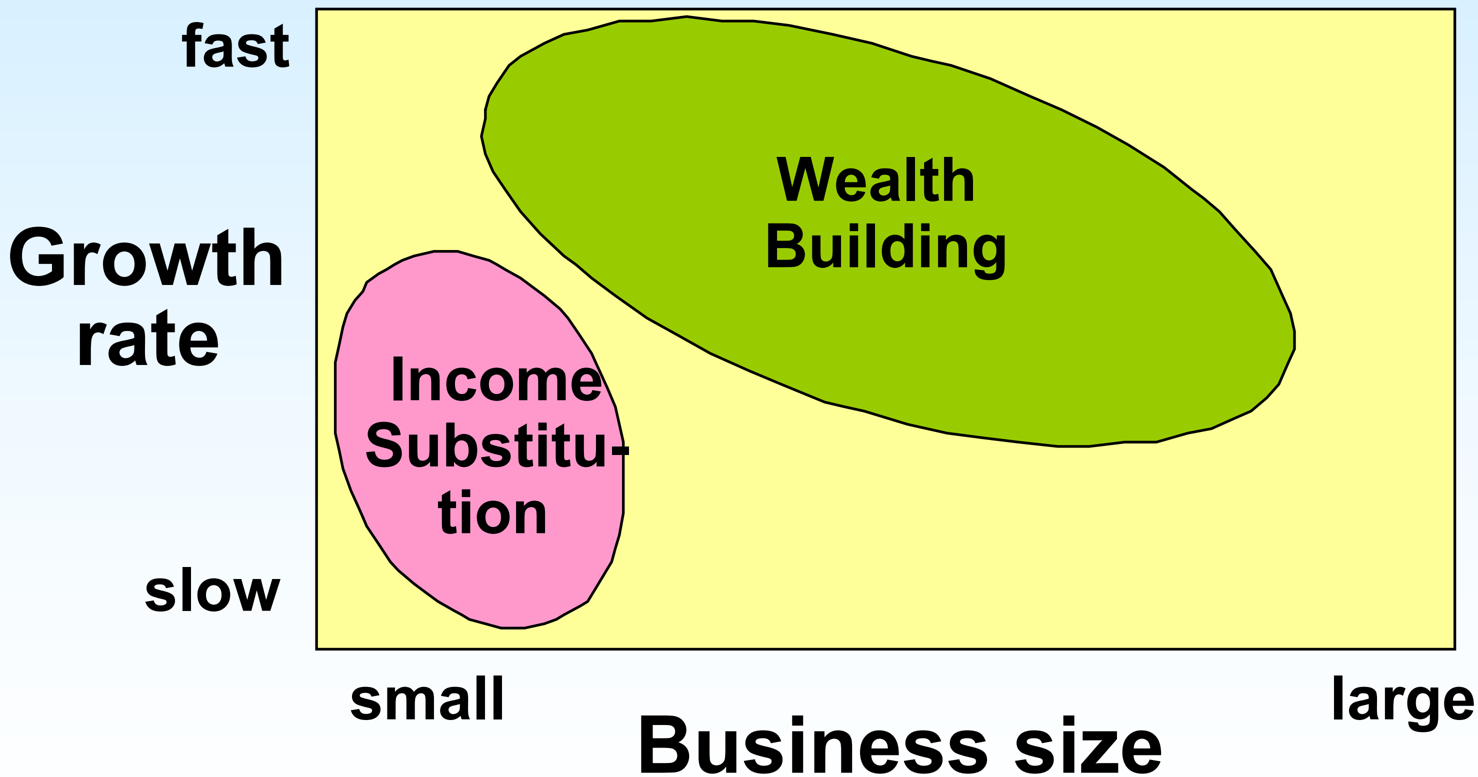
Fortune 500
engineering manager



Entrepreneur in a
Single product start-up

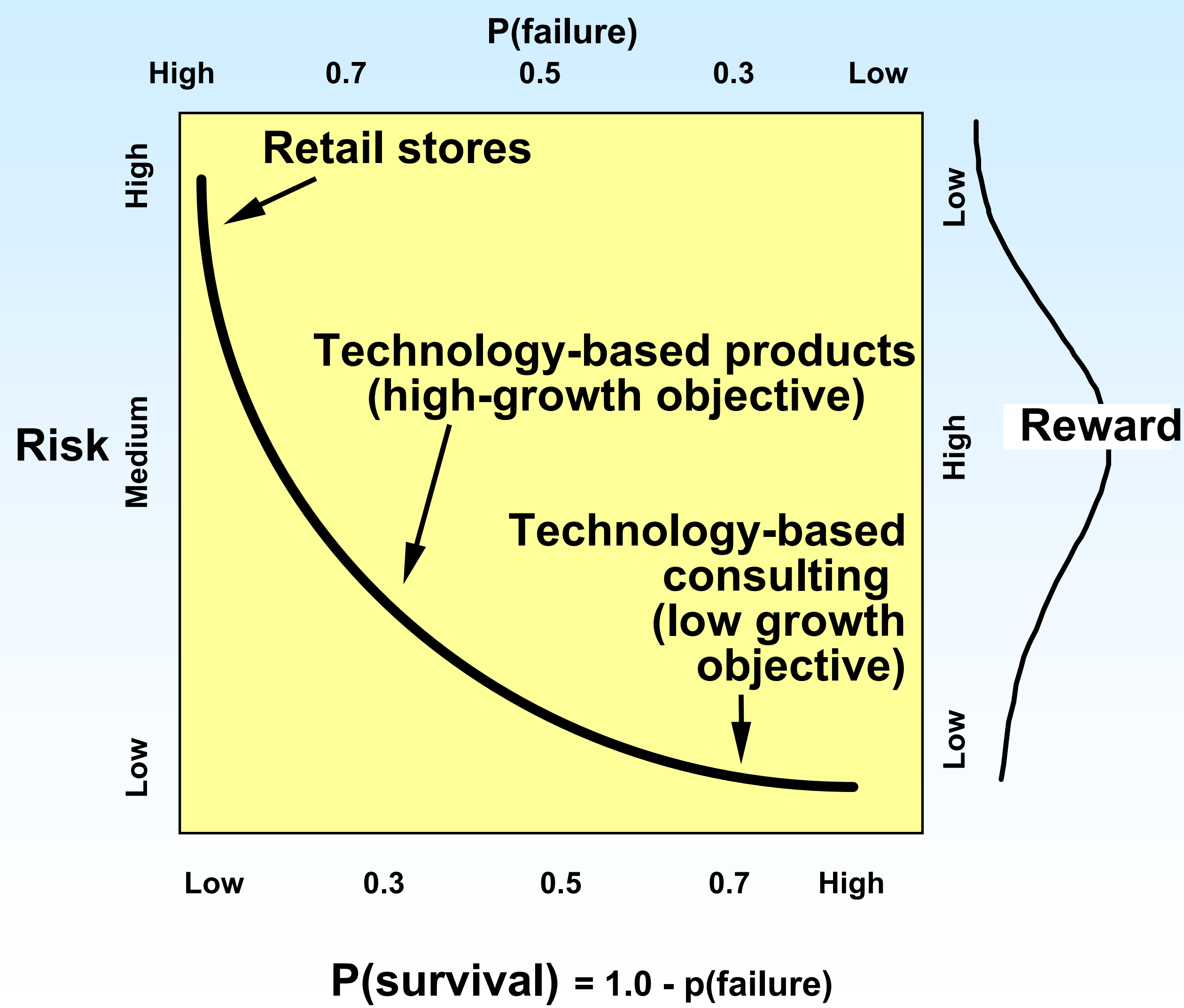
	Sales (millions)	Employees
High-growth team-driven business	> $20	> 50
Income substitution business	$1 – $20	5 – 50
Lifestyle consultancy	$0 – $1	0 – 4

The Income-Substitution Wealth-Creation Spectrum

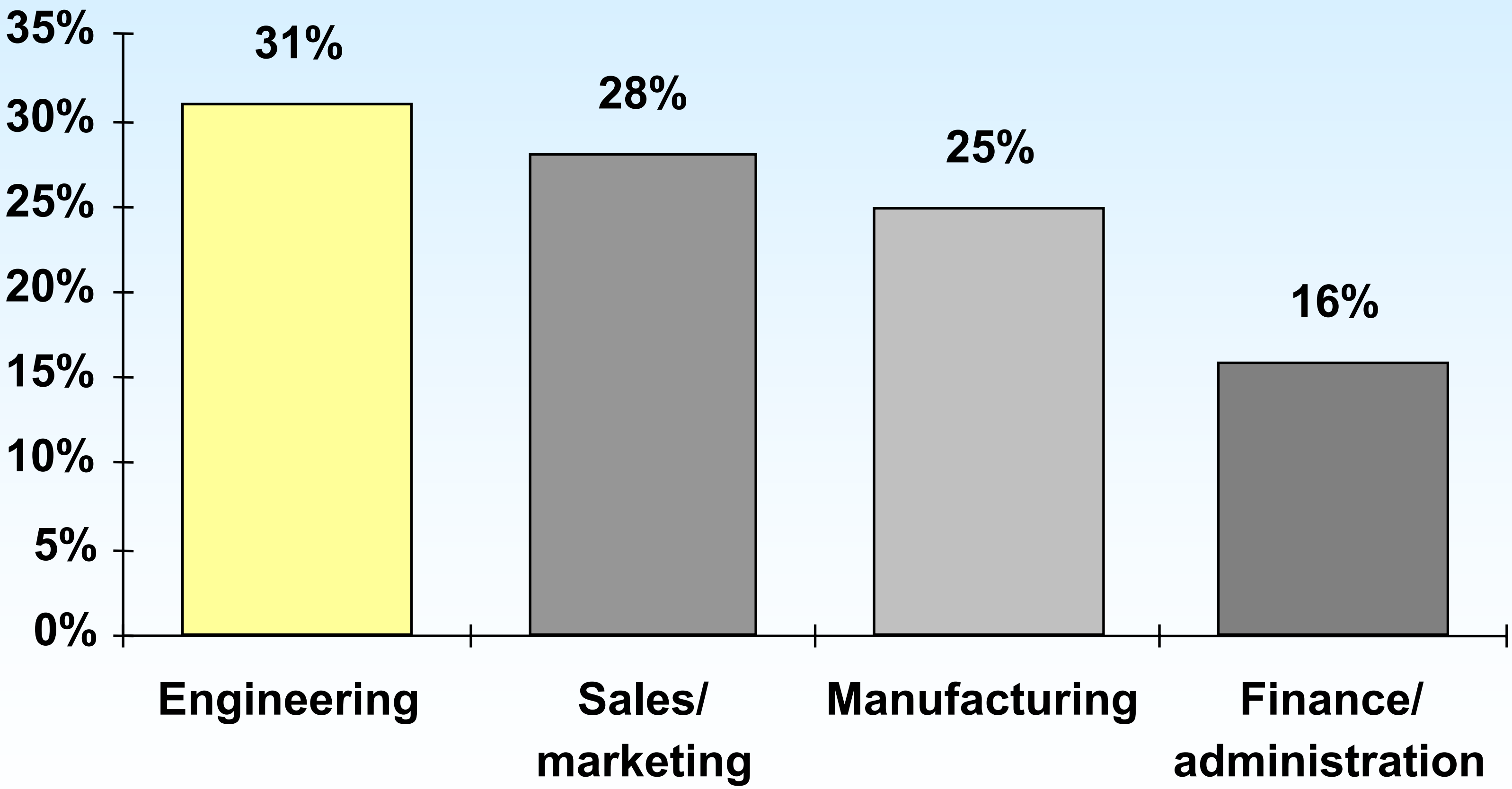


Business Size, Risk, and Reward

P(Survival) is inversely proportional to risk



Effort Allocated by Founders During First Six Months



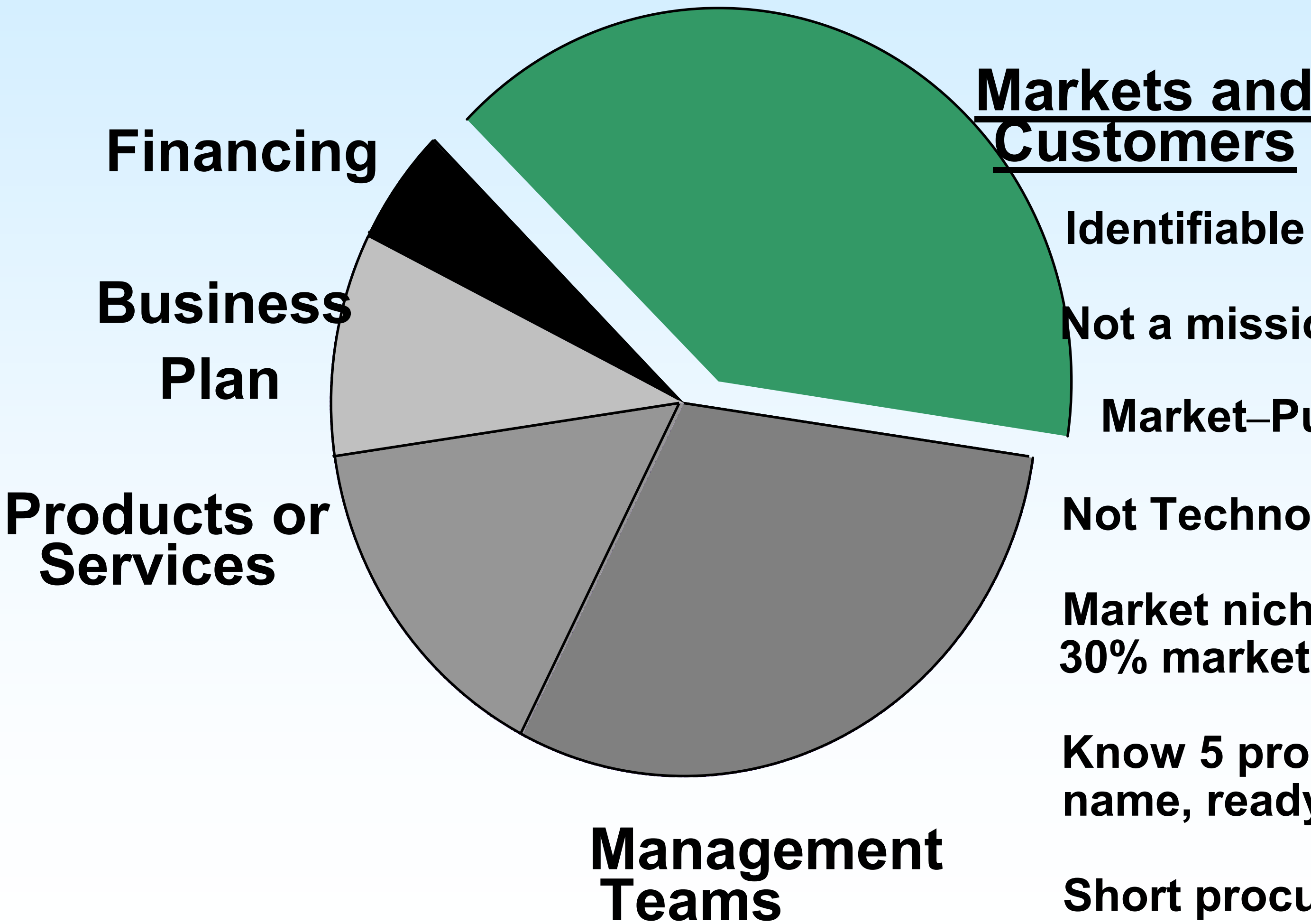
5 Basics for Success

Beyond "The Big Idea, the Passion, the Vision"… making it real… involves…

- Management
- Markets and Customers
- Proprietary Products, Technology, Services
- Attractive Financing and ROI
- Compelling Business Plan

Do You Need a Radical New Idea?

First of Five Elements of Start-Up Success



Identifiable customers.

Not a missionary sale.

Market–Pull.

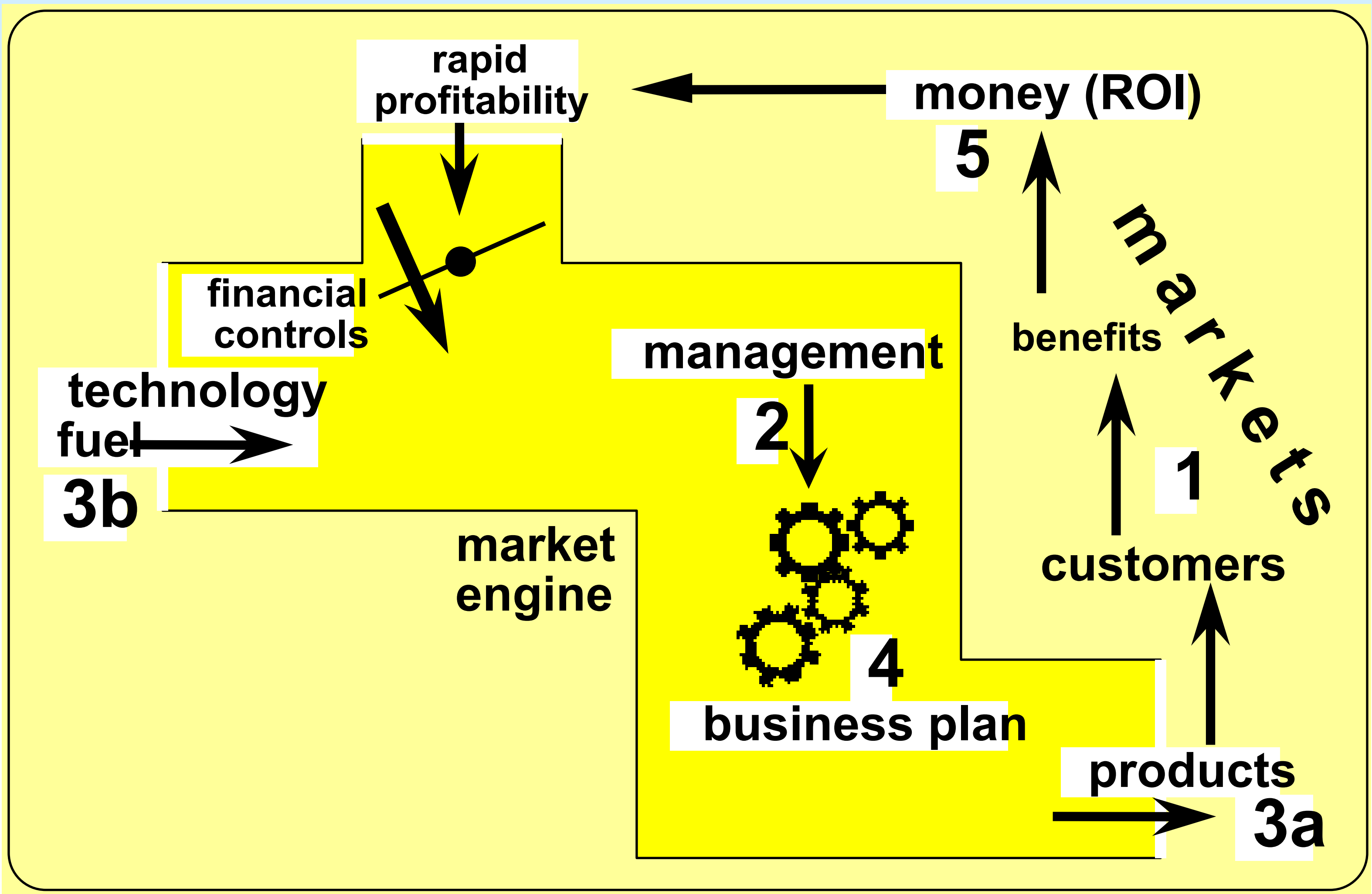
Not Technology–push.

Market niche with 15%–30% market share possible.

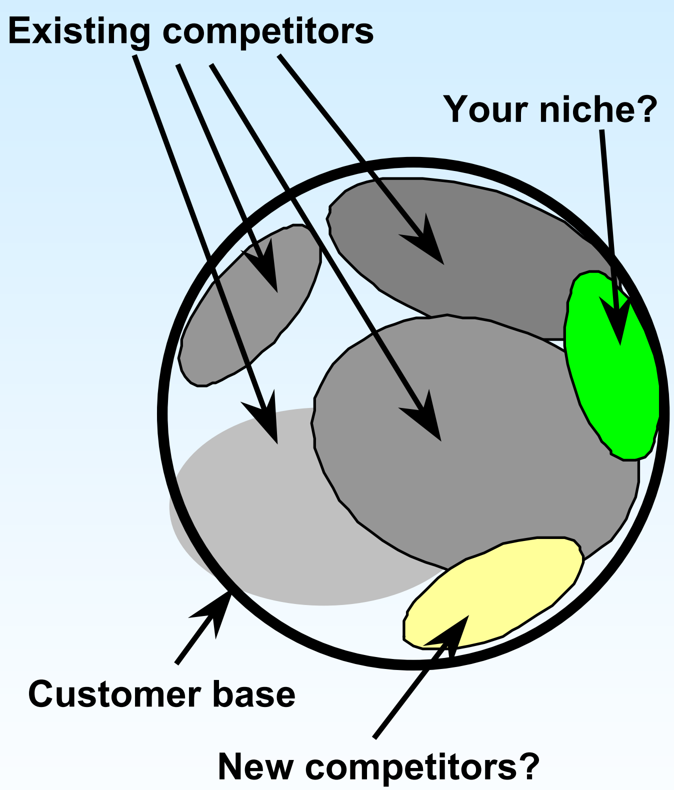
Know 5 prospects by name, ready to buy.

Short procurement cycle.

Market- and Customer- Driven Technology-Fueled Business Machine



Competitive Forces in Your Marketplace



Competitors:

- Who?
- Growing?
- How long in business?
- What sales volumes?
- How big?
- How many customers?
- Market share?
- Product niche?
- Similarities/dissimilarities?
- How will you compete with them?
  - product superiority?
  - price?
  - advertising?
  - innovation/technology?
- How is your business better? What is your "distinctive competence?"
  - price?
  - management?
  - product?
  - service, delivery?
  - operations?
- Barriers to entry for new competitors?

Marketing Strategy

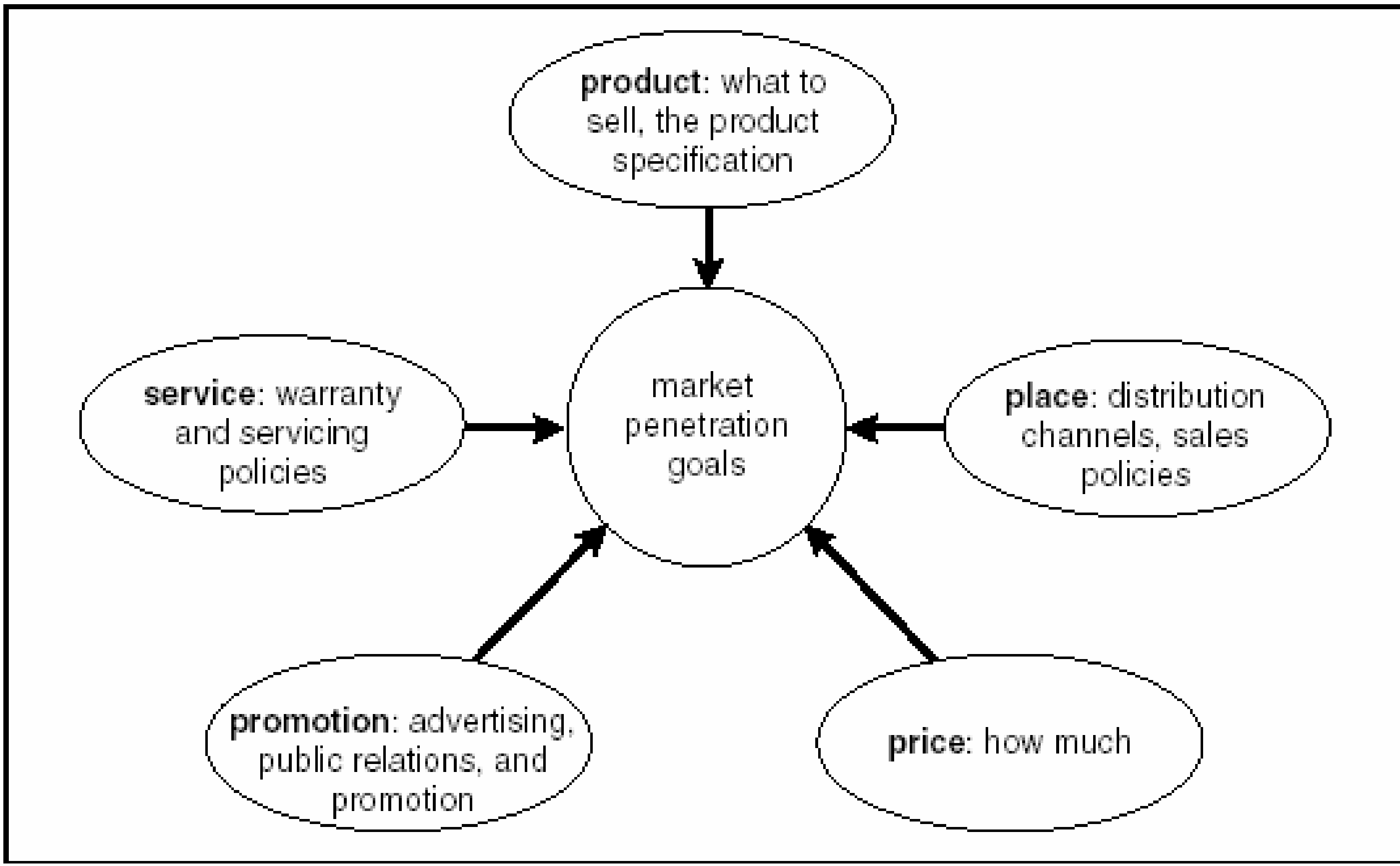
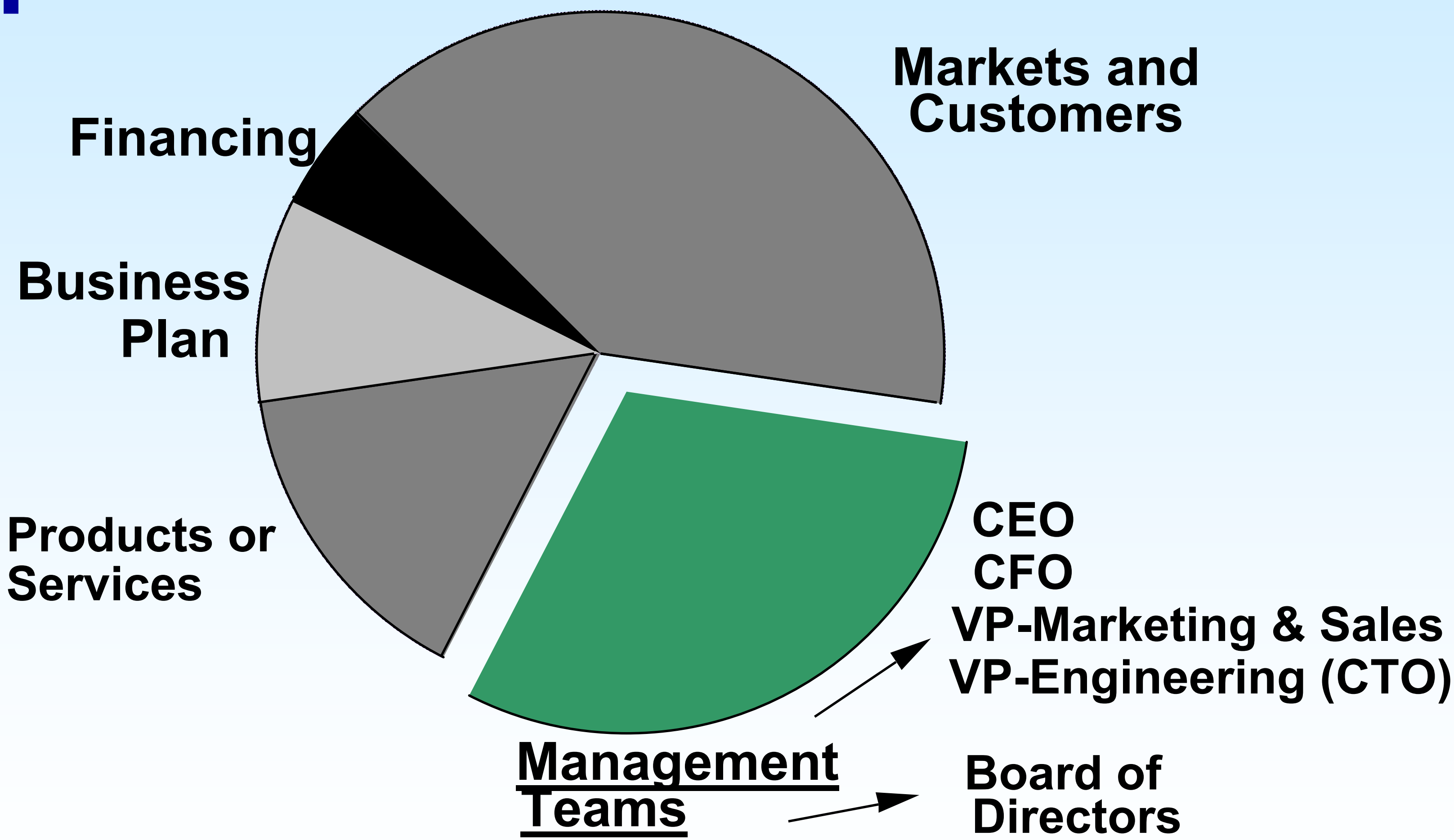


Figure 8.2 Marketing Strategy—the Four Ps Plus an S

Markets versus Marketing

- Gillette introduces The Sensor™ razor for men
  - Retail price: $3.75 with three blades
  - R&D costs: $200 million
  - First-year advertising budget: $110 million
  - Estimated annual retail sales: $390 million
- Even if you could invent a superior razor blade, would you want to compete in this game?

Second of Five Elements of Start-Up Success



Management Completeness-Experience Grid

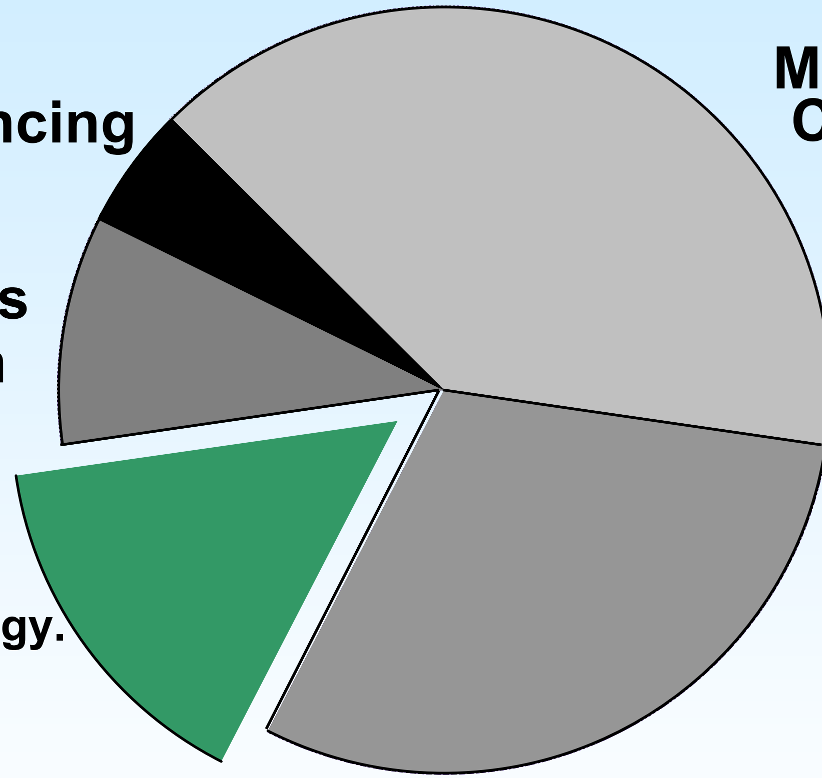
	Inexperienced (0)	Experienced (1)	Very experienced (2)
Complete team (2)	2	3	4
Partial team (1)	1	2	3
No team (0)	0	1	2

Team Size and Product Status in Business Plan Reception

Management status → Most desirable

Level 4. All members on board and experienced.	**4 + 1 =5**	**4 + 2 = 6**	**4 + 3 = 7**	**4 + 4 = 8**
Level 3. All members identified; some on board only after funding.	**3 + 1 = 4**	**3 + 2 = 5**	**3 + 3 = 6**	**3 + 4 = 7**
Level 2. Two founders; others not identified.	**2 + 1 = 3**	**2 + 2 = 4**	**2 + 3 = 5**	**2 + 4 = 6**
Level 1. Single entrepreneur.	**1 + 1 = 2**	**1 + 2 = 3**	**1 + 3 = 4**	**1 + 4 = 5**
Product status=>	Level 1. Idea only; market assumed.	Level 2. Prototype operable but not developed for production; market assumed.	Level 3. Product fully developed; few or no users; market assumed.	Level 4. Product fully developed; satisfied users; market established.

Third of Five Elements of Start-Up Success



Proprietary Technology.

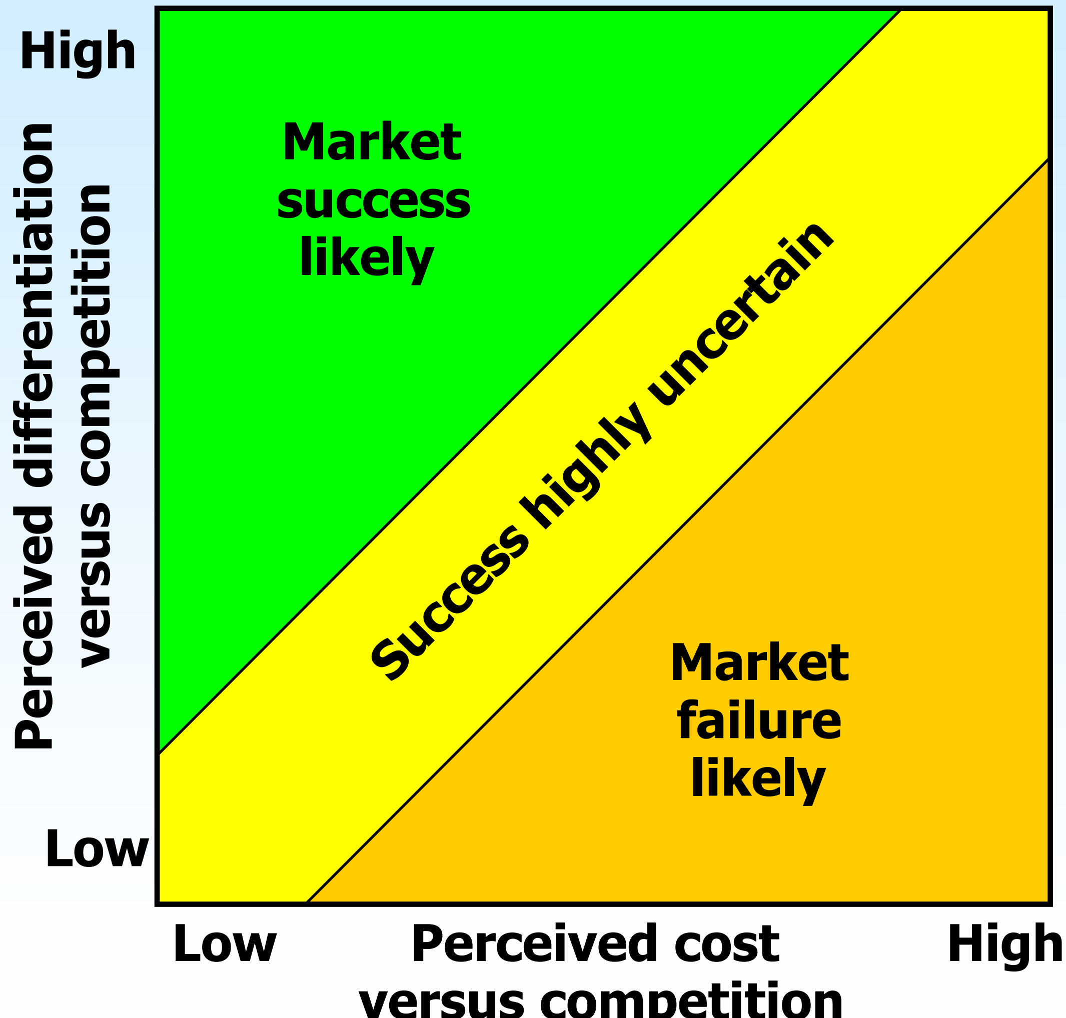
Product Family.

Easily understandable.

Easily Sold.

Short Development Time.

Cost versus Perceived Differentiation Model



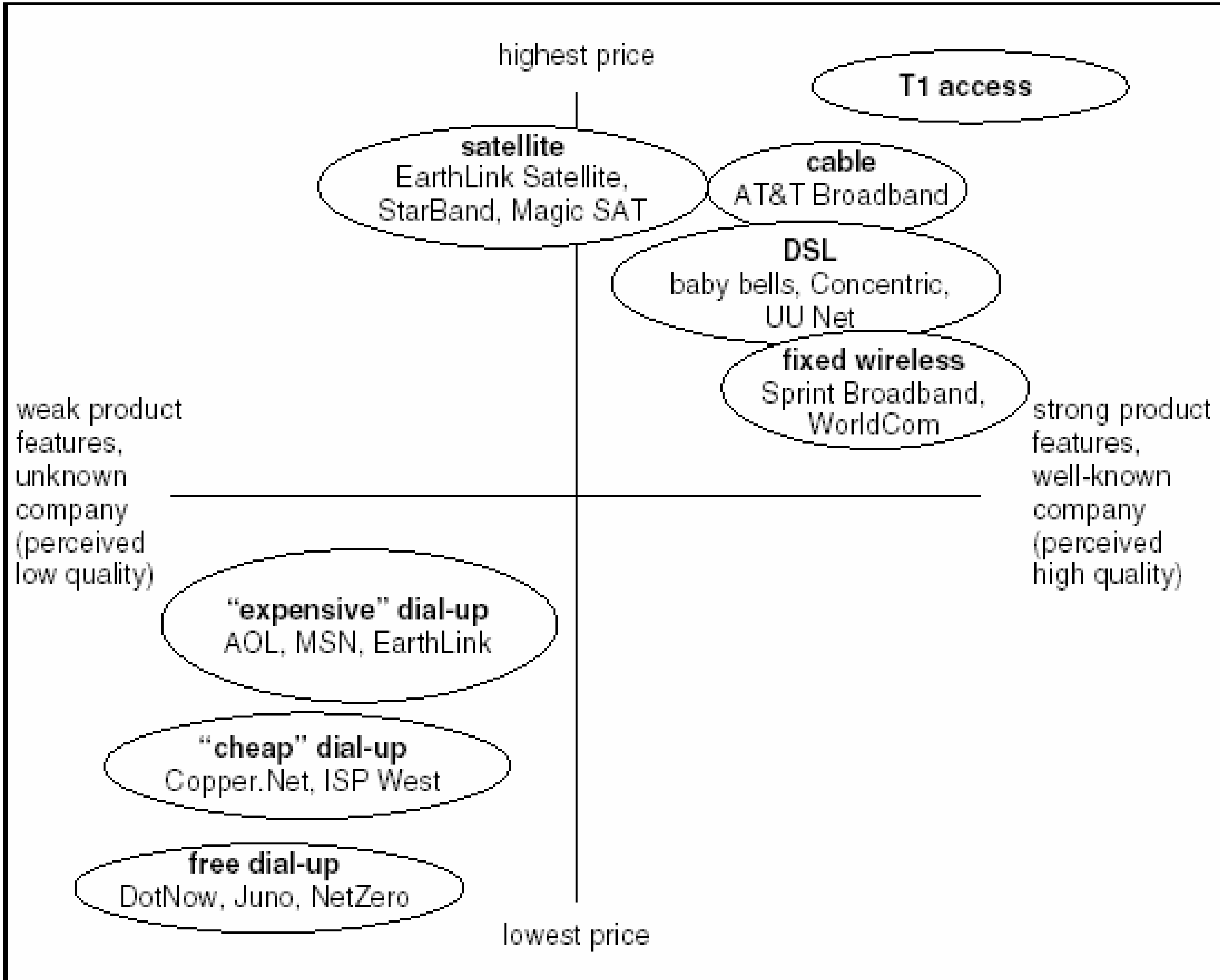
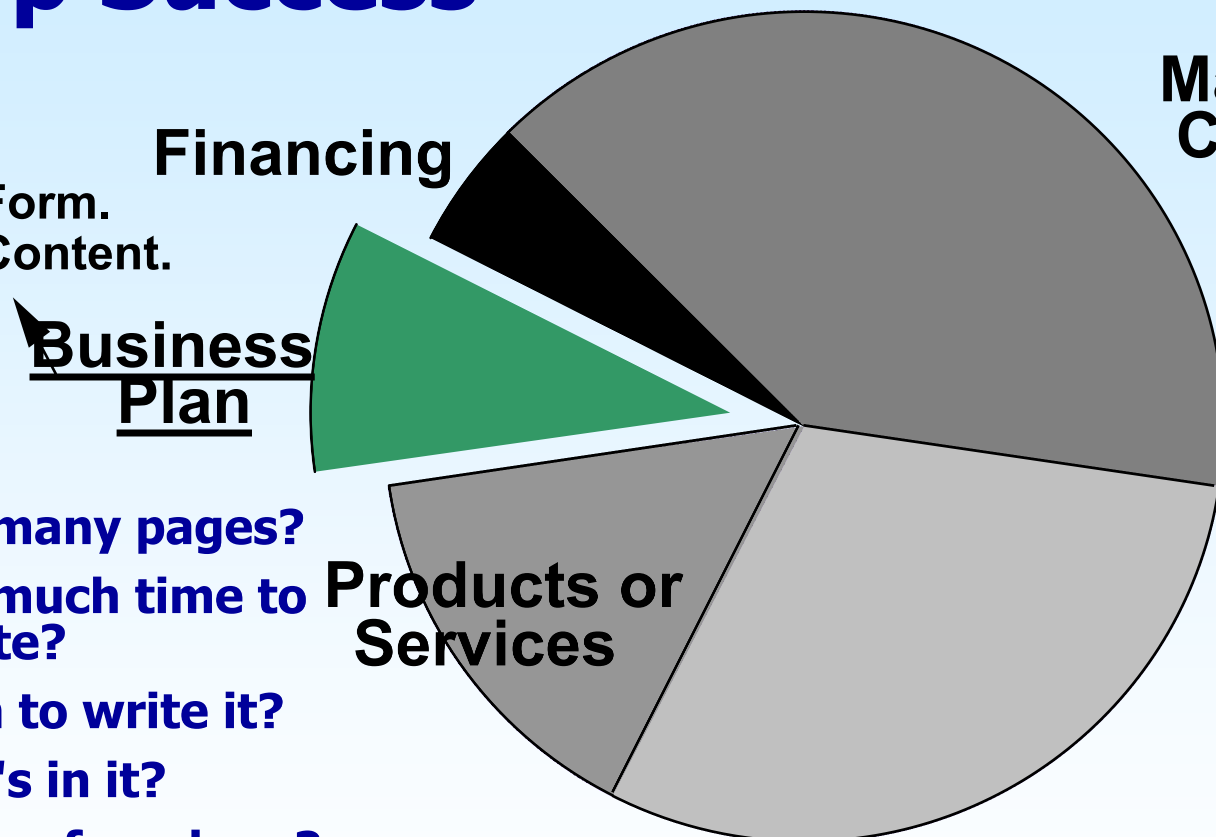


Figure 9.2 Positioning of Internet Service Providers (ISPs)

Fourth of Five Elements of Start-Up Success



How many pages?

How much time to write?

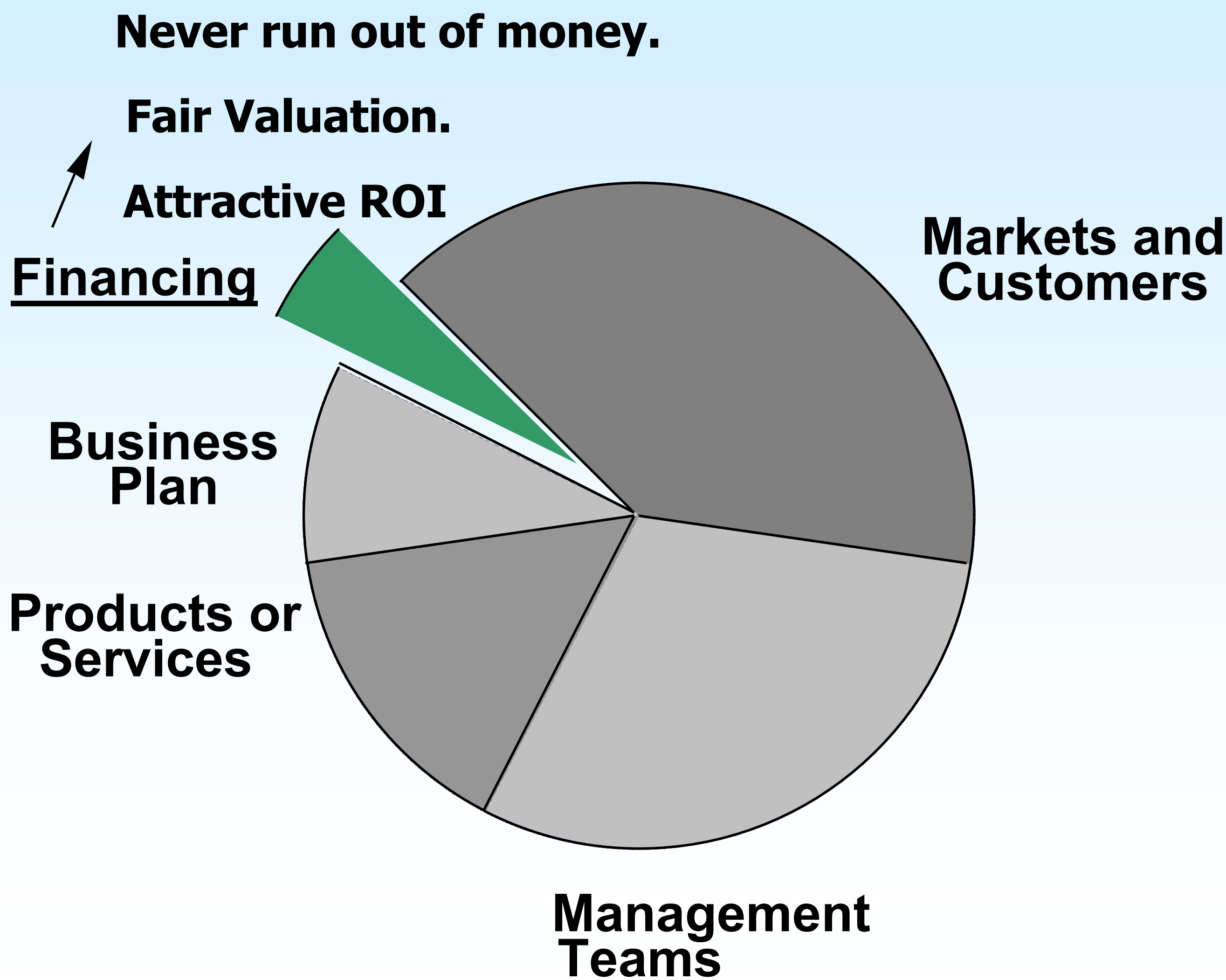
When to write it?

What's in it?

Written for whom?

Types of plans:
Funding;
Operational

Fifth of Five Elements of Start-Up Success



Writing a compelling business plan

- Elements of a successful and fundable plan
- Some sample plan outlines
- Analysis of a classic venture capital-funded business plan
- Fatal flaws and deal killers – how to avoid them
- "Tips and Tricks" for writing the plan

Elements of a successful and fundable plan

- Markets and Customers (compelling…)
- Management Team (proven…)
- Products and Services (proprietary…)
- Business Plan (content, format, presentation)
- Financing (ROI, pro-formas…)

Some sample plan outlines

- See ***Engineering Your Start-Up*** **for many sample outlines**

Analysis of a classic venture capital-funded business plan

Genus, Inc. Case Study ($9.5M, 1981)

Section name	Number of pages	Comments
Executive Summary	2	It is compelling and powerful.
Marketing Analysis	15	The section is comprehensive.
Product Analysis	4	Says what the product will do, *nothing* about how it will be developed or invented. Technology is not being sold here.
Operations Plan	1	The strong management team, with proven track records, can administer operations.
Management and key personnel	8	Three two-page résumés for the president/general manager, the V.P. finance, and the V.P. engineering, plus an organization chart says it all. **No mention is made of any key engineers** who might design the product.
Financial Data	12	Tells investors how much money the business is going to make, when, and what will be spent to make it happen.

Some fatal flaws and deal killers – how to avoid them

- Lofty Mission Statement (e.g., reduce world hunger, plow 10% of profits into charity…)
- Missing any of the 5 basics of success w/o acknowledging the fact
- Imputed ROI not attractive
- Fixation on "control," overt greed
- "Distributed leadership," or professed"socialist" management philosophies

Case Study: One Business Plan that Will Never be Funded

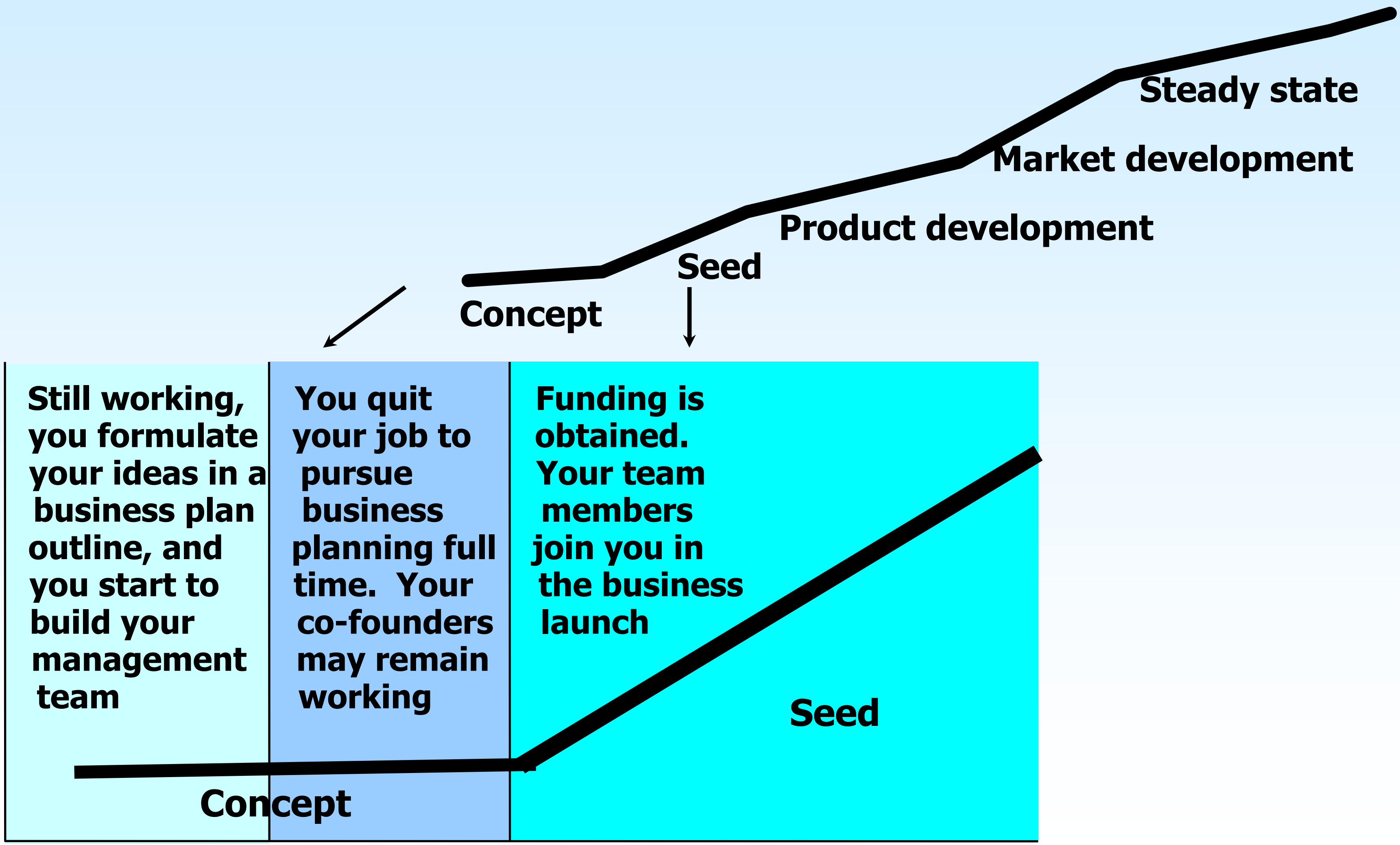
- Entrepreneur looking for $500,000 for 15% of the company

  (Implied pre-money valuation = $2.83 million; post-money valuation = $3.3 million)
- Projected Sales of $1 million in 3 years
- Management team is one person
- Market is "everyone"

"Tips and Tricks" for writing the plan

- Can someone else write *your* plan?
- When to use a consultant?
- Watch out for promises to help raise funds, especially with up-front fees.

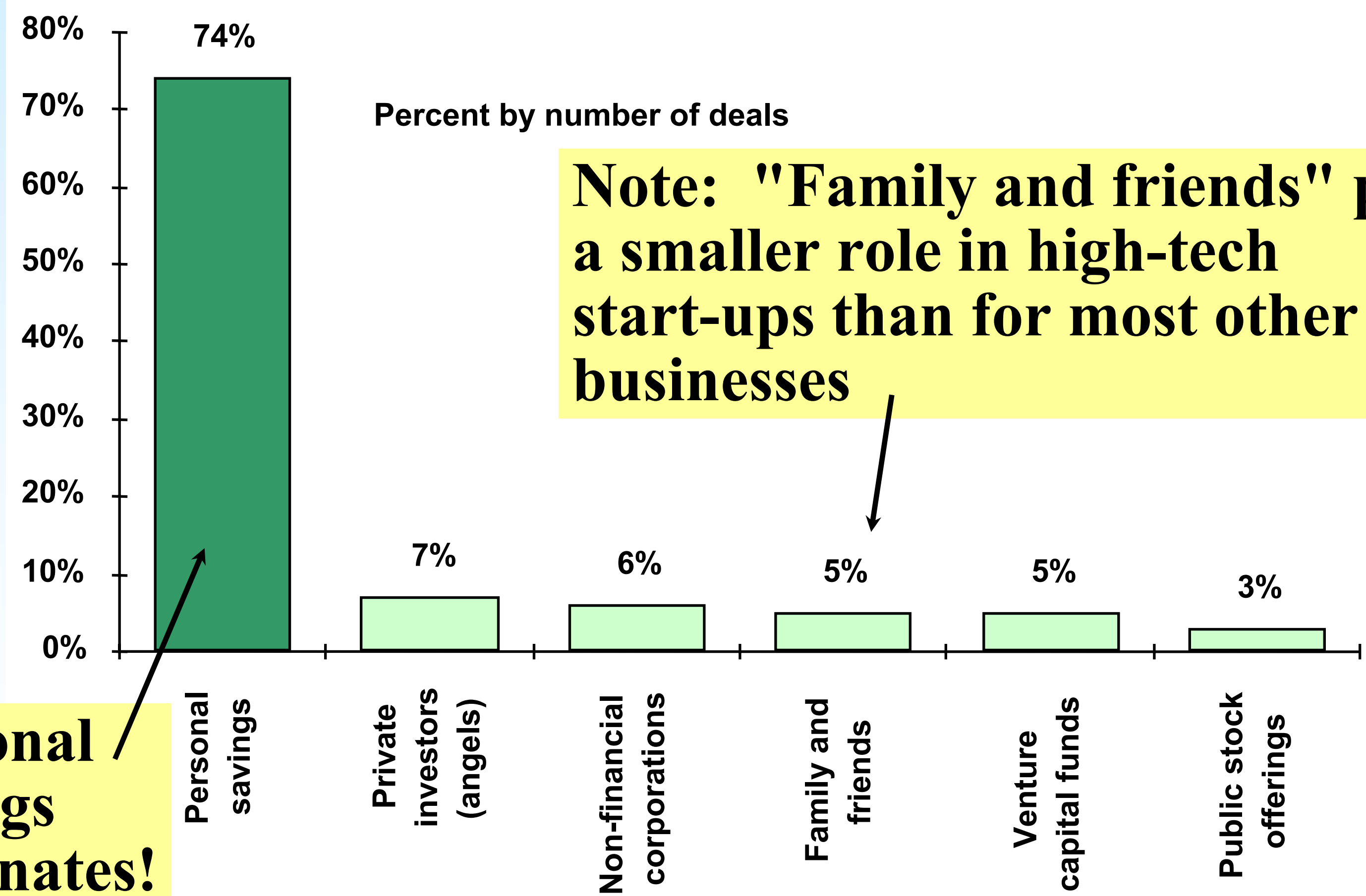
Operational Stages of Company Growth —When to Write Your Plan



Getting Funded

- Sources of start-up capital
- "Shopping" the plan
- Venture capital – is it for you?

Sources for Seed Capital for High-Tech Companies



Note: "Family and friends" plays a smaller role in high-tech start-ups than for most other small businesses

Personal savings dominates!

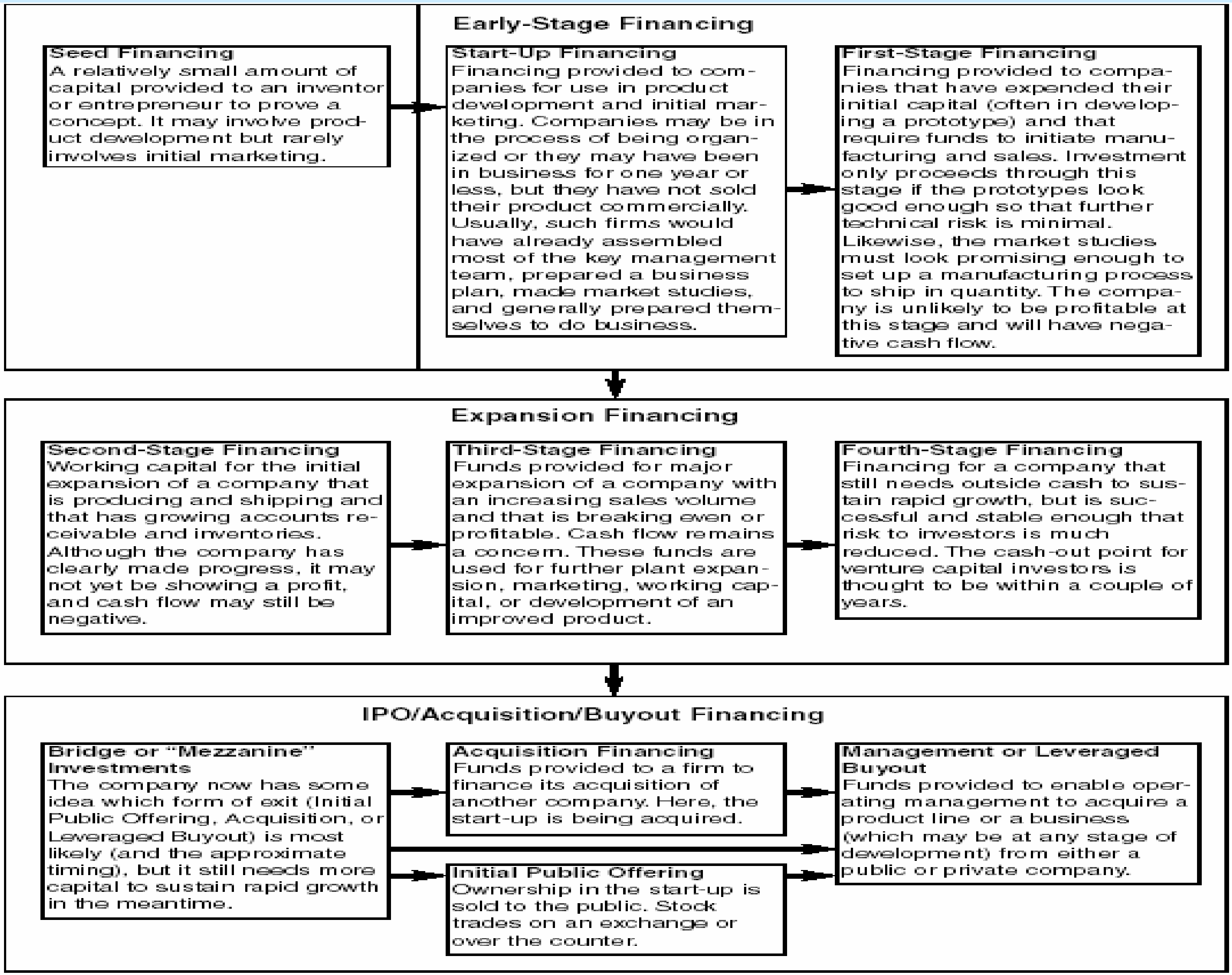


Figure 6.1 Stages of a Company's Growth

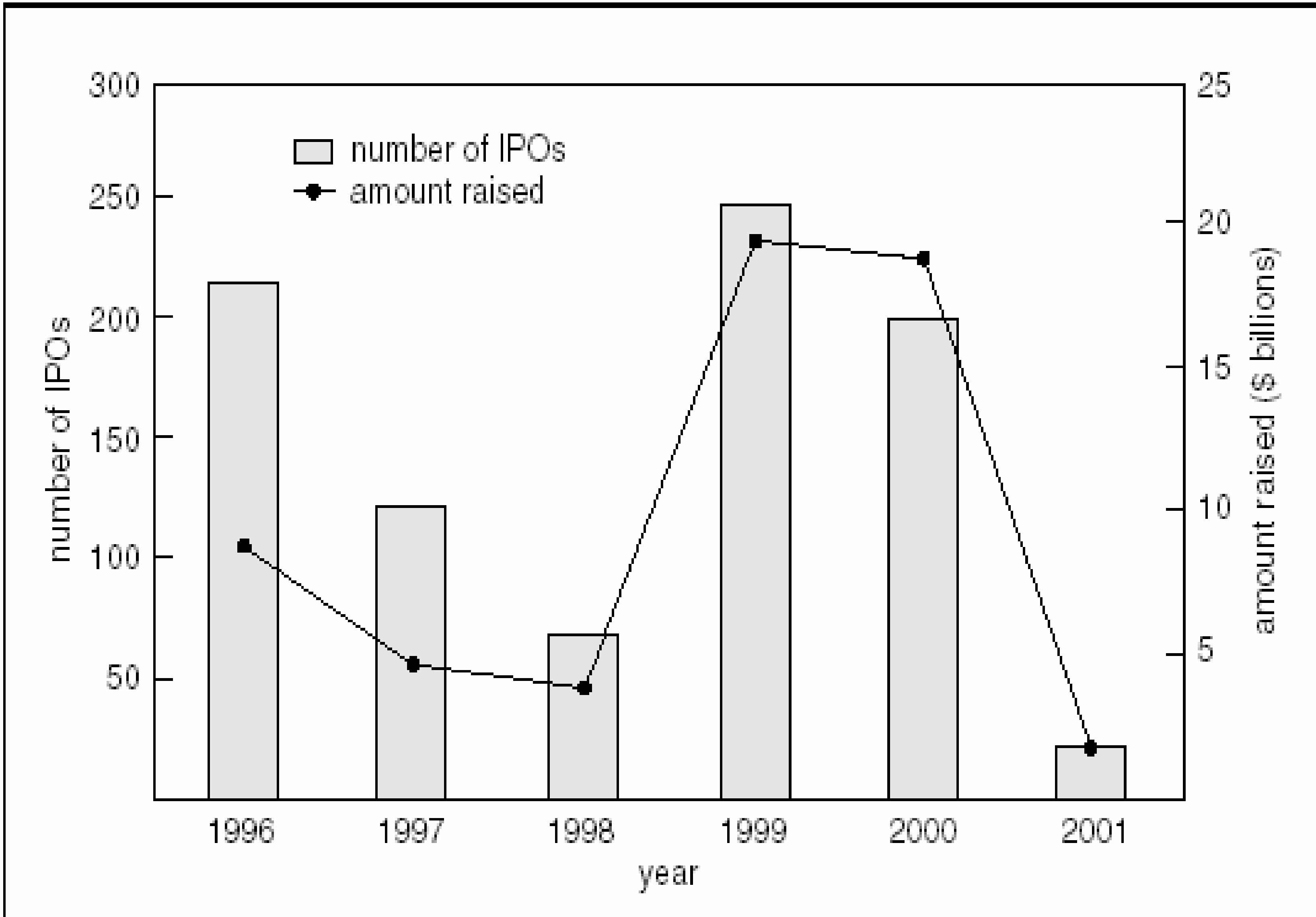
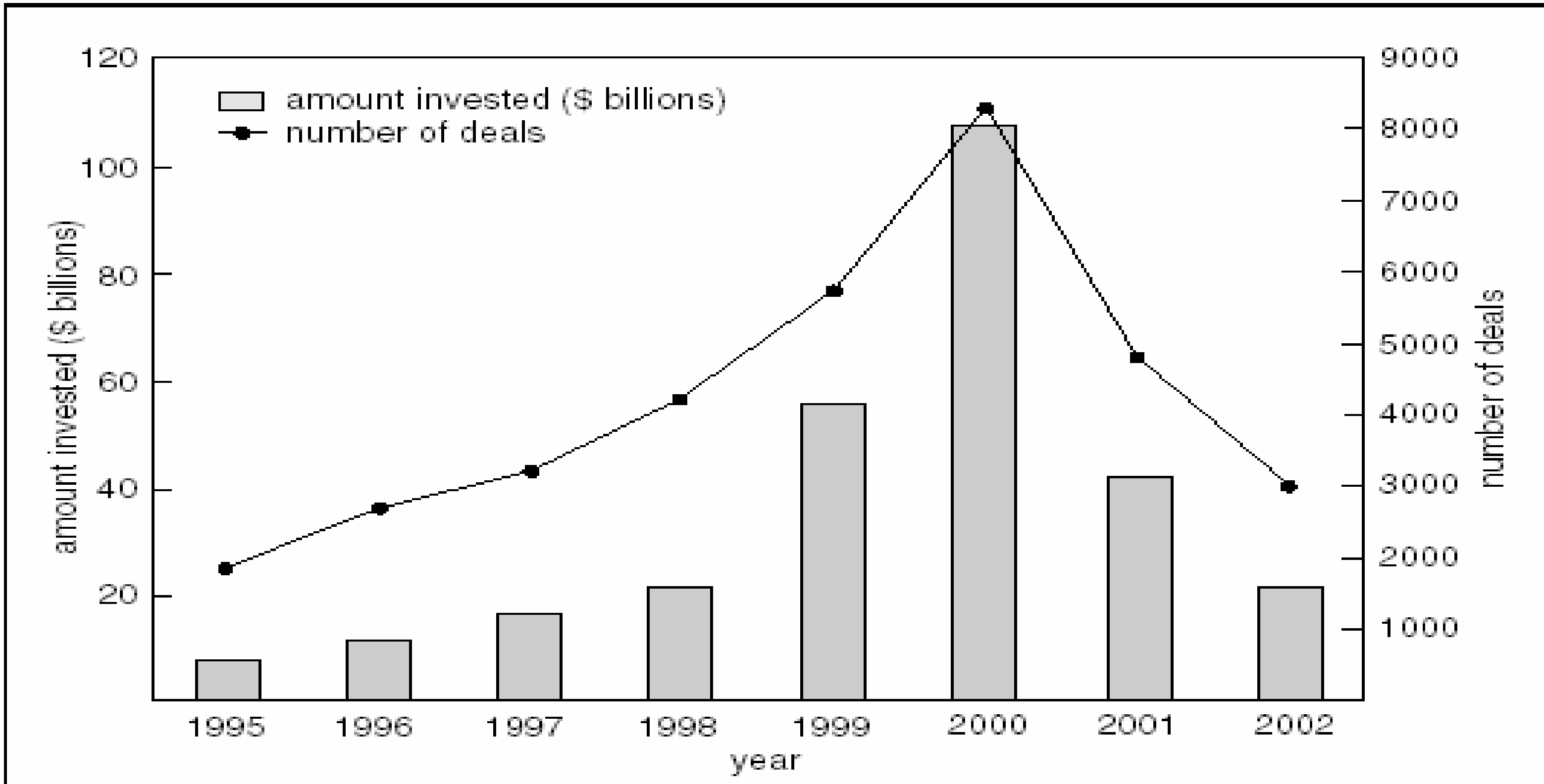


Figure 6.4 Several Years of Venture-Backed IPOs

VCs versus Angels

Venture funds back ~2,000+ deals per year

Angels support ~30,000 deals per year



Source: PricewaterhouseCoopers/Venture Economics/National Venture Capital Association MoneyTree™ Survey

Figure 11.2 Venture Capital Investments (1995–2002)

Venture capital – is it for you?

- Who is getting funded? (read, attend…)
- What's your "score" (on the 5 success factors)
- Outside advice (seek it, and listen)

"Shopping"the VC plan

- Unsolicited "Over the transom" plans: % funded ~= 0
- Use VC directories only as a road map (WAVC is good)
- Strong partners are well-connected (work on developing, or joining, a team)

Summary

- Commit
  (make the right decision for yourself)
- Educate yourself (read, network, explore, experiment, invest time and money, build relationships, build prototypes, cultivate potential customers)
- Plan
  (what will result in success for you?)
- Execute (persist, but know when to call a loss)

Starting a High-Tech Business

Session II
Advanced Entrepreneurship

2004

This presentation is published at http://www.eysu.org

Jim Swanson
Mike Baird

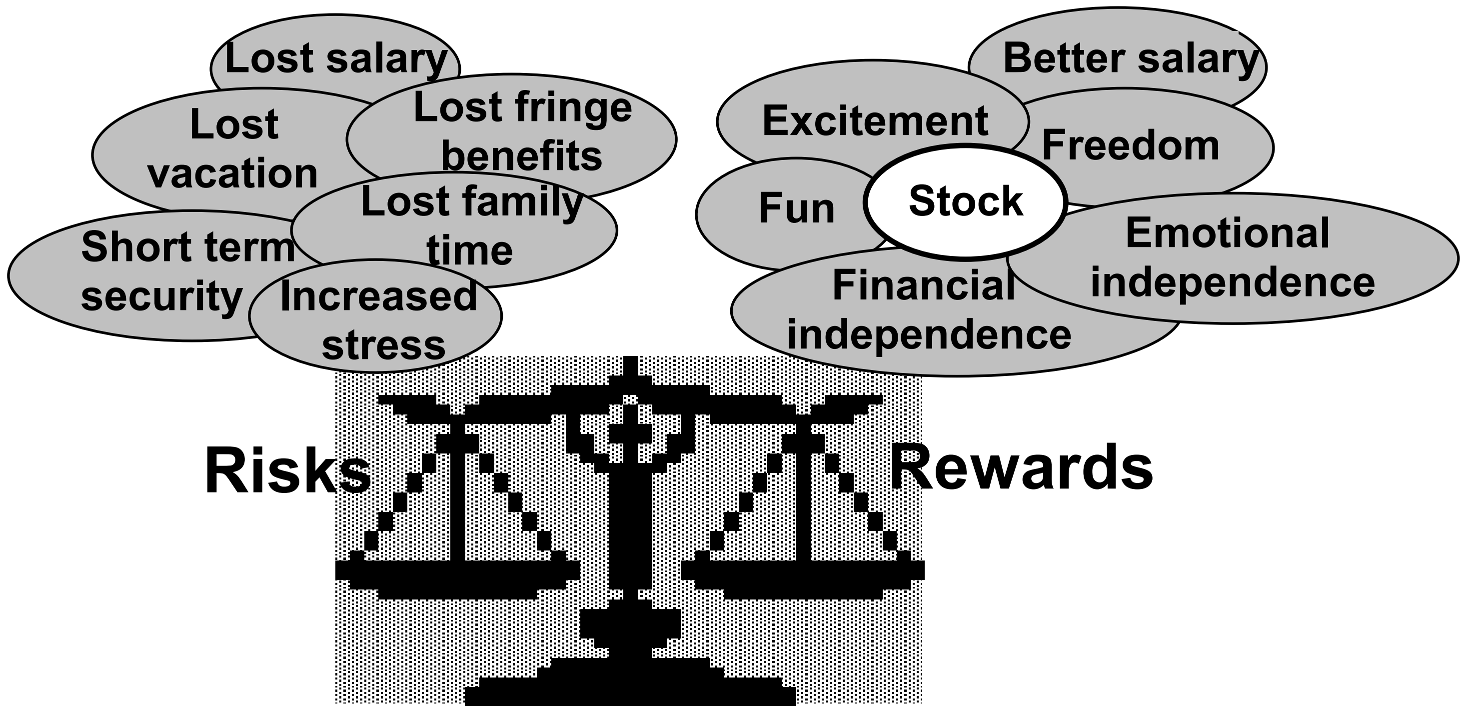
Advanced Entrepreneurship

- Capitalizing your start-up
- Legal structures
- Stock (restricted, common, preferred…)
- Stock Options (ISO's, NQSO's) , Other wealth building vehicles
- Stock & Option Grants, vesting, §83(b) elections…
- Valuation, Q & A

Knowledge is $$$

- **Lack of knowledge of financing tricks, stock grant, and stock option practices can do more to <u>limit your financial success</u> than lacking knowledge of the fundamental basics for business success:**
  - **Markets and customers**
  - **Management team**
  - **Products and services**
  - **Attractive ROI,**
  - **Supported by a written Business Plan**

The Relative Importance of Stock



Capitalizing your Start-Up
–Levels of Financing

To raise the money you need to speak the language…

Seed financing

Early stage financing
- Start-Up
- First-stage

Expansion financing
- 2nd, 3rd, 4th stages

IPO/Acquisition/Buyout financing

Capitalizing your Start-Up (cont.)

Private vs. Public sales of stock

- **Private stock offerings**
- **SEC Registration Requirements**
- **Initial Public Offerings (IPOs)**
- **SCORs Small Company Offering Registration**

§1244 IRS small business stock (common stock losses can be treated as "ordinary"rather than "capital" losses)

Legal Structures

and ownership vehicles

- Sole Proprietorships
- Partnerships
- Corporations

  -'C'

  -Sub-Chapter 'S'
- Limited Liability Companies (LLCs)

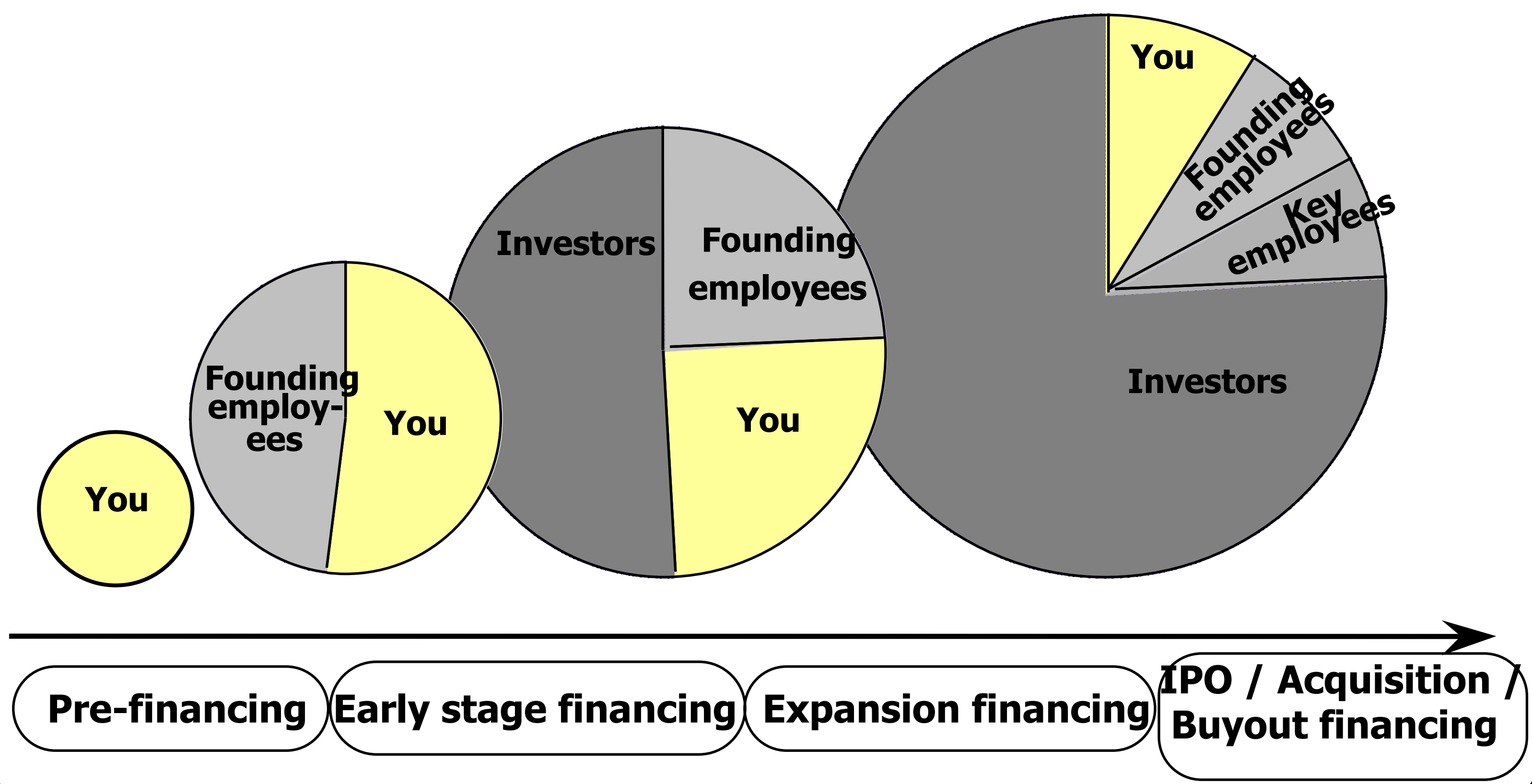
Incorporate with an experienced lawyer!

Stock Ownership, Grant and Award Practices for Your Start-Up

Many questions…

Founders' stock; options; incentive stock options; non-qualified stock options; stock grants; vesting schedules; how many shares? when? legal & tax considerations.

Dividing Up the Pie !



Authorized and Outstanding Shares

- Authorized= number of shares you can issue (of no importance to valuation or percentage ownership calculations)
- Outstanding ~= "Issued" = number of shares granted or purchased.

Common vs. Preferred Stock

- “Preferred” for investors
  - Has preference on liquidation
  - Usually has (cumulative) dividend rights; Rights to ROI before common; Converts to common at "exit"
  - Often has anti-dilution rights
- “Common” for founders and key employees

Restricted Stock

- Securities laws — restrictions on transfer (stock is not registered)
- Company restrictions — on transfer (you need to be vested before you can sell stock). Plus, the company / existing investors have rights of first refusal…

- **Stock Gifts and Grants**
  - **Founders' stock**

- **Stock Options**
  - **Incentive (ISOs)**
  - **Non-Qualified (NQSOs)**

See Table for Details

ISO Case Study - "Exploiting employee desire for stock options"— selling stock in disguise

- Job offers come with numerous stock options with…
- only 2 year vesting (must exercise w/in short period thereafter)
- 110% fair-market-value
- double up if exercise immediately

How Many Shares to Grant?

- Rules of thumb
- Common stock is considered to be "worth" what's being paid for the preferred, although common is priced typically at 1/10th of preferred
- Option on common stock "worth" 1–2X annual salary is good

How Many Shares to Grant? (cont.)

- Rule of thumb (very rough)
- If CEO gets 100 shares
- Direct reports (VPs) get 10
- Next level reports get 1
- and so on…

Vesting Schedules and Conditions – Exercising Options

- Vesting is typically over 3, 4, 5 years; w/ linear, stair-step, threshold models
- Exercise must be done w/in 1-3 months of termination of employment for ISOs

Founders' Stock

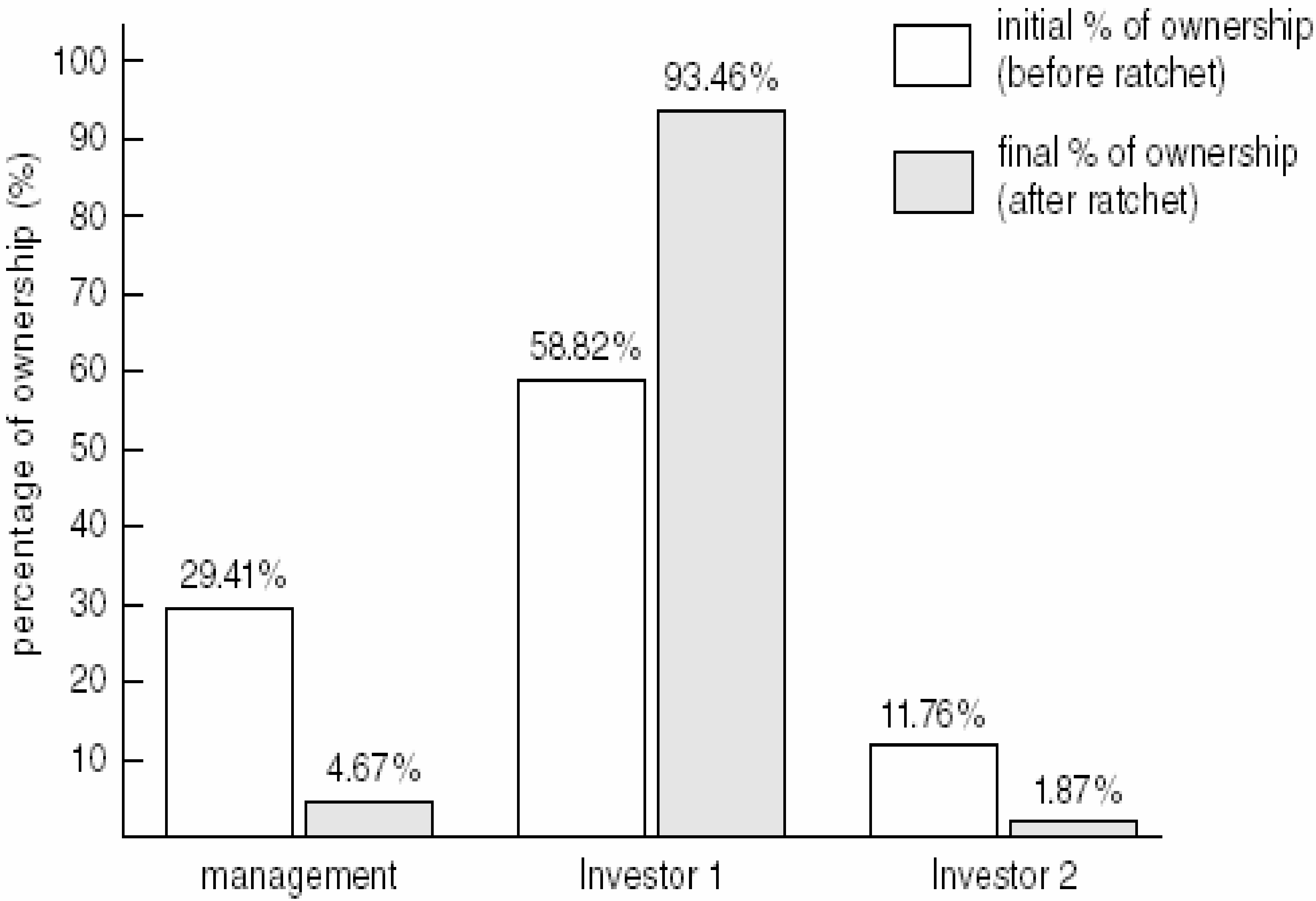
- Common stock; Pay almost nothing if buy before funding;
- Vesting is by time, & may also be based on performance.
- Poor performance can result in dilution of your ownership (either via partial vesting, or investors' performance-based conversion formulas)

Section 83(b) Election

- Allows you to "pay taxes now" on any gain from buying founders stock at a favorable price, and then NOT having to pay taxes when vesting conditions expire (when stock could be worth tons) — only pay taxes later if stock is sold
- Avoids tax surprises later
- Founders should always elect 83(b) — Many don't (using inexperienced lawyers?)

Venture Capital Ratchets

- Significant anti-dilution protection for investors via change in conversion privileges of preferred to common if later pricing drops. Example:
- Ratchets are Very common
- Make aggressive promises, don't perform, and you may pay



initial % of ownership (before ratchet)
final % of ownership (after ratchet)
percentage of ownership (%)
100
90
80
70
60
50
40
30
20
10
29.41%
4.67%
58.82%
93.46%
11.76%
1.87%
management
Investor 1
Investor 2

Stock Warrants

- Another instrument of sophisticated investors to increase their ownership
- Allows purchase of additional stock in the future, at older favorable price
- Used properly, warrants encourages your investors to stay in the play (you must insist on increasing warrant conversion prices)

Punitive Financing

- Ratchets (invoked on lower pricing)
- Turnarounds (if pricing flat; management may be replaced)
- Re-starts (if pricing declines; management is replaced)

Company Valuation

- Pre-money defined
- Post-money defined
- Rule of thumb (~$3-5 million is pre-money valuation for a start-up with a good management team, a hot market w/ identified customers, and a "protected" product

Pre-money defined

- Example:

1,000,000 shares outstanding:

300,000 sold for \$0.01/share \$3,000 (founder's common shares)

700,000 sold for \$1.00/share \$700,000 (preferred shares)

Total paid-in-equity \$703,000

If new investors willing to pay. e.g., \$2.00/share, pre-money valuation is \$2,000,000

Post-money defined

- Example continued:

1,000,000 shares outstanding:

New investors willing to pay $2.00/share, for 1 million new shares (contribute $2,000,000).

Total paid-in-equity - $2,703,000.

Post-money valuation = # shares outstanding * last price

= 2,000,000 * $2/share = $4,000,000

Post-money defined (cont.)

- Example continued: (using "percentage" approach)

Imputed valuation = amount invested ÷ % purchased

(from amount invested = valuation * % purchased)

In above example: investors bought 1 million new shares, which become 50% of the company, and

Imputed valuation = $2,000,000 ÷ 50% = $4,000,000

"A $2 million addition to a $2 million valuation company equates to a $4 million post-money valuation"

Post-money defined (cont.)

Scenario

Entrepreneur: "My company is worth $2 million"

VC: "Is that pre- or post-money?"

[Translation] "Is that before or after we put in $2 million?"

Conclusion: simple stuff — better have it down cold

Summary

- Incorporate with an experienced lawyer
- Maintain clean corporate records, follow your bylaws and articles of incorporation; Maintain CPA audited financials
- Full disclosure to investors — always
- Create fair, motivating, win-win performance-based stock and option structures; Understand dilution risks

Summary (cont.)

- Don't violate securities laws
- Don't neglect tax consequences (e.g. §83(b) elections, §1244 stock declarations, use of tax-deferring ISO's…)
- Valuation is in the eyes of the buyer
- Never ever run out of money
- Stop and smell the roses too