



Digital Leadership | UKP | 2020

DESIGN THINKING

Yusita Kusumarini | 14.09.2021

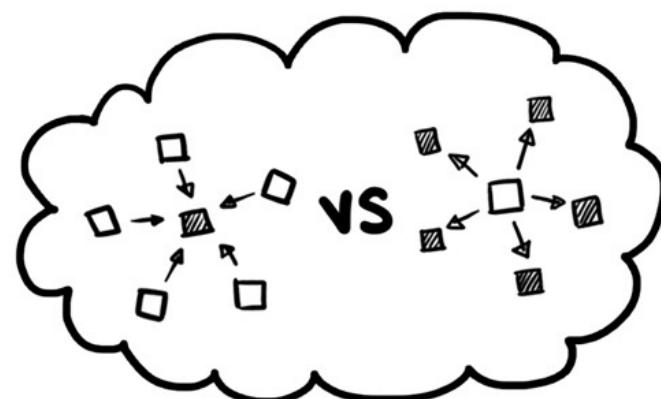
Design Thinking

... mempelajari proses strategis yang sistematis untuk mengidentifikasi dan menyelesaikan masalah melalui kreativitas dan inovasi, yang dapat diberlakukan dalam hal pengembangan teknologi, produk, layanan, organisasi, produktivitas bisnis, serta perubahan budaya dan perilaku.

... dimulai dari pemahaman

- Convergent & Divergent Thinking
- **What** is Design Thinking? **Why** use Design Thinking? **When** to use Design Thinking?
- Design Thinking Process & Method.

DESIGN THINKING: Convergent - Divergent



1. Kepalkan kedua tangan Anda. Ibu jari tangan manakah yang berada di atas?

- a. Ibu jari kiri
- b. Ibu jari kanan

2. Letakkan kedua tangan Anda di dada Anda. Tangan manakah yang berada di atas?

- a. Tangan kiri
- b. Tangan kanan

3. Saat duduk, coba silangkan kaki Anda, Kaki mana yang berada diatas?

- a. Kaki kiri
- b. Kaki kanan

4. Saat bersedekap yaitu menyilangkan kedua tangan di atas dada atau perut. Posisi tangan mana yang berada di atas?

- a. Tangan kiri
- b. Tangan kanan

5. Ingat kebiasaan anda ngupil, anda terbiasa ngupil menggunakan tangan mana?

- a. Tangan kiri
- b. Tangan kanan

Left or Right
Brain?
?

I AM THE
LEFT BRAIN

Decisive!

011001011

LOGIC

Accurate
ANALYTIC

136
24579

PRACTICAL
Strategic

CONTROL

SCIENCE

Realistic
BPD

WWW.CARTOONADNY.COM

I AM the

Right Brain!

Intuition
LOVE

than Art
Poetry

FREE DO

Passion

Vivid
creative

YEARNING

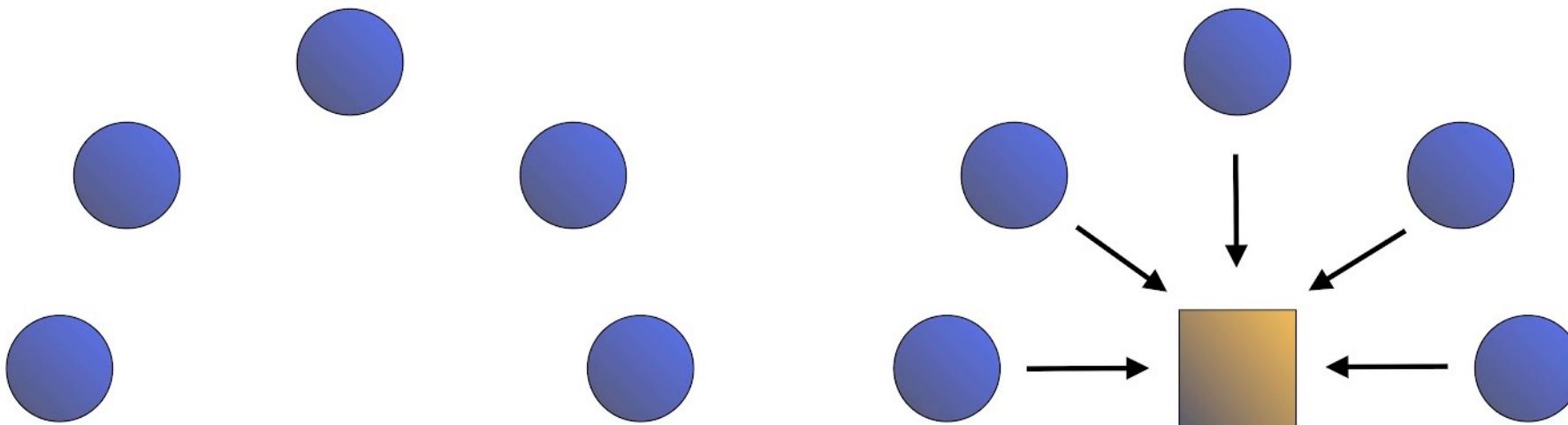
PEACE

CONVERGENT THINKING

(Hudson 1967; Joy Paul Guilford)

- Convergent thinking is a tool for problem solving in which the brain is applies a mechanized system or formula to some problem, where the solution is a number of steps from the problem. This kind of thinking is particularly appropriate in science, engineering, math and technology.
- Convergent thinking is opposite from divergent thinking in which a person generates many unique, creative responses to a single question or problem.

Convergent Thinking



Begin with information

Converge around solution(s)

Convergent Thinking:



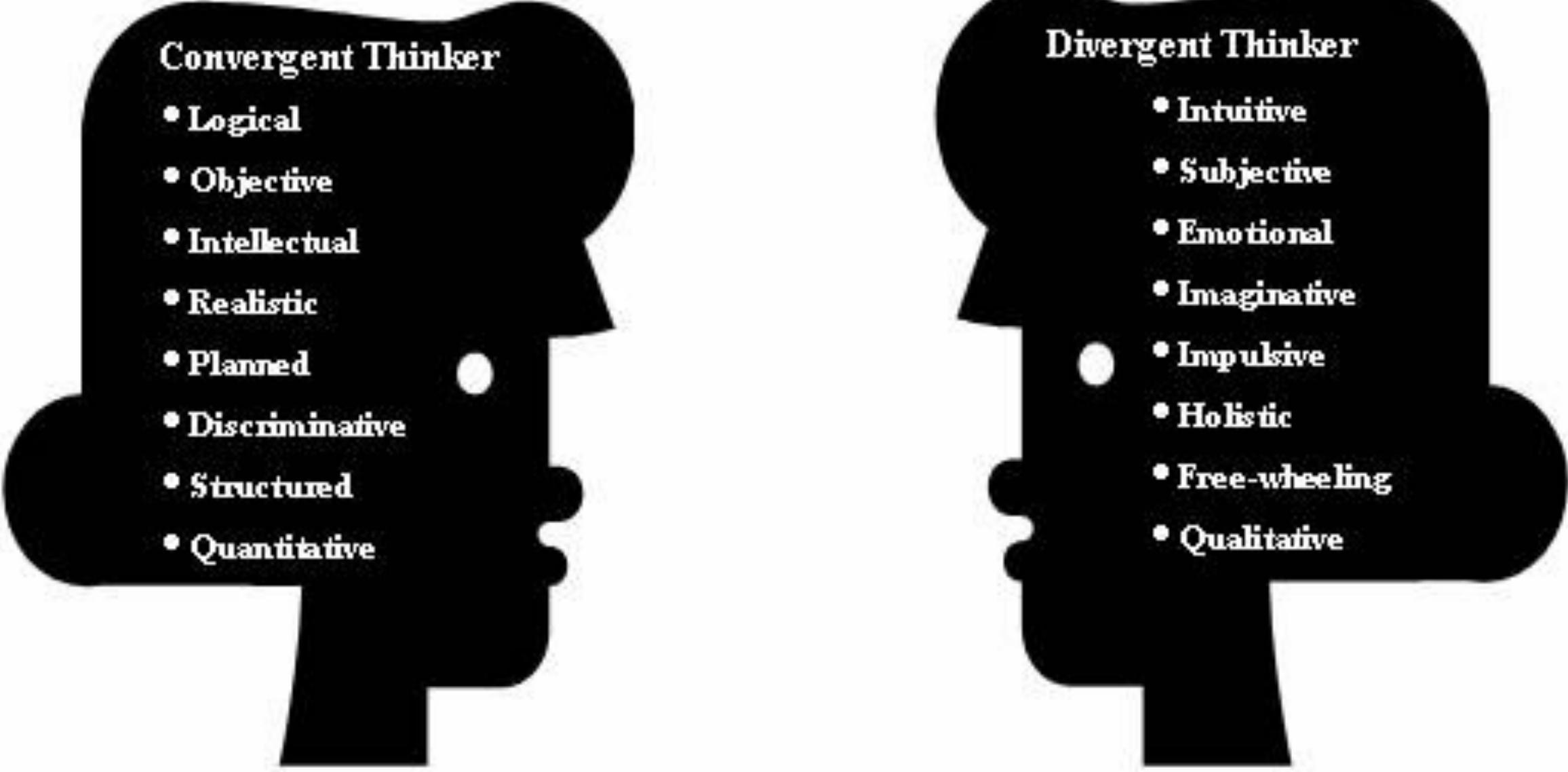
Many facts, one right answer



DIVERGENT THINKING

(Hudson 1967; Joy Paul Guilford)

- Divergent thinking is followed by convergent thinking, in which designer assesses, judges, and strengthens those options. Divergent thinking is what we do when we don't know the answer, when we don't know the next step.
- The design process is a series of divergent and convergent phases. During the divergent phase of design the designer creates a number of choices. The goal of this approach is to analyze alternative approaches to test for the most stable solution.



Convergent Thinker

- Logical
- Objective
- Intellectual
- Realistic
- Planned
- Discriminative
- Structured
- Quantitative

Divergent Thinker

- Intuitive
- Subjective
- Emotional
- Imaginative
- Impulsive
- Holistic
- Free-wheeling
- Qualitative

Divergent Thinking:

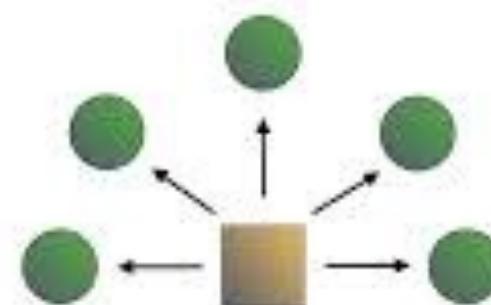


One stimulus, many responses

Divergent Thinking



Begin with a prompt



Generate many solutions

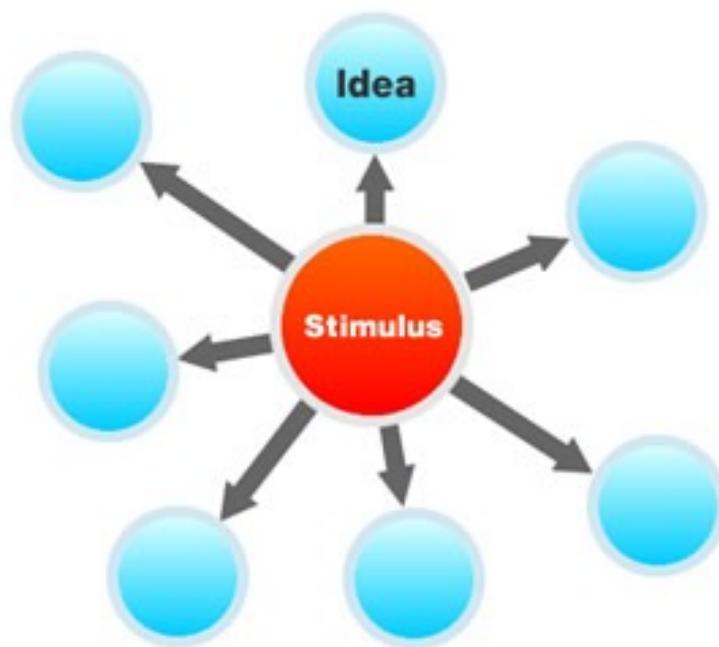
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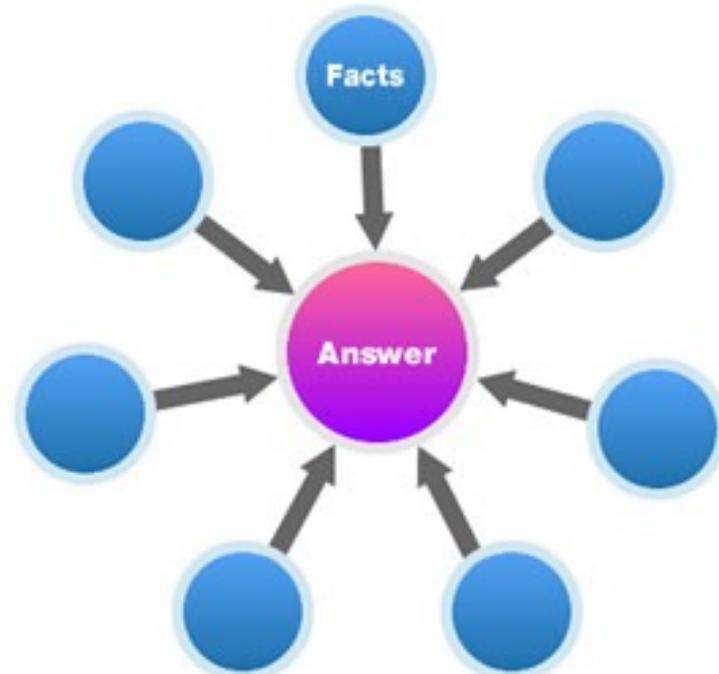
Convergent thinking:
a few similar ideas

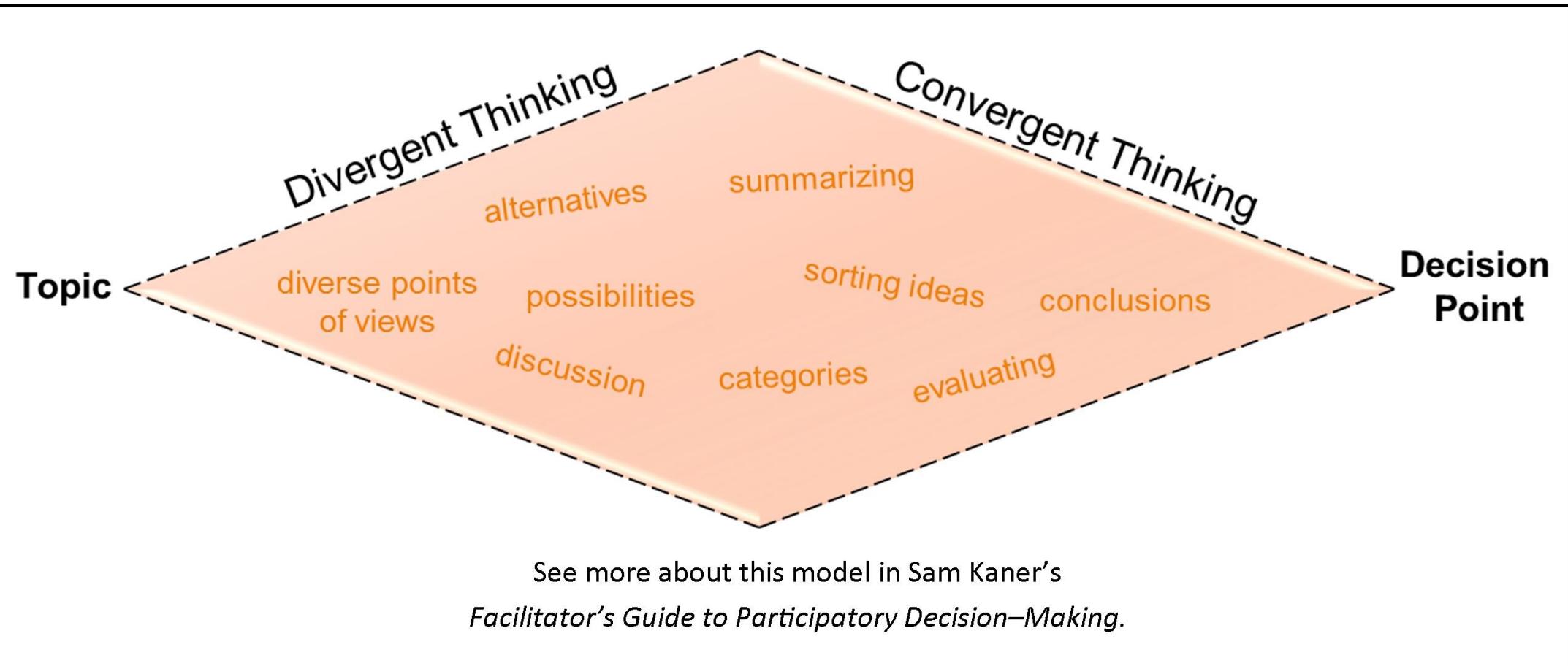
Divergent thinking:
many different ideas

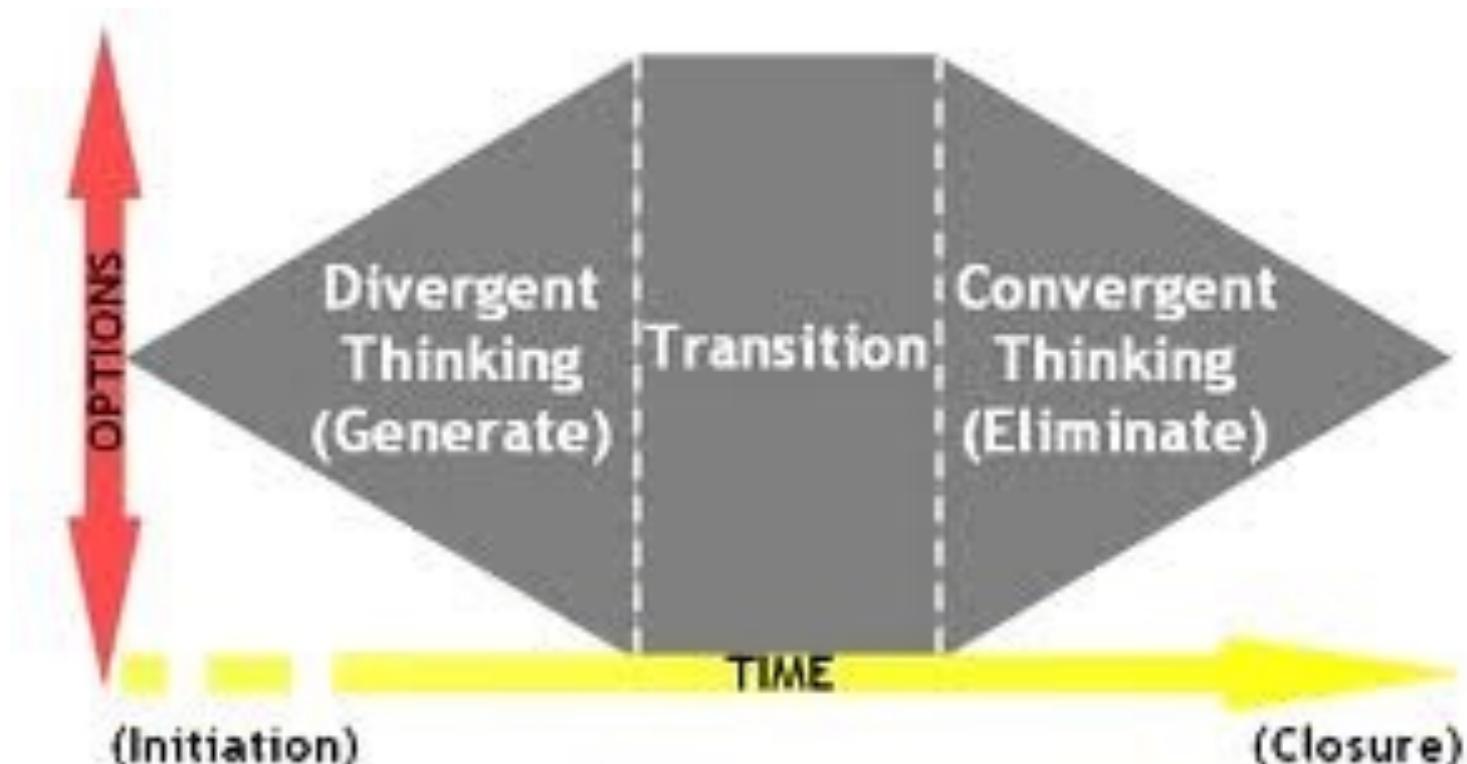
Divergent Thinking



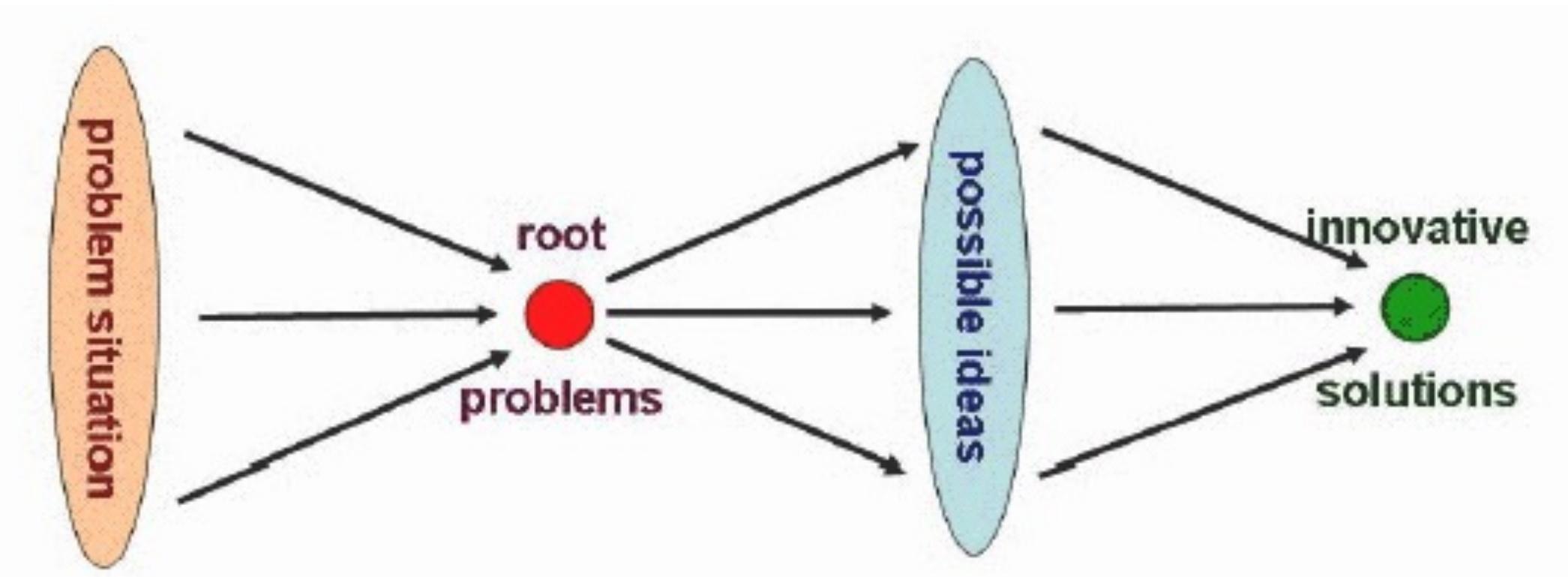
Convergent Thinking

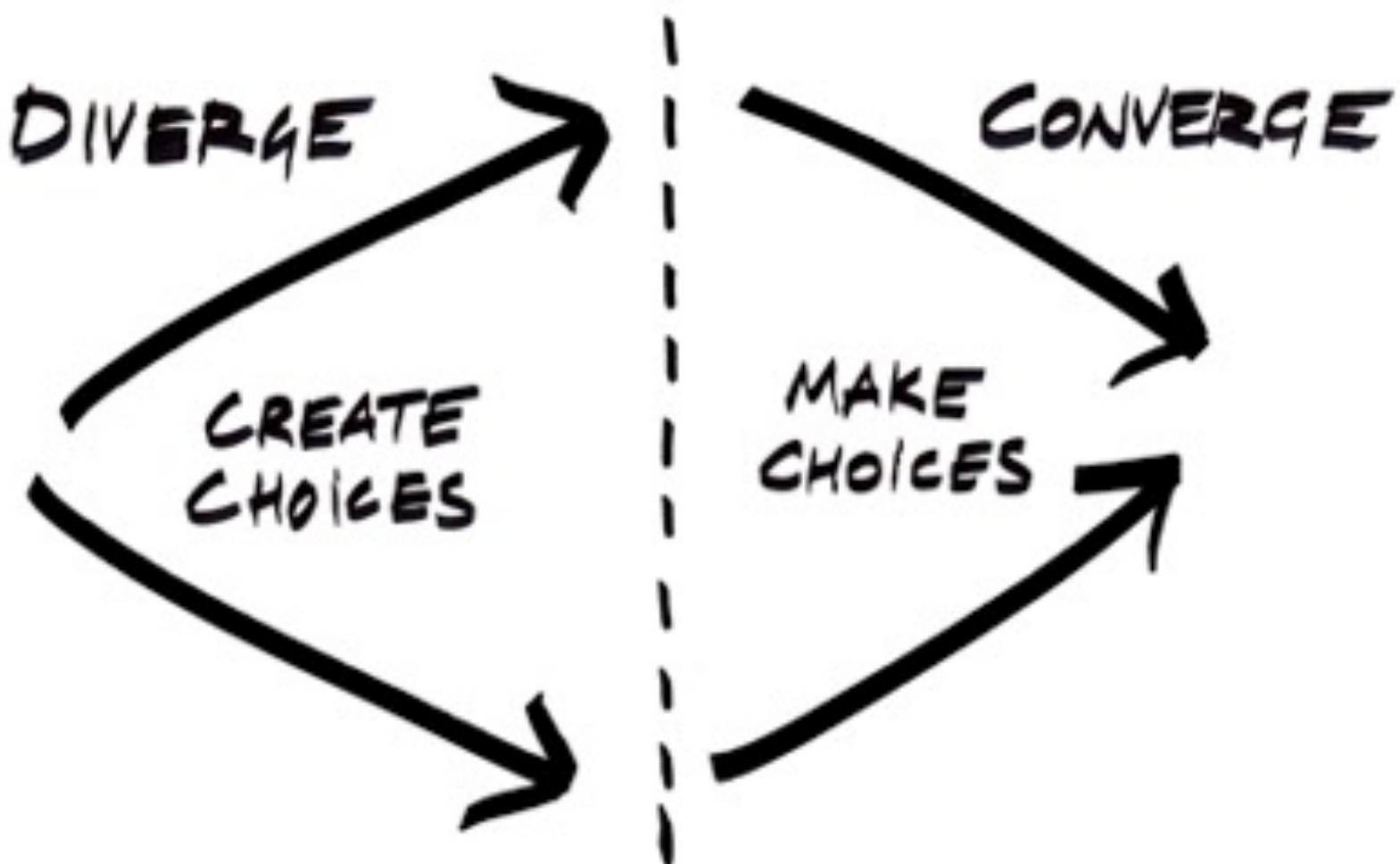


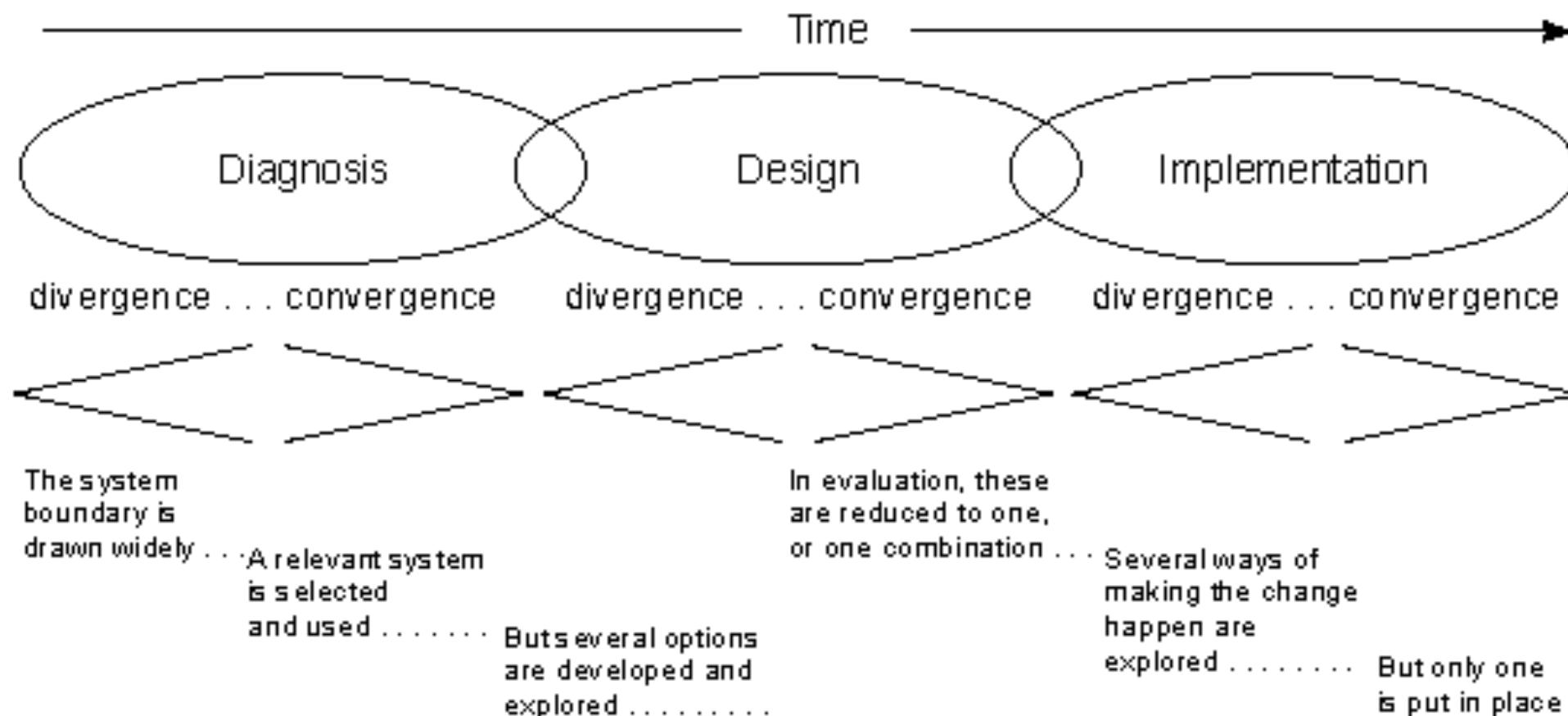




www.edbatista.com/2009/03/decisions.html







Studi mandiri . 1

Pelajari secara mandiri melalui video berikut:

<https://www.youtube.com/watch?v=cmBf1fBRXms>

John Spencer

<https://www.youtube.com/watch?v=xjE2RV6IQzo>

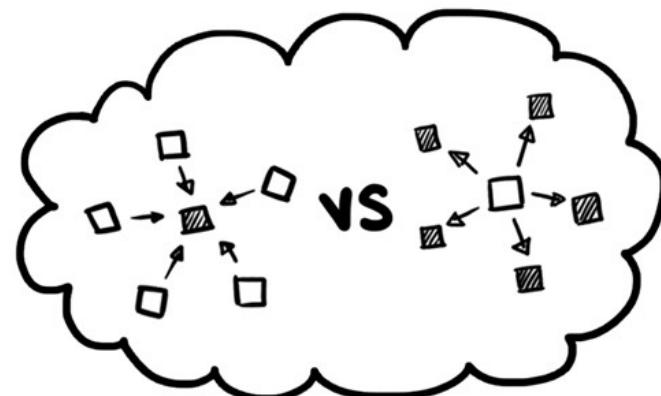
Harvard Professional Development

Anne Manning demonstrates the concepts of divergent and convergent thinking to inspire new ways to approach problem-solving with your team.

Buatlah simpulan pribadi tentang pemahaman Convergent - Divergent Thinking...

DESIGN THINKING:

What ? Why ? When?



What is it?

- Design thinking has come to be defined as combining **empathy** for the context of a problem, **creativity** in the generation of insights and solutions, and **rationality** in analyzing and fitting various solutions to the problem context.

Tom Kelley and Dave Kelley, Creative Confidence, Crown Business, 2013, ISBN 978-0-385-34936-9, pages 19-20.

- According to Tim Brown, CEO and president of IDEO, the goal of Design Thinking is "matching people's needs with what is technologically feasible and viable as a business strategy"

Design Thinking - Thoughts by Tim Brown, <http://designthinking.ideo.com>

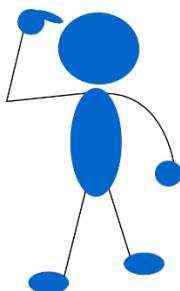
- The premise of teaching Design Thinking is that by knowing about how designers approach problems and the methods which they use to ideate, select and execute solutions, individuals and businesses will be better able to improve their own problem solving processes and take innovation to a higher level.

Cross, N (2011) Design Thinking: Understanding How Designers Think and Work, Berg, Oxford and New York.

Why Use Design Thinking?

DT is useful when you have:

- A poorly define problem.
- A Lack of information.
- A changing context or environment.
- It should result in consistently innovative solution



DT seeks a balance of design considerations including:

- Business.
- Empathy with people.
- Application of technologies.
- Environmental consideration.

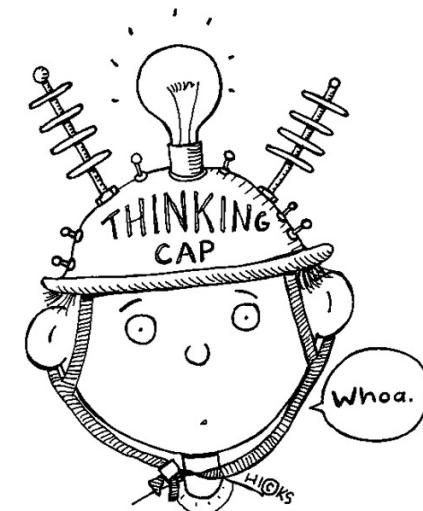
DT seeks to balance two modes of thinking:

- Analytical thinking
- Creative thinking.

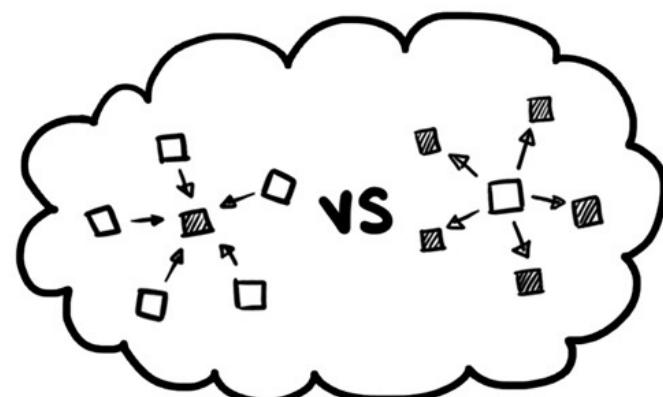
When to Use Design Thinking?

DT is an approach that can be applied throughout the design process:

1. Define Intent (mendefinisikan maksud)
2. Know Context (memahami konteks)
3. Know User (memahami pengguna)
4. Frame Insight (membingkai wawasan)
5. Explore Concept (mengeksplorasi konsep)
6. Make Plans (membuat rencana)
7. Deliver Offering (memberikan penawaran)



DESIGN THINKING: Process & Method



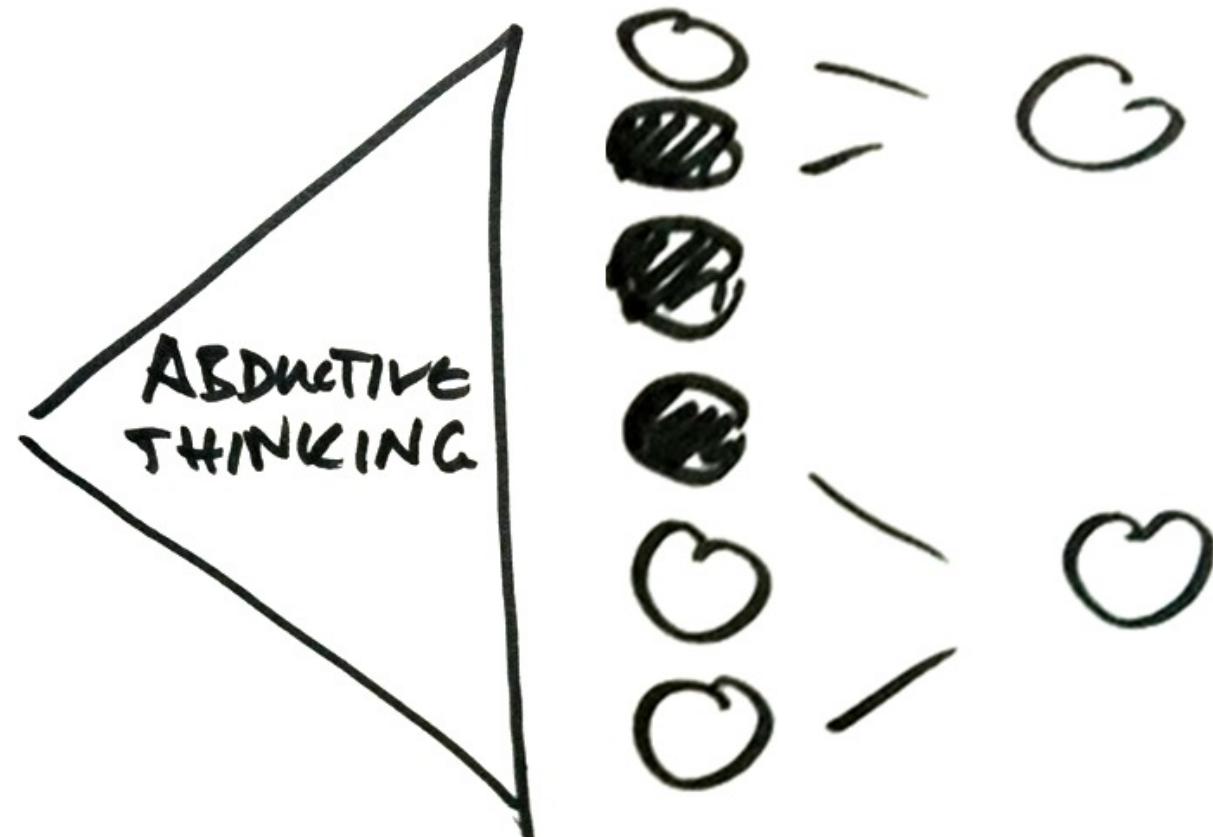
BUSINESS THINKING

PROBLEM SOLUTION



DESIGN THINKING

UNDERSTAND PROBLEM SOLUTION



BASIC DESIGN PROCESS



Observation

AKA: Discovery, Define, Research, Immersion, Understand, Observe

Research

- Project/Company History
- Competitors

Collection

- Text
- Visuals
- Related Materials

Interviews

- Project Participants
- Audience

Brainstorming

AKA: Ideate, Visualize

Mind Mapping

Tools

Sketching

- thumbnails
- Rough Comps

Storyboards

- Narrative
- Interaction

Prototyping

AKA: Create, Build

Comprehensives

- Prototypes
- Product
- Interface
- Dummies
- Tight Comps

Design Brief

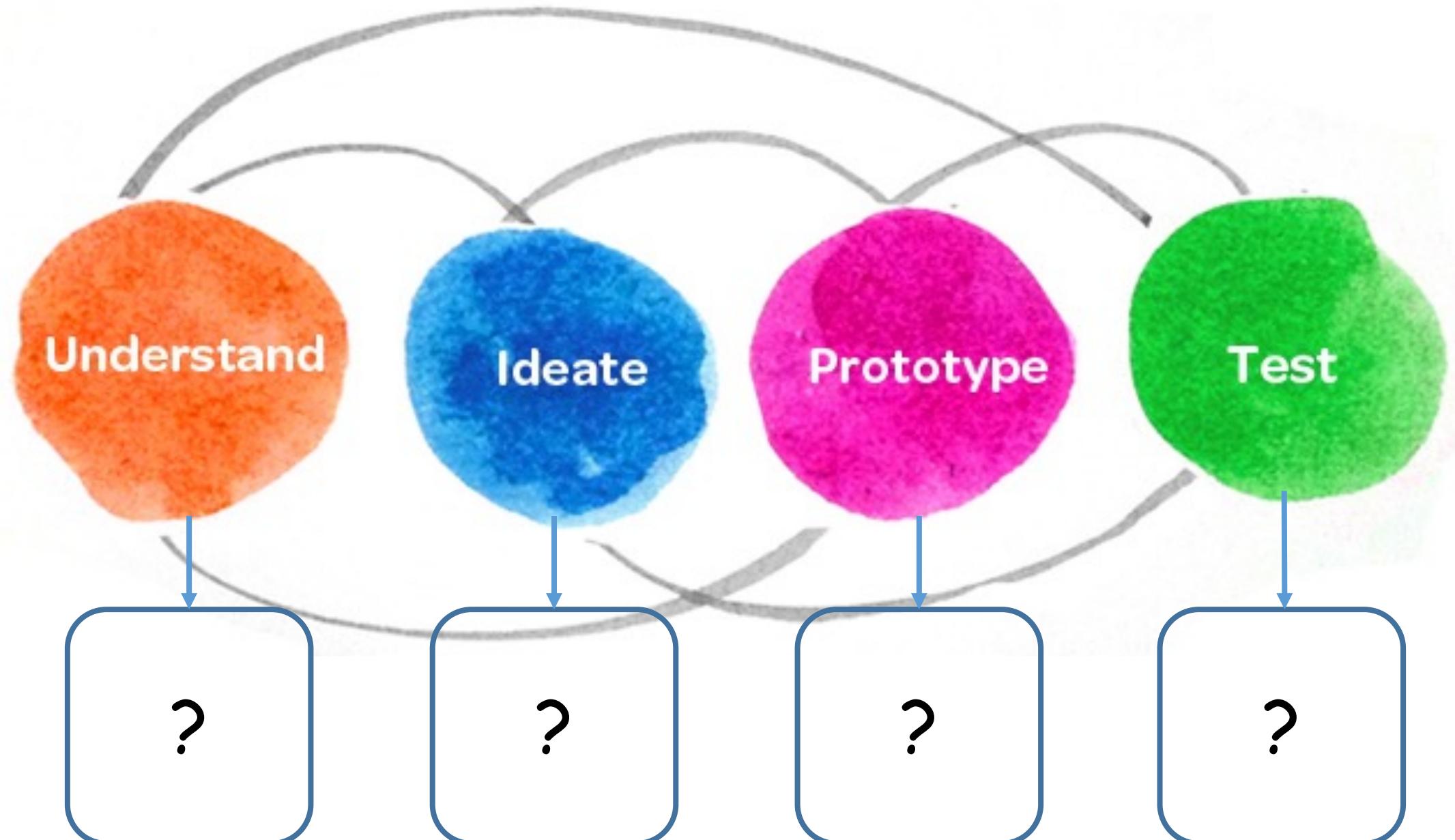
- Writing
- Images

Implementation

AKA: Test, Produce, Launch

Production

- Website Constr.
- Printing
- Manufacturing
- Animation
- Photography
- Videography
- Etc.



EMPATHIZE



DEFINE



IDEATE



PROTOTYPE



TEST

The design process is what puts Design Thinking into action.

It's a structured approach to generating and developing ideas.

The five phases of the design process:

1

DISCOVERY



2

INTERPRETATION



3

IDEATION



4

EXPERIMENTATION



5

EVOLUTION



I have a challenge.

How do I approach it?

I learned something.

How do I interpret it?

I see an opportunity.

What do I create?

I have an idea.

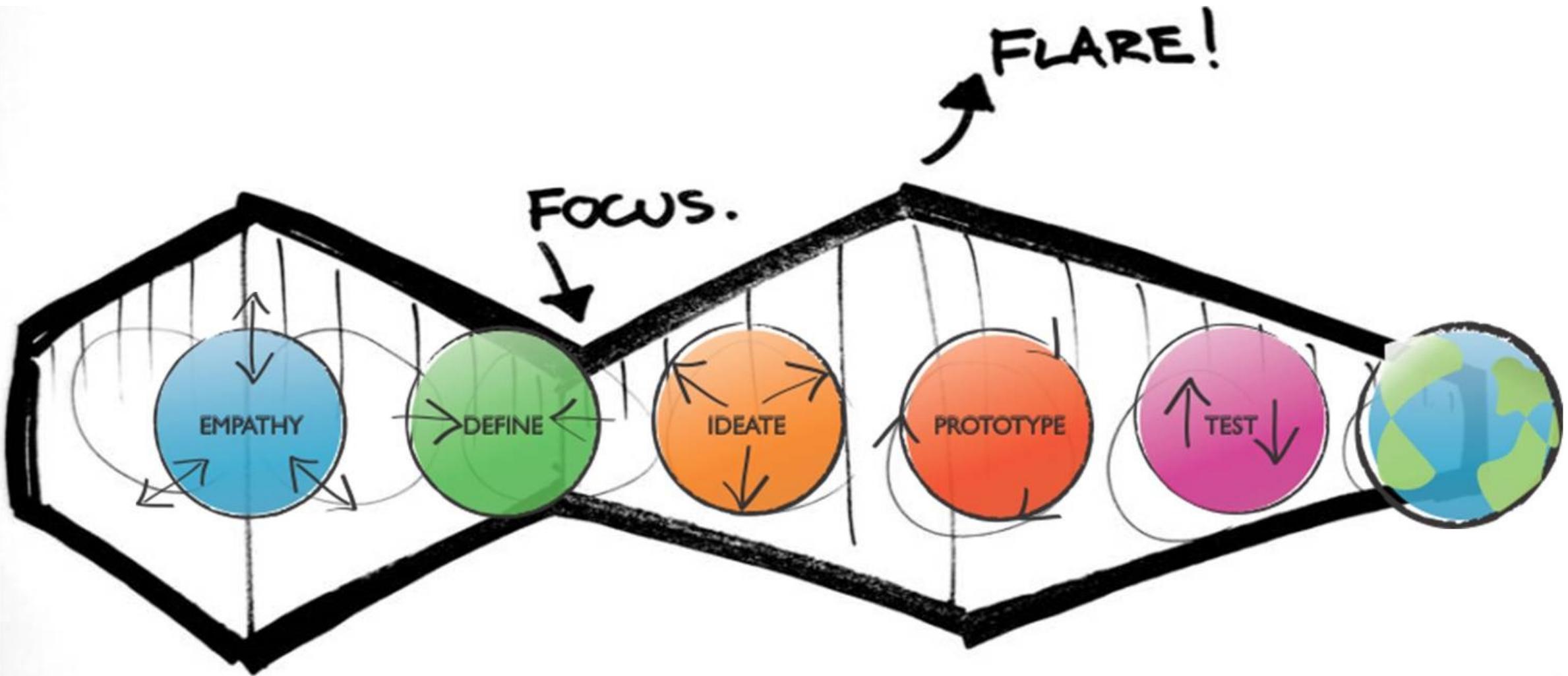
How do I build it?

I tried something.

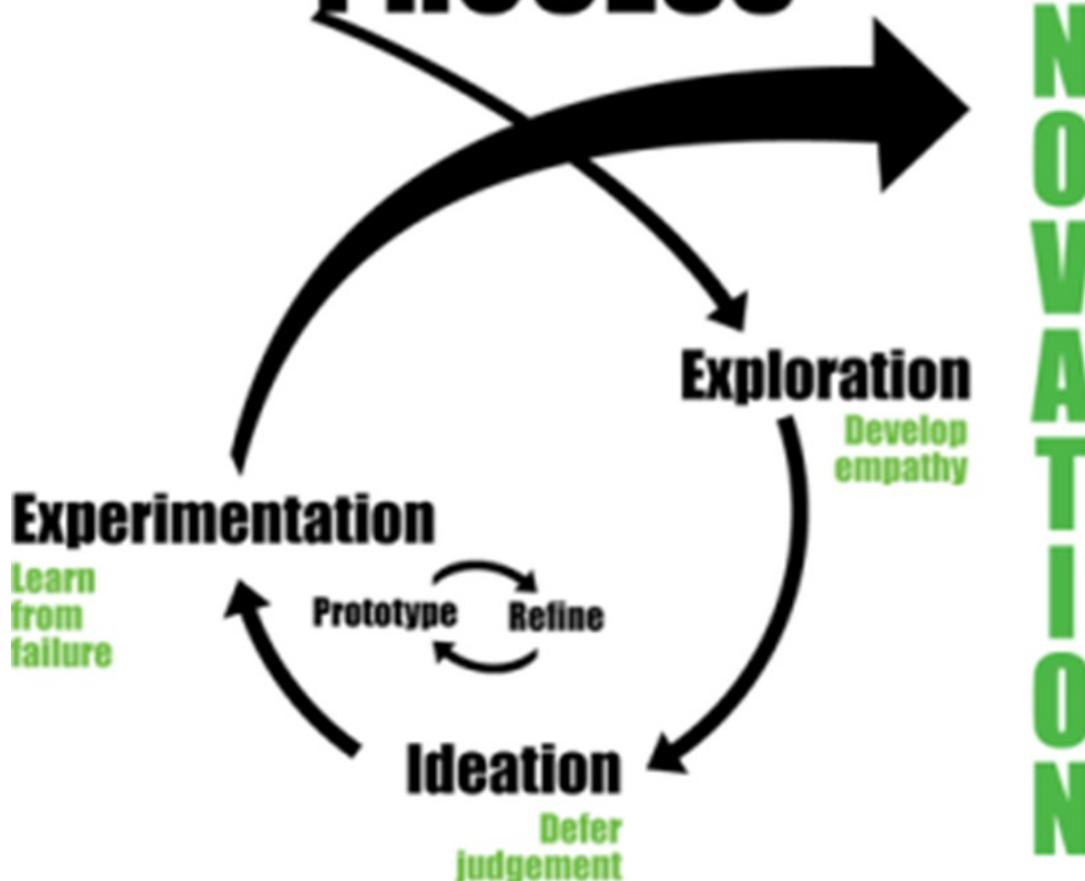
How do I evolve it?

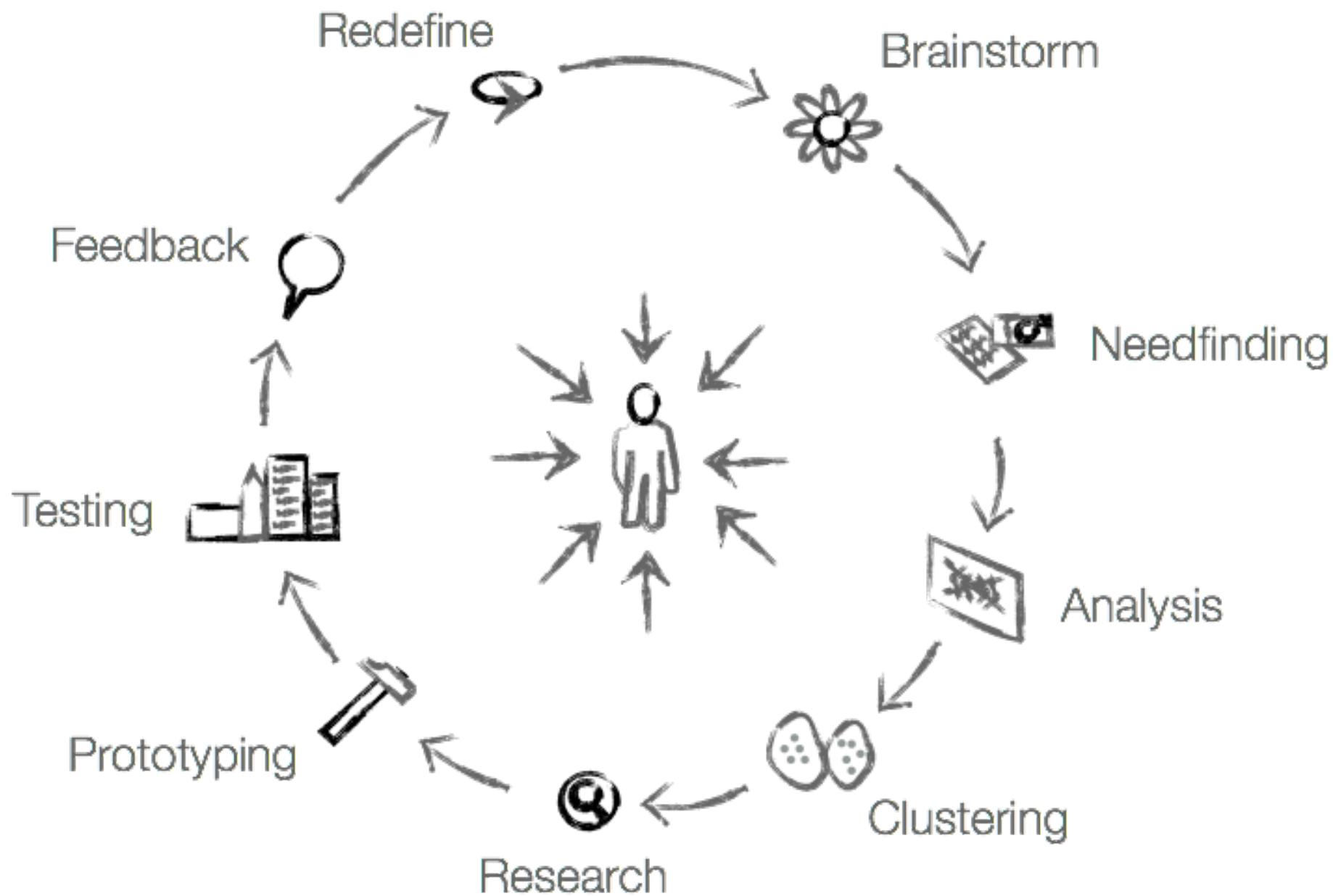
The Design Process

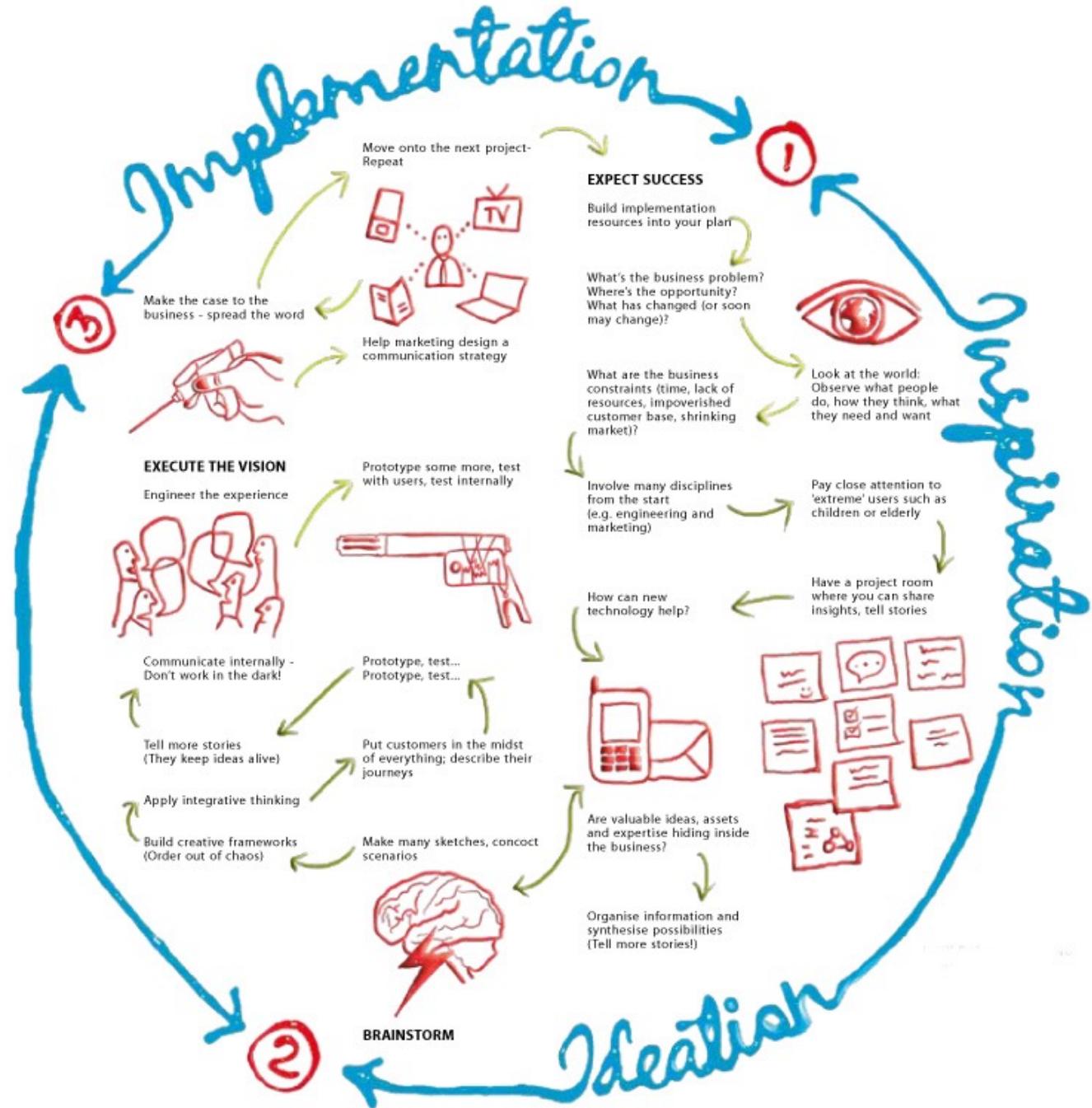
PHASES	DISCOVERY	INTERPRETATION	IDEATION	EXPERIMENTATION	EVOLUTION
	 A compass icon with a needle pointing towards the top right. DISCOVERY  A black and white photograph showing several people in a classroom or workshop setting, looking at papers and discussing them.	 A magnifying glass icon focused on a central point. INTERPRETATION  A black and white photograph of people standing in front of a wall covered with many small notes and drawings.	 A simple lightbulb icon with rays of light emanating from it. IDEATION  A black and white photograph of people sitting around a table, looking at small cards or prototypes.	 A gear icon with several teeth visible. EXPERIMENTATION  A black and white photograph of people working at a table, surrounded by various tools and materials.	 A circular arrow icon indicating a loop or cycle. EVOLUTION  A black and white photograph of a person pointing upwards at a wall covered with large, prominent notes.
	I have a challenge. How do I approach it? Discovery builds a solid foundation for your ideas. Creating meaningful solutions for students, parents, teachers, colleagues and administrators begins with a deep understanding for their needs. Discovery means opening up to new opportunities, and getting inspired to create new ideas. With the right preparation, this can be eye-opening and will give you a good understanding of your design challenge.	I learned something. How do I interpret it? Interpretation transforms your stories into meaningful insights. Observations, field visits, or just a simple conversation can be great inspiration—but finding meaning in that and turning it into actionable opportunities for design is not an easy task. It involves storytelling, as well as sorting and condensing thoughts until you've found a compelling point of view and clear direction for ideation.	I see an opportunity. What do I create? Ideation means generating lots of ideas. Brainstorming encourages you to think expansively and without constraints. It's often the wildest ideas that spark visionary thoughts. With careful preparation and a clear set of rules, a brainstorm session can yield hundreds of fresh ideas.	I have an idea. How do I build it? Experimentation brings your ideas to life. Building prototypes means making ideas tangible, learning while building them, and sharing them with other people. Even with early and rough prototypes, you can receive a direct response and learn how to further improve and refine an idea.	I tried something new. How do I evolve it? Evolution is the development of your concept over time. It involves planning next steps, communicating the idea to people who can help you realize it, and documenting the process. Change often happens over time, and reminders of even subtle signs of progress are important.

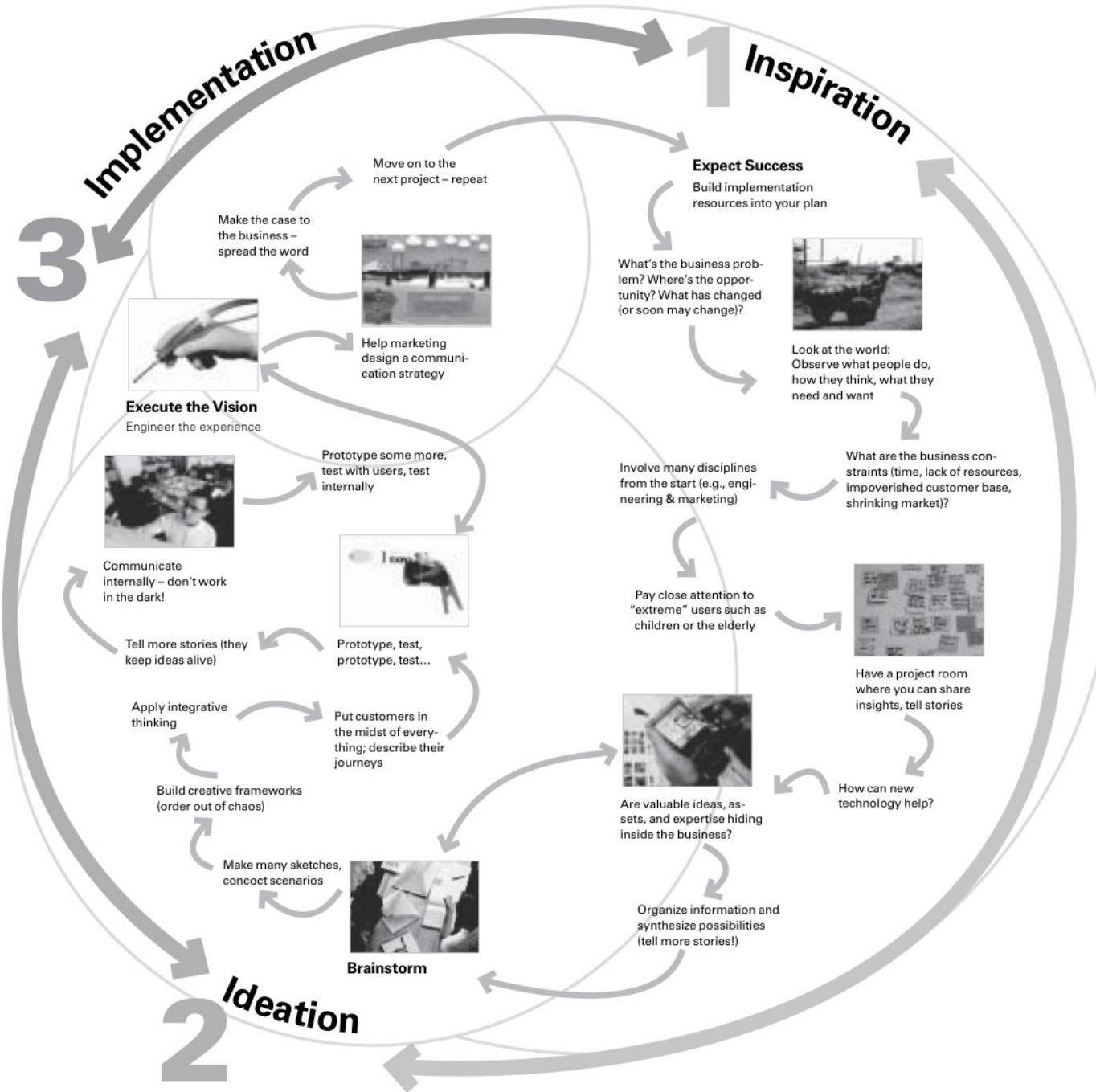


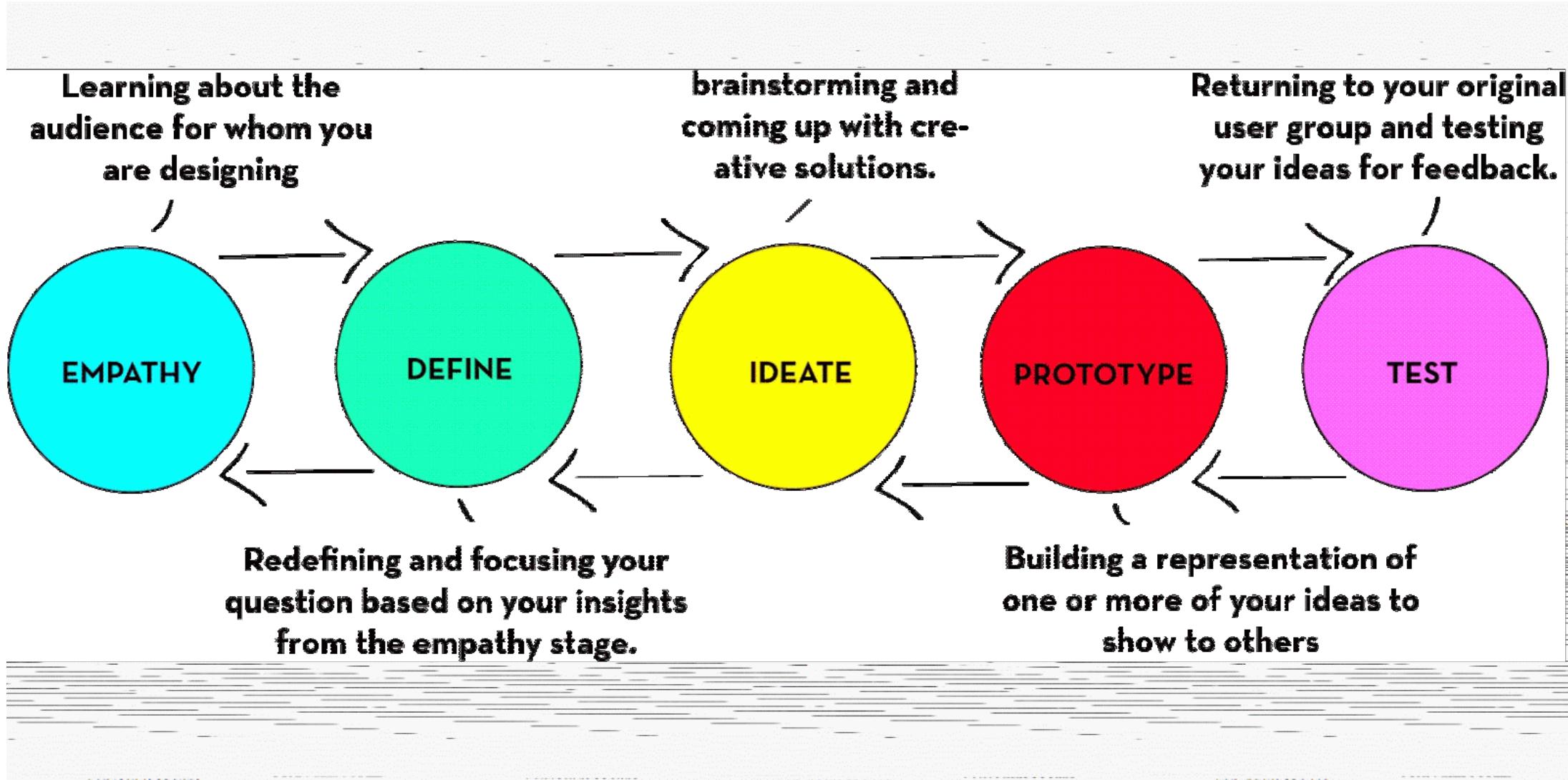
The DESIGN THINKING PROCESS

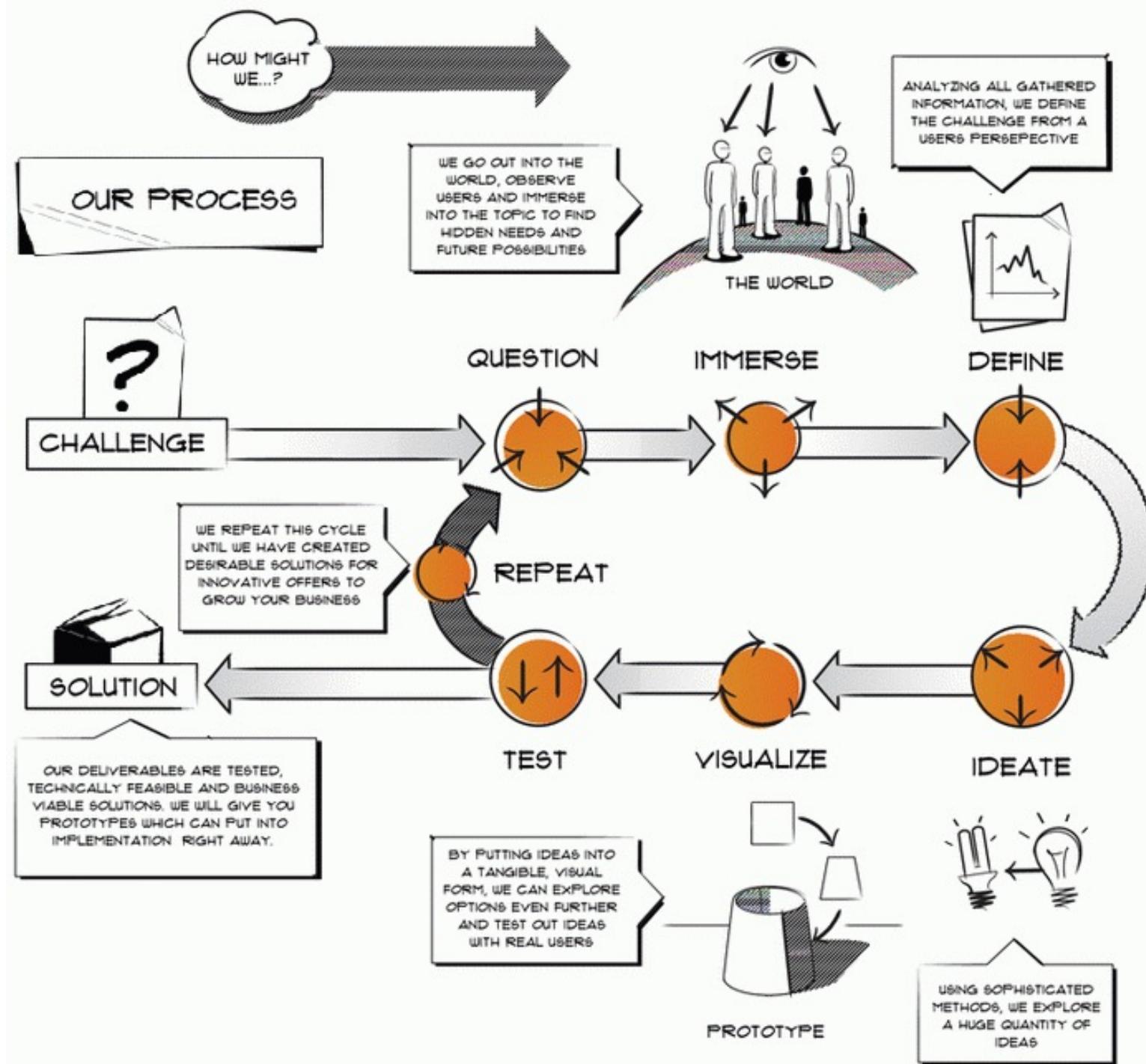


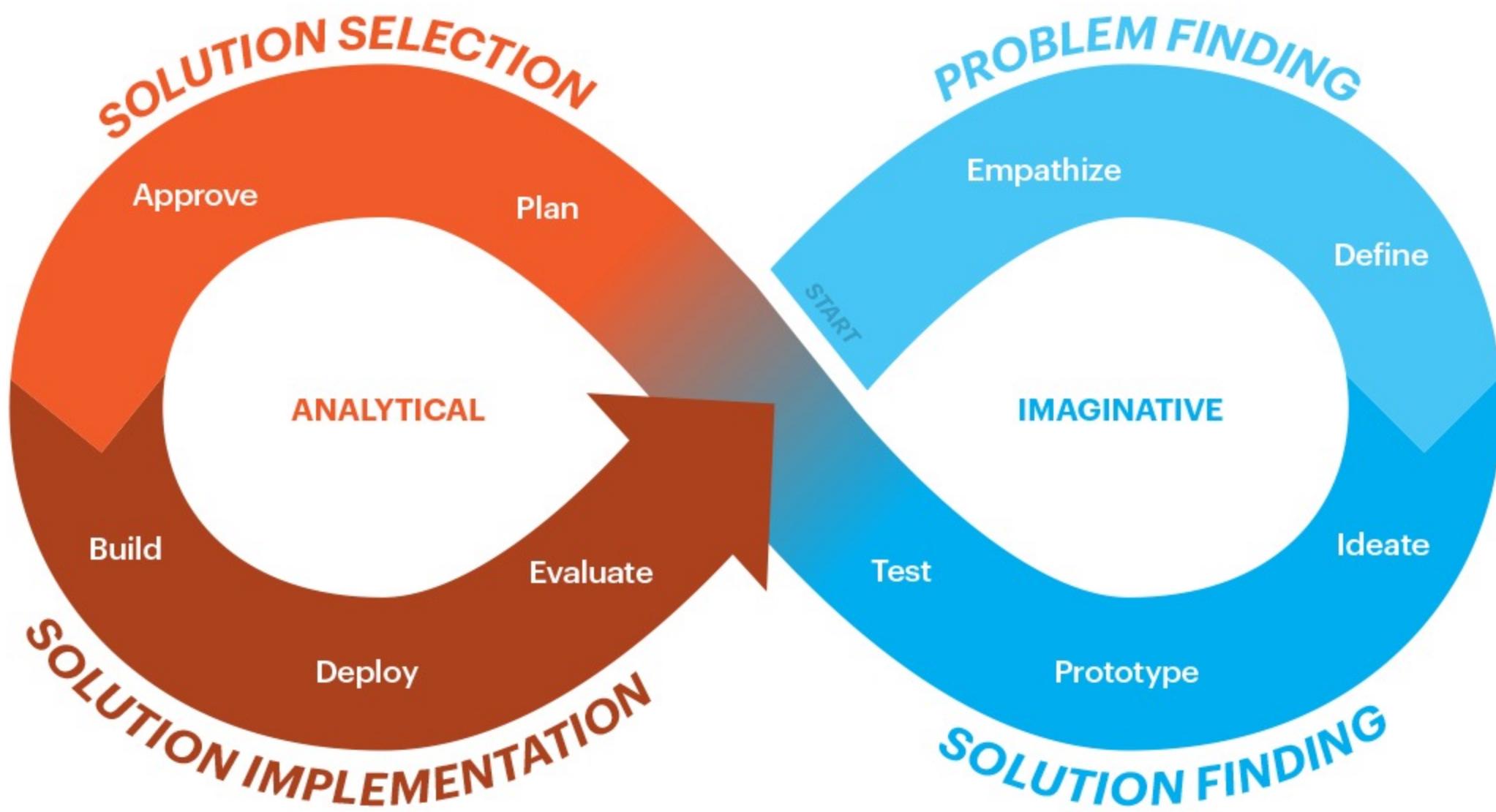


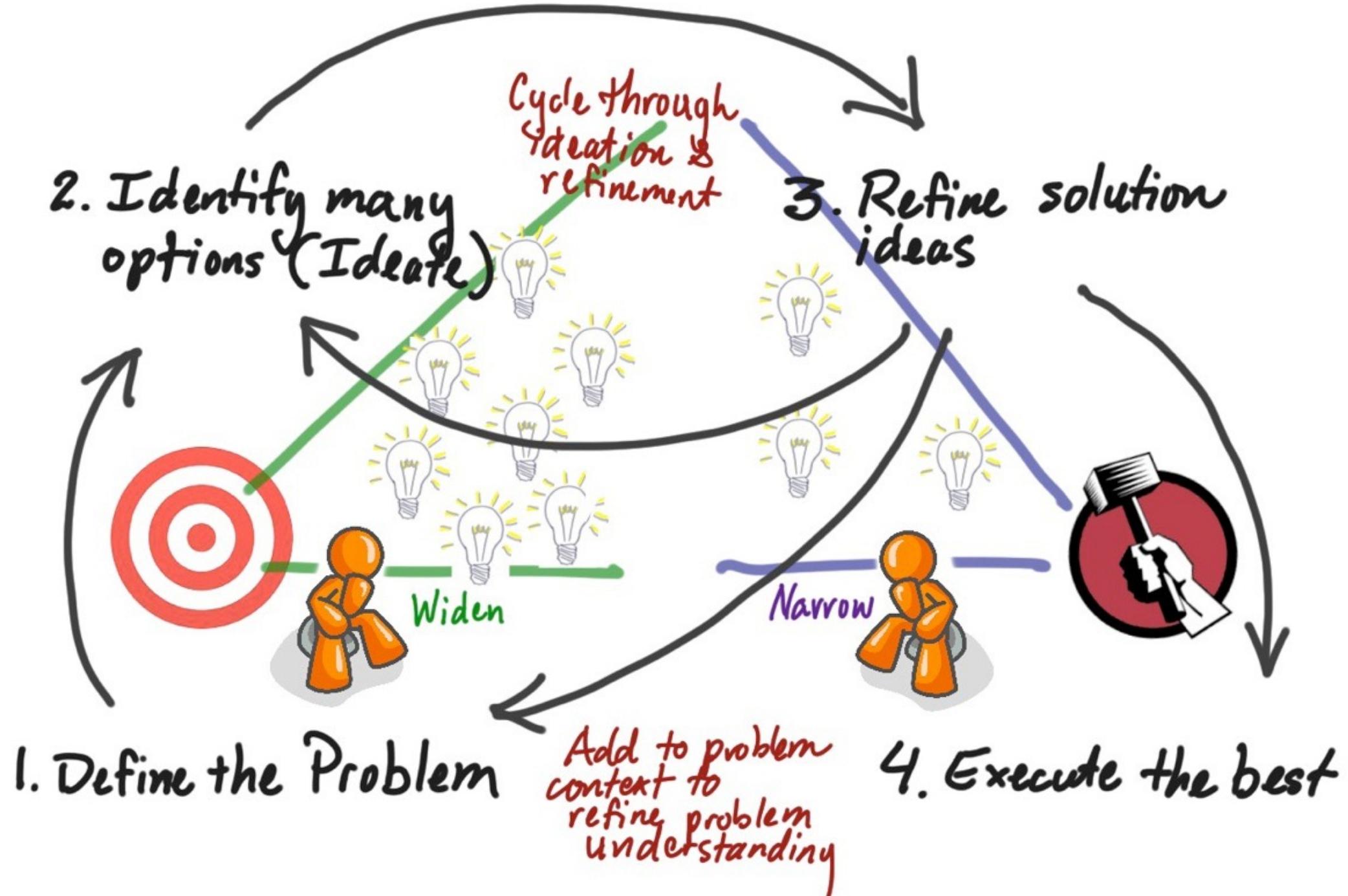






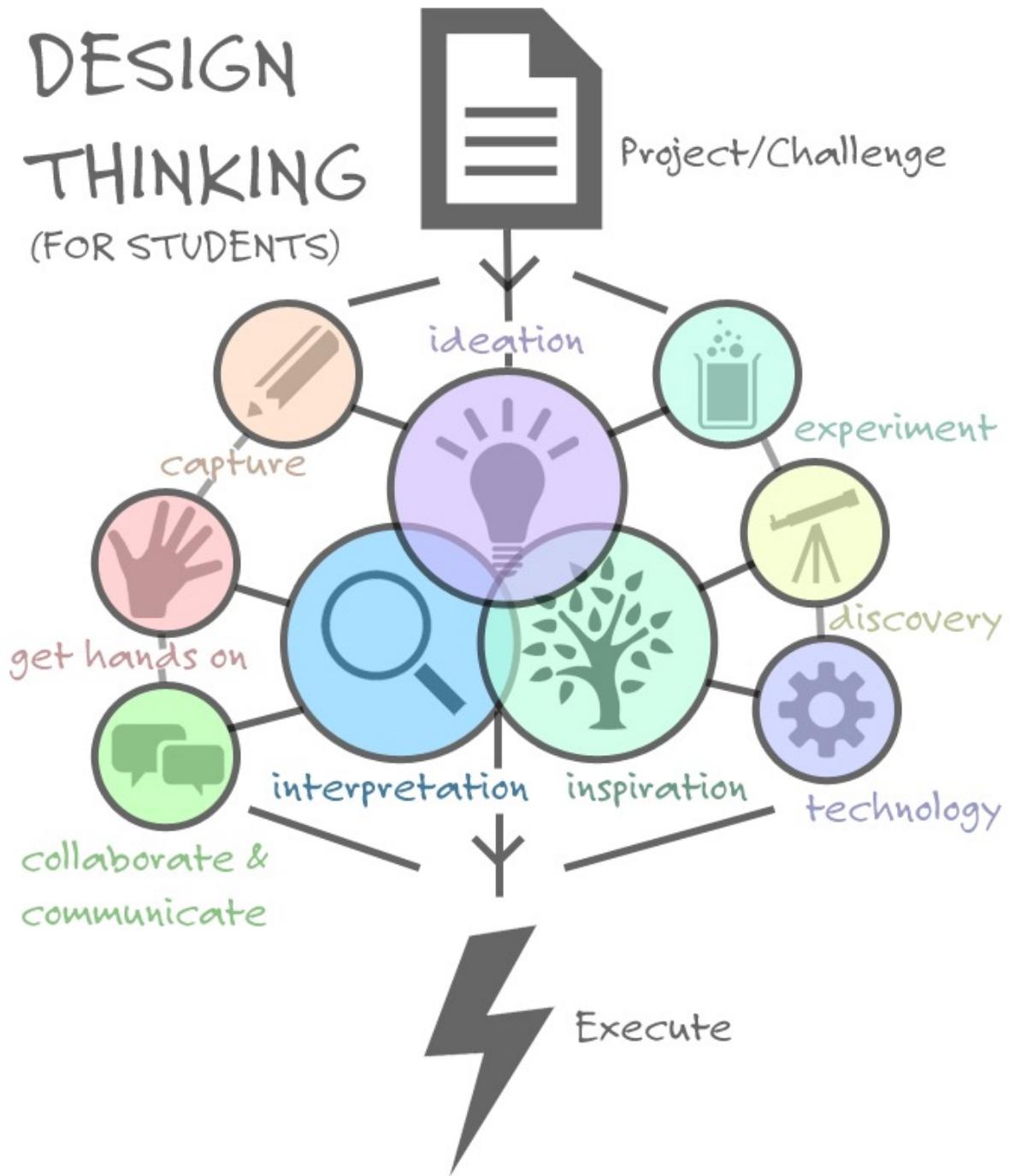






DESIGN THINKING

(FOR STUDENTS)



CHALLENGE

Understand

Problem
Context
Needs
Vision

..... Analysis

Brainstorm

Ideas

..... Synthesis

Evaluate

Direction

..... Analysis

Design

Prototype
Refine

..... Synthesis

Execute

Plan
Review
Improve

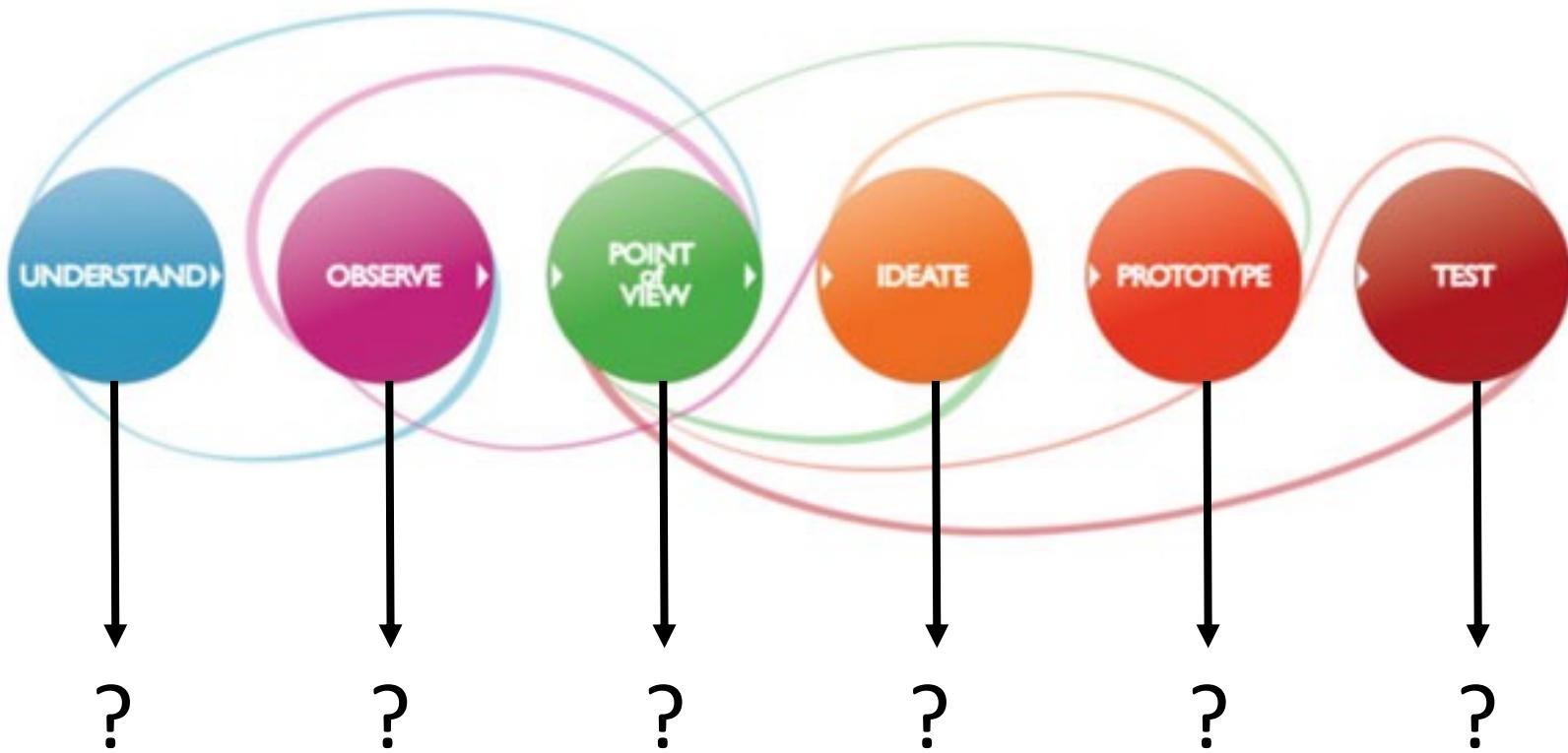
..... Analysis

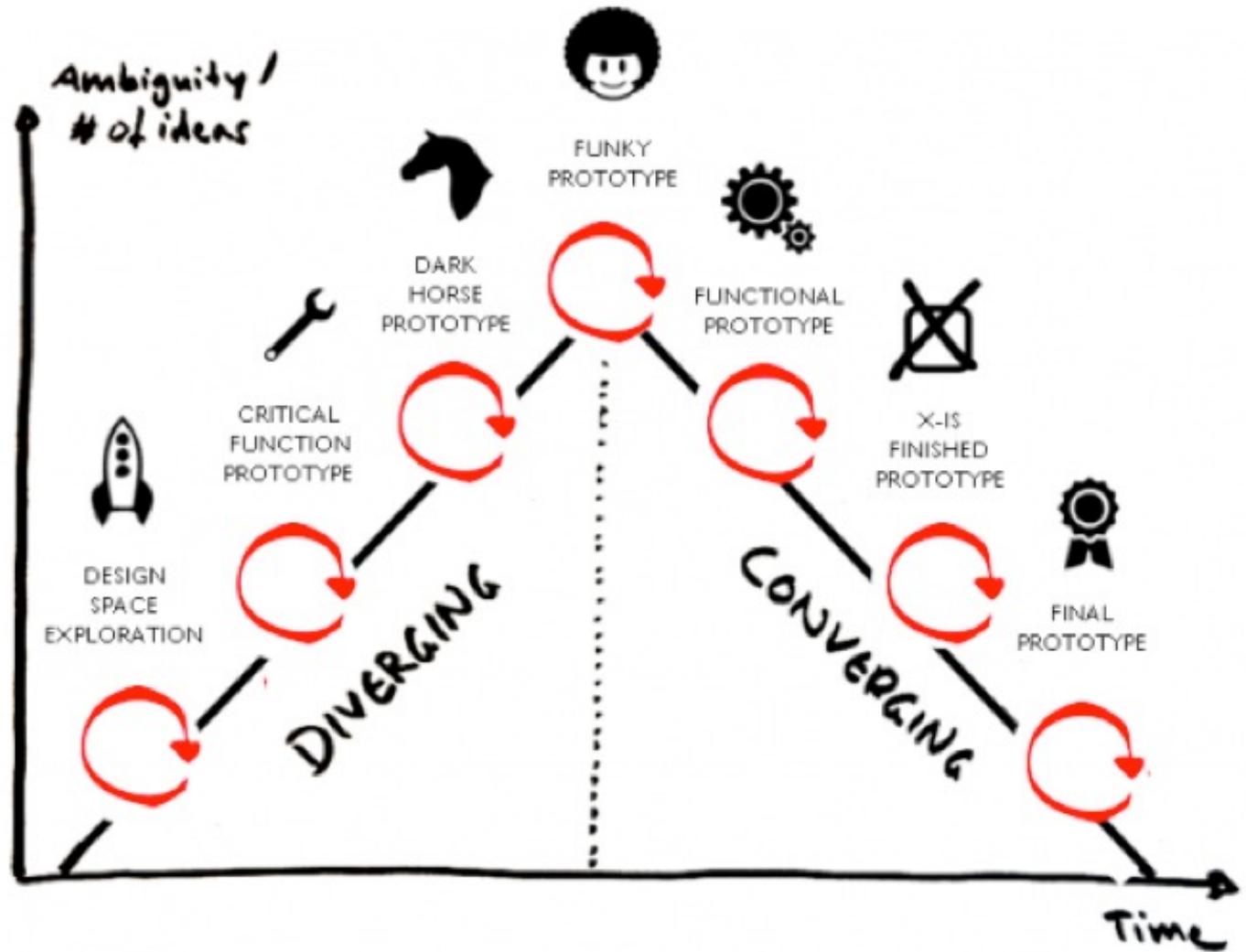
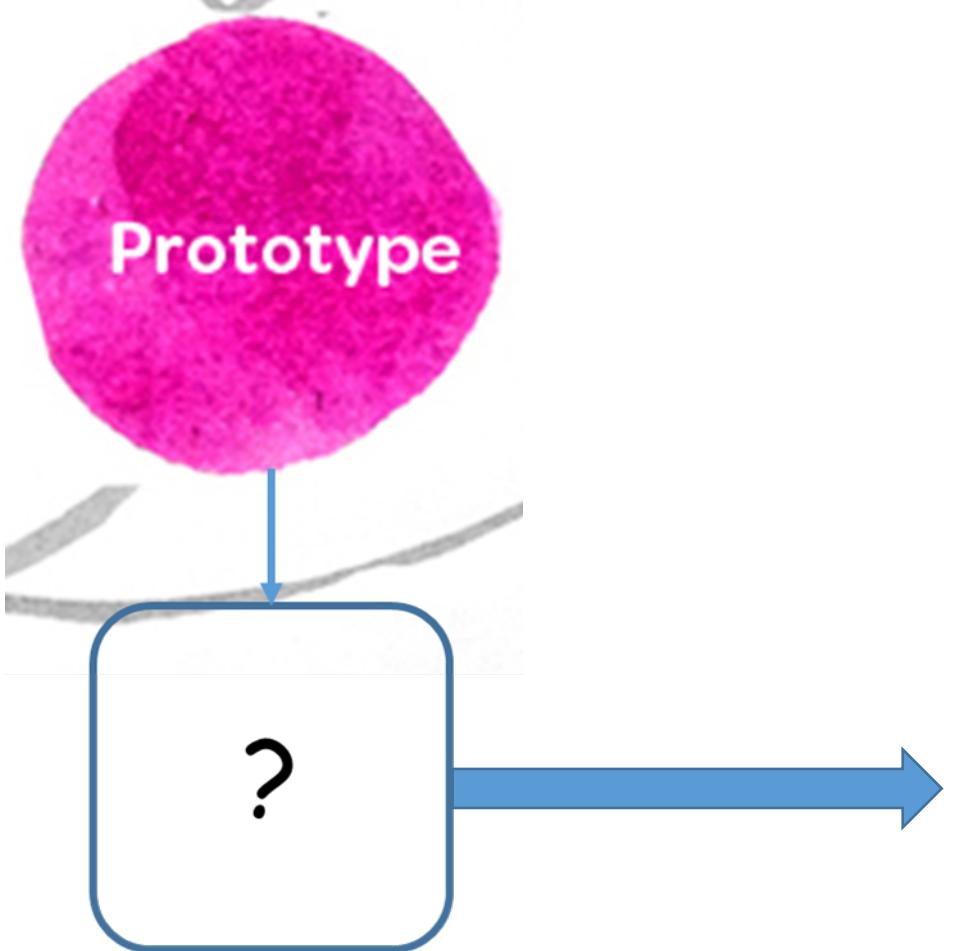
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SOLUTION

DESIGN IS A PROCESS...





Design Methodology

01 Plan

Research
Observe
Understand
Analyze

The Planning Phase

While the customer is getting ready to develop the idea into a product;
I Collect requirements and details from Customer/Stakeholders
I Collect Research data from User Researchers
I Analyze and compare the market research results and create a design plan.



Key Players: Stakeholders/Customer, Product Managers

Research & collect data



02 Design

Use Cases
Business Processes
Wireframes
Design Concepts

The Concept Phase

In this phase, when the basics of the application are getting ready;
I create wireframes, use case scenarios, conceptual layouts and low or high fidelity prototypes.
At this point, I also influence design decisions and work with development teams to reconcile legacy, performance and usability trade-offs.
I make sure to validate design solutions with end users.



Key Players: Product Managers, Project Managers, Development Team

Information Architecture & Interaction Design



03 Develop

Design Handover
Communicate
Monitor
Visual Design

The Development Phase

In this phase when the product almost reaches the alpha stage;
I Work closely with the development team to resolve implementation issues.
Make sure all the test cases are implemented as defined. Continue to collect feedback on designs.
I Make sure that all the design details are translated effectively to the development team. I also Maintain a constant communication between the Designers and the Developers.



Development Monitoring & Visual Design



04 Deploy

Usability Testing
Verification
Design Quality Check
Approval

The Deployment Phase

In this phase when the product is almost ready to hit the market;
My role is to design & conduct comprehensive usability tests on the product and provide recommendations for the refinements in the next version of the release.
Get any usability issues critical to the release fixed.
This is where the project either ends or starts its cycle for the next version.



Usability Testing and Deployment



Process

Methods

Goals

50 Selected Design Methods to Transform Your Design

By Robert Curedale

1. Affinity Diagram
2. Backcasting
3. Behavioral Map
4. Benjamin Franklin Method
5. Bhag
6. Biomimicry
7. Blueprint
8. Brainstorming NHK Method
9. Brainstorming: Method 635
10. Brainstorming: Related Context
11. Brainstorming: Scamper
12. Card Sort: Open
13. Card Sort: Closed
14. C-Box
15. Critical Success Factors
16. Crowd Funding
17. Crowd Sourcing
18. Cultural Probe
19. Customer Experience Map
20. Day in The Life
21. Design Charette
22. Design Intent Statement
23. Diary Study
24. Disney Method
25. Dot Voting
26. Empathy Map
27. Innovation Diagnostic
28. Interview: Contextual Inquiry
29. Interview: Extreme User
30. Lotus Blossom
31. Low Fidelity Prototype
32. Mind Map
33. Misuse Scenario
34. Mobile Diary Study
35. Objectives Tree
36. Observation
37. Personas
38. Dark Horse Prototype
39. Pictive
40. Rich Pictures
41. Scenarios
42. Shadowing
43. Sociodrama
44. Synectics
45. Storyboard
46. Storytelling
47. SWOT Analysis
48. Talk Out Loud Protocol
49. Unfocus Group
50. 10x10 Sketch Method

Studi mandiri . 2

Pelajari secara mandiri melalui video berikut:

https://youtu.be/_roVX-aU_T8

The Design Thinking Process

<https://www.youtube.com/watch?v=Vv26k2z5No8>

Apa itu Design Thinking? Dan Kenapa Sangat Populer? | CIAS QuickFix with Dr. Indrawan Nugroho

<https://www.youtube.com/watch?v=EUMbDMMYhXc>

Lima Tahapan Design Thinking | CIAS QuickFix with Dr. Indrawan Nugroho

Buatlah simpulan pribadi tentang pemahaman Design Thinking...