DESIGN THINKING

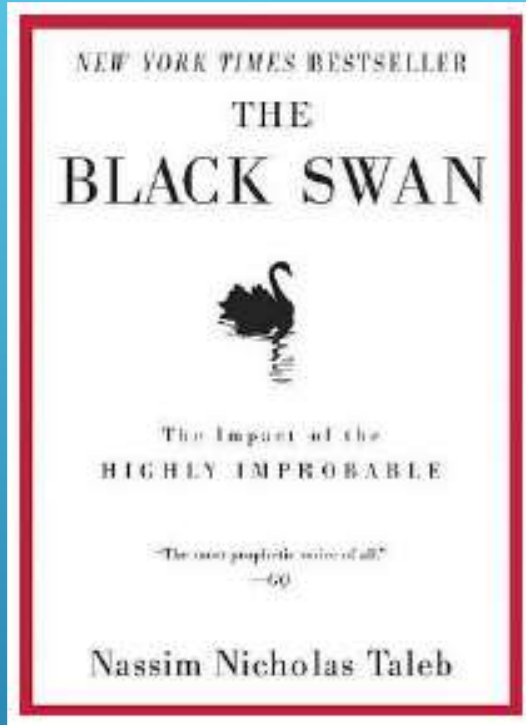**One of Think Different**

PT. Akebono Brake Astra Indonesia

- To navigate **Organization**
- To navigate **Business**
- To navigate **Process**

Create Growth

The Leader's Role

A black Swan event:
- Is a **surprise**
- Has a **major impact**
- Is rationalized by hindsight after the occurrence as if it was **expected.**

EXAMPLES:
- 9/11, Internet, WWI, etc.
- The "unknown unknowns"

The Black Swan Phenomenon

THE OLD RECIPES

- Dealing with **normative thinking**, as there is assumed to be a **direct correlation** between the rules of the **recipe & success**.

- Tomorrow's innovation **do not show up** in market statistics = **Surprise = Too late** for "white swans" to react.

The New Paradigm

Table 2.2 Companies Common to *In Search of Excellence* and *Built to Last*

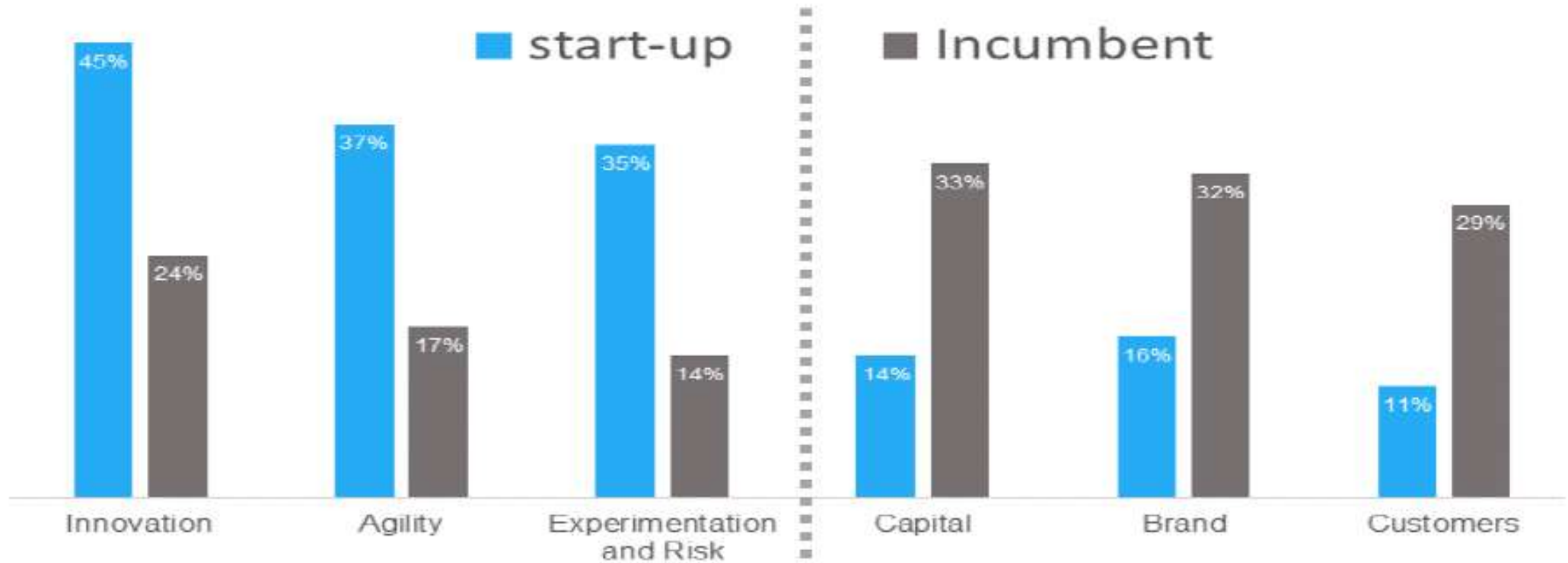| Common Companies	In Search of Excellence	Built to Last
3M	Excellent	Visionary
Boeing	Excellent	Visionary
Bristol-Myers	Non-Excellent	Non-Visionary
Burroughs	Non-Excellent	Non-Visionary
General Electric	Non-Excellent	Visionary
General Motors	Non-Excellent	Non-Visionary
Hewlett-Packard	Excellent	Visionary
IBM	Excellent	Visionary
Johnson & Johnson	Excellent	Visionary
Marriot	Excellent	Visionary
Merck	Excellent	Visionary
Procter & Gamble	Excellent	Visionary
Texas Instruments	Excellent	Non-Visionary
Wal-Mart	Excellent	Visionary
Walt Disney	Excellent	Visionary
Westinghouse	Non-Excellent	Non-Visionary

Source: Beyond Strategy – The Impact of Next Generation Companies, Michael Moesgaard Andersen and Flemming Poulfelt.

Out of the Box
Best Practices

NEW PARADIGM

**No Box
Next Practices**

Visionary vs Excellent

Survey question

What advantage does each type of company have in its ability to capitalize on digital disruption?

■ start-up   ■ Incumbent

	Innovation	Agility	Experimentation and Risk	Capital	Brand	Customers
start-up	45%	37%	35%	14%	16%	11%
Incumbent	24%	17%	14%	33%	32%	29%

Source: IMD Global centre for digital business transformation
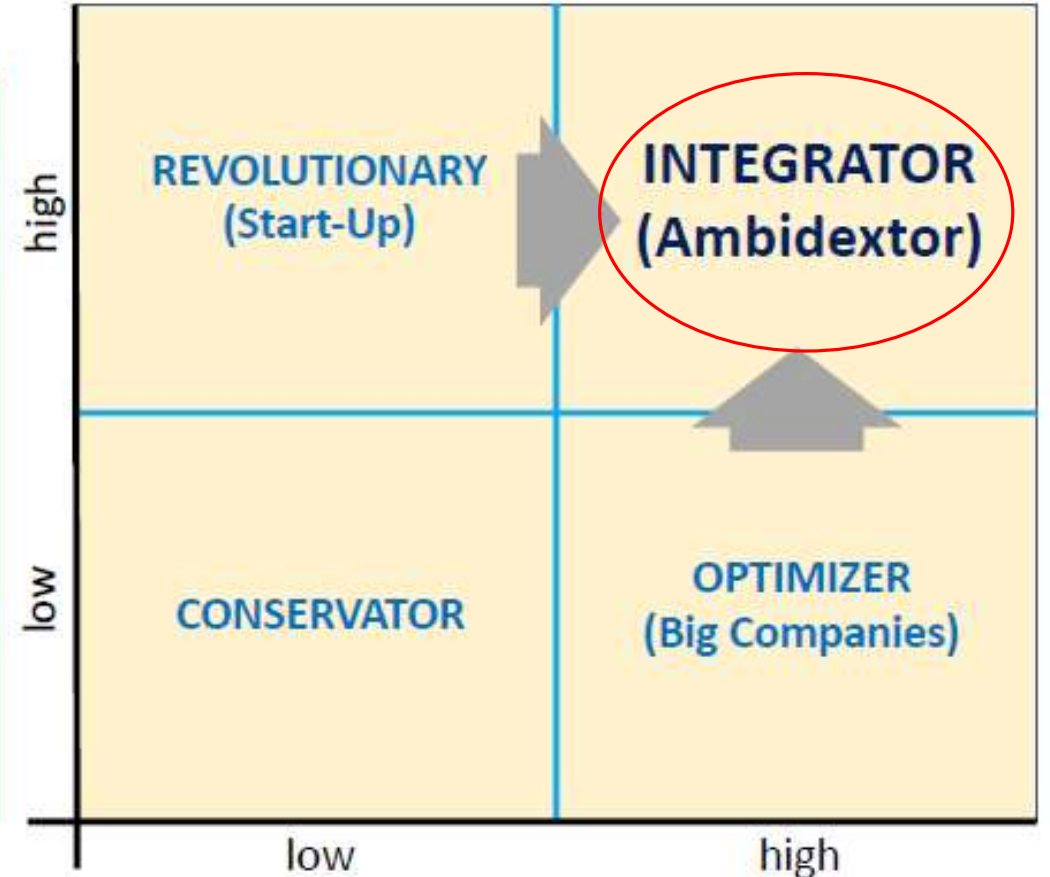
Incumbents vs Startups

am.bi.dex.trous

/,ambē'dekst(ə)rəs/

adjective
(of a person) able to use the right and left hands equally well.

EXPLORATION
Finding new possibilities. Radical innovation.

high

low

REVOLUTIONARY (Start-Up)	**INTEGRATOR** (Ambidextor)
CONSERVATOR	**OPTIMIZER** (Big Companies)

low   high

EXPLOITATION
Enhancing existing products & processes.
Incremental innovation.

Ambidextrous

UBER

The world's largest taxi company, owns no vehicles.

AIRBNB

The world's largest accommodation provider, owns no real estate.

FACEBOOK

The world's most popular media owner, creates no content.
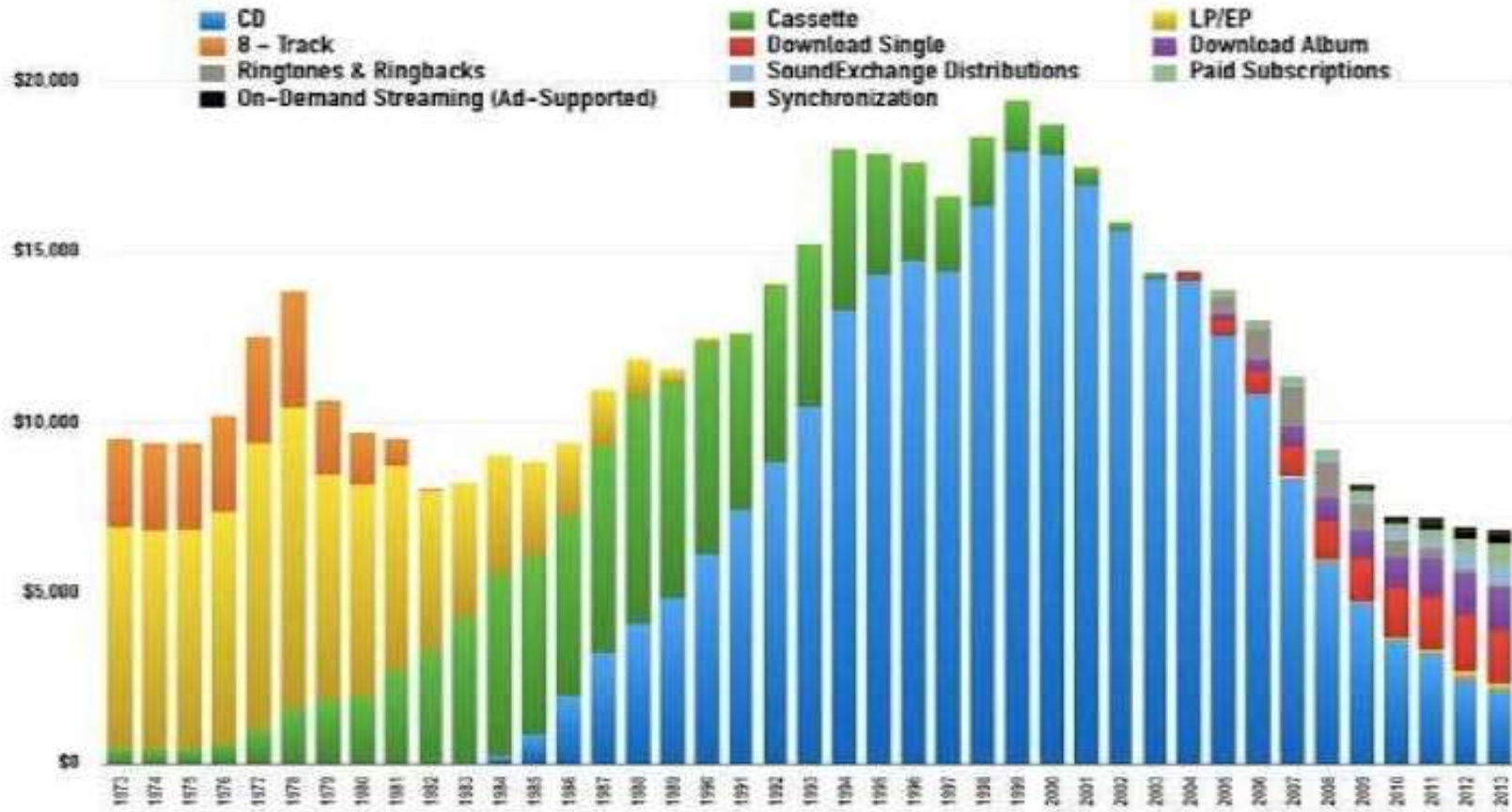
ALIBABA

The most valuable retailer, has no inventory.

At some point, **process improvements** only will not sufficient.

Change in the Business Environment
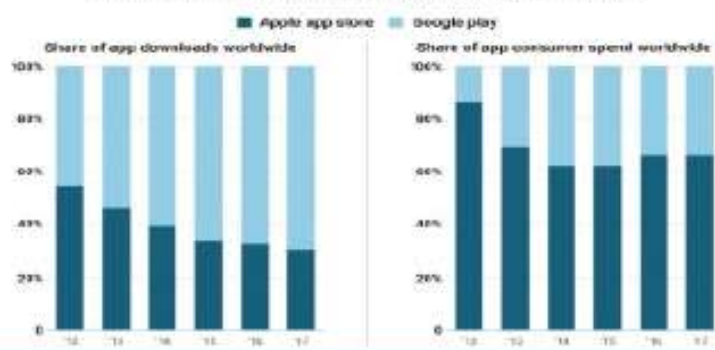
Inflation Adjusted 2013 Dollars (1973 to 2013)
US; $ In Millions; source: RIAA

Disruptive Business Ideas

Significant Growth

From
MAKING PEOPLE WANT THINGS > To MAKING THINGS PEOPLE WANT

Emphatic Product & Service

Related to your organization and business, do you really **understand** what customers **want**, and what **strategies** and **changes** are urgent for your organization to take.
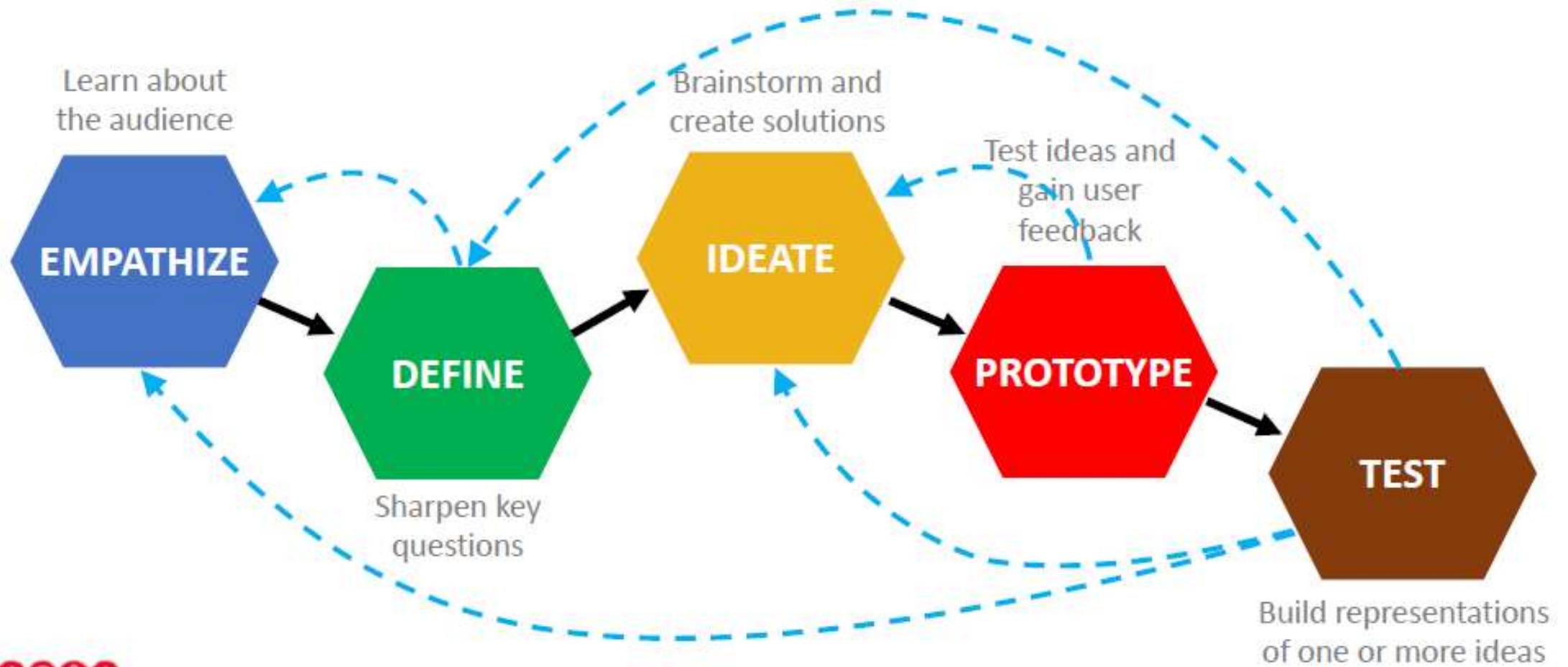
Think different

DEFINITION of Design Thinking

"**Analytic** and **creative** process that engages a person in opportunities to **experiment**, create and prototype models, gather feedback, and redesign"

– Razzouk and Shute 2012
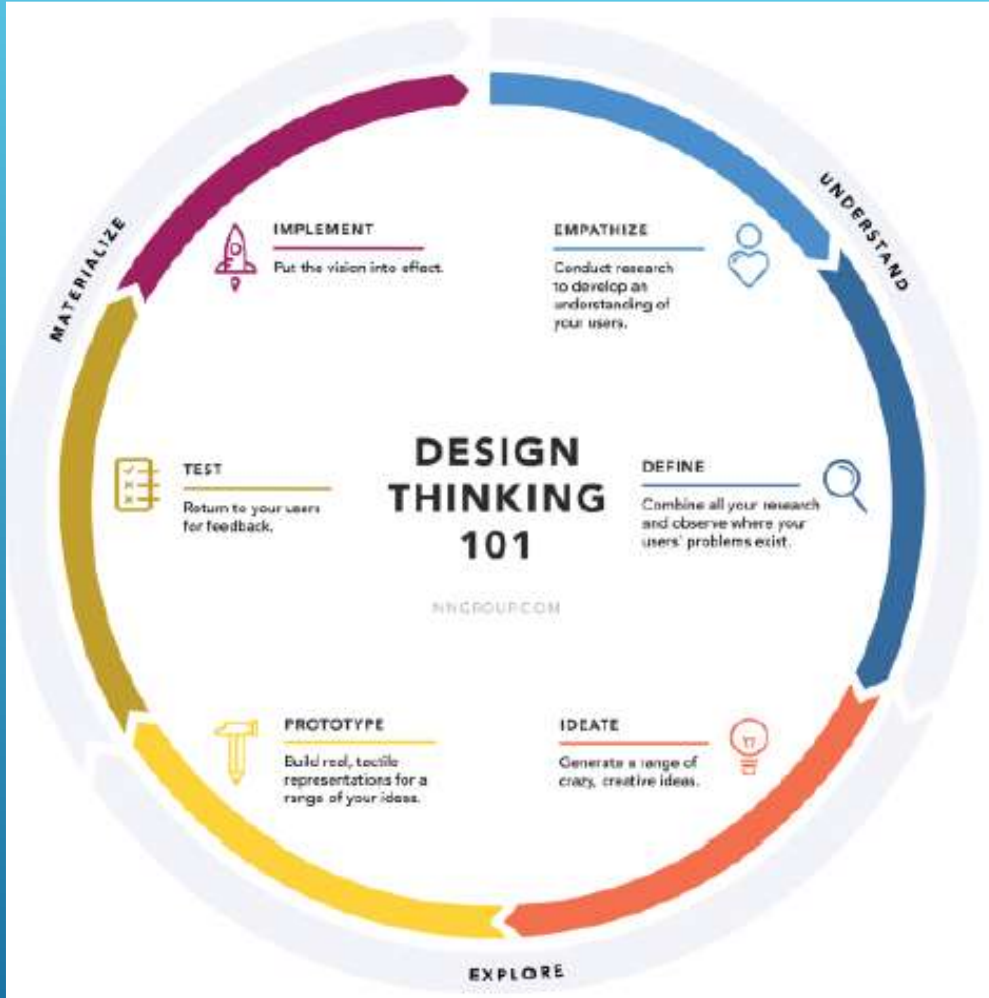
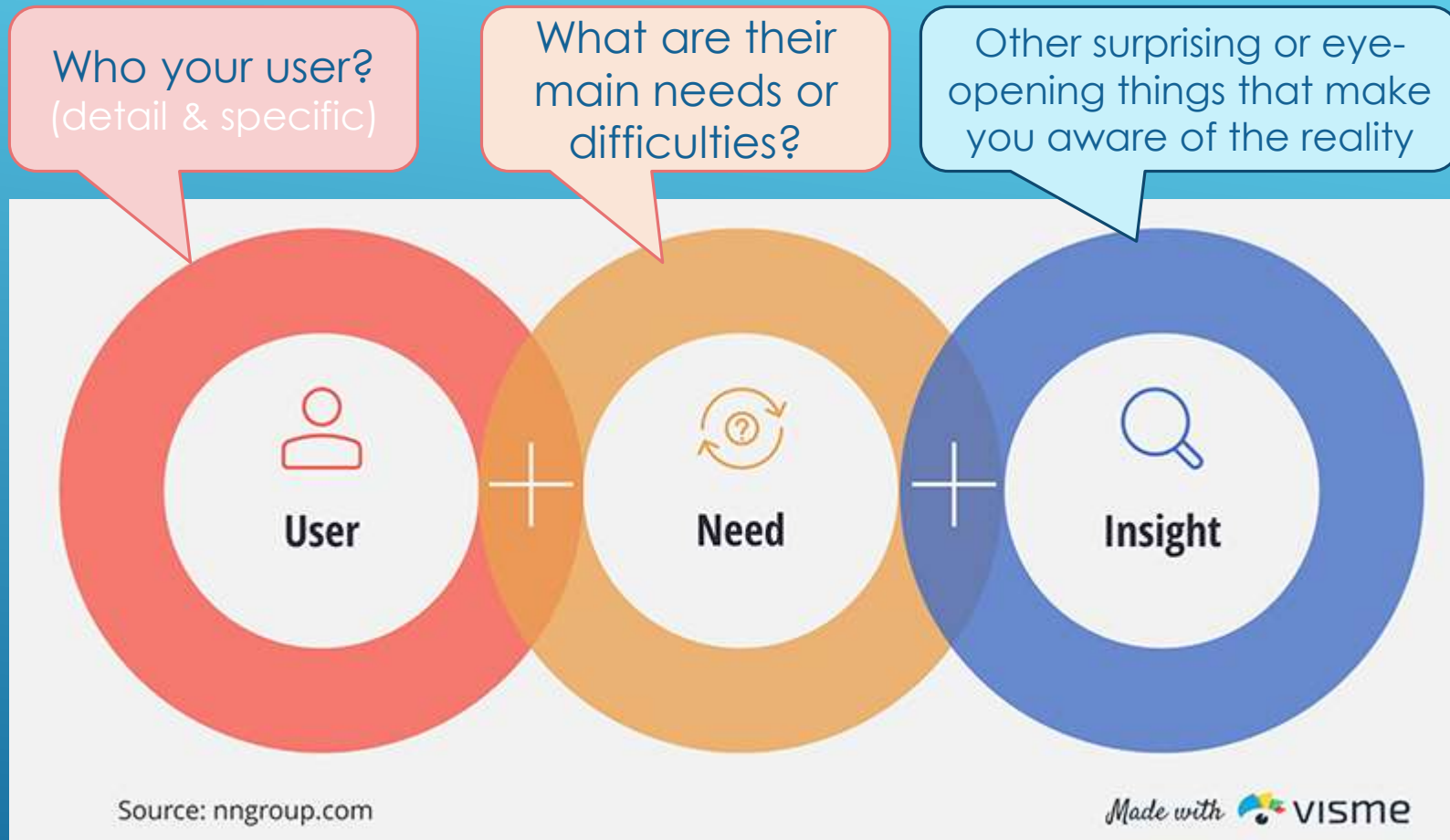**Design Thinking – an Emphatic Approach**

Design Thinking Process

"Empathy is at the heart of design. Without the understanding of what others **see, feel, and experience**, design is a pointless task"

Emphatize – Feel your users

Framing the Problem within **a Point of View.**

Who your user? (detail & specific)

What are their main needs or difficulties?

Other surprising or eye-opening things that make you aware of the reality

User + Need + Insight

Source: nngroup.com

Made with **visme**

Perspective Statement :
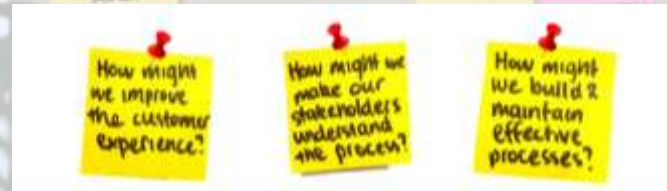
"We met … "

"We were amazed to realize that … "

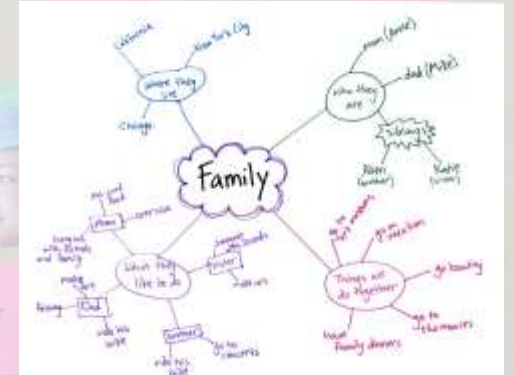"It would change the world if … "

Define – What are they really need?

1. **Do not be judgmental**
2. **Focusing on generating as many ideas**
3. **a culture of trust**

Mind Mapping

How might we method

Amplify good and eliminate bad

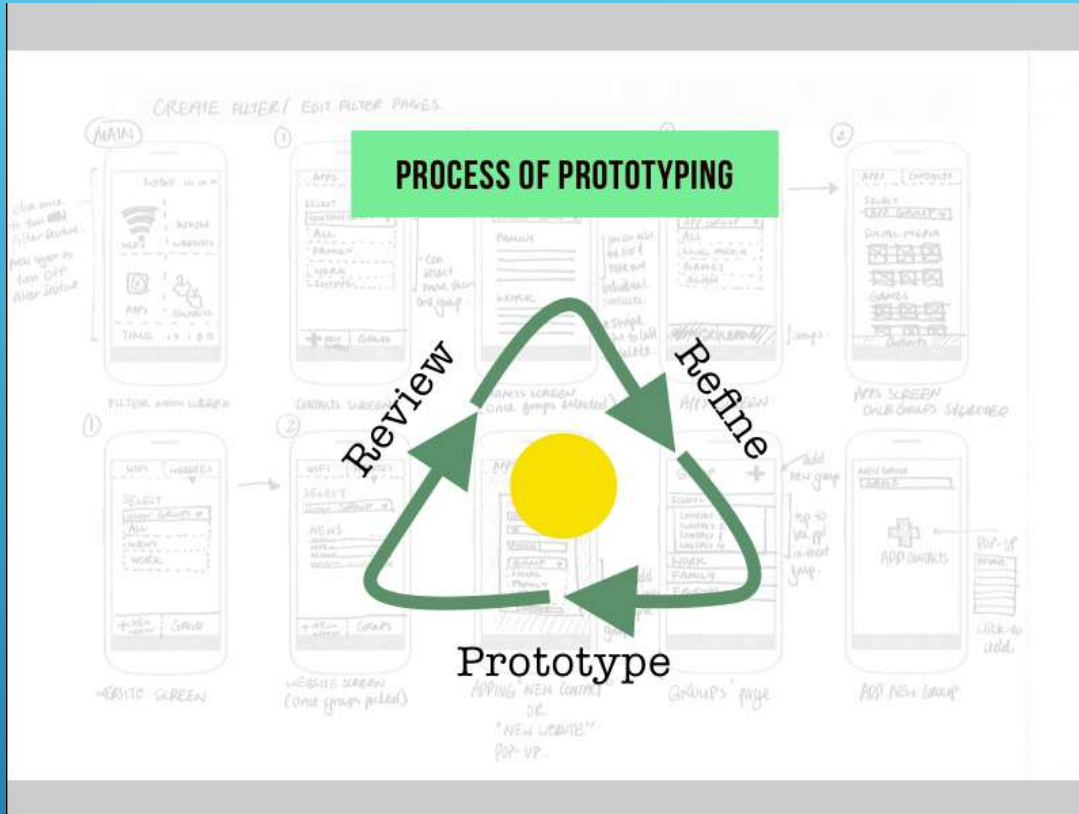Explore opposites and question

Ideate

Analyse
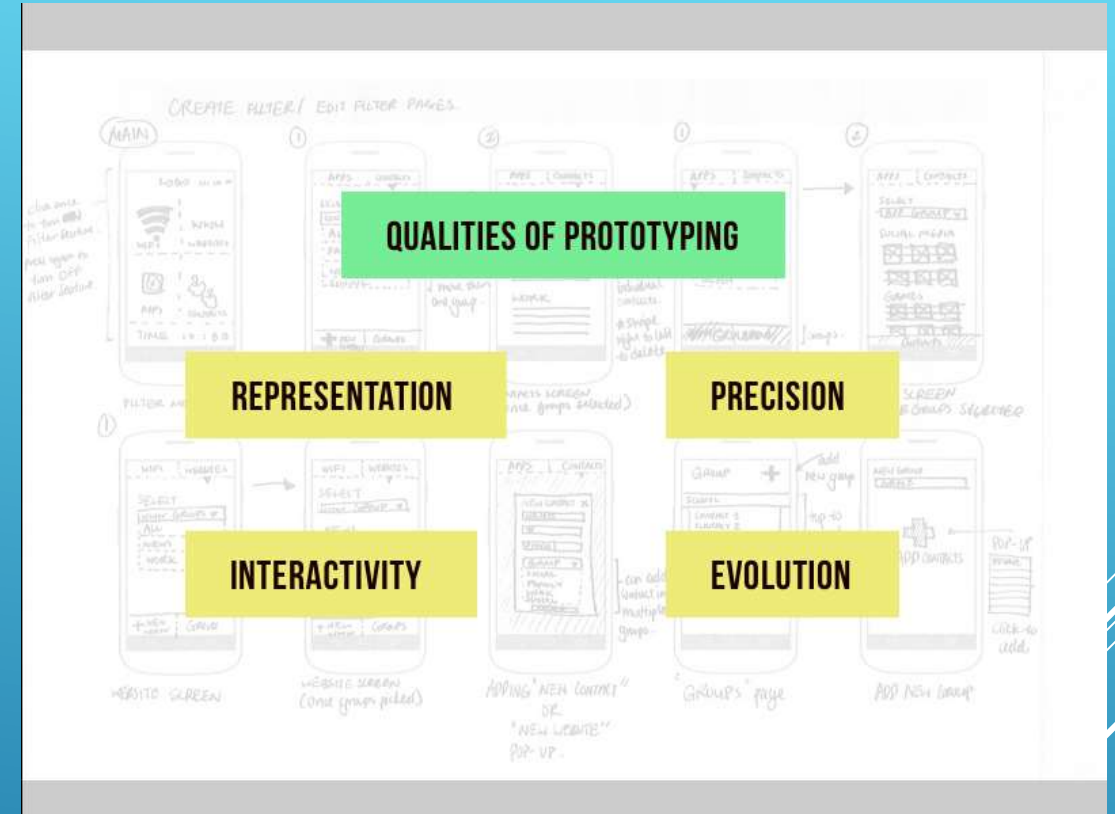
Identify unexpected resources

"Deferring judgement reduced social inhibitions in the group — no one would be stigmatized for shouting out a crazy idea."

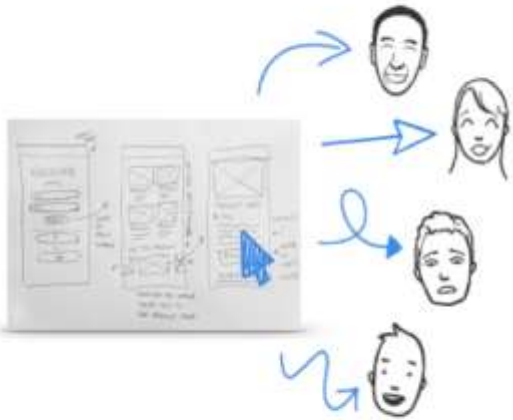**Ideate - Generate as many ideas you could think of**

"A good prototype is a prototype that facilitates answering the questions you have."

Prototype - Demonstrate the idea

"Prototype as if you know you're right, but test as if you know you're wrong."

Activity: Test your designs and gather feedback

What worked?	What could be improved?
Questions	Ideas

Example Test

prototype/test

			Team 1	Team 2	Team 3	Team 4	Team 5	Team 6
Purpose: To quickly create manifestations of an idea in order to test ideas and to iterate failures	➕	In addition to ✓ prototypes are tested in a thorough manner that shows thoughtful analysis how feedback was used in each iteration.						
Student Design Thinking Growth Goal: To generate solutions based on responses to iterative prototypes instead of just making a representation. Students should focus on human centered feedback and show a bias towards action while developing ideas.	✓	Through prototyping, getting feedback and iterating, student created a solution that addressed user needs. There is a clear record of how iterations to the prototype incorporated feedback from users to better address user needs.						
	△	Prototyping provides partial solution for needs. Little or no iteration or evidence of responding to feedback.						
	🚫	Little or no prototyping accomplished. No indication of responding to feedback.						

Get feedback

Be Beginner's mind
"In the beginner's mind there are many possibilities, in the expert's mind there are few."

Test - Challenge your assumption and learn from it

How to DT breakthrough Invention

thinking like a designer

- Many start to realize that **design mindset** is useful for business.

- Thinking like designers are a good starting point **to foster innovation** in companies.

- Innovative business are those that are **customer/user-centered.**

- Many industries are starting to realize that they have to build **design capacity, mindset, and capability** in their organizations.
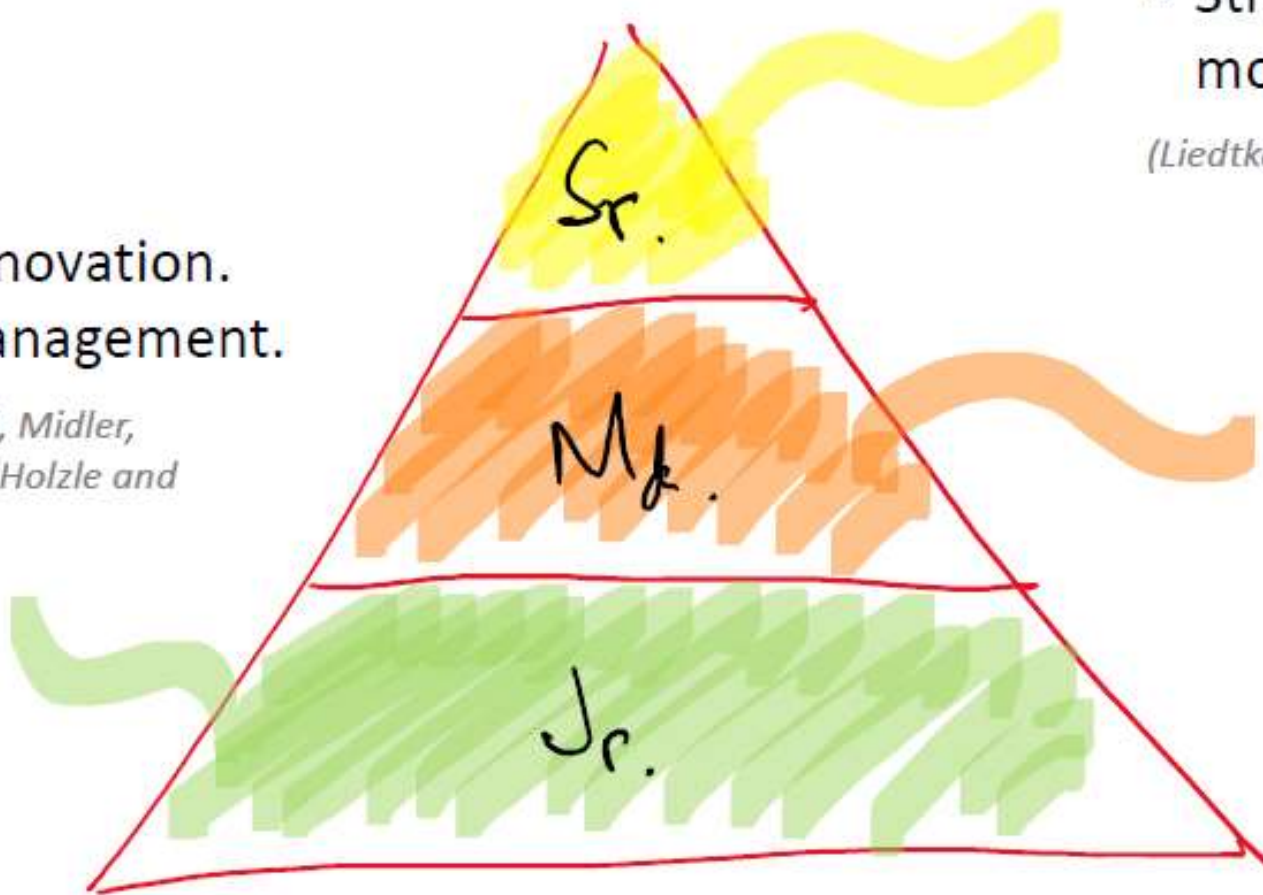
Getting More Popular in Business

Companies using DT

DT for Different Levels of Management
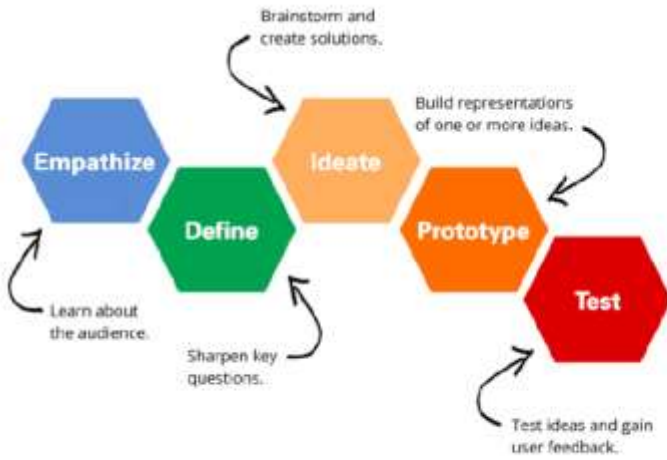
STANFORD UNIV.

Pros
- Relatively general.
- Easy to understand.
- Applicable to many purposes (public, private, etc).

Cons
- Students / trainee tend to assume that DT is a linear process.

COLUMBIA UNIV.

Pros
- Designed for growth.

Cons
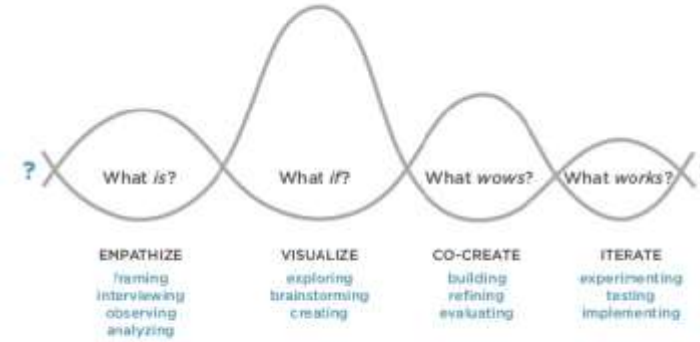- Less popular and less catchy.
- May be difficult to follow for first learner / adopter of design thinking.

Liedtka and Ogilvie (2011)
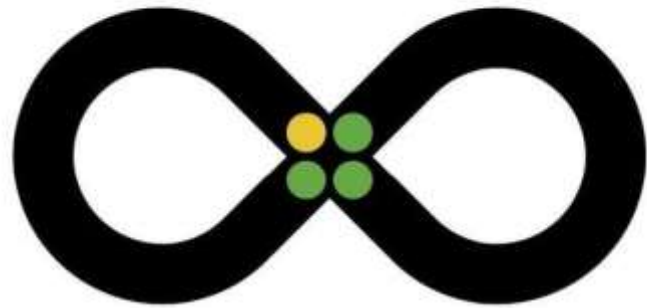
IBM

Pros
- Team-oriented.
- Easily-used in large-scale processes (with mass participants).

Cons
- Need alignment across teams.
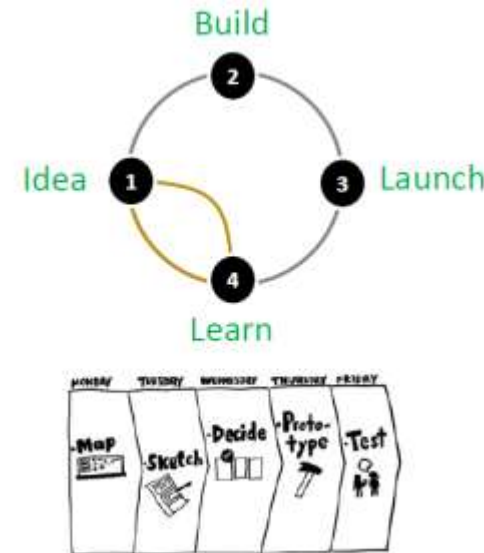
GOOGLE VENTURE

Pros
- Fast and rapid – confined in a certain time frame (5 days).
- Combination between individual and team works.

Cons
- Need momentum.

Some DT Approaches

Design Thinking + Lean Startup + Agile Diagram

https://www.mendix.com/blog/design-thinking-vs-agile-combine-problem-finding-problem-solving-better-outcomes/
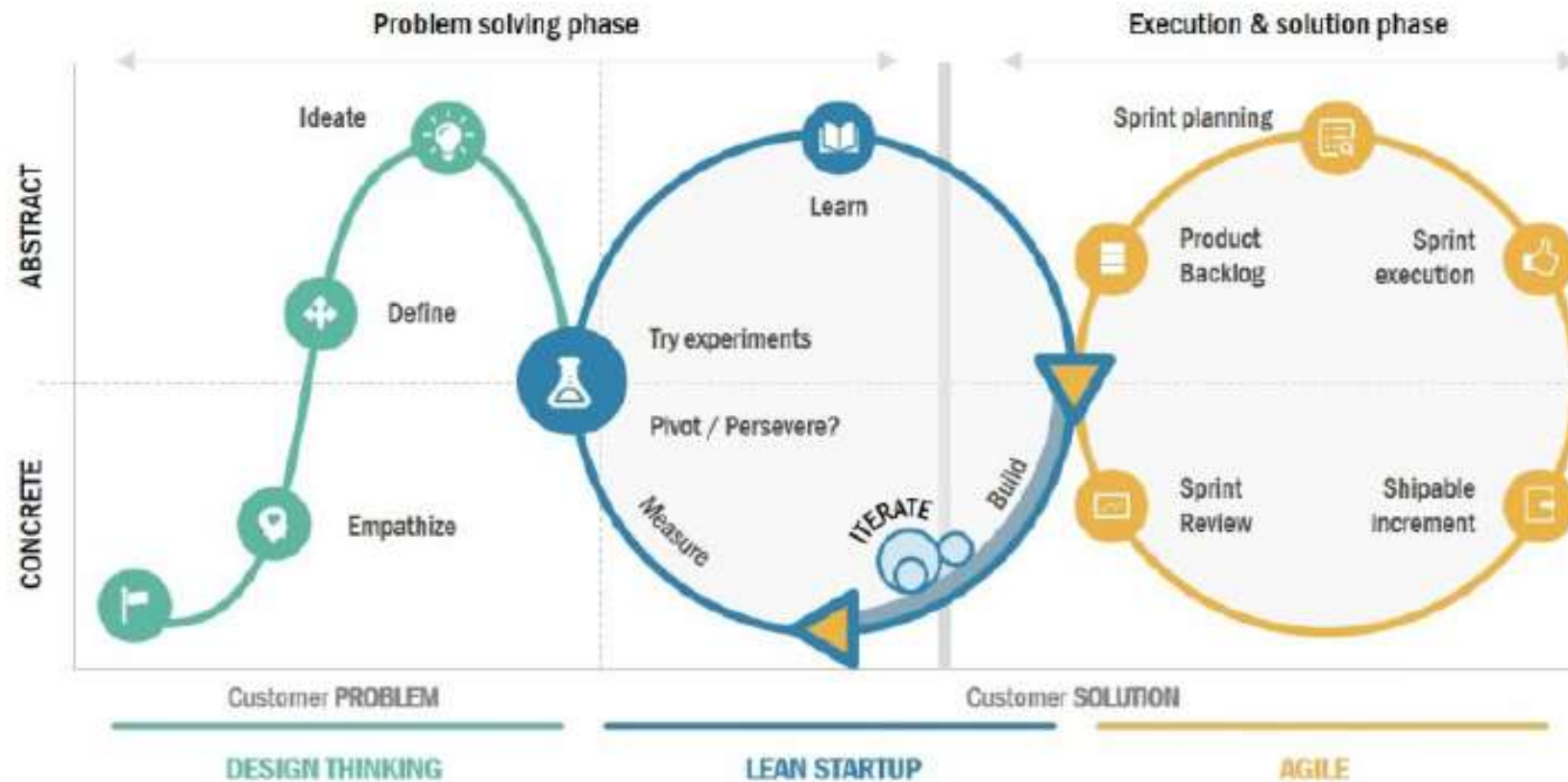
Collaboration DT + Lean Startup + Agile Diagram

Sprint Backlog → Sprint Planning → Sprint Review → Sprint Retrospective → Backlog → Sprint Planning → Sprint Review → Sprint Retrospective

Empathize — Ideate — Define — Design Thinking

Scrum Sprint — Daily Stand Up

Scrum Sprint — Daily Stand Up

Empathize — Ideate — Define — Design Thinking

https://medium.com/@takeshi.yoshida/design-thinking-plus-scrum-d671a1a8e67a
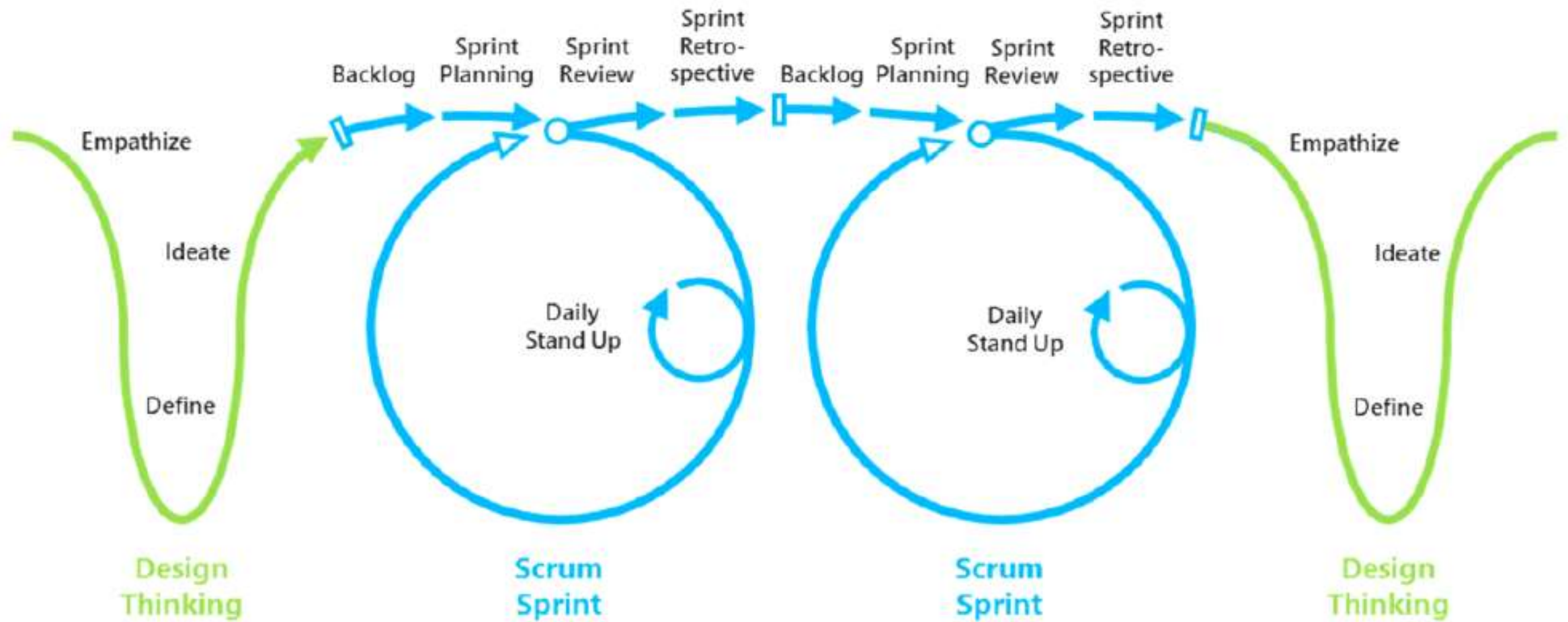
Collaboration DT + Scrum

The Danger of **DT "Fetish"**

- DT is so **common-sensical**, it is tempting to label any convergent divergent process as "DT"
- DT is often reduced to **"Post-it"** exercise.
- Many **jump into the conclusions** / solutions in the process.
- Lack of **"Design Crit"** or criticism which is essential in any design process.

Caution

A process where a small group of people **provide critique** to a result or a prototype of a design:

1. Identify **audience** (lecturers, experts, etc).
2. Clarify a **goal** – e.g. "to sharpen the insights from empathize process".
3. Set **context** (ensure that everyone is on the same page on what you do).
4. Tell the **stories** of your prototype or design or insights.
5. Set the room into **critique mode** – "what do you think about this ….".
6. List all **the feedback**.
7. **Follow up** (re-design, re-prototype, re-develop insight, etc.).

Design Crit

Creativity "Accidents"

A form of **social or cultural problem** that is **difficult** to solve because of **incomplete**, **contradictory**, and **changing** requirements.
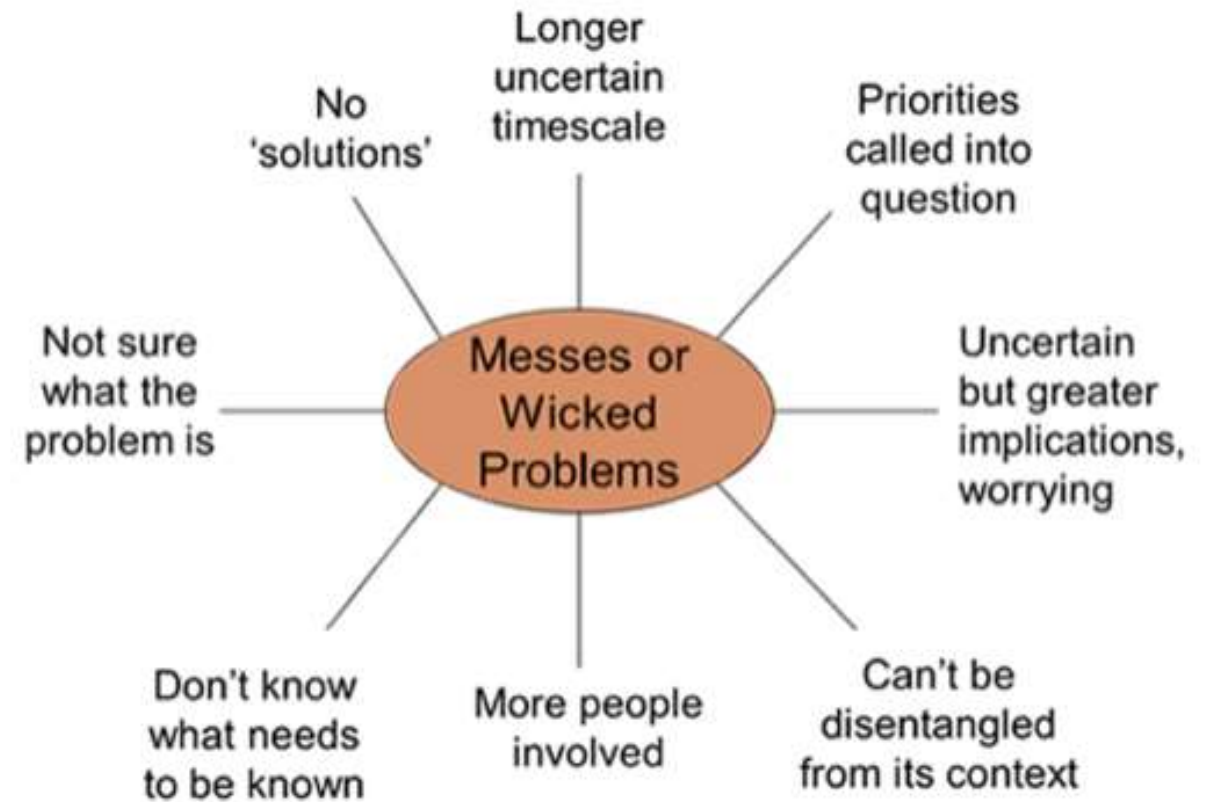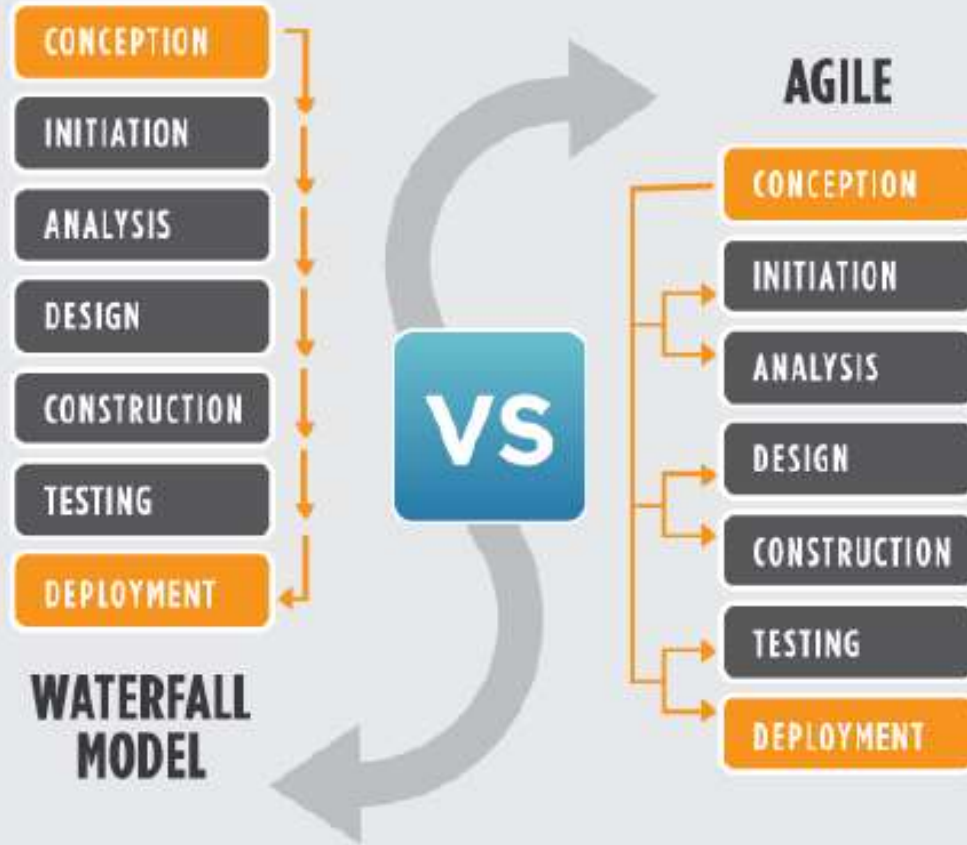

The "Wicked" Problem
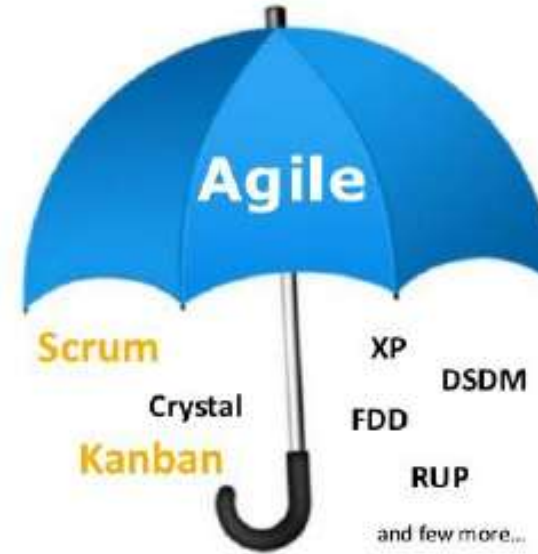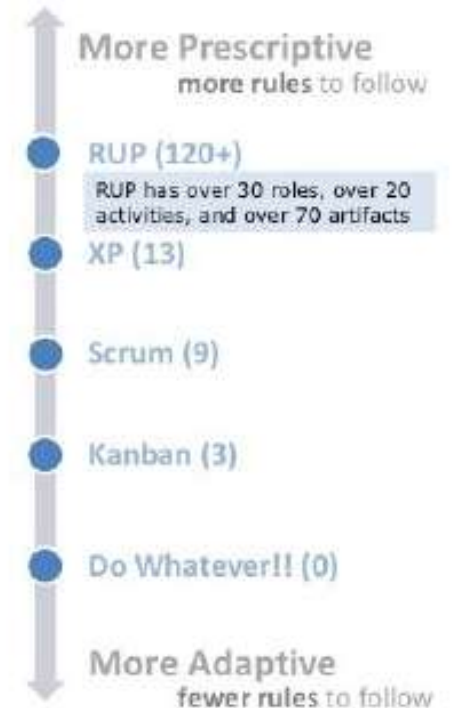
Waterfall vs Agile Methode

Based on **determined problems** in **defined situations**

Problem Definition

Concepts Created Through Brainstorming and Research

Testing the Solution

ANALYSIS ➡ **SYNTHESIS** ➡ **EVALUATION**

Messes or Wicked Problems

- No 'solutions'
- Longer uncertain timescale
- Priorities called into question
- Uncertain but greater implications, worrying
- Can't be disentangled from its context
- More people involved
- Don't know what needs to be known

Not sure what the problem is

Linear methods are not enough to solve a wicked problem, which we just **not sure what the problem is.**

Linear Method

howmightwe...?

KNOW	UNDERSTAND	APPLY	ANALYSE	EVALUATE	CREATE
define	predict	solve	focus	reframe	create
identify	associate	apply	compare	recommend	develop
describe	demonstrate	construct	experiment	support	modify
match	distinguish	choose	question	convince	rewrite
recognise	discover	prepare	test	defend	devise
select	research	produce	correlate	assess	imagine
examine	transform	chart	separate	consider	negotiate
tell	describe	judge	analyse	critique	design
visualise	compare	transfer	compare	persuade	structure

Design Thinking Method

Template:

How Might We **ACTION WHAT** for **WHOM** in order to **CHANGE SOMETHING**

Example:

How might we **bridge** the **disconnect between culture and technology** for **members of the organisation** in order to **improve communication**

Design Thinking Method

How might we **built** the **online connections** for **people who want to rent out their homes with people who are looking for accommodations** in order to **give new experience of traveling**

Airbnb is an online marketplace that connects people who want to rent out their homes with people who are looking for accommodations in that locale. It currently covers more than 81,000 cities and 191 countries worldwide.

DARE TO EXPERIMENT

Design thinking is a part of Airbnb's success; in particular, they built **a culture of experimentation**: "It was only when they gave themselves permission to experiment with non-scalable changes to the business that they climbed out of what they called the 'trough of sorrow.'"

This is how the famed start-up went **from $200 a week profit to the "unicorn"** it is today.

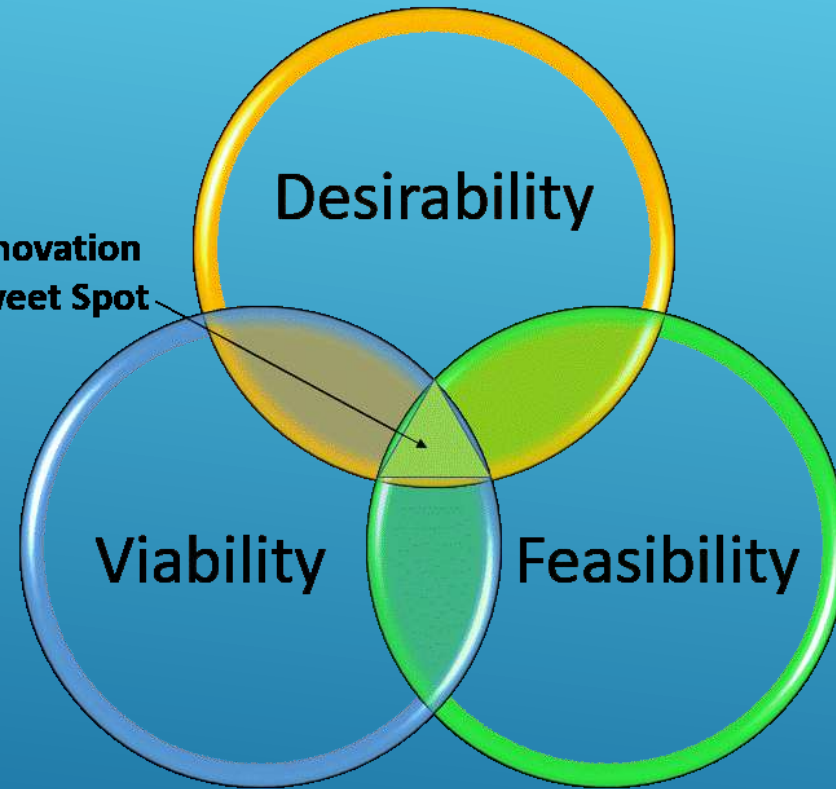# E.g. Airbnb

How Airbnb design for trust

Desirability tests whether your innovation is solving the right customer / user problem

Innovation Sweet Spot

Desirability

Viability

Feasibility

Viability tests your value chain for long-term sustainability

Feasibility tests whether your innovation strengthens your business

Measure DT
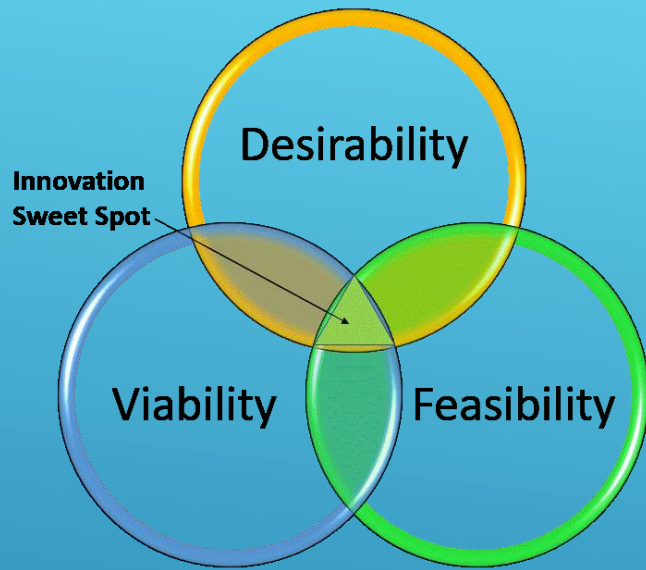
At two emerging markets, car sharing and electric cars. The customers who are drawn to both are concerned about two things:

- the environmental impact of driving a gas-powered car,
- the cost of ownership.

Tesla has primarily focused on building cars that are environmentally friendly. While this works for an upscale niche of people, there are many others who can't afford to have a Tesla sitting in their driveway, and who are concerned about both the cost of ownership and the environmental impact of building one car for every person.

So Elon Musk as Leader think about both sides of the equation. Once his cars become autonomous, they can drive others around after their owner has reached their destination. This pivot can **increase the desirability of the Tesla for their target customer**, and provides direction for the design team to also build for share-ability.

Tesla are not proposing they build a car sharing service and compete with Uber. Instead they are building on **their core capabilities and brand strength to design an autonomous car** that has been built for the sharing economy.

One of the smartest moves that Musk made with Tesla is to build infrastructure to support drivers who needed to recharge for longer trips. His shift towards designing for the sharing economy shows similar foresight, ensuring **his cars will be able not only to fit into this trend, but also to lead it.**

Tesla Cases Study

Businesspeople don't need to understand designers better. They need to be designers.

-- Roger Martin, dean, Rotman School of Management

image: Vector Hugo

1. **What business challenges that Apple must deal with?**

Business challenges :
- The future of Apple was uncertain (stock price drop to $5, market share and profit were declining, the company was nearly written off.
- Unstable strategy due to change of executives teams.
- Unclear vision about Apple's competitive strategy
- Product not unique in the market
- Too many failed products (e.g. set-top boxes for TVs, Apple PDA (Newton), etc) than the successful ones (e.g. PowerBook)

2. **Do you think they can be resolved by using continuous improvement? Explain your answer.**

Continuous improvement alone is not sufficient to solve those business challenges because continuous improvement only focus on exploitation / improvement of existing products. Design thinking approach is more suitable to understand customer needs (exploration).

Apple Cases

3. How does Apple integrate Design Thinking into its strategy to overcome the business challenges? Describe the way Apple use the human-centered design (people desirability, business viability, and technology feasibility) in their strategy and execution.

- Apple focuses on people's needs and desires, rather than business needs by building user empathy and create simple and user-friendly products
- Beautiful products beyond fashion
- Using platform strategy to make production more stable, reliable, quickly and cost efficient
- Involving customers in the design and testing (participatory design)
- CEO as Chief Innovator
- Excellent in execution
- Bold business experimentation : internet-based business models (App Store)

Apple Cases

INNOVATION IS A STATE OF MIND

THANK YOU