

# IT 427

## Entrepreneurship and Innovation in IT

Chapter -1-

We don't "study" entrepreneurs,  
we become entrepreneurs!

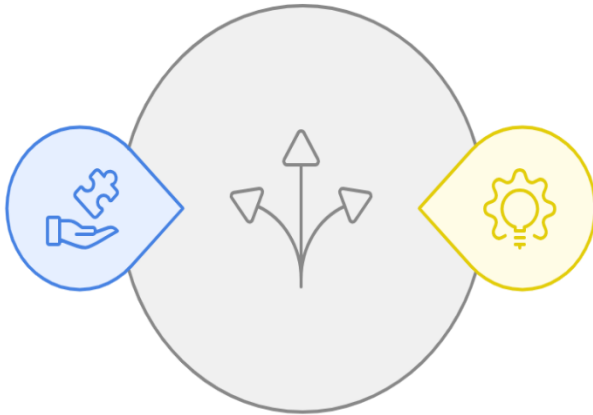
# Outline

- Definitions: Innovation, Entrepreneurship, Technopreneur, Startup
- Why you should {NOT} work at a startup?
- Entrepreneurial Mindset
- Ideation
- Design Thinking
- Startup Team
- Your Startup
- End of Lecture Assessment!

# What is Innovation?

## Invention vs. Innovation

**Innovation**  
Using inventions in new  
ways to add value



**Invention**  
The creation of new  
devices or processes

Discovery

The initial  
spark of new  
ideas or  
knowledge

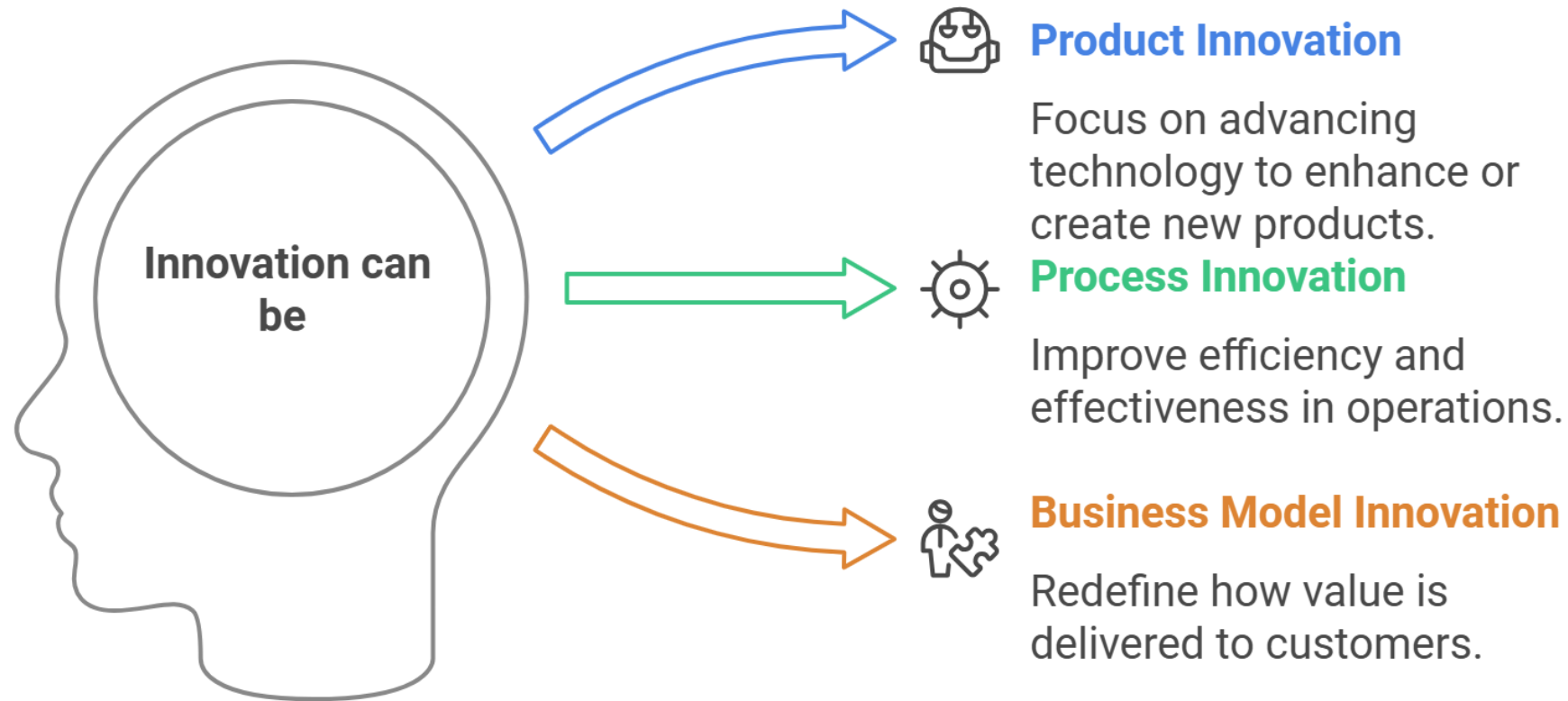
Invention

The process of  
creating new  
products or  
solutions

Innovation

The application  
of inventions to  
improve  
systems or  
processes

# What is Innovation?



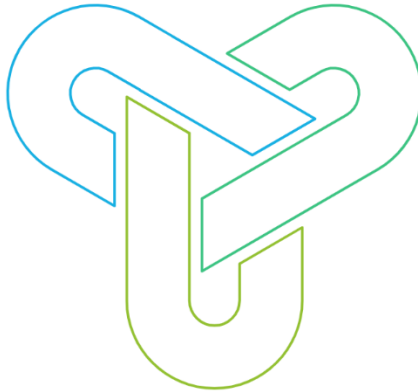
Product and Process innovation can be >> **incremental and moderate**,  
Business model innovation is almost >> **radical , risky, and transformative**

# Product Innovation

## Forms of Product Innovation

### New Features

Adding new functionalities to existing products



### New Product Development

Creating entirely new products like Fitbit or Kindle

### Performance Improvement

Enhancing existing products' performance, e.g., iPhone 11 camera

## Drivers of Product Innovation



Technological Advancements



Changes in Customer Requirements



Outdated Product Design

**Generally visible to the customer**  
Should result in a greater demand for a product.

# Process Innovation

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A process combines facilities, skills, and technologies to produce, deliver, and support a product or provide a service

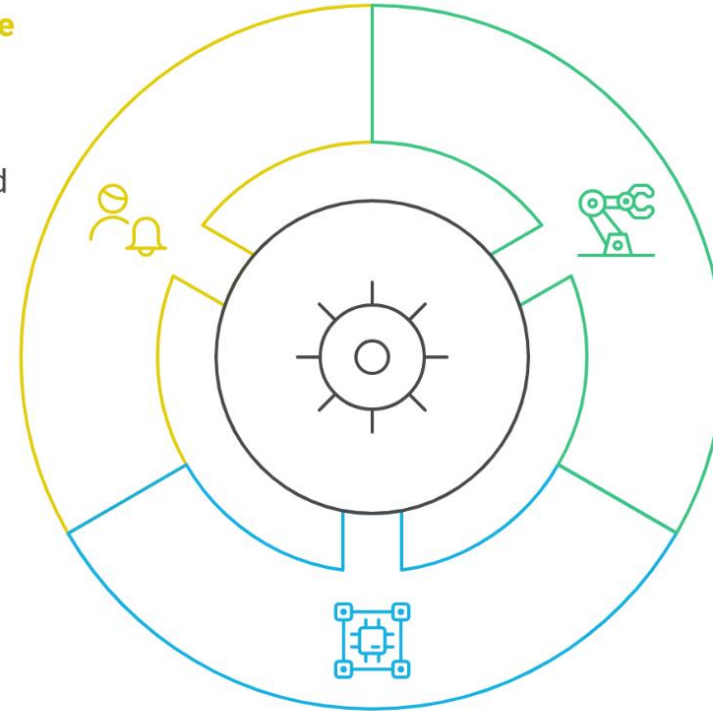
## Ways to improve processes

### Accounting and Customer Service

Automation and AI improve financial management and customer interactions.

### Manufacturing Changes

Innovations like 3D printing and robotics enhance production efficiency.



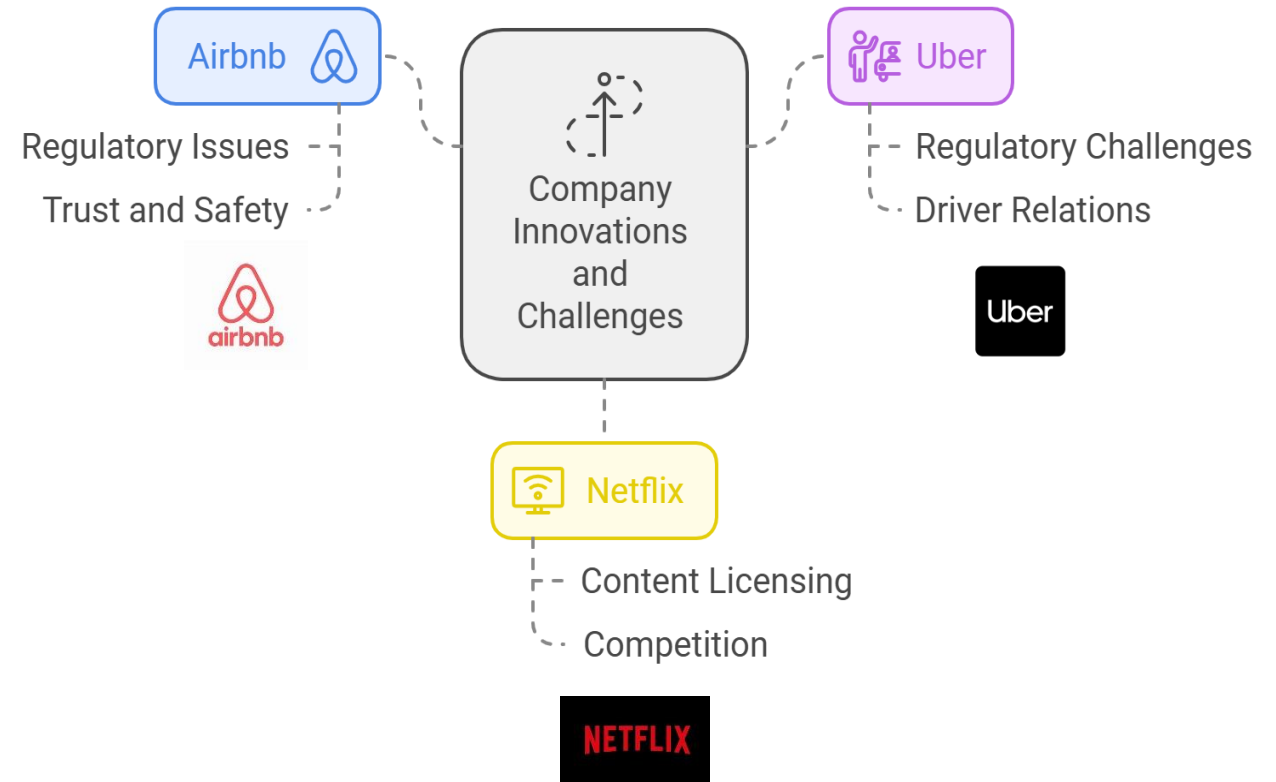
### Supply Chain Enhancements

IoT and blockchain streamline and secure logistics operations.

# Business Model Innovation

Refers to changes in how a product or service is delivered to the market.




- Is the greatest challenge among types of innovation
- The goal of improvement is to make the company successful and profitable.





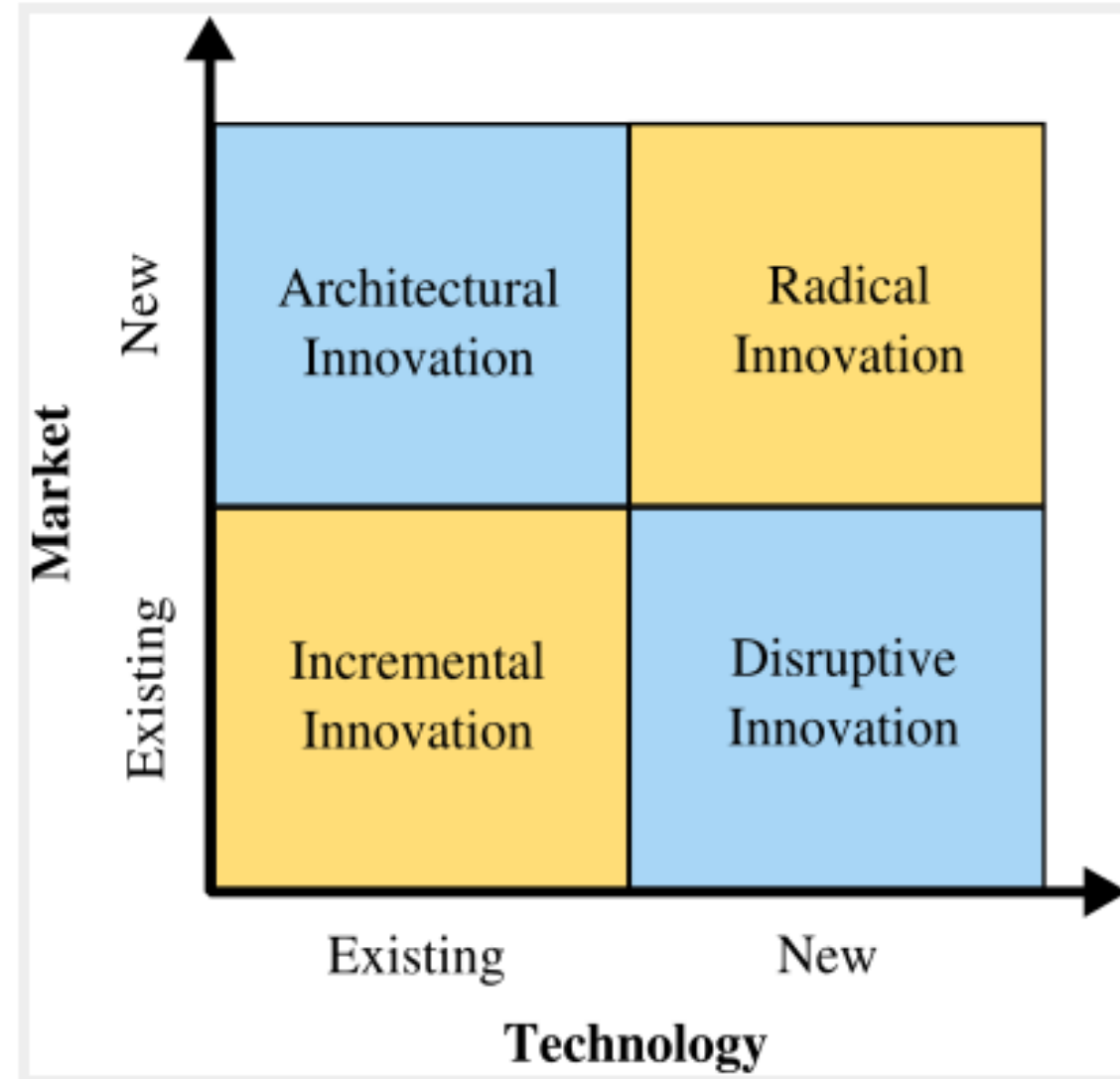
# Reading!

## Examples of business model innovation and their challenges

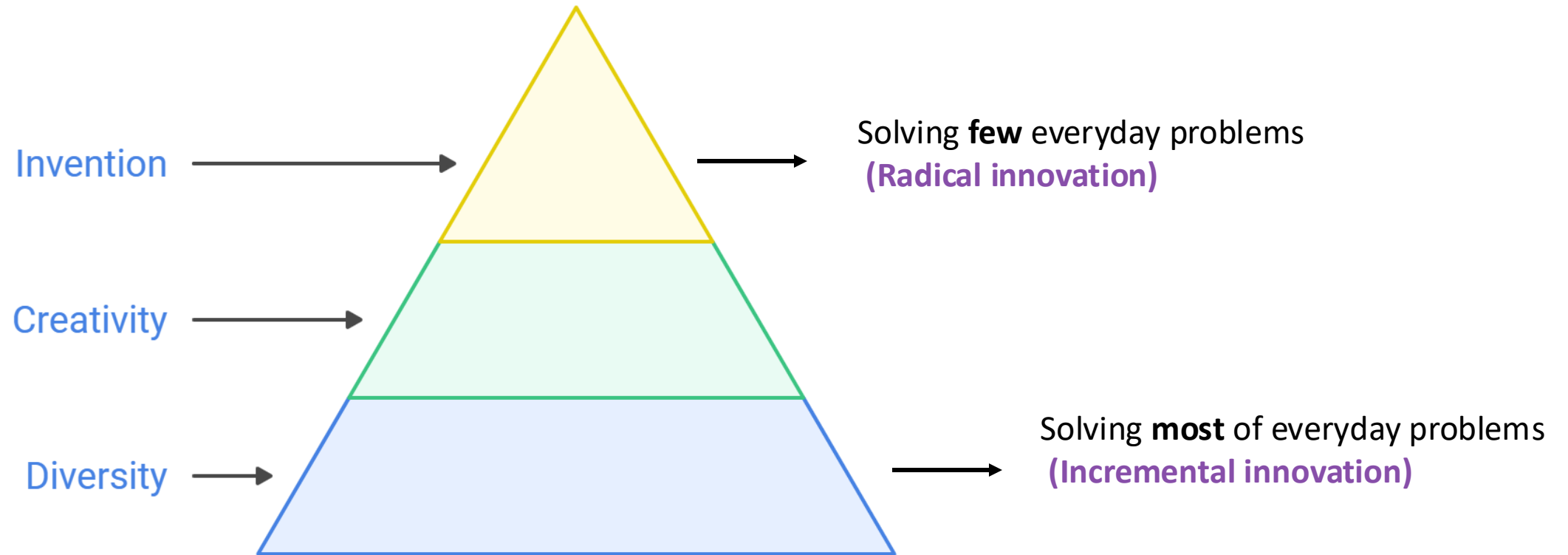
Company	Innovation	Challenges
	Transformed the hospitality industry by allowing individuals to rent out their homes or rooms to travelers.	<ul style="list-style-type: none"><li>• Regulatory Issues: Legal battles due to strict city regulations on short-term rentals.</li><li>• Trust and Safety: Ensuring safety and trustworthiness of hosts and guests.</li></ul>
	Disrupted the taxi industry by offering a ride-hailing service through a mobile app.	<ul style="list-style-type: none"><li>• Regulatory Challenges: Opposition from traditional taxi services and regulatory bodies.</li><li>• Driver Relations: Managing disputes overpay and benefits with drivers classified as independent contractors.</li></ul>
	Shifted from a DVD rental service to a streaming platform, and later to producing original content.	<ul style="list-style-type: none"><li>• Content Licensing: Securing rights to stream content from various studios.</li><li>• Competition: Intense competition from other streaming services like Amazon Prime, Disney+, and HBO Max.</li></ul>

# Types of Innovation

Based on Technology & Market



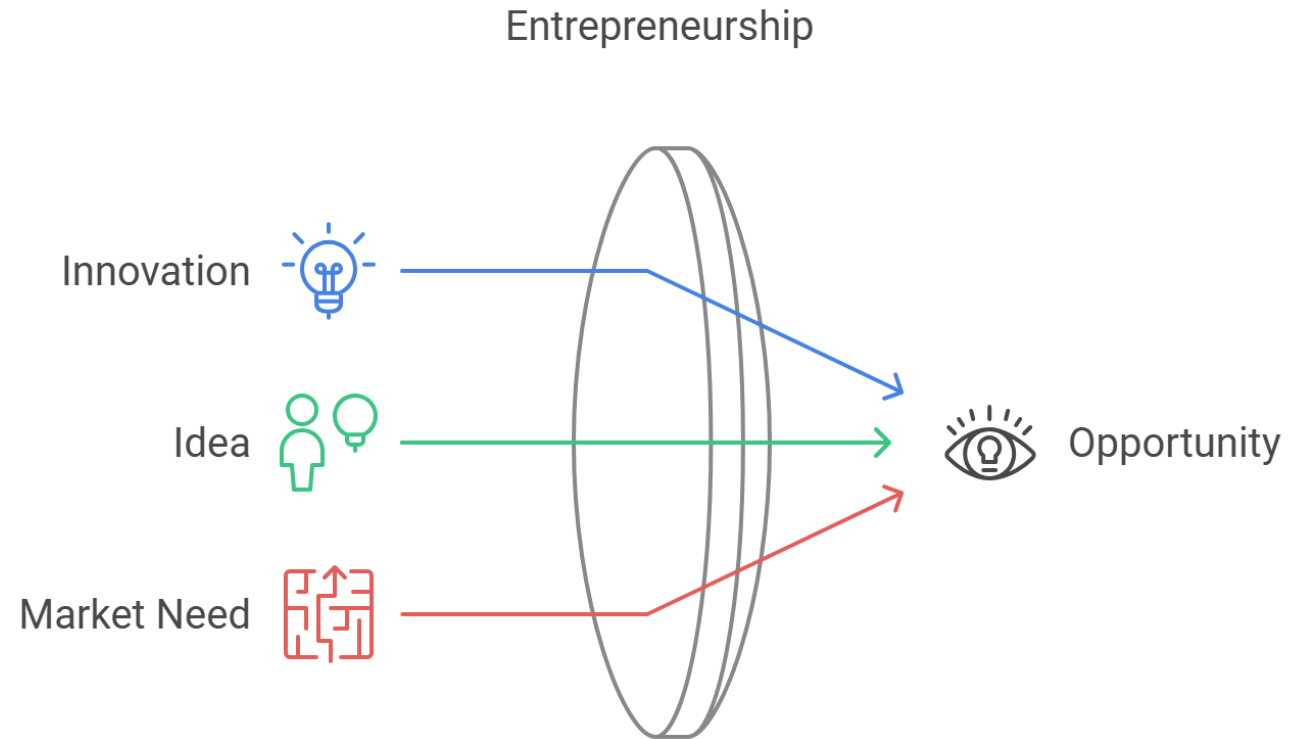
# Sources of Innovation



# What is Entrepreneurship?

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The **ability** and **readiness** to develop, organize, and manage a business enterprise, including its **uncertainties**, to achieve **profit**.



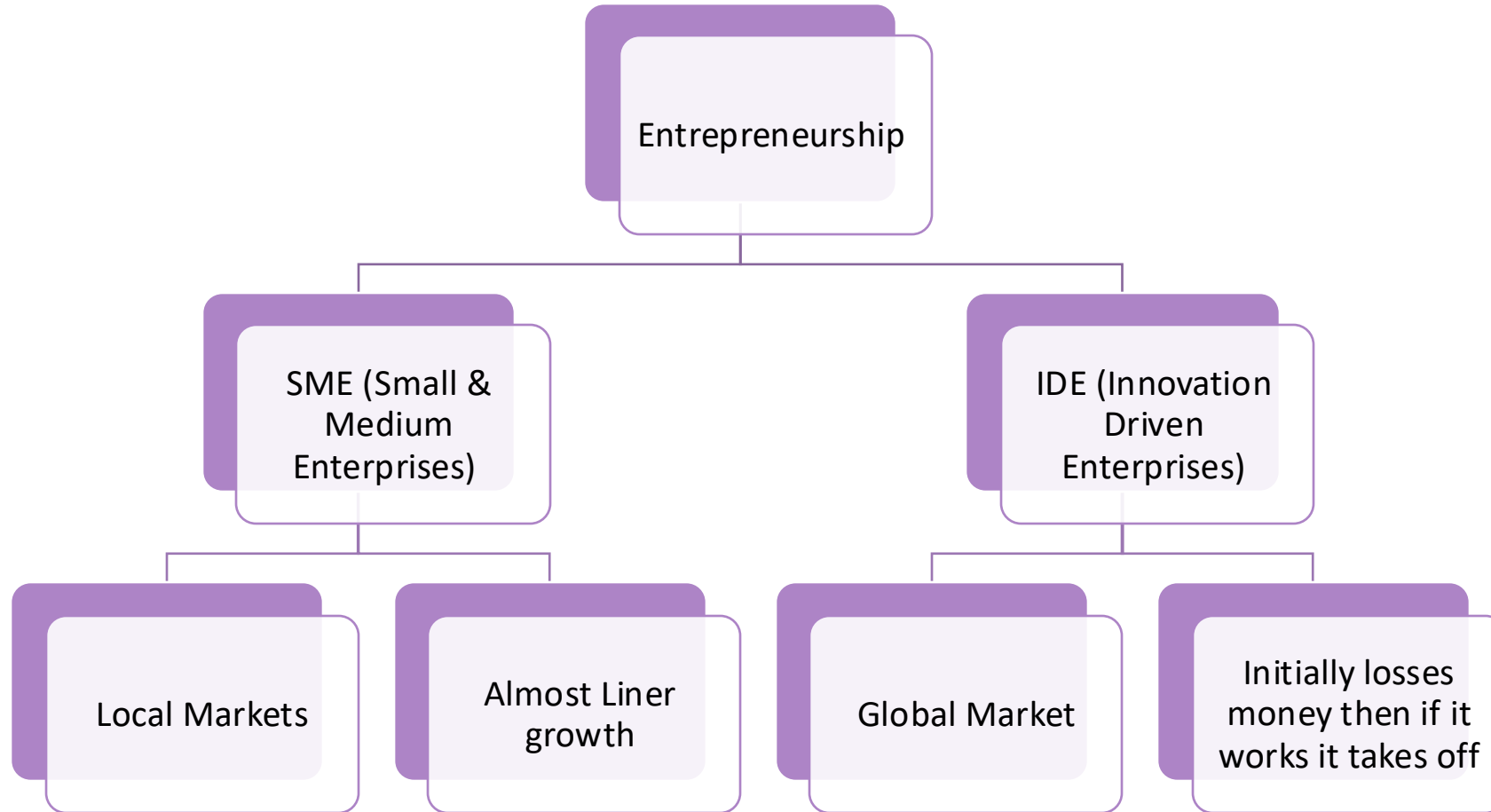
# Who is an Entrepreneur?

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Someone who creates a **new business** despite risk and uncertainty, aiming for profit and growth by identifying significant opportunities and assembling the necessary resources to capitalize on them.



# Types of Entrepreneurship

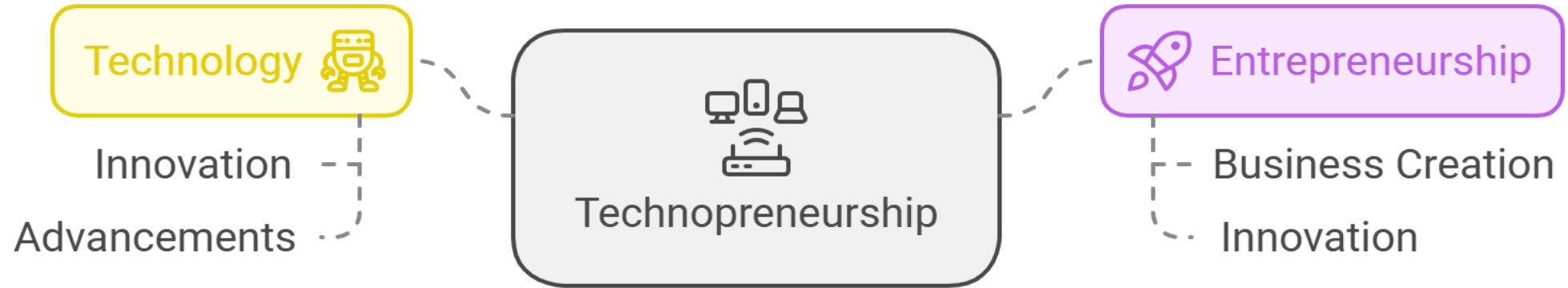




## Types of Entrepreneurship Organizations



# What is a Technopreneur?



- **Technopreneurship** is entrepreneurship in a technology intensive context.
- A process of merging technological and entrepreneurial talents and skills.

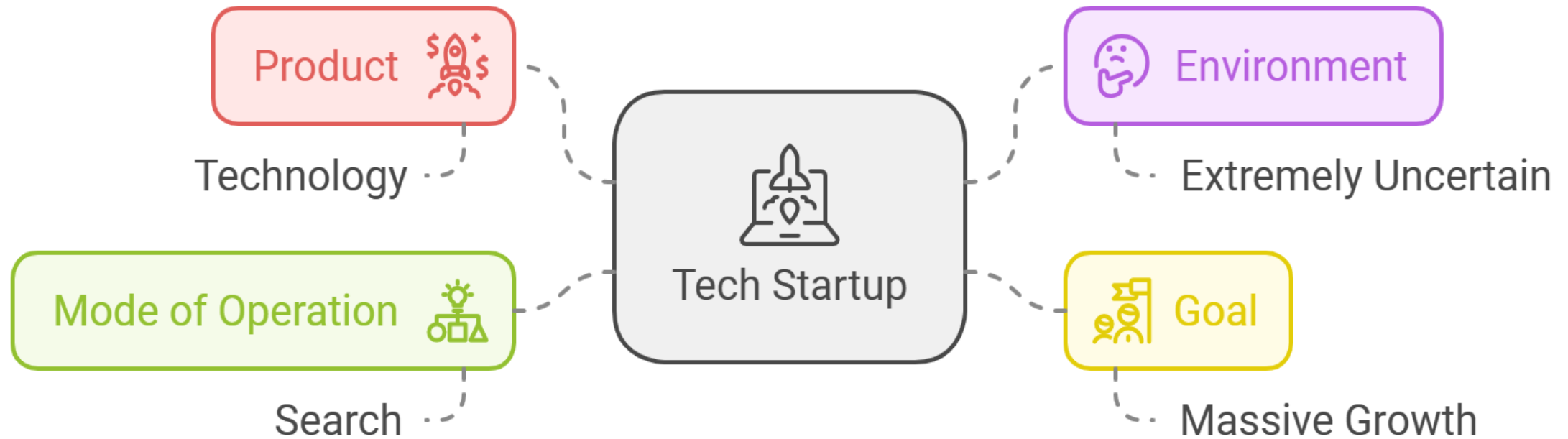


# What is a Startup?



- A **startup** is a human institution designed to **create** a new product or service under conditions of extreme **uncertainty**.
- A **startup** is NOT a smaller version of a large company. A startup is a temporary organization in search of a *scalable, repeatable, profitable* business model.

# What is a Tech Startup?



# Why should you work at a startup?

OPPORTUNITY , OWNERSHIP , FUN

# Why should you NOT work at a startup?

NOT GLAMOROUS , SACRIFICE , WON'T GET RICH ,  
JOINING VS FOUNDING A STARTUP



# Entrepreneurial Mindset

# Entrepreneurial Mindset

- A way of **thinking** that enables you to *overcome challenges*, be *decisive*, and *accept responsibility* for your outcomes.
- It is a **constant** need to **improve** your **skills**, learn from your **mistakes**, and **take** continuous **action on your ideas**.
- Anyone **willing** to do the work **can develop** an entrepreneurial mindset.



# Entrepreneur Personal Factors



# Growth vs. Fixed Mindsets







Ideation

An idea is nothing  
more nor less than  
a new combination  
of old elements

- James Webb Young







# IS YOUR INNOVATION IDEA A **VITAMIN OR PAINKILLER?**

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VITAMIN or PAINKILLER?



Something your target  
consumer **should** buy



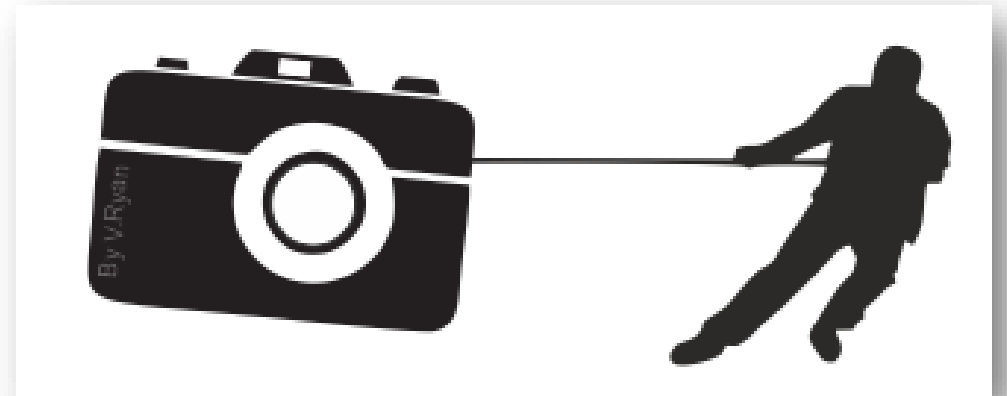
Something your target  
consumer **will** buy

# Technology Push or Market Pull

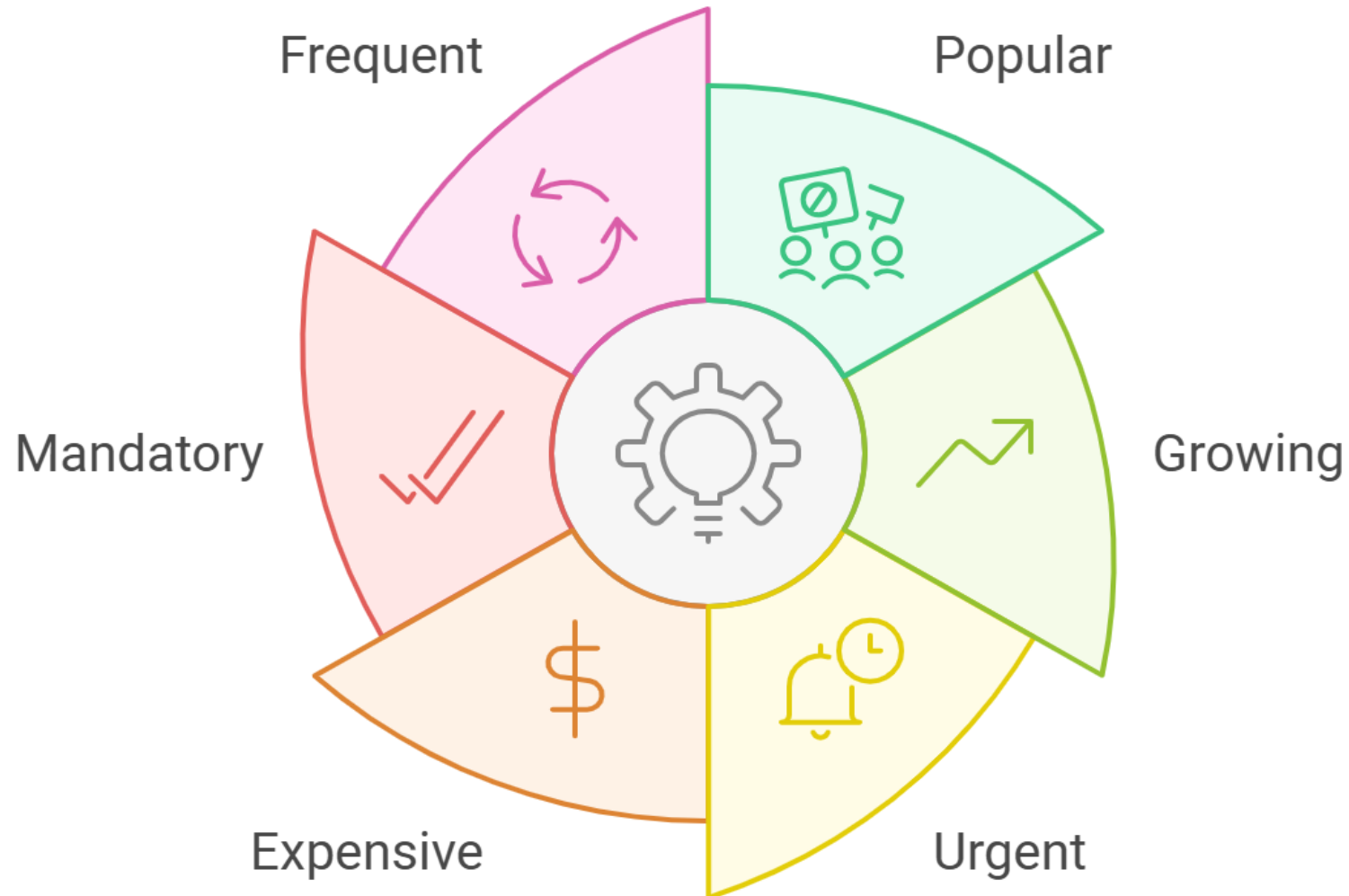
**Technology Push**



**Market Pull**

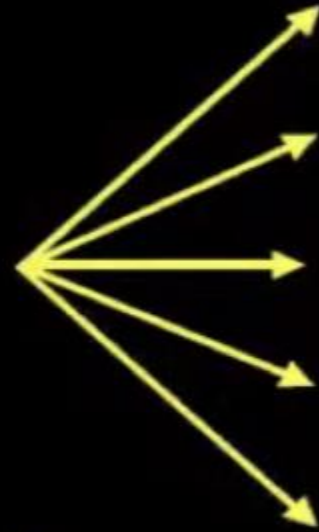


# Startup idea starts with a Problem..



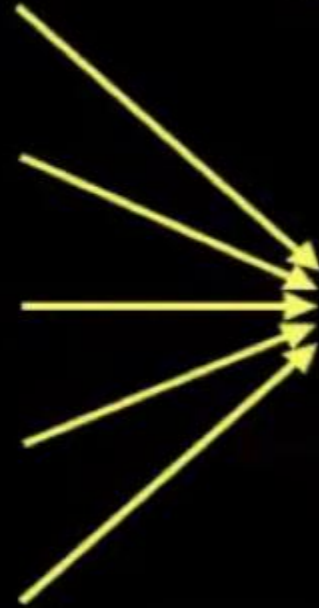


IDEATION



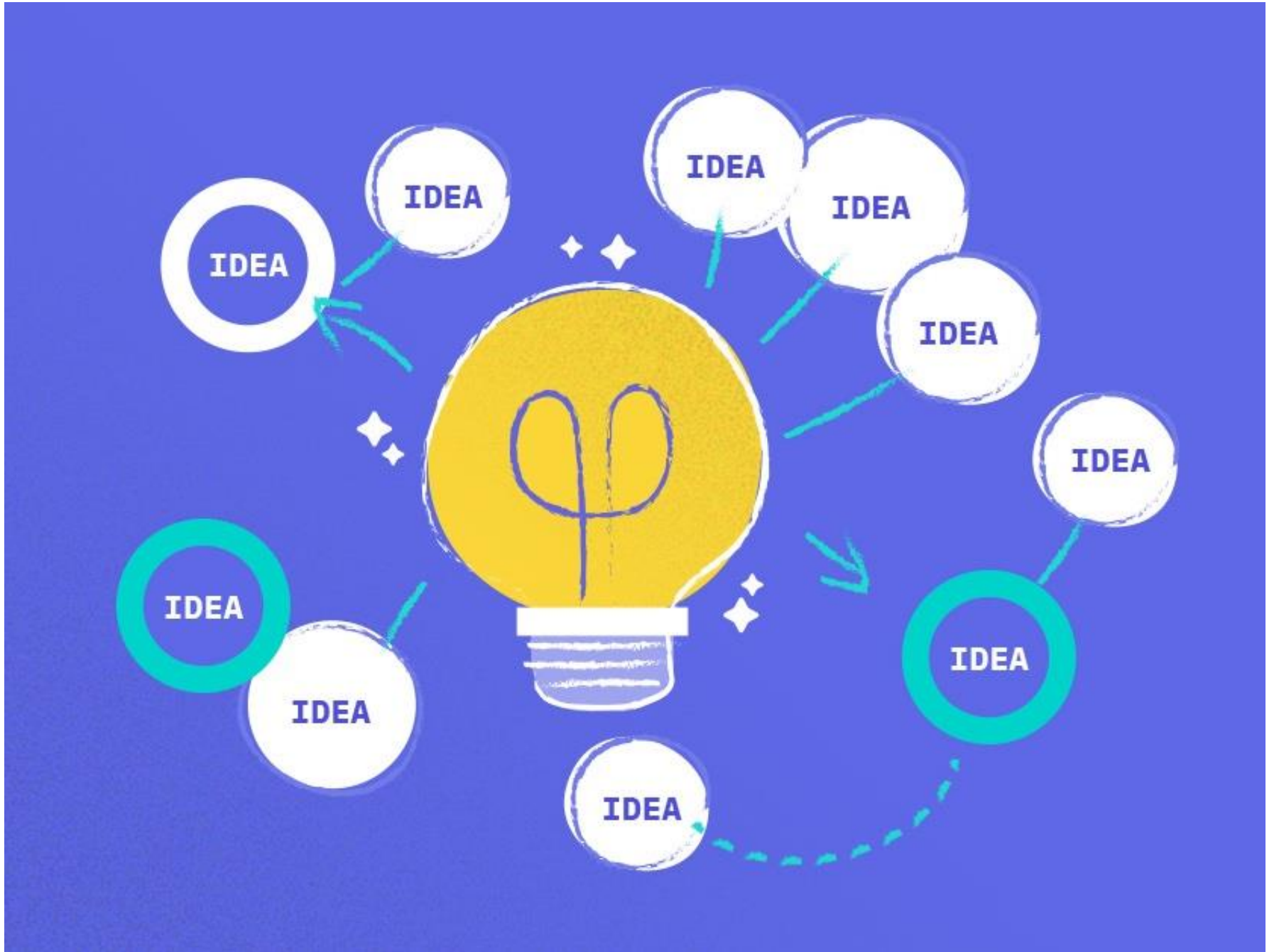
GOING FOR QUANTITY

SELECTION



NARROWING IT DOWN  
TO 1 IDEA

# Brainstorming



# Brainstorming Rules from IDEO.org

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## Defer Judgment

Creative spaces are judgment-free zones—they let ideas flow so people can build from each other's great ideas.



## Encourage Wild Ideas

Embrace the most out-of-the-box notions. There's often not a whole lot of difference between outrageous and brilliant.



## Build on the Ideas of Others

Try to use "and" instead of "but," it encourages positivity and inclusivity and leads to tons of ideas.



## Stay Focused on the Topic

Try to keep the discussion on target. Divergence is good, but you still need to keep your eyes on the prize.



## One Conversation at a Time

This can be difficult—especially with lots of creative people in a single room—but always think about the challenge topic and how to stay on track.



## Be Visual

Use colored markers and Post-its. Stick your ideas on the wall so others can visualize them.



## Go for Quantity

Crank your ideas out quickly. For any 60-minute session, you should try to generate 100 ideas.

# SCAMPER

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## **Substitute:**

Replace a thing, or concept with something else.



## **Combine:**

Unite. What? Who? Ideas? Materials?



## **Adapt:**

Adjust to a new purpose. Re-shape? Tune-up?



## **Modify:**

Change the color, sound, motion form, size. Make it larger, stronger, thicker, higher, longer. Make it smaller, lighter, slower, less frequent, reduce.



## **Put to another use:**

Change when, where, location, time, or how to use it.



## **Eliminate:**

Omit, get rid of, cut out, simplify, weed out...



## **Reverse:**

Change the order, sequence, pattern, layout, plan, scheme, regroup, redistribute

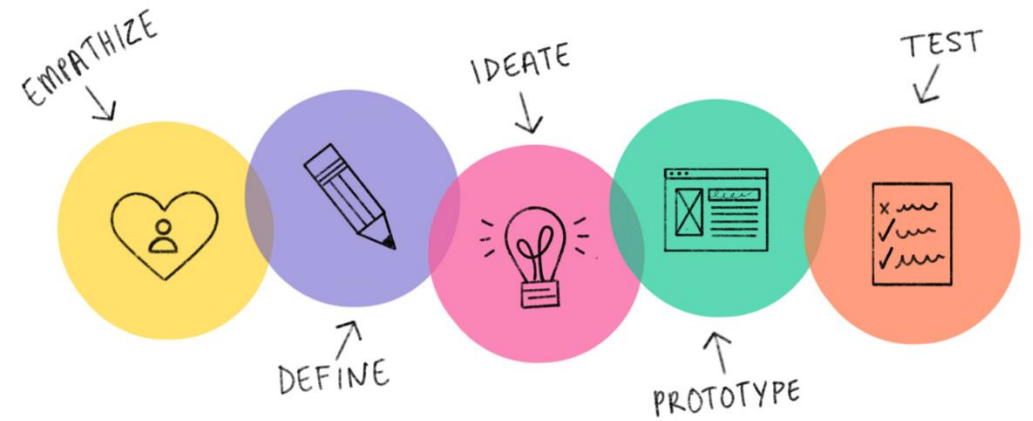
# Brainwriting

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## 6-3-5 Brainwriting

consists of 6 participants supervised by a moderator who are required to write down 3 ideas on a specific worksheet within 5 minutes, this is also the etymology of the methodology's name. The outcome after 6 rounds, during which participants swap their worksheets passing them on to the team member sitting at their right, is 108 ideas generated in 30 minutes.

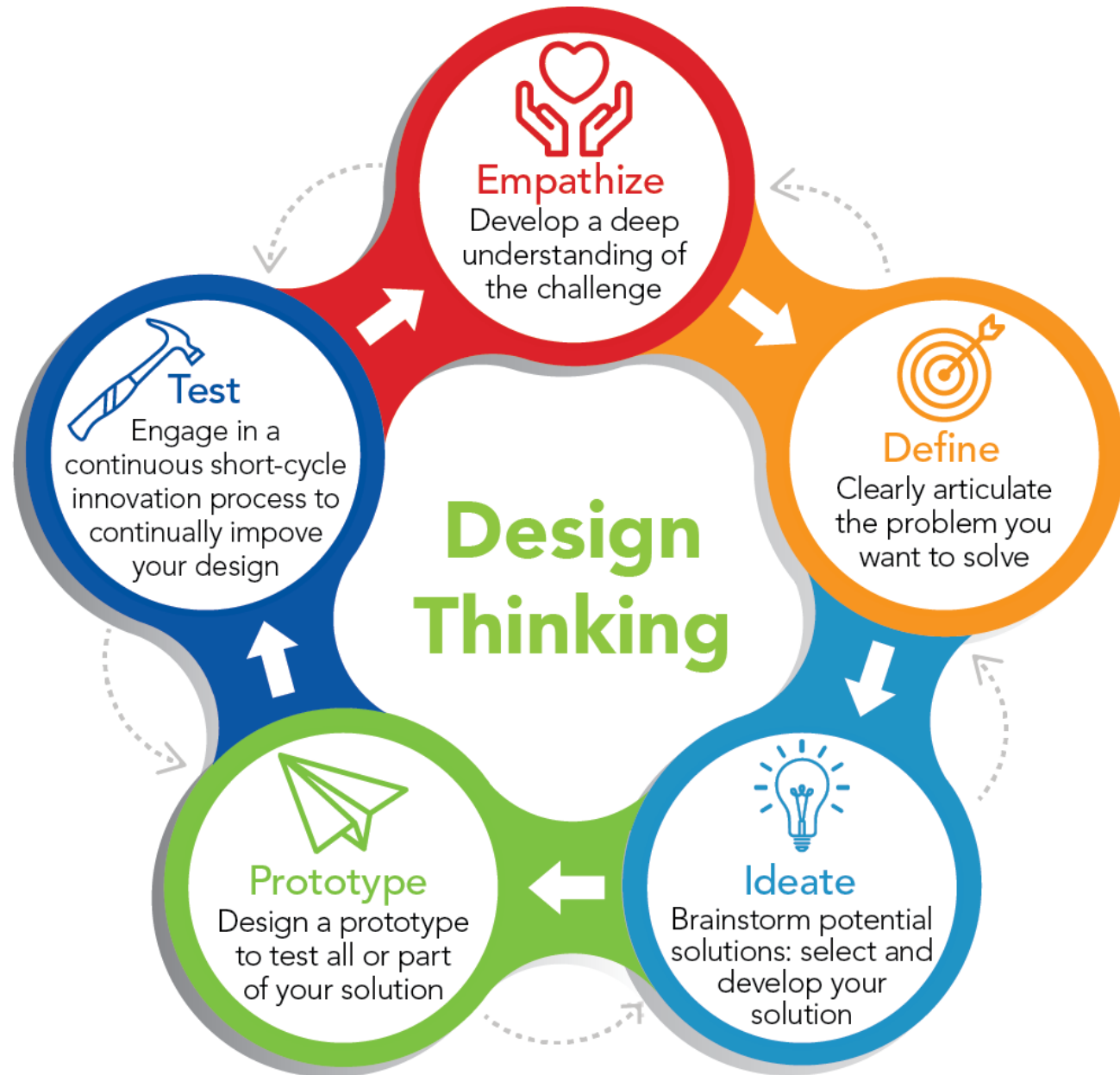
# Design Thinking



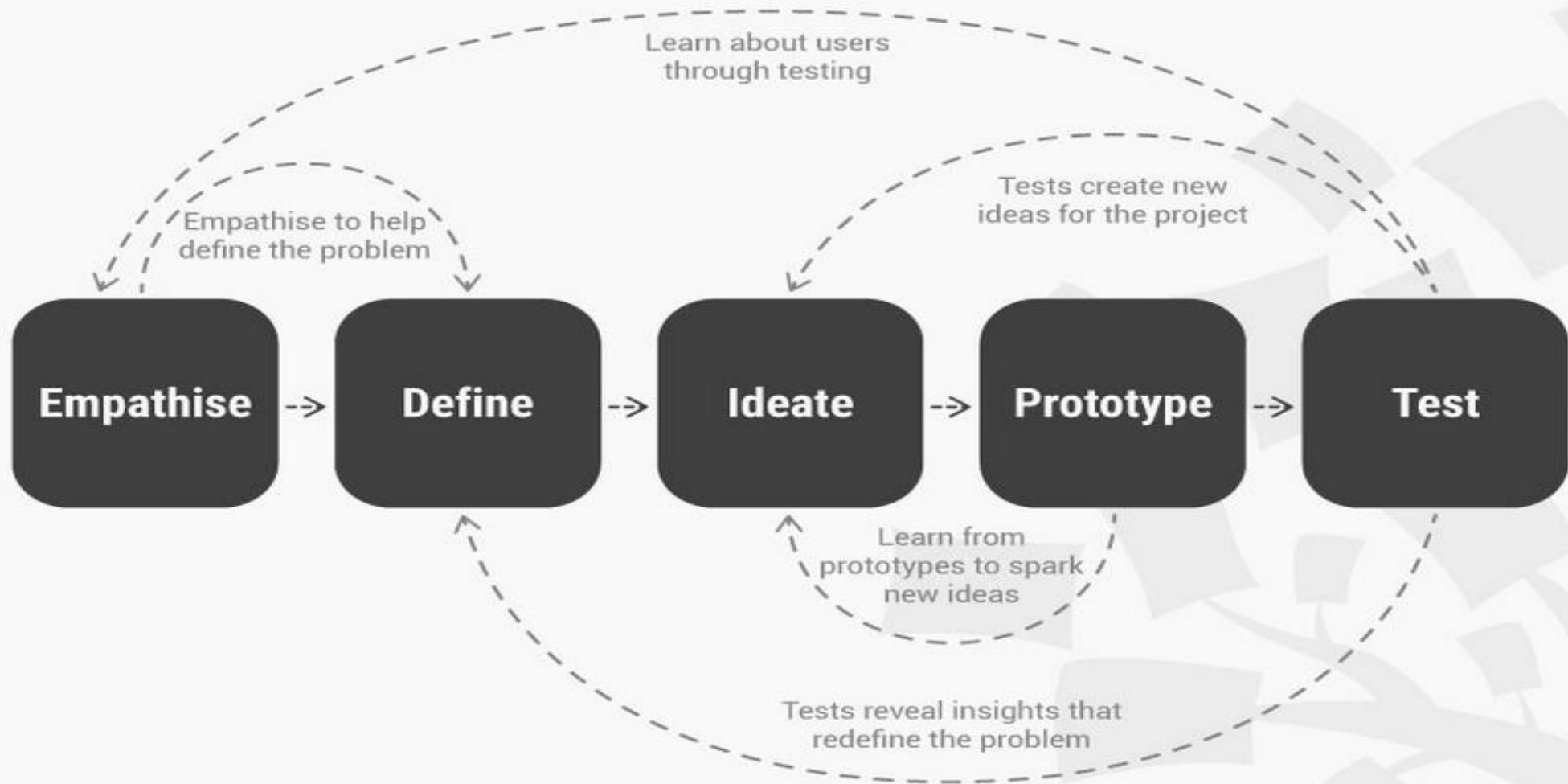


# Design Thinking

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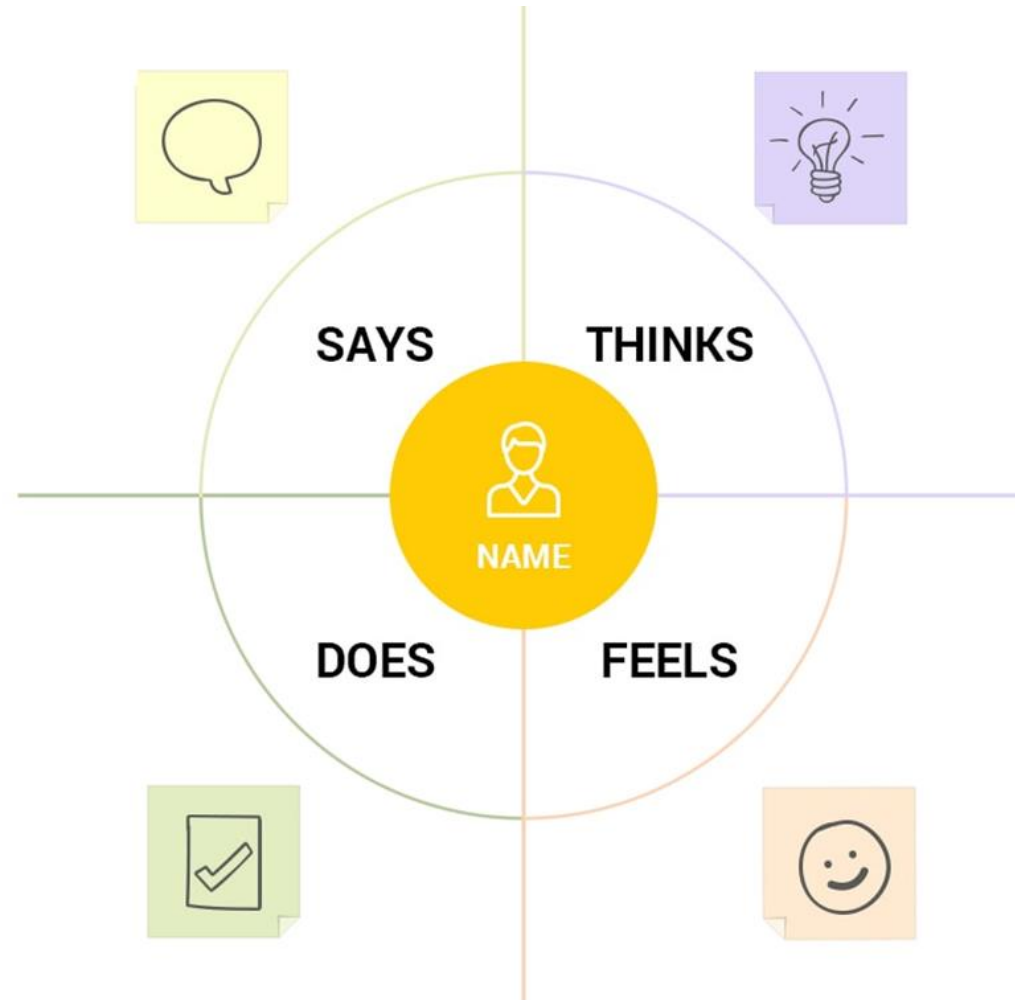


# DESIGN THINKING: A NON-LINEAR PROCESS

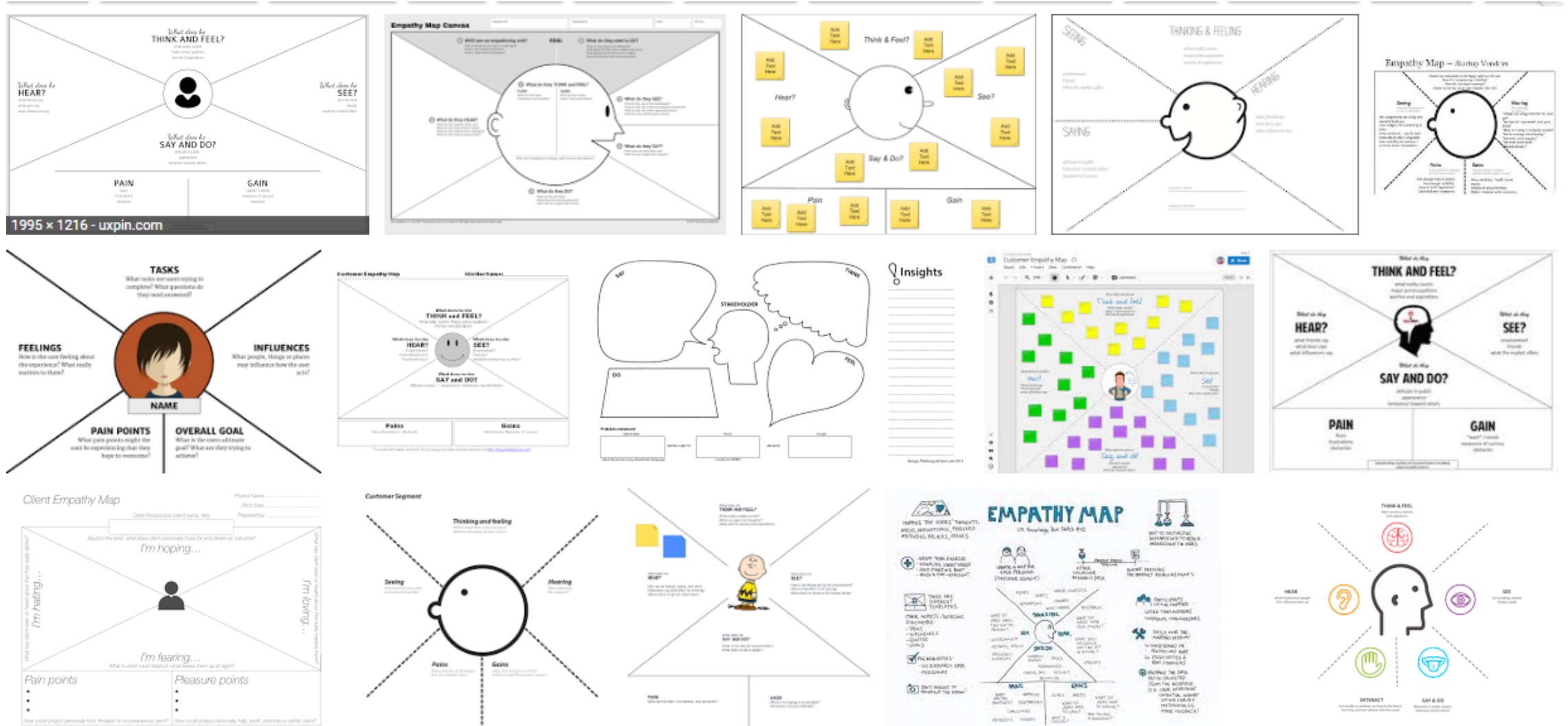




# Design Thinking Tools (Empathy Map)



# Design Thinking Tools (Empathy Map)



Google image search results for “empathy map template.”



# Startup Teams

# Think of the following!

1. What makes a successful startup team?
2. Before you set up a team
3. When to partner and when to hire?
4. Who to get in your team?
5. Where and how to search for startup team players?
6. What to avoid when creating a startup team?

End of Lecture Assessment