



Short course on business modeling and market analysis

May 4-6. 2022

Hybrid course: Location at University of Oulu and Zoom

Course outline

- Oulu Business School, Martti Ahtisaari Institute, is organizing a 2 ECTS doctoral course on Market analysis, Business Models, Strategies and Go-to-Market plans as a part of the MinExTarget EIT Raw Materials project. The course is open to both project's own and external students and project participants.
- This is a subject and industry-specific course focusing on the Mining Exploration. It aims to acquaint students with market analysis, business models, and go-to-market planning at strategic level. By the end of the course the students will have gained skills and knowledge on the above-mentioned topics applied to mining exploration context.
- Upon completion of the course, the students will
 - be familiar with different tools and methods for conducting market research
 - be familiar with the key areas of business model thinking and application
 - understand the trends and directions of mining exploration business
 - be able to apply the contents in their own work in practice

Contents and schedule

12.00-13.45

Session 1 Lecture
Market Analysis
 (Timo Koivumäki)
 (case MinExTarget)

Session 4 Lecture
Business models and
 strategies
 (Petri Ahokangas)
 (Case MinExtarget Oy)

Session 7 Lecture
Go-to-market planning
 (Petri Ahokangas)

BREAK

BREAK

BREAK

14.00-15.50

Session 2 Workshop
Market analysis exercise
 (Timo Koivumäki / Petri
 Ahokangas / Nina van
 Vulpen)

Session 5 Workshop
Business model exercise
 (Petri Ahokangas / Timo
 Koivumäki / Nina van
 Vulpen)

Session 8 Workshop
Go-to-market exercise
 (Petri Ahokangas / Timo
 Koivumäki / Nina van
 Vulpen)

16.00-17.00

Session 3 Wrap-up
Team presentations and
 discussion
 (Timo Koivumäki)

Session 6 Wrap-up
Team presentations and
 discussion
 (Petri Ahokangas)

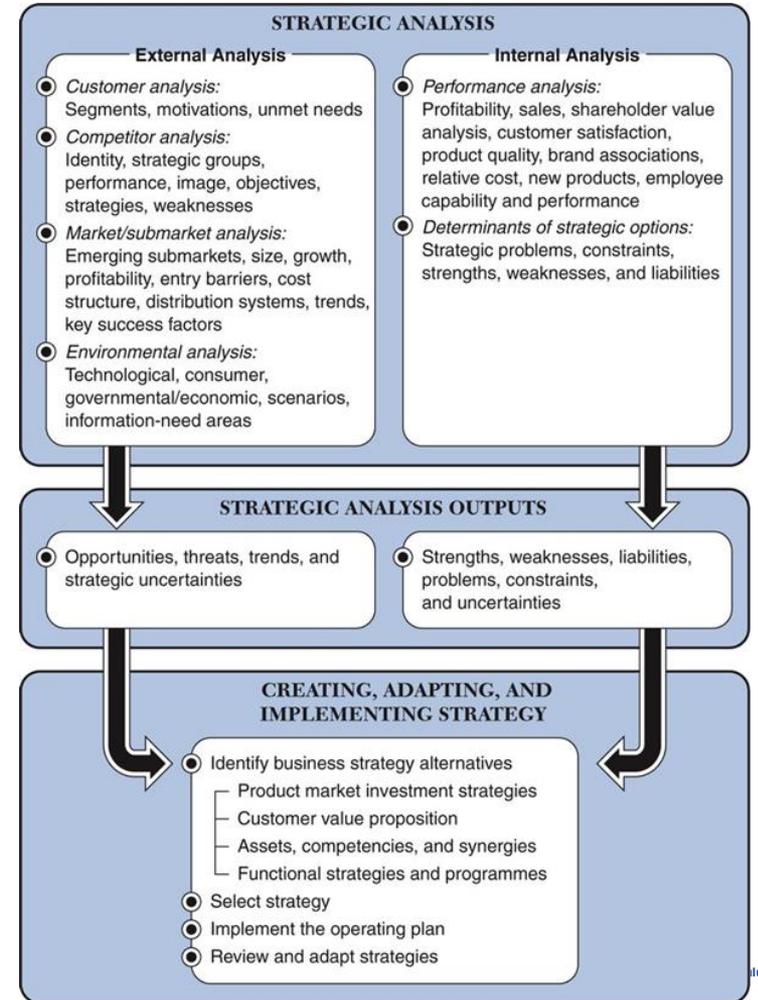
Session 6 Wrap-up
Team presentations and
 discussion
 (Petri Ahokangas / Timo
 Koivumäki / Nina van
 Vulpen)



Why?

- **Market and competitor analysis is an “investment” to reduce uncertainty**
- **Helps management create, change, or retain a business strategy and to create strategic visions**
- **Can help guide strategic decisions on**
 - Whether to enter
 - Product characteristics
 - Promotional strategy
 - Positioning
 - Creation of competitive advantage

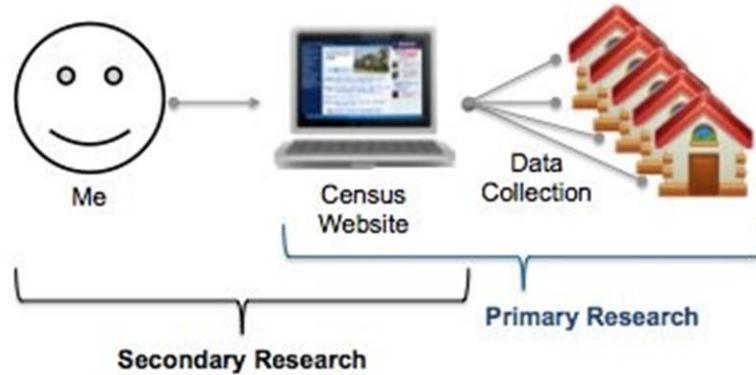
MARKET: the area of economic activity in which buyers and sellers come together and the forces of supply and demand affect prices





How?

Types of Market analysis: Primary vs. Secondary



Secondary research

Based on data previously collected for purposes other than the research in hand (e.g. published articles, government stats, market reports, etc)

Primary research

Collection of data specifically for the problem or project in hand

- Surveys
- Experimentation
- Observation
- Focus groups
- In-depth interviews
- Online research
- Scanner data
- Sentiment Analysis



How?

Secondary research lays the groundwork on markets, customer segments, competition etc., while primary research fills in the gaps.

By using both types of market research, you get a well-rounded view of their markets.

Points	Primary Data	Secondary Data	
Meaning	Primary data is collected directly from the first-hand experience. This is the information that you gather for the purpose of a particular research project.	Secondary data is the data that have been already collected for another purpose. The data is collected by someone else instead of the researcher himself.	
Main Sources	Interview, surveys, questionnaires, field observation, experiments, action research, case studies and etc.	Previous research, mass media products, Government reports, official statistics, web information, historical data and etc.	
Data Time	Real - Time Data	Past Data	
Specific to the Researcher Needs	Always specific to the researcher's needs.	Often, it is not specific to the researcher's needs.	
Costs	Expensive	Low Cost or Free	
Level of the control over data quality	Higher level of control	Lack of control over data quality	
Time consuming	More time consuming	Less time consuming	
Proprietary Information	You are the owner of the data. Thus, the information can remain hidden from the competitors.	You are not the owner of the data. Your competitors also have access to the data.	
Capability	More capable to solve a specific problem	Less capable to solve a specific problem	



Market analysis elements:

- 1) Market definition and sizing
- 2) Assessing growth and potential
- 3) Competitive analysis

Market sizing – source of data

Market reports

- Trade associations, companies and other sources will publish market reports which can be ideal.
- These can also be a valuable starting point if the information is not exactly what is needed.

Proxy indicators

- In other situations, a proxy measure may be the best source. For example, there may not be a published report on the 'plastic cork' market, but a report on the wine industry gives a starting point that can then be refined.
- In some situations, reports from other countries can help build the picture and validate the estimate.

Competitors and sales channels

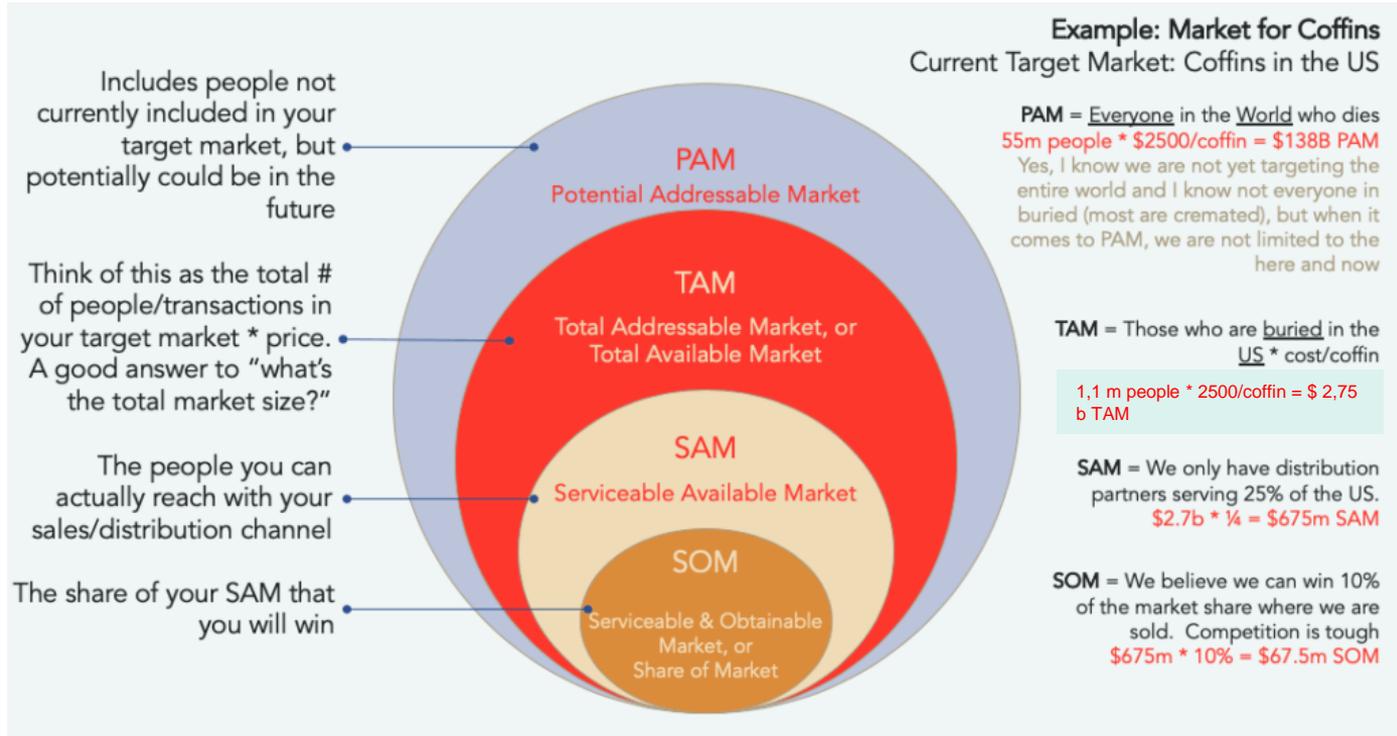
- Looking at the financial information of competitors and distributors etc. can also be valuable source of market information.

Customers

- Understanding how many customers there are (whether this is be this specific demographics, number of households, airports etc.) provides another starting point for calculating the market potential.



Market size terminology

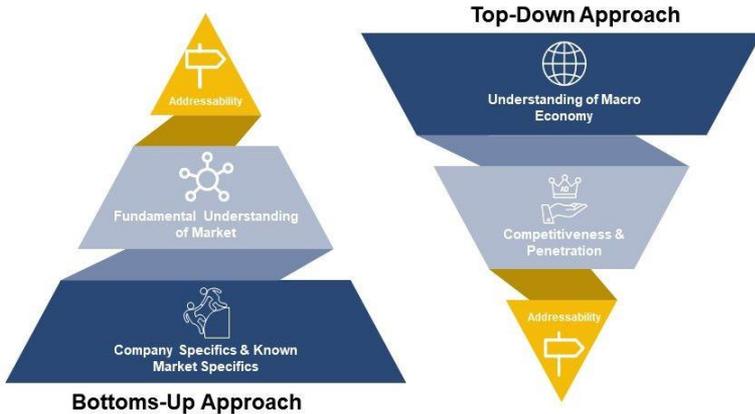


Source: <https://www.mymarketresearchmethods.com/market-sizing/>



Calculating market size and growth

Bottoms-Up Approach & Top-Down Approach



Key questions:

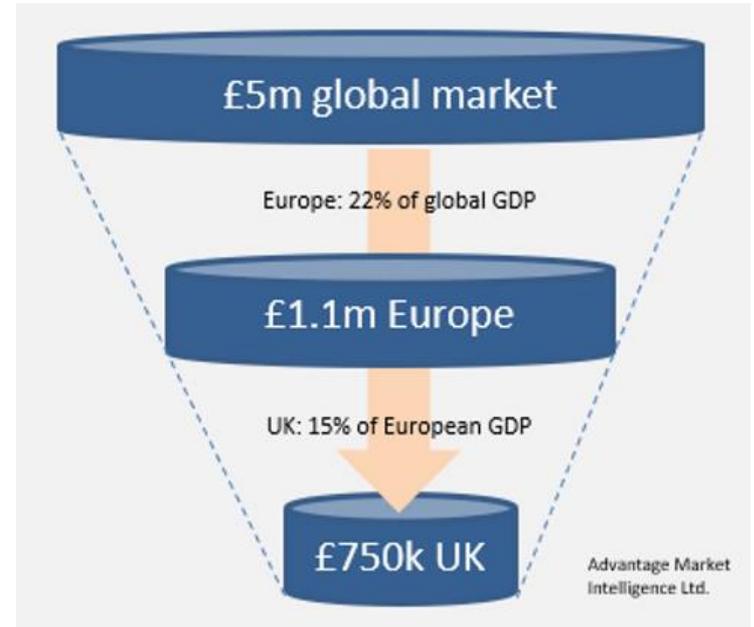
- What is the time period you are looking at? One year is standard,
- What geography does your market cover? Are you a local, regional, national, or global business? Are you national but choosing to launch in one region first?
- Are there special issues that need to be factored in such as regulations or buying seasons?
- Has your market been changing within the past couple of years? How do you foresee it changing within the next few years? Markets are rarely static. They evolve, so being able to foresee new technologies or changing consumer habits is important.



Market size calculation: Top-down approach

- **Top-down approach**
- Begin with broad statistics and narrow down to find your market size
- Data usually obtained from secondary sources, such as industry research and analysis reports.
- Process:
 1. Estimate the size of the total market
 2. Identify the relevant submarket

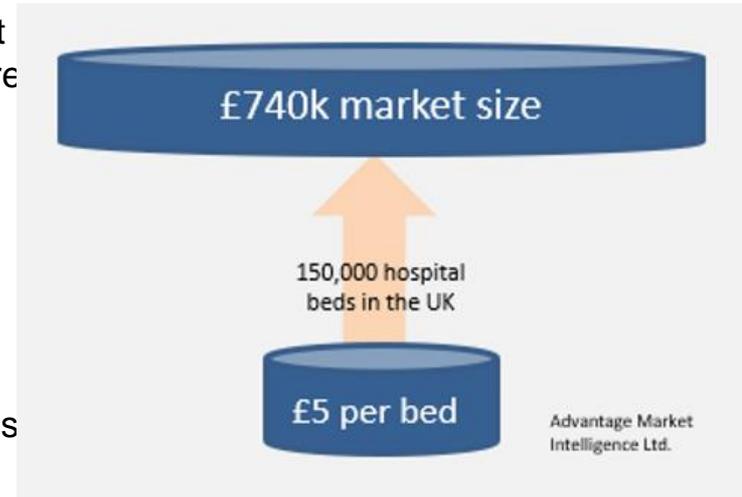
→ Estimate your market share, i.e. service obtainable market(SOM)





Market size calculation: Bottom-up approach

- **Bottom-up approach**
 - Reverse approach from Top-down. If possible, start building up the estimate from the lowest point where the product can be used and estimate potential sales or revenues of key players.
 - It is often very difficult to obtain product sales data. Possible approach is to survey customers to determine their yearly spending on
 - Process:
 1. Estimate the yearly sales/revenues of key players e.g. through customer surveys or sales data (if available)
 2. Extrapolate the findings to estimate the entire market
- Estimate your service obtainable market(SOM)





Assessing market growth & potential

Product Lifecycle

Market Size and Structure

Is the Market Emerging and/or Fragmented?

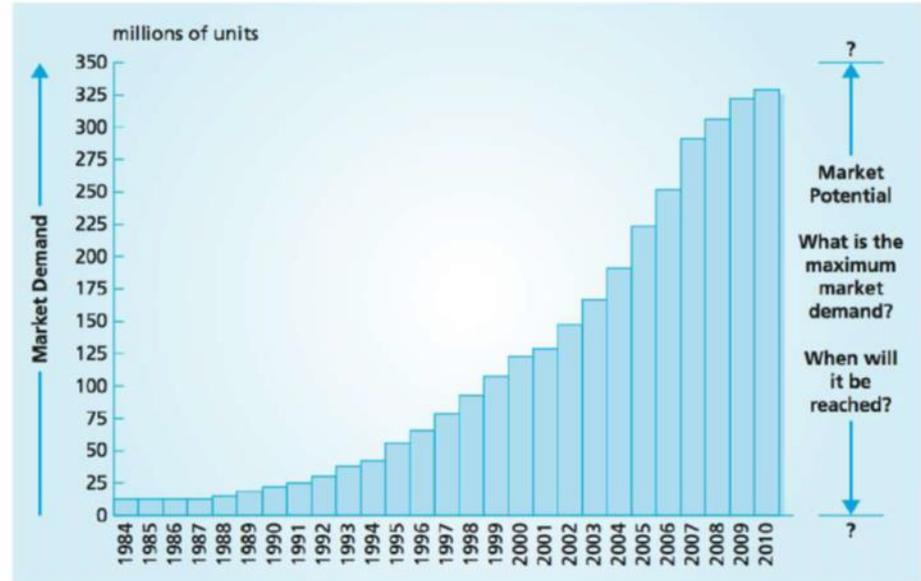
Are There Proprietary Barriers to Entry or Excessive Costs of Exit?

What Stage of the Product Life Cycle Are You On?



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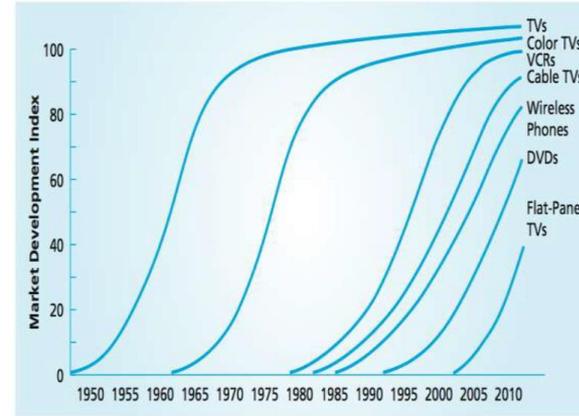
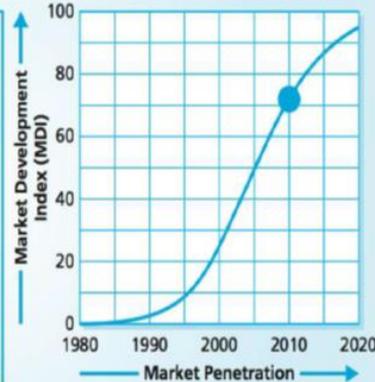
Knowing the maximum number of units that can be consumed by the defined market is of great strategic importance to a business: After a market reaches its full potential and saturates, new customers will be hard to find.



Assessing market growth & potential

$$\text{Market Potential} = \text{Maximum Consuming Units} \times \text{Buying Ceiling} \times \text{Purchase Rate} \times \text{Purchase Quantity} \times \text{Average Price}$$

Geographic Scope of Market Focus	Worldwide
Scale (e.g., none, thousands, millions, billions)	Millions
Consuming Unit (e.g., household, business)	Individual User
Current Market Demand (units)	325
Performance Factors	Performance
Maximum Number of Consuming Units	4,500
Buying Ceiling (% who can buy at average price)	50%
Annual Purchase Rate	20%
Quantity per Purchase	1
Market Potential (units)	450
Market Development Index (MDI)	72
Average Price (for achieving buying ceiling)	\$650
Market Potential (millions)	\$292,500



Each of these products had a well-defined tipping point, followed by periods of rapid growth and eventually a leveling-off period as market demand approached its market potential.

$$\begin{aligned} \text{Market Development Index} &= \frac{\text{Current Market Demand}}{\text{Market Potential}} \times 100 \\ \text{Personal Computers} &= \frac{325 \text{ million}}{450 \text{ million}} \times 100 = 72 \end{aligned}$$

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The first step is to define the geographical boundaries and the consuming units. The consuming units could be defined in terms of individuals, families, households, businesses, or other purchasing entities.



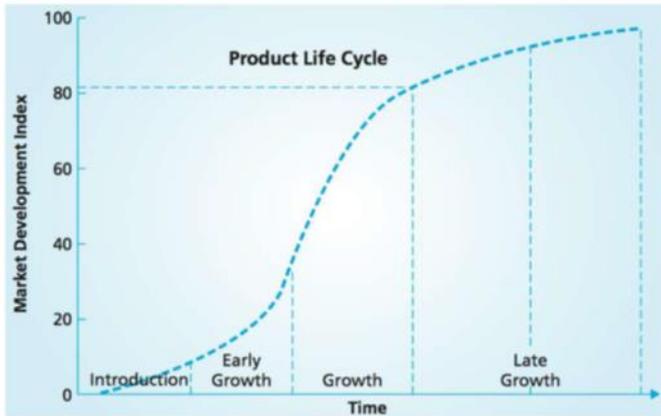
Assessing market growth & potential



Many new markets and most global markets are **well below** their market potentials because large numbers of potential customers have **not yet entered them**.

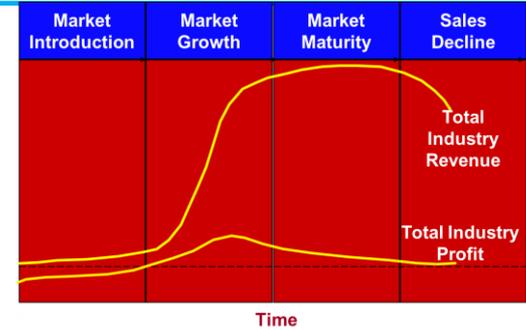


Assessing market growth & potential

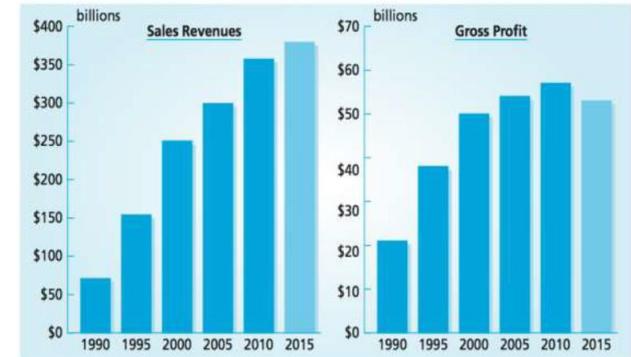


One of the benefits of estimating market potential is the ceiling it places on market demand. Businesses that have enjoyed years of growth will often project continued growth beyond the market potential.

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- ❑ Profits can vary over the product life cycle.
- ❑ For PCs, we see continued growth beyond the late growth stage in both sales revenues and market demand in units.
- ❑ Slower growth in volume and declining prices will contribute to lower margins and lower industry gross profits.
- ❑ This modest decline occurs as the PC market moves from late growth to the maturity stage.

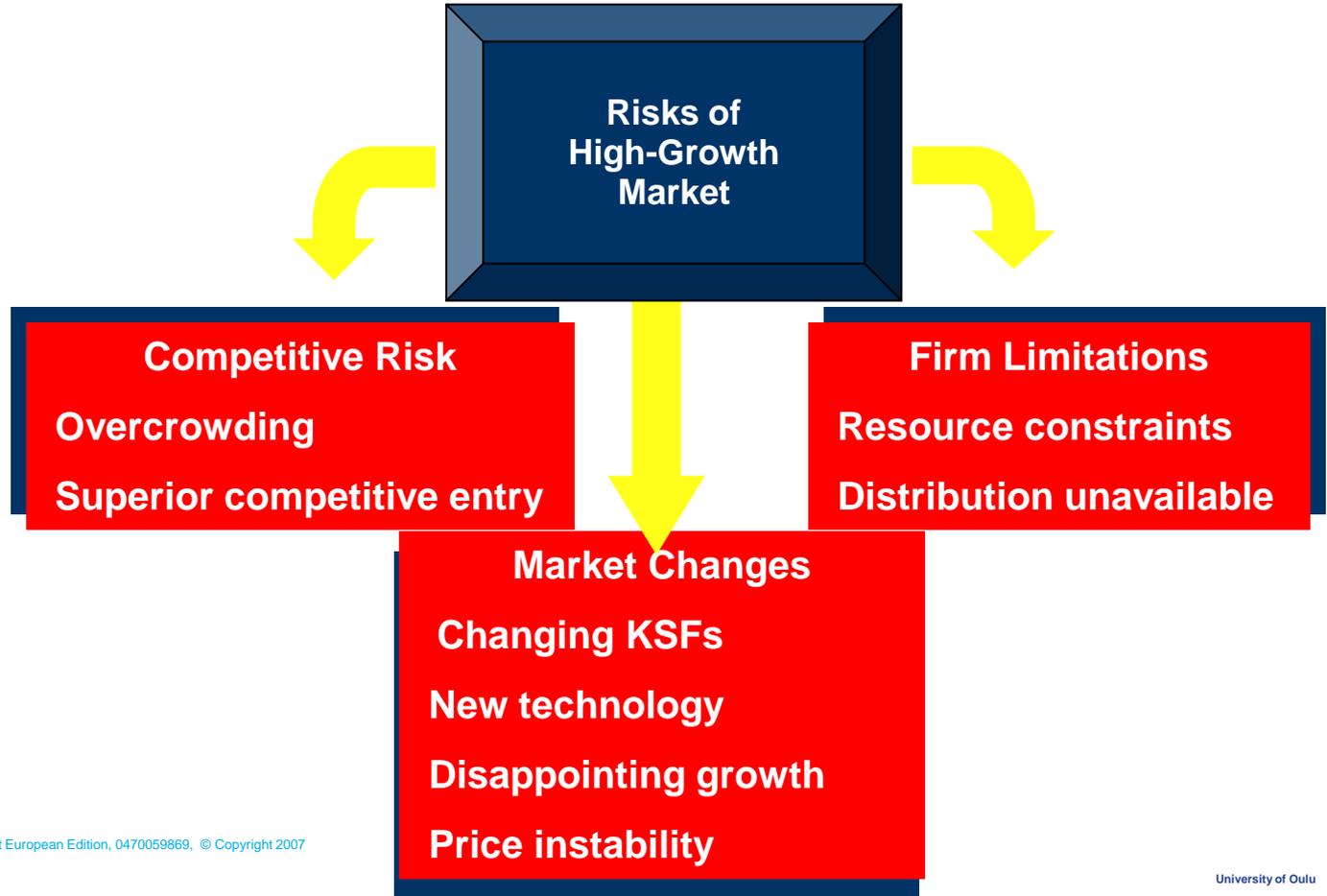


Industry Market Performance	1990	1995	2000	2005	2010	2015
Market Potential (millions)	450	450	450	450	450	450
Market Demand (millions)	24	58	132	207	325	400
Market Development Index	5	13	29	46	72	89
Average Selling Price	\$2,950	\$2,650	\$1,900	\$1,450	\$1,100	\$950
Industry Sales (billions)	\$71	\$154	\$251	\$300	\$358	\$380
Average Margin (%)	30%	25%	20%	18%	16%	14%
Industry Gross Profit (billions)	\$21	\$38	\$50	\$54	\$57	\$53

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High growth markets and risks



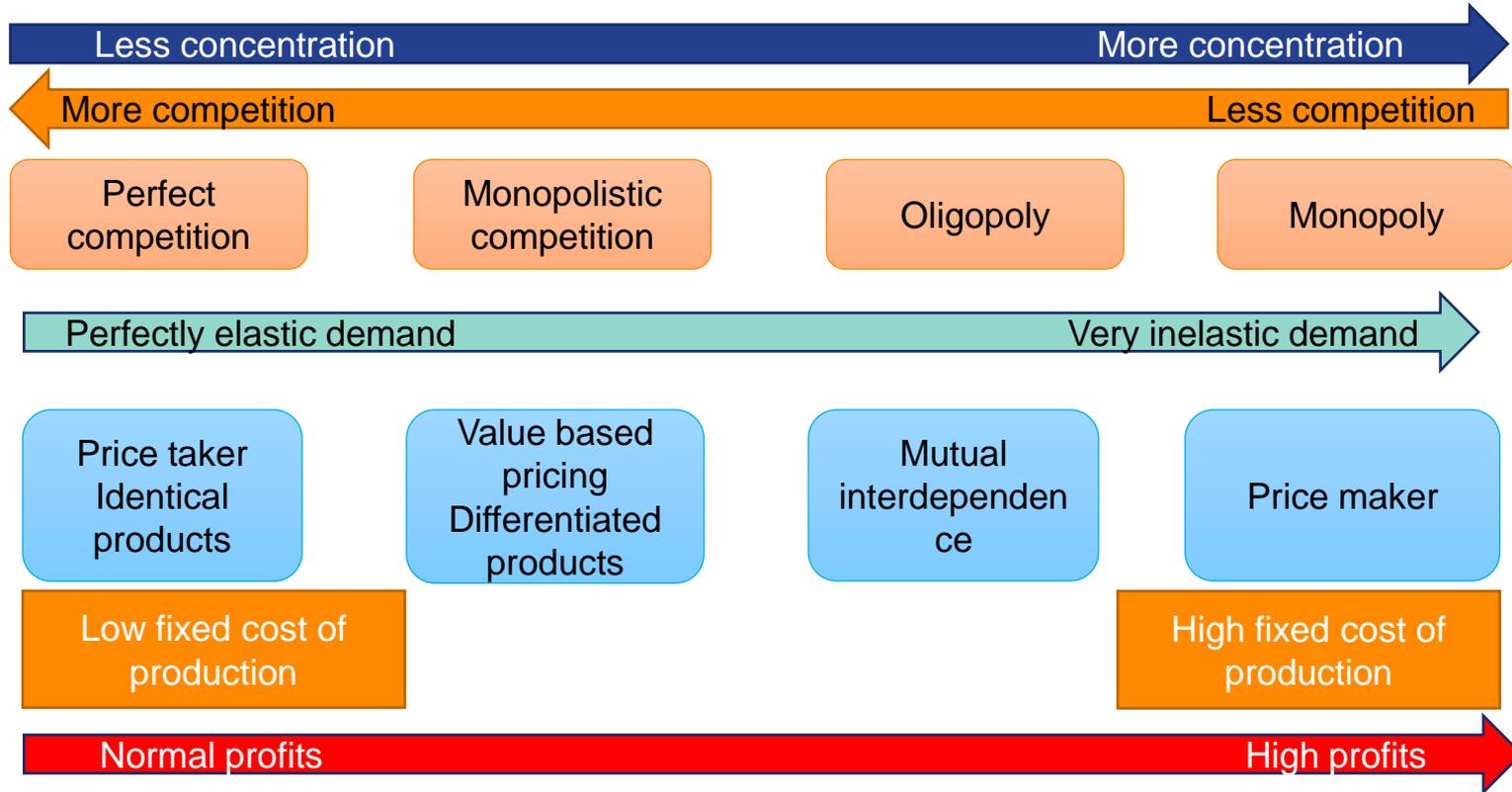


Market structure affects opportunity and competitive situation

Market Structure	Seller		Buyer	
	Entry Barriers	Number	Entry Barriers	Number
Perfect competition	No	Many	No	Many
Monopolistic competition	No	Many	No	Many
Oligopoly	Yes	Few	No	Many
Monopoly	Yes	One	No	Many

Market structure and market opportunities

- Market structure affects pricing, profitability & market opportunities





Competitive analysis in markets

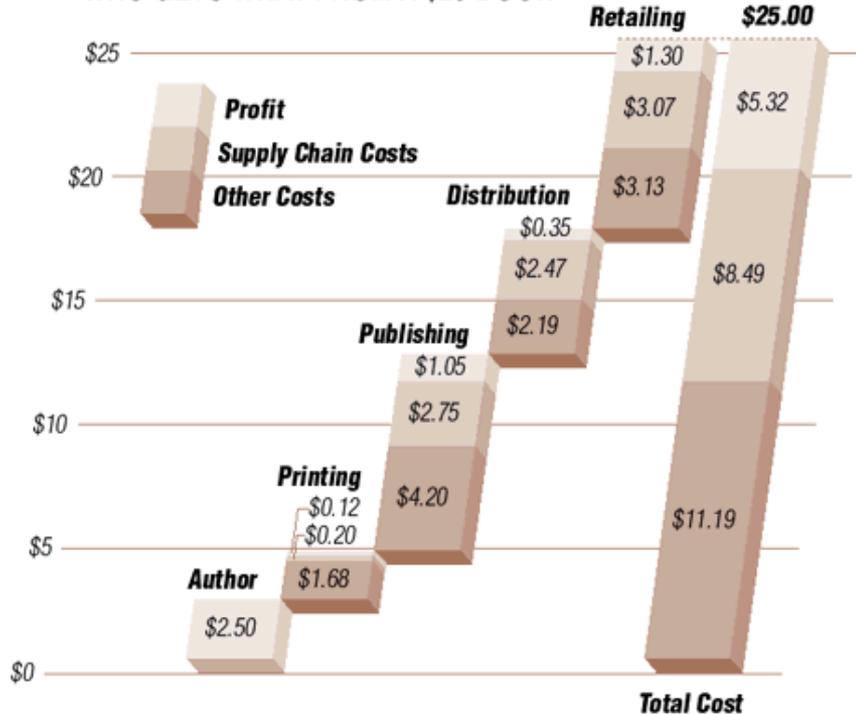
- 1) Competitive position analysis 2) Competitor analysis
 - Competitive position analysis starts from value chains in markets as a sets of competing firms using similar technologies and/or manufacturing processes.
 - Competitor analysis starts from identifying the offerings that are in competition with one another

Value chain: A value chain is the combination of activities a business undertakes to move a product or service along its life cycle, including design, marketing, distribution, and customer support.

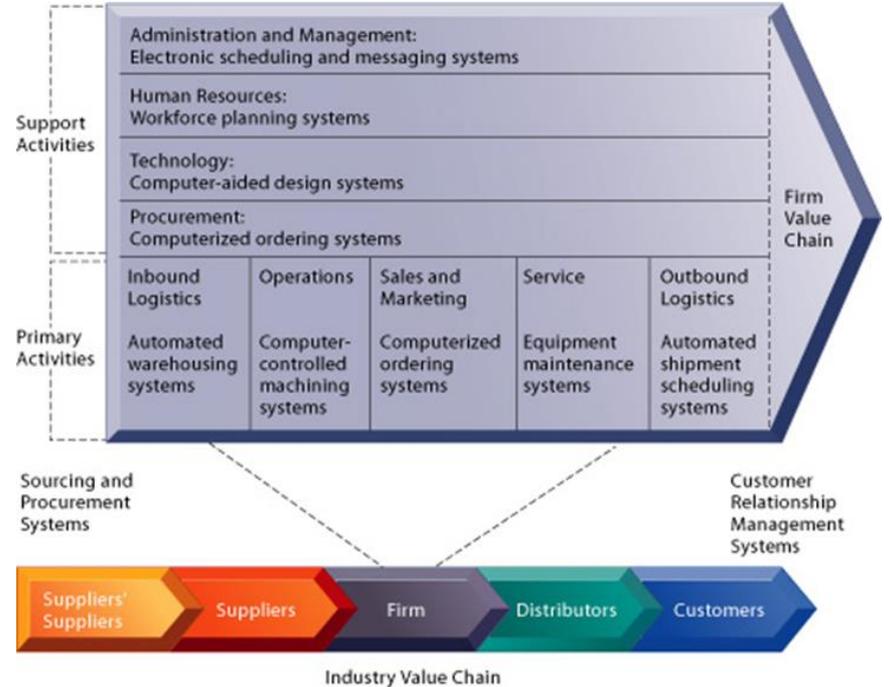


Value chain

**EXHIBIT II
WHO GETS WHAT FROM A \$25 BOOK**



Source: Simba Information Inc. Trade Book Publishing 1999. Standard and Poor's Publishing Industry Surveys, Brill's Content Magazine, October 1998, and BAH analysis.

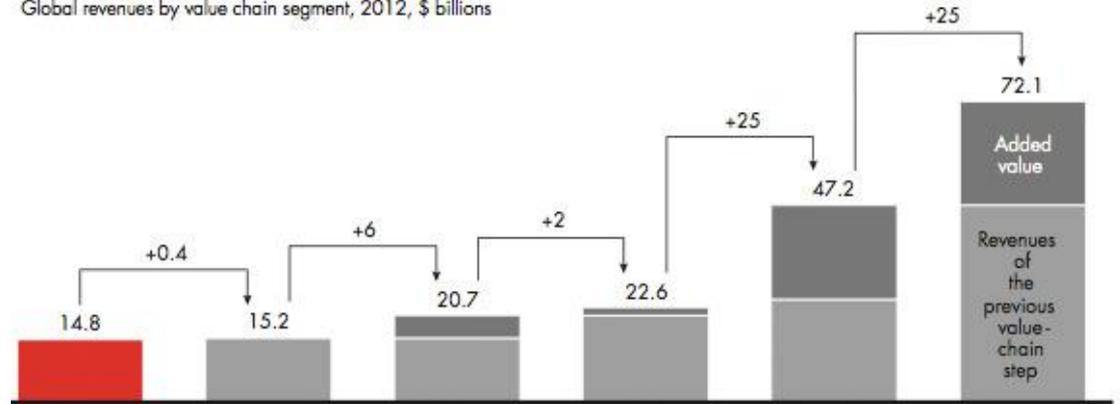




Example: The diamond value chain



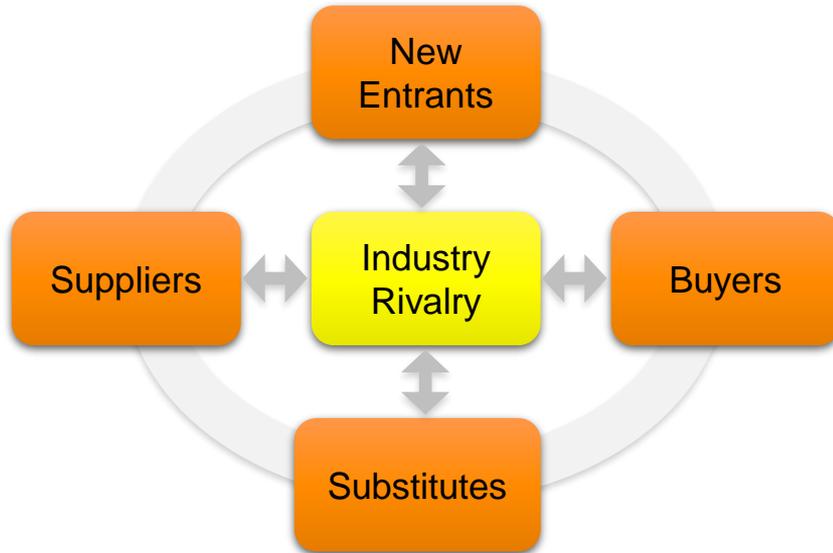
Global revenues by value chain segment, 2012, \$ billions



Source Bain &Company 2013



Porter's Rivalry (5 forces)



- **How are you positioned as compared to:**
- Possible new entrants
- Existing suppliers
- Likely substitutes for your product
- Buyers that (don't) know what they want
- How will customers react to changes?



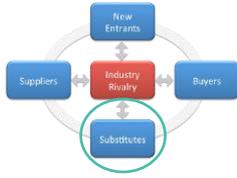
New Entrants

- **Industries that are hard to enter are cozy for insiders, but also often attractive to outsiders longing for the value being shared by so few.**
- **Barriers to entry make it harder for newcomers to play.**
 - Fierce reaction by incumbents (e.g. lawsuits over IP)
 - Capital (e.g. building a chip foundry)
 - Economies of scale (e.g. building a sales network)
 - Existing customer loyalty (e.g. Coke)
 - Application stickiness (e.g. learning curve or cost)



Buyer Power

- **Some attractive industries feature disorganized, small customers, with little purchasing and negotiating power**
 - How has the Internet changed this?
 - What about a niche?
- **Buyers gain power when:**
 - They become better informed (role of internet has been significant)
 - They are large, relative to the seller (e.g. superstores)
 - They are organized (e.g., a coop)
 - It is easy to switch to another supplier (e.g., when products are standard... try comparing mattresses or house brands)



Substitutes

– Number

- Industries with few substitute products are more attractive than those with many substitutes

– Opportunity

- Effective substitutes can often provide opportunities for upstarts

– Threat

- Just the threat has impact... "Spotify effect"—during times of high demand or fast change, when interlopers may see opportunities

– Industry killers

- Netflix to video store, Amazon to book stores



Supplier Power

- **Attractive industries feature small and disorganized suppliers**
- **Suppliers gain power when:**
 - They are large, relative to the buyers. (e.g. Alcoa).
 - It is difficult for buyers to switch to competing suppliers. (e.g. custom products, proprietary information)
 - They pose a credible threat of integrating forward and taking over the buyers' functions (e.g. direct sale or drop ship)



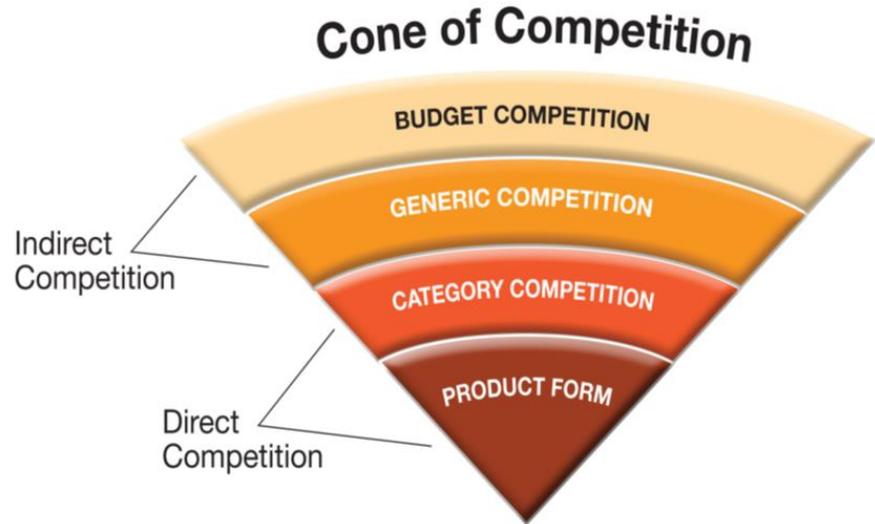
Rivalry

- **Usually, the attractive industries are controlled by monopolies, gentlemanly oligopolies or even cartels.**
- On the other hand, the more the players, and the more equally matched, the closer the industry approximates “perfect competition” and minimum profits.
- **Rivalry is reduced when:**
 - Power is concentrated
 - Competitors can truly differentiate.
 - Demand is stable and predictable.
 - Regulation takes the edge off.



Identifying the types of competitors

- Competitors are the firms that compete to serve the same or similar customers in the same marketplace
- Competitors can compete directly (cars) or indirectly (bicycles, mass transit)





Example: Types of competitors for Starbucks



1) Product form

- Other products exactly like your product → Other gourmet coffee brands

2) Category competition

- Other products like your product – Brewed coffee from retailers like MacDonaldds and Dunkin Donuts

3) Generic competition

- Products with attributes similar to your product - Other beverages – all kinds!

4) Budget competition

- Other products that cost about the same and fulfill the desire – or solve the “problem” that could be candy, a sandwich or even a cigarette!



Tools for CA: Competitors Table

Organizes competitors using crucial dimensions of competition, plus effectiveness, power, trajectory, likely changes...

						
 Lifetime Warranty	✓		SOME PRODUCTS	SOME PRODUCTS	SOME PRODUCTS	SOME PRODUCTS
 Made in the USA	✓		✓	SOME PRODUCTS	SOME PRODUCTS	SOME PRODUCTS
 Free Shipping	✓		SOME PRODUCTS	SOME PRODUCTS	SOME PRODUCTS	SOME PRODUCTS
 Green Manufacturing	✓	✓	✓	SOME	✓	✓
 Customer Service	EXCELLENT ★★★★★	BAD ☆☆☆☆☆	GOOD ★★★★☆	OKAY ★★★★☆	GOOD ★★★★☆	GOOD ★★★★☆
 Ease of Return	EXCELLENT ★★★★★	DIFFICULT ☆☆☆☆☆	OKAY ★★★★☆	BAD ☆☆☆☆☆	OKAY ★★★★☆	OKAY ★★★★☆
 Product Recalls	✓ NONE	YES	✓ NONE	YES	YES	✓ NONE

	Market Share	Quality	Cost	Effective-ness	Power	Aggres-siveness
Competitor 1	15%	H	H	M	M	
Competitor 2	25%	L	L	H	H	very
Competitor 3	5%	M	M	L	L	
Competitor 4	20%	L	L	H	H	slipping
Competitor 5	15%	M	M	H	L	



Tools for CA: Strategic Groups

Strategic group analysis does exactly what it says—it **organizes competitors into groups based on similarity of strategy.**

According to the Business-Level Strategies theory, there are **two types of competitive advantage** that an organization must choose between:

Cost Leadership: ensuring you cost less than your competitors.

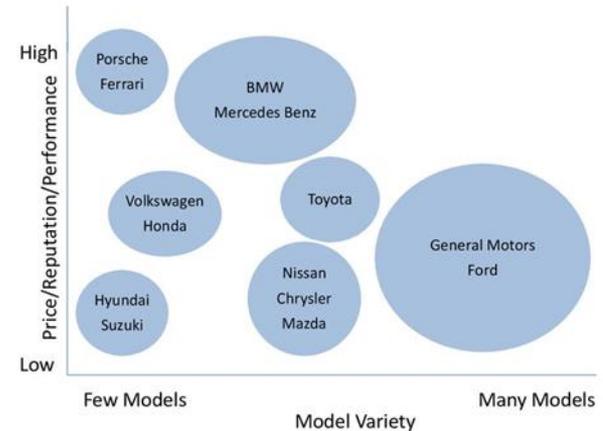
Differentiation: ensuring you are different from your competitors.

There are also **two types of competitive scope** than an organization must choose between:

Broad market: serving a diverse market.

Narrow market: focusing on a niche market.

A Strategic Group Map of Automobile Manufacturers





Extension to strategic grouping: Perceptual mapping

Perceptual mapping, also known as positioning mapping, **visualizes customers' perception of a company and its competitors**

→ Choose two relevant factors to use as the basis for comparison. Then, plot where your business and your competitors fall on the spectrum of those two factors.

POSITIONING MAP ON THE LUXURY CAR MARKET

Possible Quadrants...

- Satisfaction vs. Importance
- Urgent vs. Importance
- Quality vs. Cost
- Risk vs. Value
- Price vs. quality

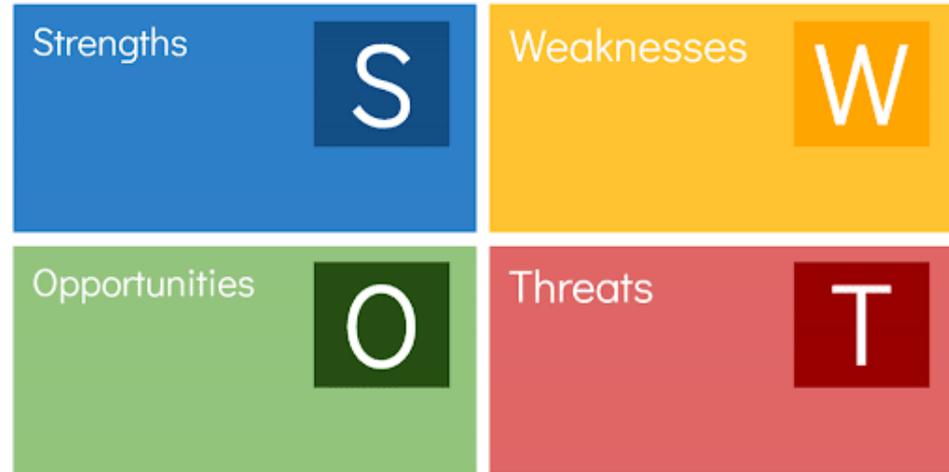




Tools for CA: Competitive analysis

SWOT

- SWOT analysis will give you the strategic view of the main opportunities and challenges your company is facing in the current competitive situation





Competitor analysis: SWOT



Strengths

- What does your competition do really well?
- What are they known for?
- What attracts customers to them?
- Why do customers ultimately end up purchasing from your competitors?

Weaknesses

- What do your competitors' customers regularly complain about?
- What problems have you experienced when you "shopped" with them?
- What products or services should they offer but don't?

Opportunities

- Are your competitors doing anything that presents an opportunity for your business?
- Have they stopped carrying any products?
- Have they changed any of their services?

Threats

- Is your competition doing anything that presents a threat to your business?
- Have they lowered their prices recently?
- Are they offering new products or services?
- Are they moving to a new location closer to you?

Market analysis exercise

- In groups: Perform a market analysis of North American/European mining industry from an exploration company perspective (1 h 50 min):
 - What is the estimated market size and market potential
 - Identify and characterize the key competitors with the suitable presented tools
 - Present a SWOT analysis based on the above
- Present the results to other groups (20 min/team)