

Product Analysis and Development

Prepared by Dr. Aya Mohamed

Lecture 2

جامعة الجميع الذكية

تسعى لتكون الكيان الأول الذي يتبنى مبدأ المجتمع التعليمي
التعاوني ويقدم العلم مقابل العمل لتنمية وبناء المجتمعات.

ENT 614
Product Analysis



جامعة الجميع الذكية
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Module 1

Product Analysis: Types, Methods, and Examples

Lecture 2



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Dr. Aya Mohamed

- Why Is Product Analysis Necessary?
- Examining the Difference Between Product Screening and Product Analysis
- What Is the Difference Between Customer Analysis and Product Analysis?
- Difference Between Ladle Analysis and Product Analysis

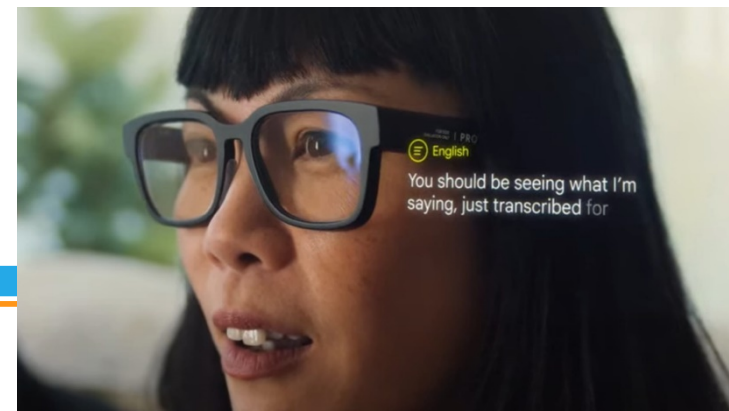
Importance of Product Analysis

1- Understand the Target Market for Your Product.

A target market is the segment of consumers most likely to want or need a business's products or services.

- You can't create a product that people will want to buy if you don't know what they want.

Product analysis helps you figure out the needs and wants of your target market.



Importance of Product Analysis



1- Understand the Target Market for Your Product.

Factors to consider when defining your target market

➤ Demographics

like their age, gender, employment status, life stage, family structure, religion and income **EXAMPLE**

- ☐ College students with a part-time job

- ☐ Women ages 40–50 who are employed full time with a yearly income of at least

\$60,000



Importance of Product Analysis



1- Understand the Target Market for Your Product.

Factors to consider when defining your target market

➤ Geographics

- Whether they live in a rural, suburban or urban environment
 - Which area of the country they live in
 - Their local language and time zone **EXAMPLE**
- ☐ Women live in villages in certain country, work with their husbands
 - ☐ Sail men live by the red sea in country...

Importance of Product Analysis

1- Understand the Target Market for Your Product.

Factors to consider when defining your target market

➤ Psychographics

Psychographics describe the intrinsic personal qualities of people in your target market. This includes things like their hobbies and leisure activities, entertainment interests and preferred sources of information.

Example:

- Working persons having their morning coffee at 8:00 o'clock



Importance of Product Analysis

1- Understand the Target Market for Your Product.

Factors to consider when defining your target market

➤ Behavioral patterns

Behavioral patterns are those that define your customers' purchasing habits.

- ❑ purchasing behavior, occasion-based behavior, the usage rate of your products, purchase reasoning, customer loyalty, and how they interact with your brand

Example:

- Moms having very small kids and using diapers



Importance of Product Analysis

2- Understand Your Competition.

Business competition is the contest between organizations that provide similar products or services or that target the same audience of consumers. Businesses compete to convert and retain customers, increase revenue and gain more market share.

Types of competition in business

Direct competition

Direct competitors are brands or businesses that sell the same products or services to the same target audience.

Characters:

- They operate within the same industry
- They provide the same or similar products or services
- They target the same audience of consumers
- They satisfy the same customer need
- They use the same channel of distribution



Types of competition in business

Indirect competition

Indirect competitors provide products or services that are not the same but that satisfy the same consumer needs. A great example of indirect competitors would be two different styles of restaurants. For example, a fast-food restaurant and a buffet restaurant do not provide the same type of product, but they satisfy the same customer need of hunger.

Characters:

- ☐ They operate in the same industry
- ☐ They satisfy the same need
- ☐ They target the same audience

Types of competition in business

Replacement competition

Replacement competitors are brands and businesses that can completely replace existing organizations by producing new products or services that better satisfy the needs of their target audience.

Example: mobile phone manufactures eventually replaced manufacturers of landline phones because they fulfilled the same need in an improved, more convenient way.

- You can tell if an organization is a replacement competition if it offers an existing product or service in a new, innovative way the more successfully satisfies the needs of consumers



Importance of Product Analysis

3- Understand the Costs Associated With Making and Selling Your Product.

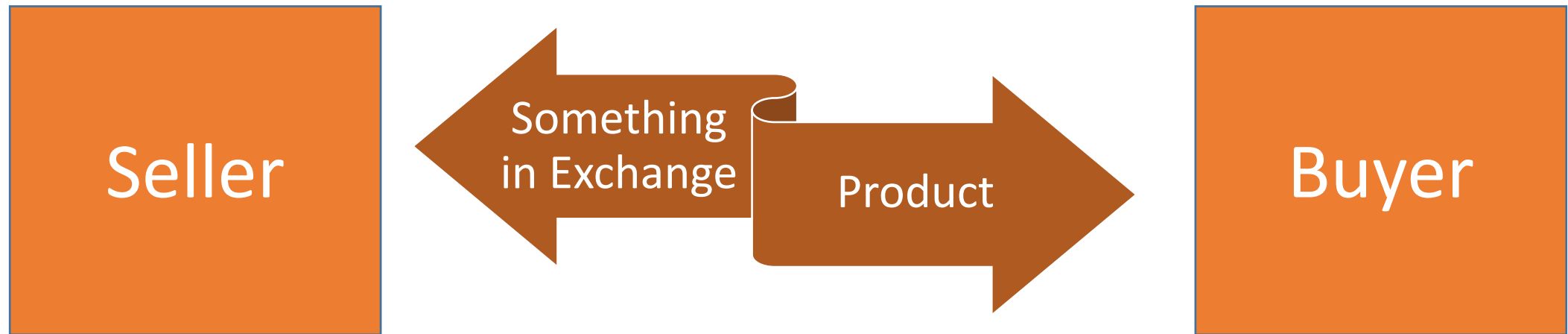
Pricing and Profitability

Price: that which is given in return for a product in a commercial exchange.

Profit is the amount of revenue that remains after accounting for all expenses, debts, and other costs.

Product profitability, is how much money a product makes minus what it costs to build, sell, and support it.

Commercial Exchange



- **Product:** good or service
- **Buyer:** consumer or business customer
- Something in exchange: **price**

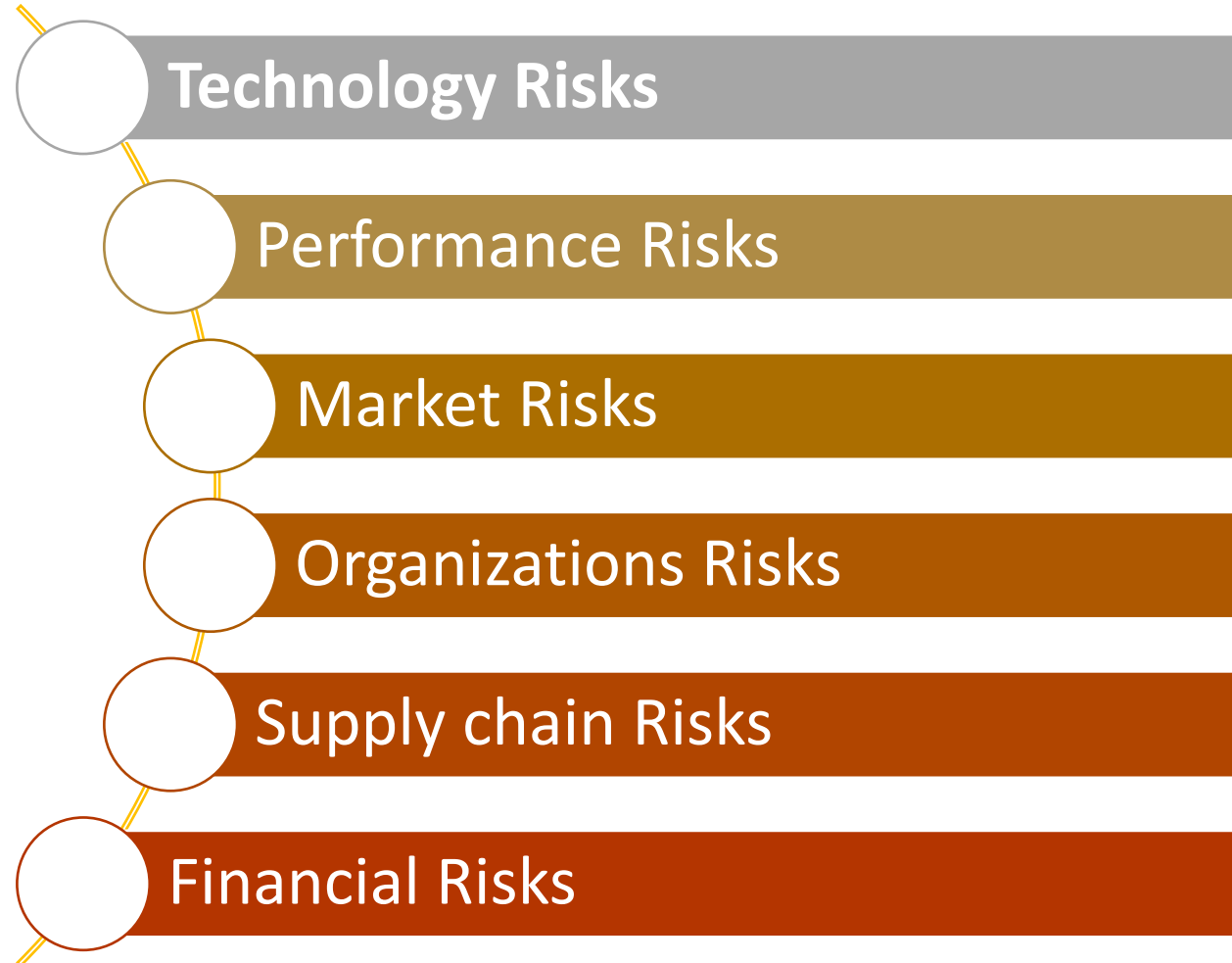
Importance of Product Analysis

4- Understand the Risks Associated With Making and Selling Your Product.

Definition of Risks

All the uncertainties and risks that can cause a product development effort to be unsuccessful.

Risks during new product development



Risks during new product development

• **Technology risks** – When incorporating new technology in a product, there's a chance your team may have blind spots or lack specific capabilities that could cause roadblocks during development.

Solution: Bringing in outside experts, such as an advanced manufacturing partner, can fill in knowledge gaps and add capabilities to your project team.



Risks during new product development

•5 Critical Risks Facing the Technology Industry

- 1) Cyber Security Awareness of cyber risk increases every day as more and more businesses are threatened with some form of cyber attack. Yet companies still neglect to prepare for such threats
- 2) Robots and Artificial Intelligence If a robot malfunctions, who is at fault? The user or the manufacturer?
- 3) Steep Pressure to Innovate
- 4) Workforce Shortage
- 5) Lacking in Diversity

Risks during new product development

Technology Risk Template

A template is used to perform security risk and vulnerability assessments in your business.

IT Professionals can use this as a guide for the following:

Identify the source of threat and describe existing controls

Risk actions and escalation points			
Group	Group description	Action required for risk	Risk escalation
12–16	Red—Extreme	Action required: risks that cannot be accepted or tolerated and require treatment	Escalated to the Head of Authority and executive Control strategy developed and monitored by the Head of Authority or Executive
5–11	Yellow—Moderate	Potential action: risks that will be treated as long as the costs do not outweigh the benefits As Low As Reasonably Practicable (ALARP)*	Managed at functional or service group level Escalated to the relevant direct report to the Head of Authority for information
1–4	Green—Low	No action: acceptable risks requiring no further treatment May only require periodic monitoring	No action required Monitoring within the functional area or business unit

Risk tolerance table		
Group	Threat	Opportunity
Action required (12–16)	Unacceptable risks Threats that your agency cannot tolerate at their current levels because their consequences coupled with their likelihoods are unacceptably high	Opportunities whose positive consequences, coupled with their likelihoods, are so large that your agency must pursue them because it cannot afford to forgo the benefits associated with them
Potential action (5–11)	ALARP risks Threats that your agency is prepared to tolerate at their current levels if the costs associated with implementing additional control measures outweigh the associated benefits	Opportunities that your agency may wish to pursue , as the benefits outweigh the costs associated with implementing the strategies required to realise the opportunity

Risks during new product development

Technology Risk Template

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Risks during new product development

- **Performance risks** – The function and reliability of the product in real-world conditions.

Solution: During the Develop and Validate steps, functional prototyping and testing are conducted to confirm the product works as intended.

The infamous Phone that Caught Fire



Risks during new product development

•Performance risks –

A product is considered to be a failure when its occupancy in the market leads to the following:

- ☐ Sudden withdrawal of the product from the market.
- ☐ The inability of the product to achieve profits.
- ☐ The inability to complete its life cycle.
- ☐ The inability of the product to retain market share to continue with its place in the market

Risks during new product development

• **Market risks** – customer sentiment, economic conditions, and unforeseen circumstances (a certain pandemic comes to mind). Timing is critical into the market (Too early and customers may not fully understand or appreciate the technology; too late and your competitors will already be established as market leaders).

Solution: Market research is critical to understand the customer's needs and wants.

Risks during new product development

- **Organization risks** – Internal conflict. Often, human resources are one of the biggest capability question marks on a project.

Solution: The Define and Feasibility steps can identify any capacity issues and ensure everyone is pulling in the same direction.

Risks during new product development

•**Supply chain risks** – Sourcing materials or components from vendors can reduce costs and internal workloads, but it also makes your product vulnerable to supply chain disruptions. There's always the possibility that a supplier can't meet its contractual obligations.

Solution: During material selection, you can vet suppliers for not just price but also reliability. Also, since the plan encourages cross-department communication, your entire team will stay updated on supply chain issues and make quicker decisions.

Risks during new product development

- **Financial risk** – Certain stakeholders will be keeping an eye on the finances to make sure the project is a good investment. Restricted access to capital or arising issues that put the project over budget can prevent a new product from crossing the development finish line.

Solution: The right plan can lower overall development costs, accelerate speed to market, and enhance manufacturability – all things that can benefit the bottom line.

Importance of Product Analysis



Difference Between Product Screening and Product Analysis

Product Screening	Product Analysis
Product screening is identifying products that meet a particular set of criteria. This could include products that have a specific feature, are in a certain price range, or meet some other requirement. Screening helps you narrow down your options and focus on the products that are most likely to be successful.	product analysis is the process of studying a product to understand its strengths and weaknesses. Analysis helps you understand how well a product will meet your customers' needs and what improvements can be made.

Difference Between Customer Analysis and Product Analysis

Customer Analysis	Product Analysis
Customer analysis is studying your target market to understand their needs and wants. The information is then used to decide what features to include in your product and how to market it.	On the other hand, product analysis is the process of studying a product to understand its strengths and weaknesses. Analysis helps you understand how well a product will meet your customers' needs and what improvements can be made. As you can see, product analysis is just one piece of the puzzle for developing a successful product.

“Customer Analysis and Product Analysis are interlocked”

If you want to create a product that meets your customers' needs, you need to analyze what they want as well as how to deliver it.

Difference Between Ladle Analysis and Product Analysis?

Ladle Analysis	Product Analysis
Ladle analysis is studying the metal content of a sample to understand its composition. This information is then used to decide how to best use the metal.	On the other hand, product analysis is the process of studying a product to understand its strengths and weaknesses. Analysis helps you understand how well a product will meet your customers' needs and what improvements can be made. As you can see, product analysis is just one piece of the puzzle for developing a successful product.

The most popular product analysis methods:

1. KJ method
2. SWOT analysis
3. Value chain analysis
4. PESTLE analysis
5. Business model canvas
6. Competitive product analysis



Product Analysis Methods

KJ Method

invented in the 1960s by Japanese anthropologist **Jiro Kawakita**

The KJ method is a popular technique used to help understand a product.

It's also known as the Affinity Diagram, and it's often used in product design and development.

The KJ method is a way of organizing information by **grouping it into categories**.

This can be done by **brainstorming with a group** and then sorting the information into groups.



The advantage of using the KJ method is that it helps you see patterns and relationships between ideas

How it looks like

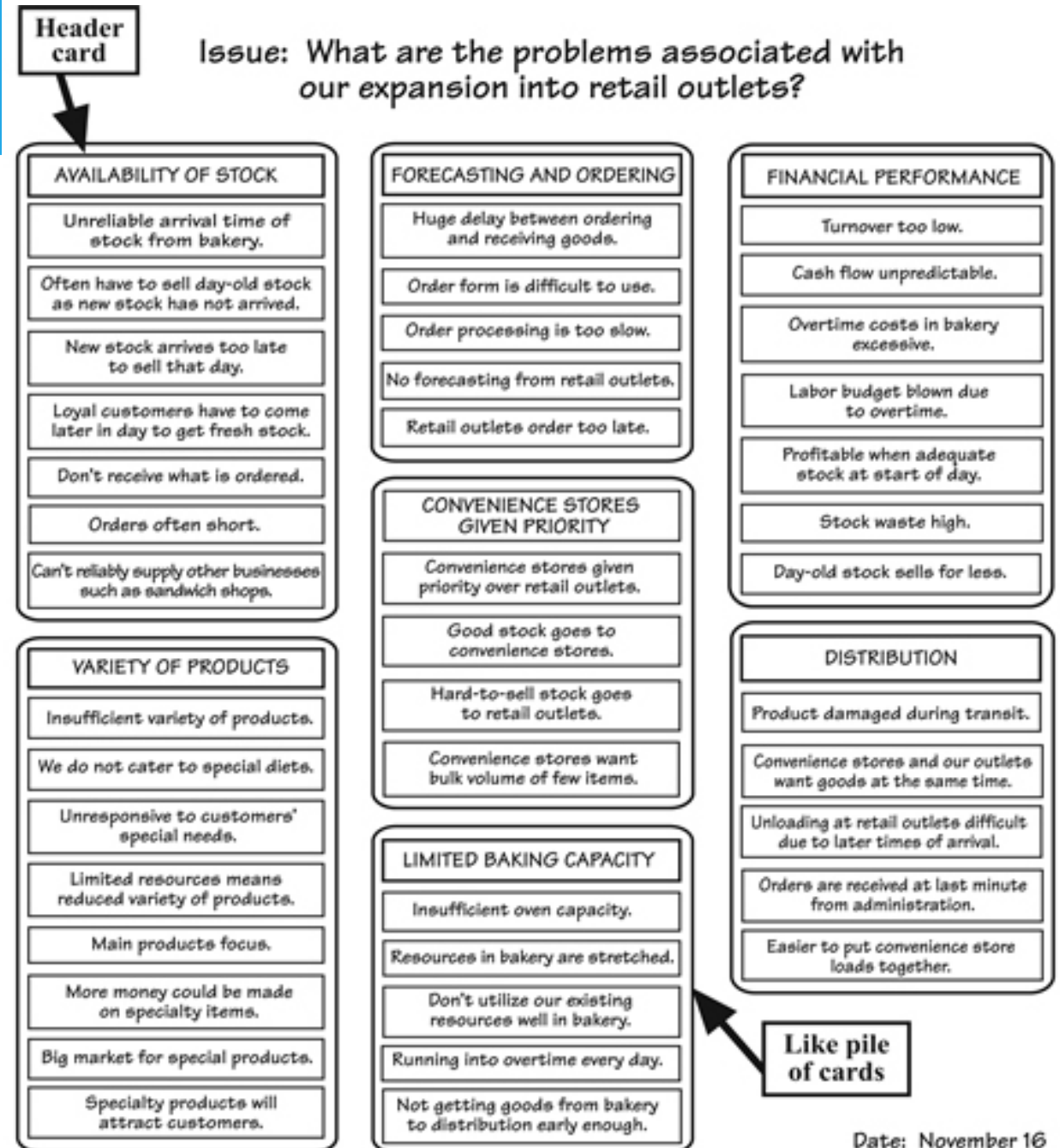
KJ Method or Affinity Diagram

Is the most effective when

1- the issue is complex

2- the issue is unorganized

3- the issue requires the
involvement and support of a
group



Affinity Diagram or KJ Method

1.Choose a facilitator.

The facilitator is responsible for leading the group through the steps to make the affinity diagram.

2.State the issue or problem.

Before beginning, the group should state the issue or problem to be addressed. It is often useful to state the problem in the form of a question. In the example, the question is, “What are the problems associated with our expansion into retail outlets?” It is essential that the group understands the aim of the session.

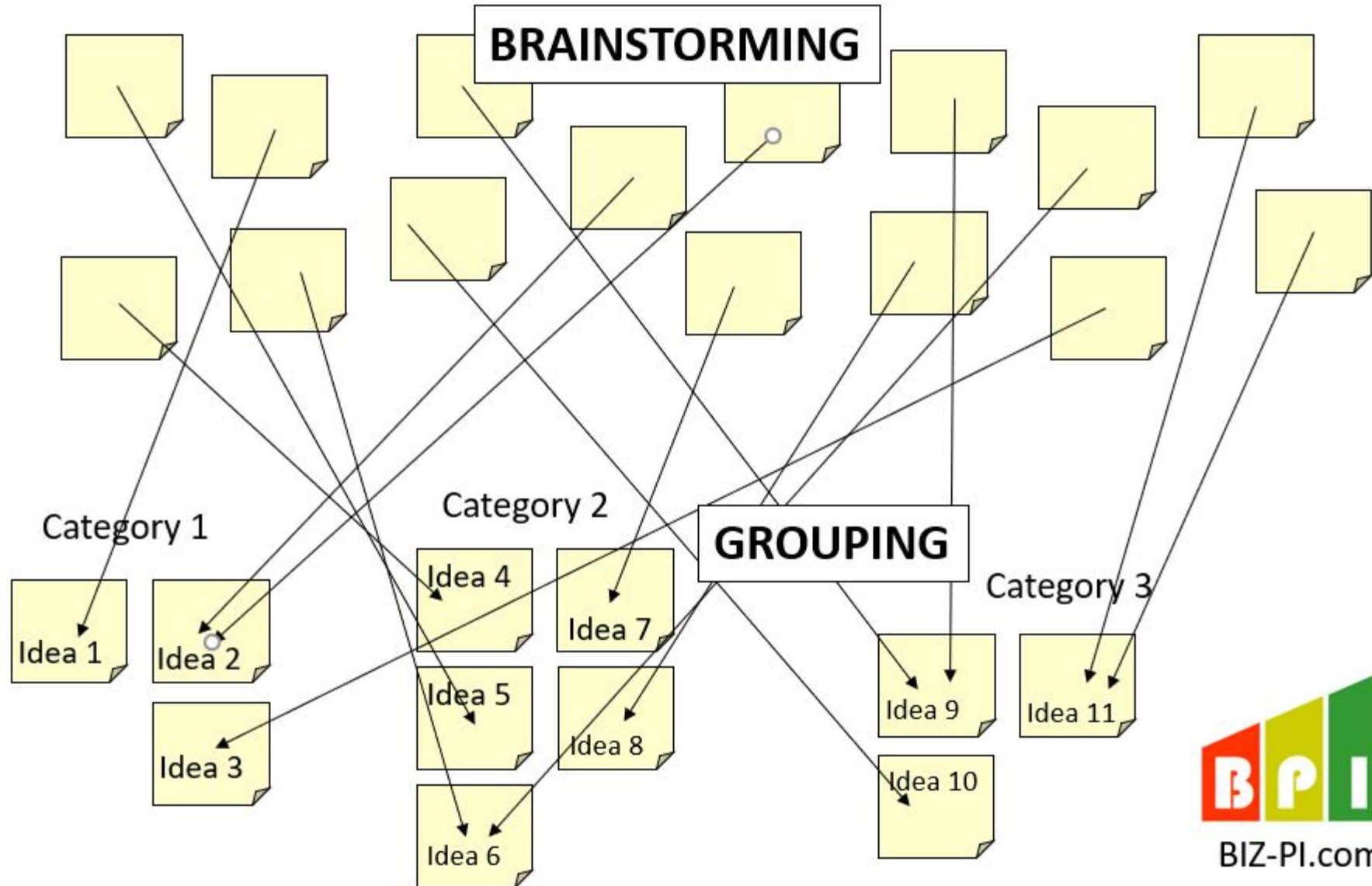
Affinity Diagram or KJ Method

1. Brainstorm and record ideas.

Next, brainstorm ideas concerning the issue statement. Brainstorming for ideas to make an affinity diagram uses a mixture of traditional brainstorming and the Crawford slip method. **In traditional brainstorming**, individuals generate ideas, which they voice in turn. Ideas are given by each person in the group until no one has anything else to add. **In the Crawford slip method**, ideas are recorded on index cards, slips of paper, or sticky notes, in silence. There is no verbal exchange. Brainstorming for the affinity diagram uses a mixture of these two approaches.



AFFINITY DIAGRAM (KJ METHOD)



Affinity Diagram or KJ Method

Importance of affinity Diagram

1. Find creative solutions to difficult problems by involving people from diverse fields
2. Sort through large volumes of confusing data and quickly organize them in a logical, easy-to-understand manner
3. Encourage the participation of everyone involved, which leads to uncovering new patterns of thinking and unique solutions
4. Generate useful discussions that will lead to innovation/ effective solutions
5. Present your analysis to others in the company in an easy-to-understand manner



Many different types of analyses can be done on a product.

There is a difference between product screening, ladle analysis and product analysis

But customer analysis and product analysis are interlocked

“ Without product analysis, you would be flying blind and making decisions based on guesswork.”

- The Importance of Product Analysis
- Examining the Difference Between Product Screening and Product Analysis
- What Is the Difference Between Customer Analysis and Product Analysis?
- Difference Between Ladle Analysis and Product Analysis
- KJ Method of product analysis

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Lecture 1

Thank You



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