Creativity Enhancement Workshop

Mr. Jerry Lee
Managing Director, Daewon Advisory

Experience

- Managing Director, Daewon Advisory (Current)
- New Business & Strategy Manager, Samsung Electronics
- Strategic Planning Office Manager, Samsung Electronics
- Instructor, Korea Military Academy (Captain in Army)
- Economic Policy Analyst, Maryland Department of Transportation

Education

- M.B.A., Seoul National University
- M.A., Johns Hopkins University
- B.A., UC Berkeley

Successful People

Read every day

Talk about ideas

Compliment

Embrace change

Forgive others

Learn constantly

Accept responsibility for their failures

Have a sense of gratitude

Set goals and develop life plans

Set a budget &
Save money wisely

Unsuccessful People

Watch TV every day

Talk about people

Complain, Criticize

Fear change

Hold grudges

Are know-it-alls

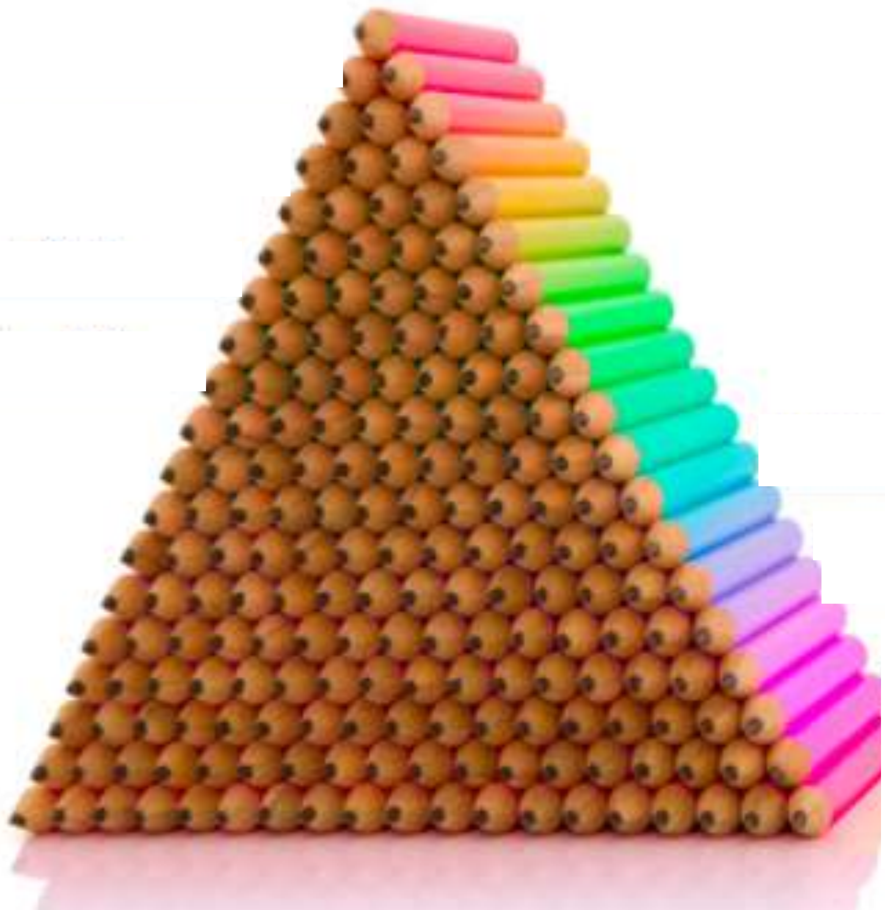
Blame others for their failures

Have a sense of entitlement

Never set goals just wing it

Never set a budget &
Spend money rashly

Learning Efficiency Pyramid



NTL (National Training Laboratories)

DAEWON

Creativity & Innovation, Korea

Lectures	Activities	Site Visits	Group Project

	Day 1 (Sun)	Day 2 (Mon)	Day 3 (Tues)	Day 4 (Wed)	Day 5 (Thu)
AM	[Interactive Lecture] • Overview of Korean History & Business Culture [Case Study] • Role of Leadership in Rapid Economic Development	*Depart to Itaewon (Meet at hotel lobby)* [Interactive Lecture] • Leadership Lessons from Great Leaders of Korea	*Hotel Check-out & Leave for Sintanjin* • Visit to KT&G Sintanjin Factory	*Leave for Ulsan* • Visit to Hyundai Motors: Global #5	*Hotel Check-out (Gyeongju)* • Visit to POSCO Steel Factory: Global #1 Most Efficient Steel Maker • Visit to POSCO Museum
PM	[Workshop] • Creative Enhancement Workshop • Group Meeting	• Visit to Center for Creative Economy & Innovation *Return to Hotel* • (Optional) N-Tower	• Visit to Korea Aerospace Research Institute (KARI) *Leave for Gyeongju* *Hotel Check-in* • Prepare for Group Presentation	• Visit to Hyundai Heavy Industries: Global #1 *Return to Hotel* • (Optional) Donggung Palace & Wolji Pond	*Leave for Seoul* • *Hotel Check-in*

DAEWON

Creativity & Innovation, Korea

Lectures	Activities	Site Visits	Group Project

	Day 6 (Fri)	Day 7 (Sat)	Day 8 (Sun)	Day 9 (Mon)	Day 10 (Tues)
AM / PM	• Mission Possible: Speedy Planning & Execution within Your Team *Working as a team for various tasks requiring effective decision-making, clear communication, efficient delegation and cooperation*	• Preparation for Final Group Presentation *Preparing for the group final presentations on key lessons learned & implications for their own job at their respective workplaces*	*Depart to Itaewon* [Interactive Lecture] • Enhancing Global Competitiveness: Samsung Group [Interactive Lecture] • Importance of Strategic Planning	*Depart to Suwon* • Visit to Samsung Innovation Museum *Depart to Osan* • Visit to Story Garden by Amore Pacific *Return to Hotel*	• Program Wrap-up & Closing Discussions • Group Presentation & Closing Ceremony *Hotel Check out*

Evaluation Criteria

Participation: 30%
Peer Review: 30%
Group Presentation: 40%

Group Presentation on the Last Day

- Key lessons learned from Korea?
- Implications to Kuwait?
- How will it impact my job at KOC?

(10-15 Minutes per group)

1 Best Group Award
"Star Performer" Awards: 3 individuals

Dress Code: Smart Casual
Casual (Running Shoes): Mission Possible (Day 6)

Change of Paradigm

Farming **Industrial** **Knowledge/Technology**

Environmental Change

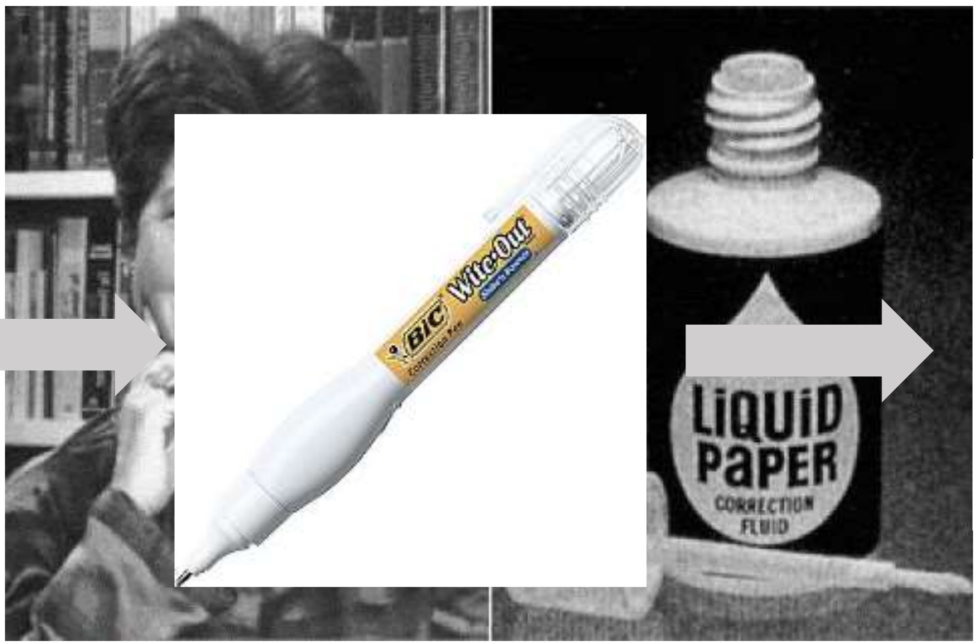
Productivity

Quality

Creativity

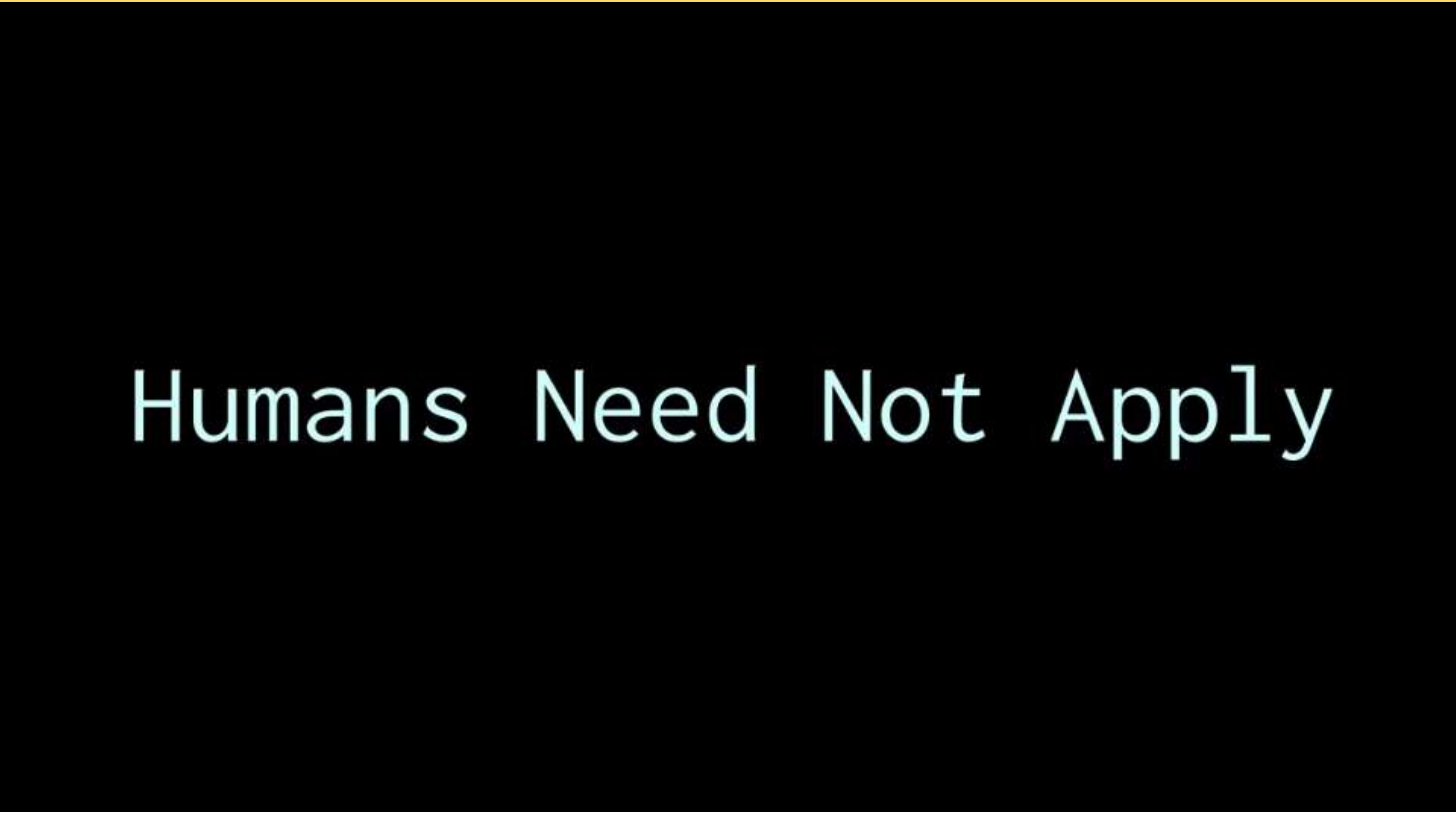
Diligently > Properly > Differently

Continuous Improvement



Bette Nesmith Graham
Inventor of Liquid Paper

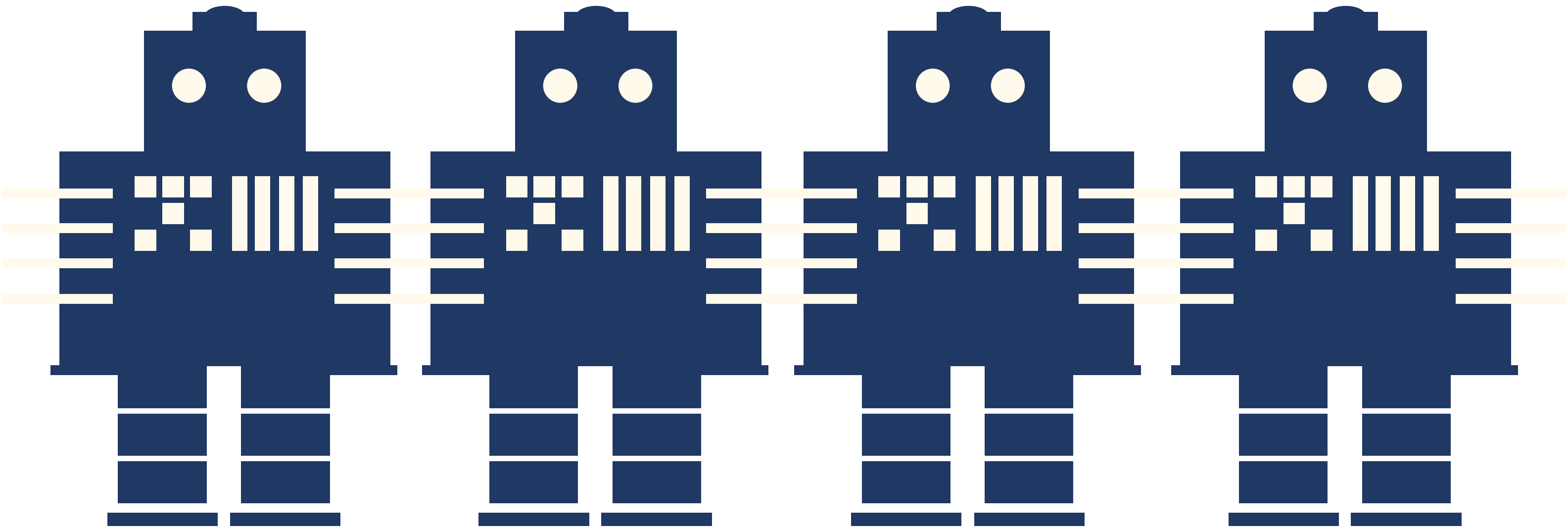
Change of Paradigm



Hon Hai/Foxconn (a major Chinese electronics manufacturer) plans to introduce

1 million robots

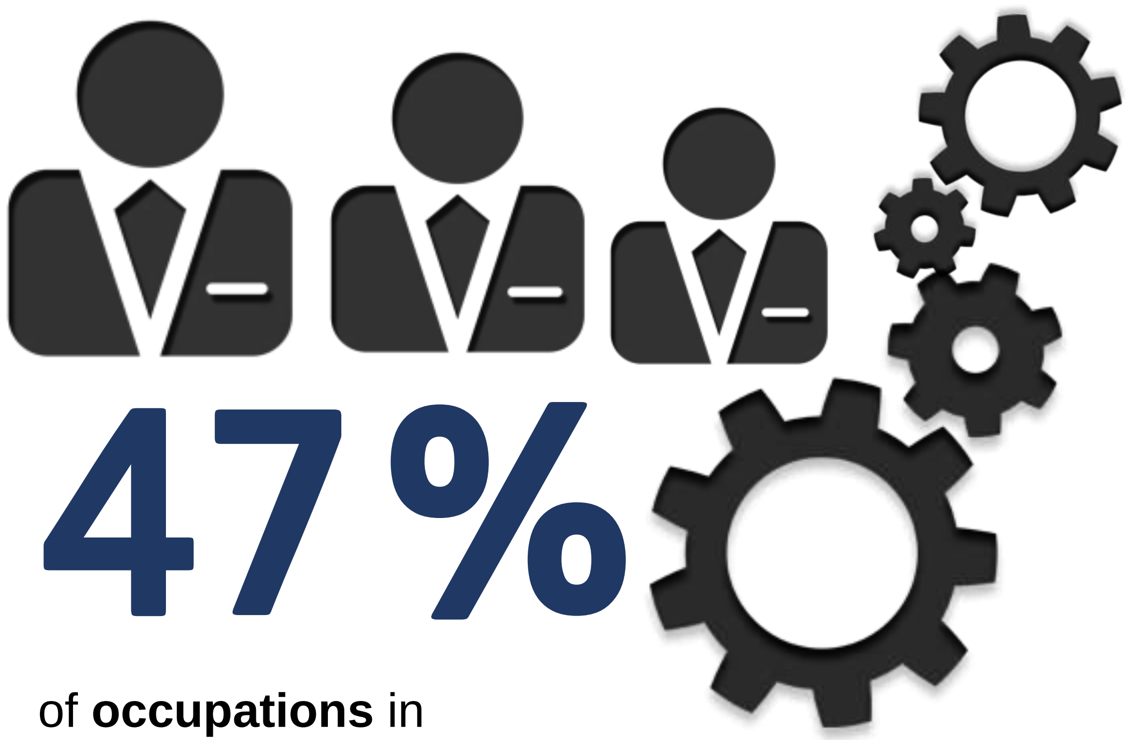
into its manufacturing processes **in just three years.**



(Source: KPMG Future State 2030)

Change of Paradigm

Change of Paradigm



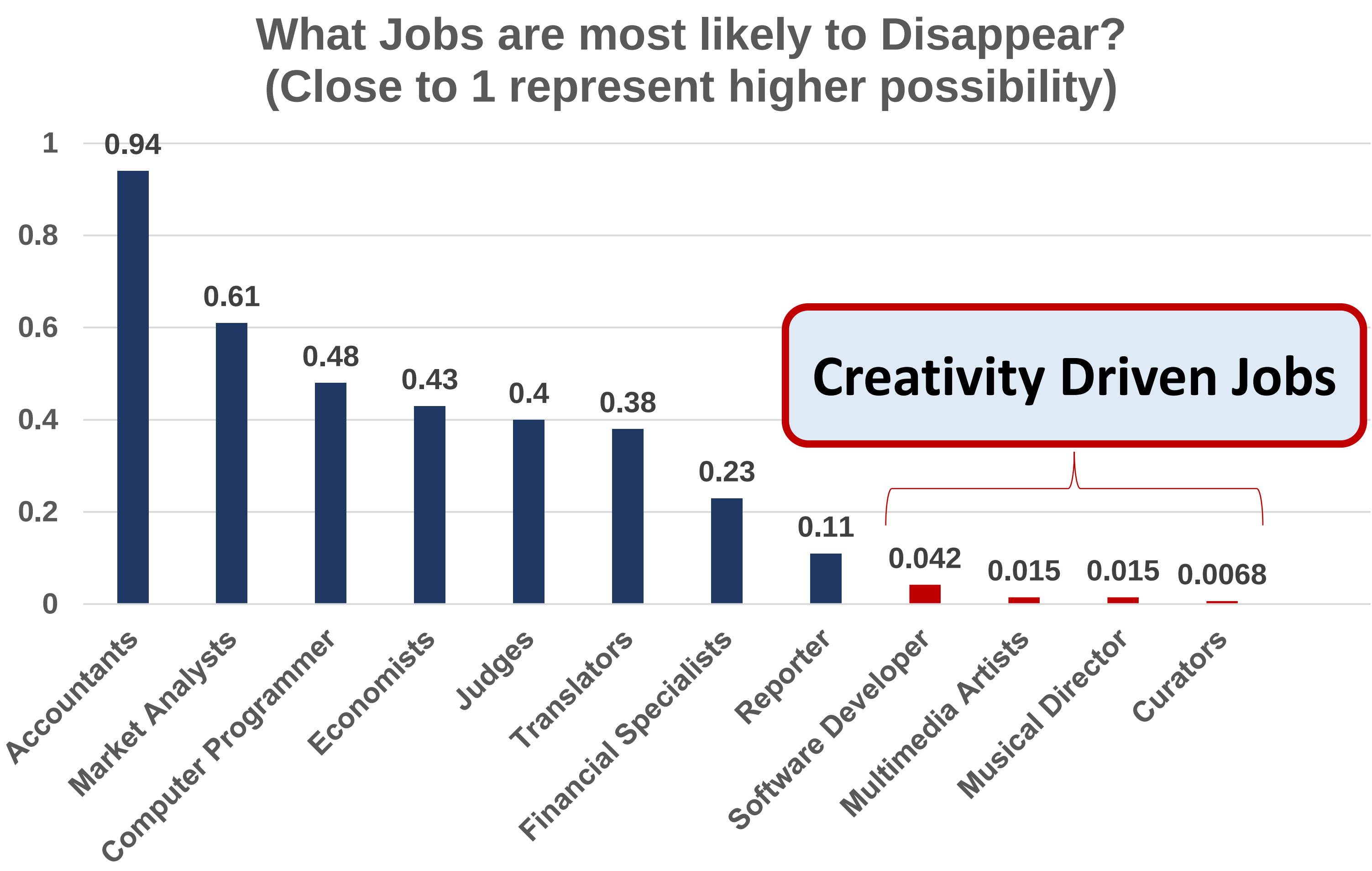
47%

of **occupations** in

advanced economies are at **“high risk”** of being **automated**

Carl Benedikt Frey and Michael A. Osborne, “The Future of Employment : How Susceptible are Jobs to Computerization?” Oxford Martin School, 17 September 2013.

Change of Paradigm



(Source: How safe are our jobs with technological advancements? 2013)

CREATIVITY

Identifying myself

The word [ ] describes me the best because …

Identifying myself

Am I creative?

☐ Yes

☐ No

Brief reason why?

Self-Evaluation

Answer the following 20 questions using the key below

Key

1. Never
2. Least likely
3. Frequently
4. Quite often
5. Often

Identifying myself

Creative-thinking Self-Evaluation

Question	Answer
1. I initially always look at a situation with "why"	
2. I think constantly and judge.	
3. I don't accept another person's thoughts/opinions without a reason.	
4. I have a lot of curiosity for new things.	
5. I get exhilarated even with finishing a small task.	
6. I don't like involving myself with following the law and rules.	
7. I think of a lot of ideas when I observe objects.	
8. I like complicated and vague problems.	
9. I step out of my daily habits when it's needed.	
10. I keep advocating for my idea until the flaw is revealed.	
11. I evaluate an object's usefulness rather than its physicality.	
12. I finish something that I've started at one swing.	
13. I don't get upset or discouraged during my work.	
14. I like riddles and playing quizzes.	
15. When I am stuck with a difficulty, I listen to people's opinions.	
16. I believe in infinite potential.	
17. I like to imagine and mediate.	
18. I relate one type of object with another.	
19. I hear from people that I "think of random ideas."	
20. I note even the smallest idea.	

Creative Thinking Evaluation Result

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20	40	60	80	100

Don’t want to think about it	Have interest in creativity, but lack creativity	Have a creative reasoning, but execution is lacking	Executes with enriched creativity

Difference between a creative vs and non creative

What is the difference between a creative person and non creative person?

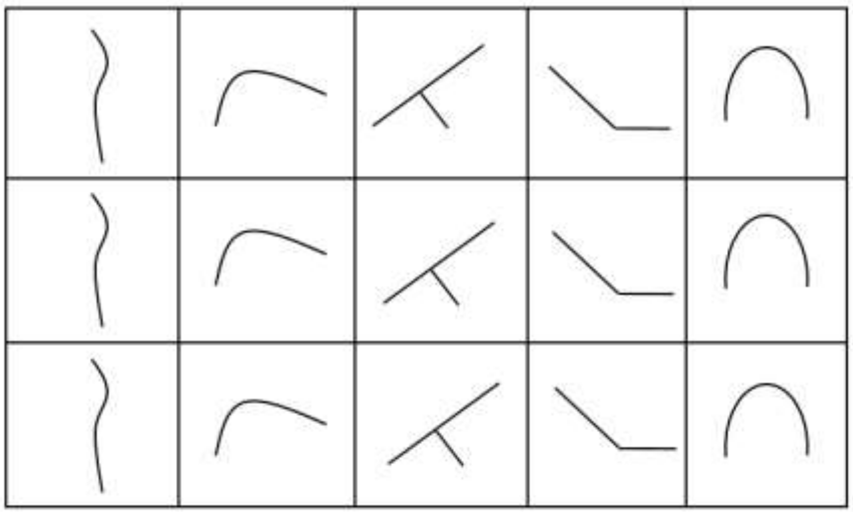
"People who are creative
think they are creative,
but for those who are not c
reative,
don't think they are creative"

Roger von Oech
Author of 'Creative Thinking'

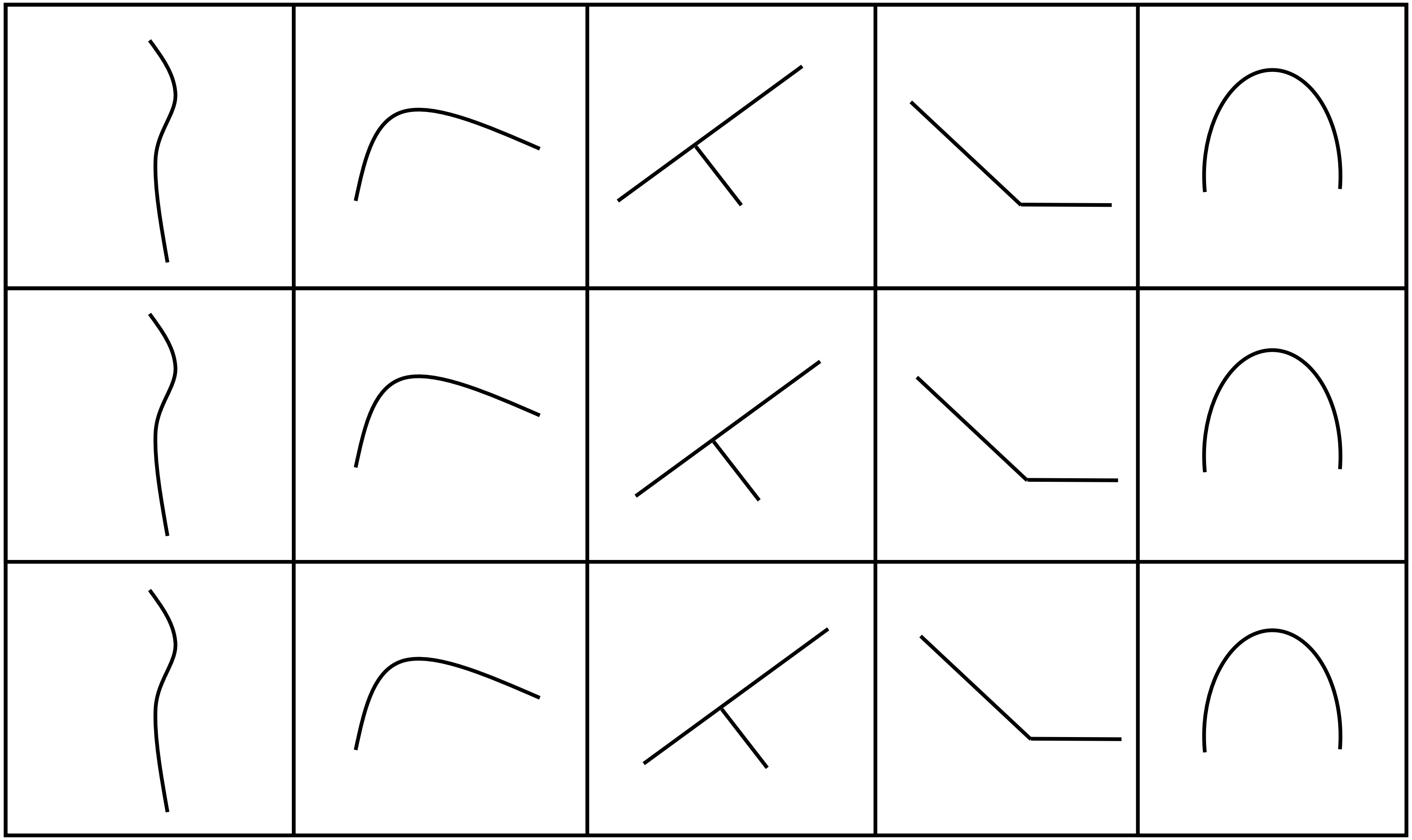
Creative Confidence
Believe that you have the ability to change the world

I'M
CREATIVE

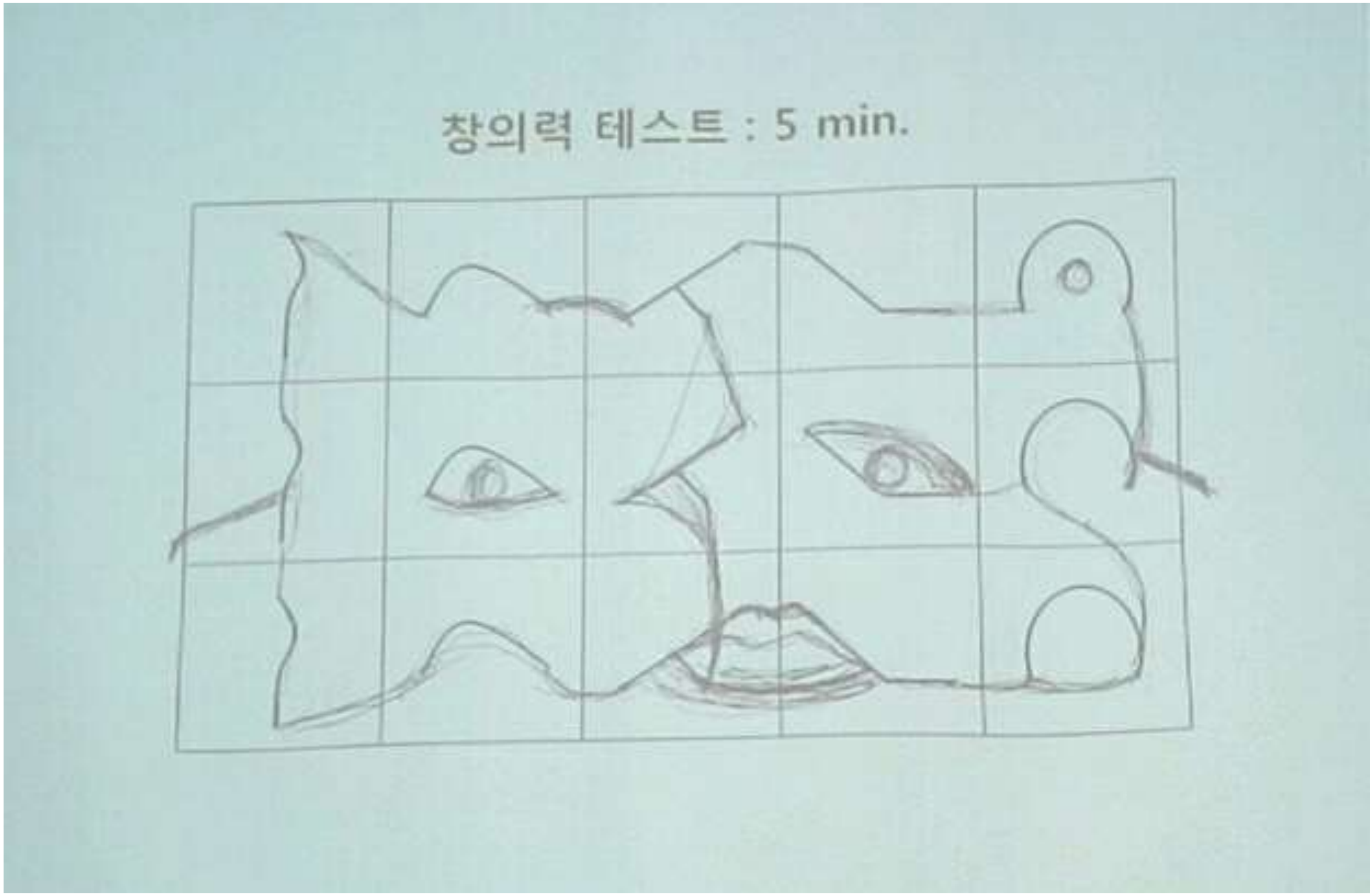
Creativity Test: 5 minutes



Creativity Test: 5 minutes



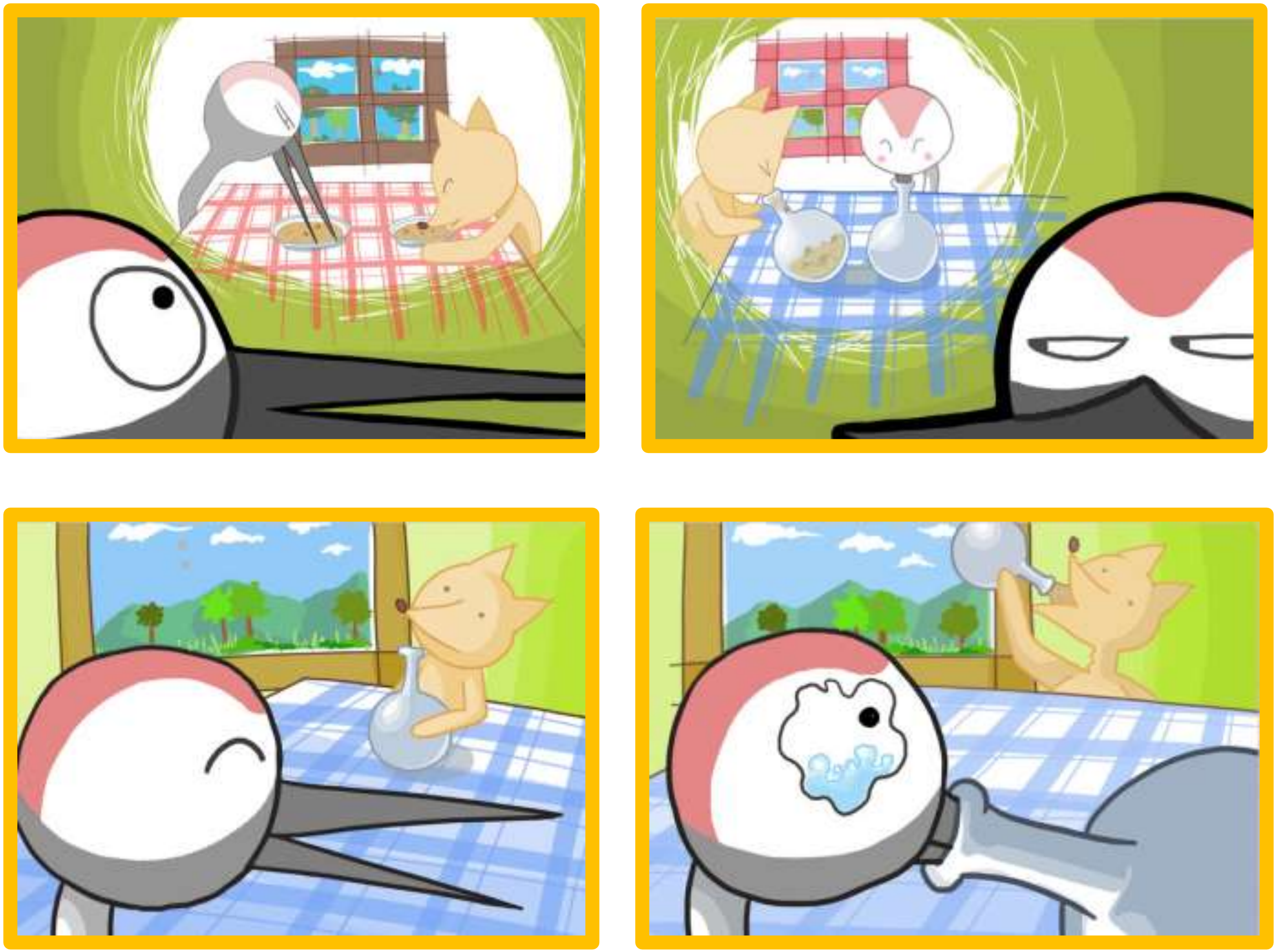
Creativity Test: 5 minutes



How can I get great results?

Making ideal questions

Fox and Crane



My concern this week

Write one of the most recent concern

Magical keywords making an ideal question

"Nevertheless"
"Yet"
"Although"
"Even though"

Nevertheless / Yet / Although / Even though…

Can I be happy even though I'm not wealthy?

How can I spend more quality time with my kids even though my boss is giving me more work?

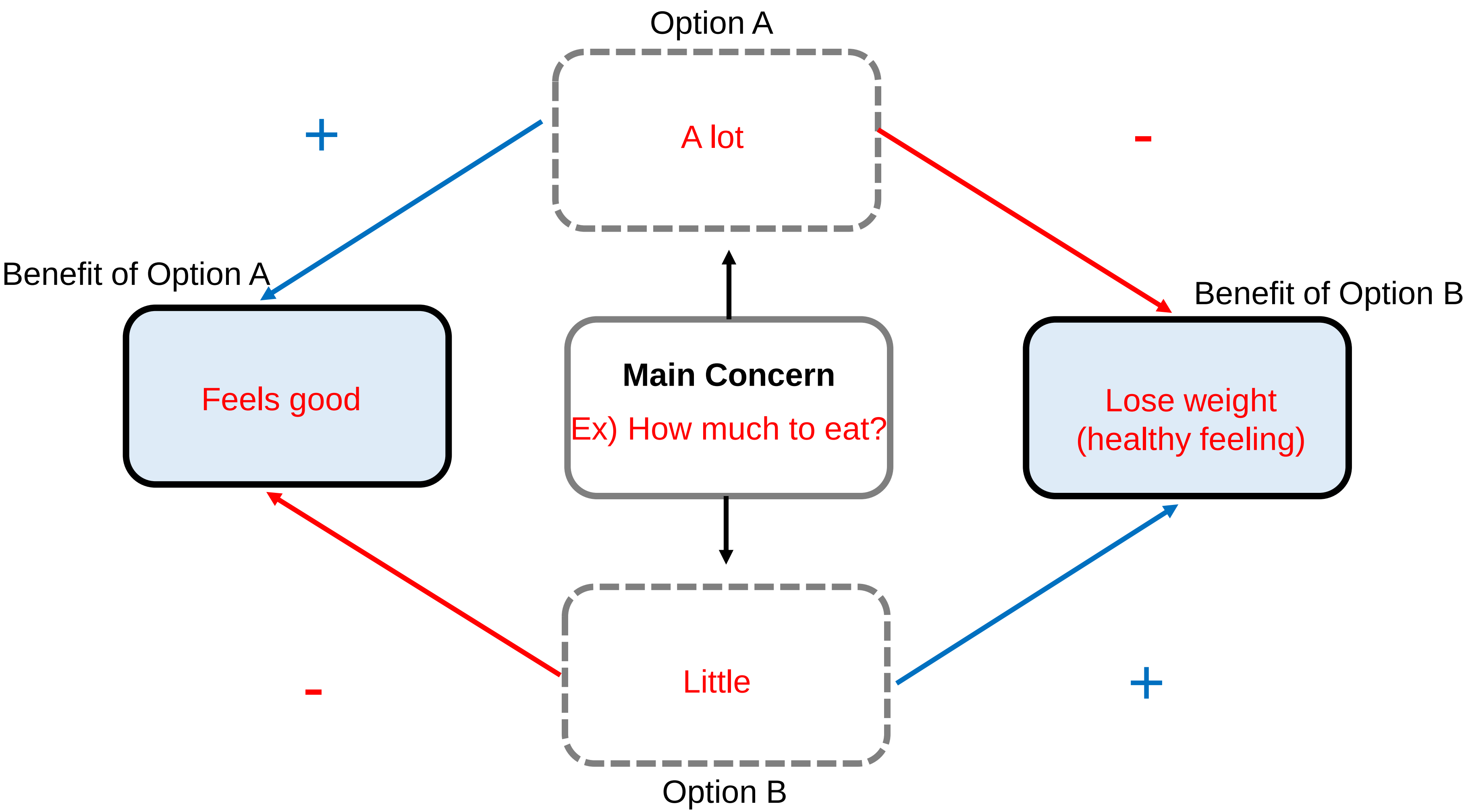
How can I sit down even though there is no chair?

My family are happy when we travel together. I'm more happy with my friends. How can I be happy even if I travel with my family?

How can I travel more to other countries even though I only have 1 month of annual vacation?

How can I drink less coffee and still go to bed early?

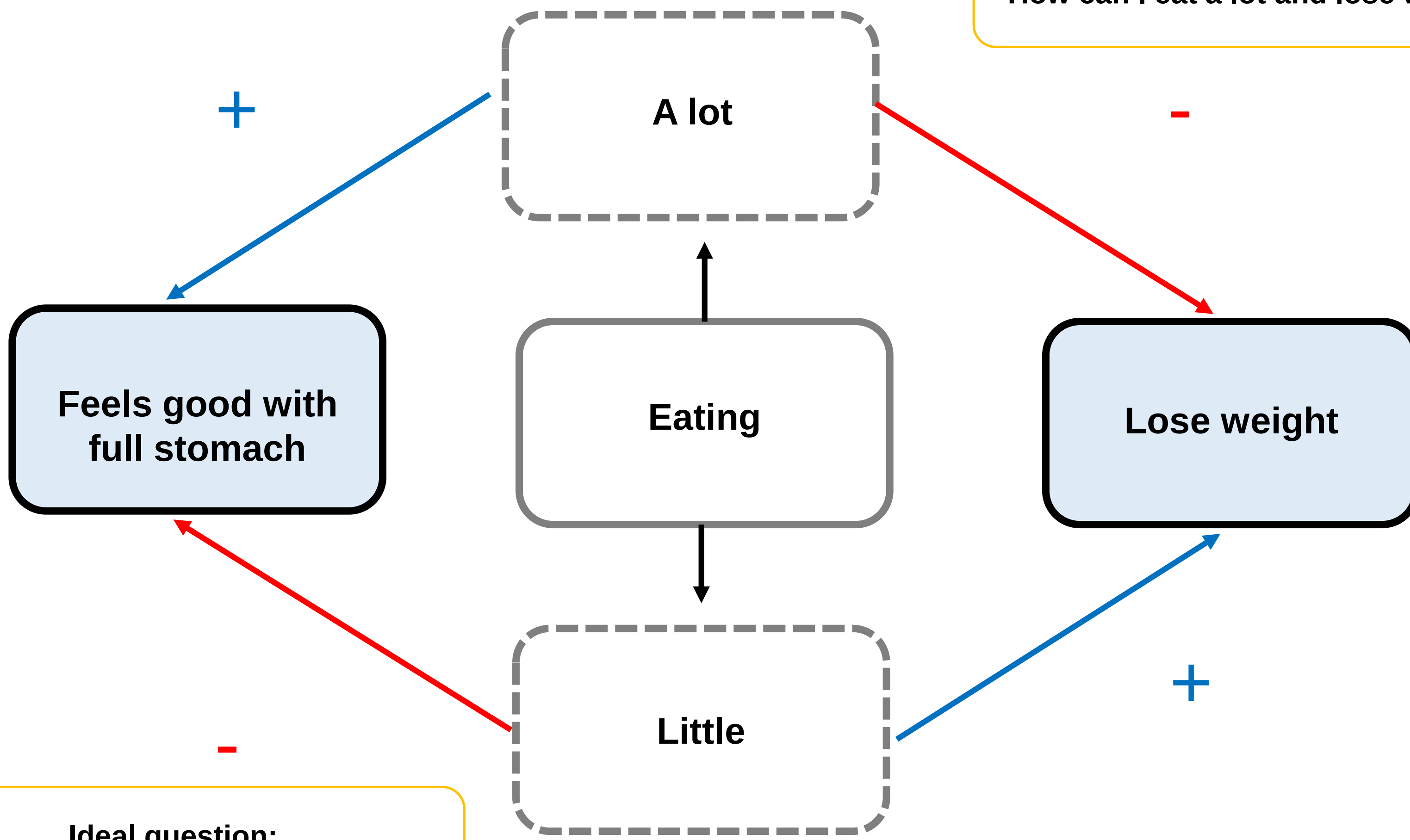
Diamond Model



*Reference : Jeongho Shin, "Development and Application of the Simple Contradiction Modeling and the invention Song", TRIZ Future conference, Dublin, Ireland, 2011

Diamond Model Example

Ideal question:
How can I eat a lot and lose weight?

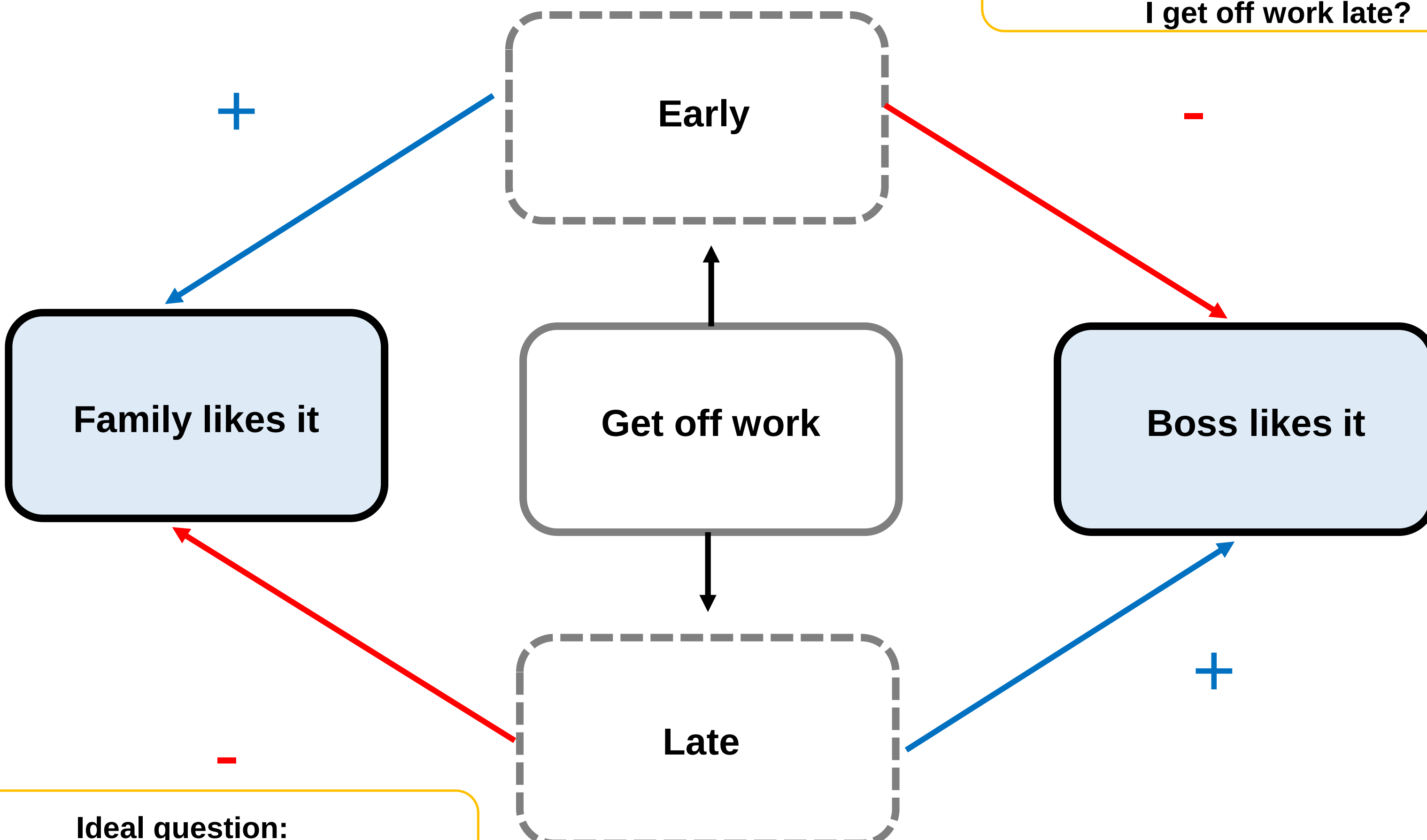


Ideal question:
How can I eat little and still feel good?


ABSORBPLATE

Diamond Model Example

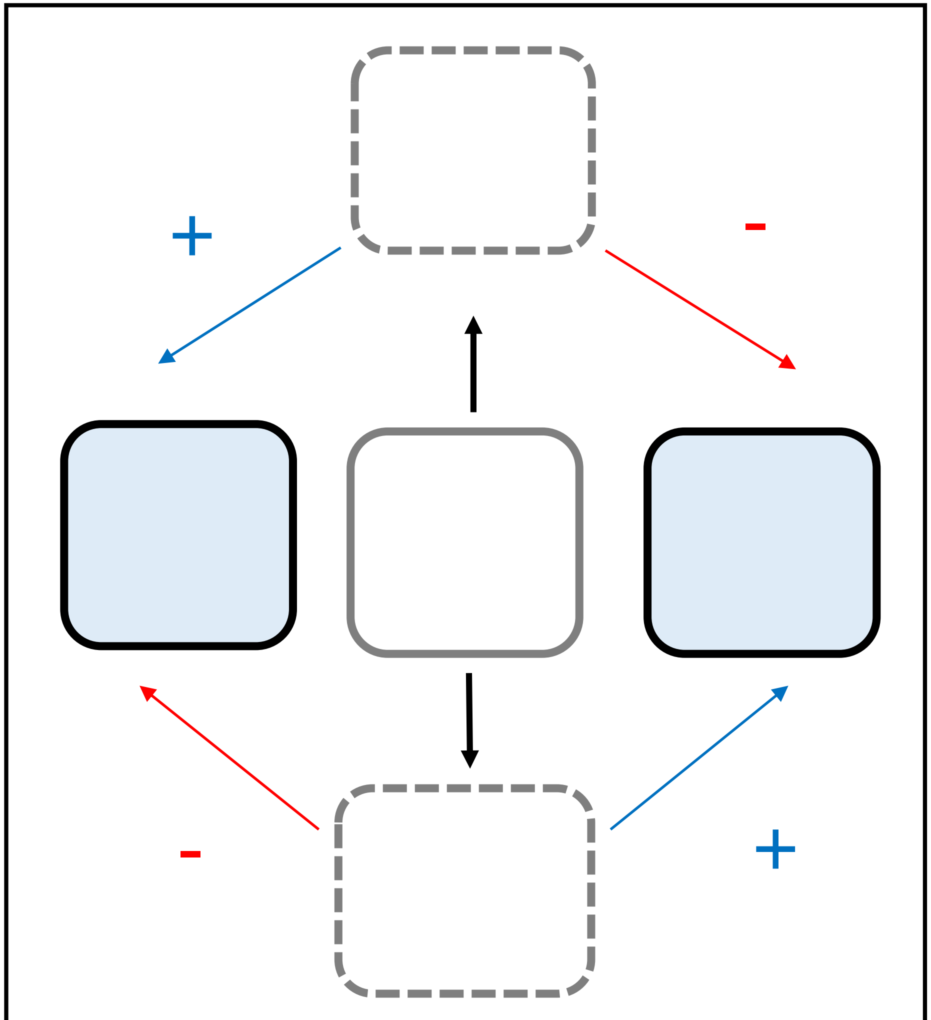
Ideal question:
How can my family still like it even if I get off work late?



Ideal question:
How can my boss still like it even if I get off work early?

My Diamond Model: Personal

Diamond Model



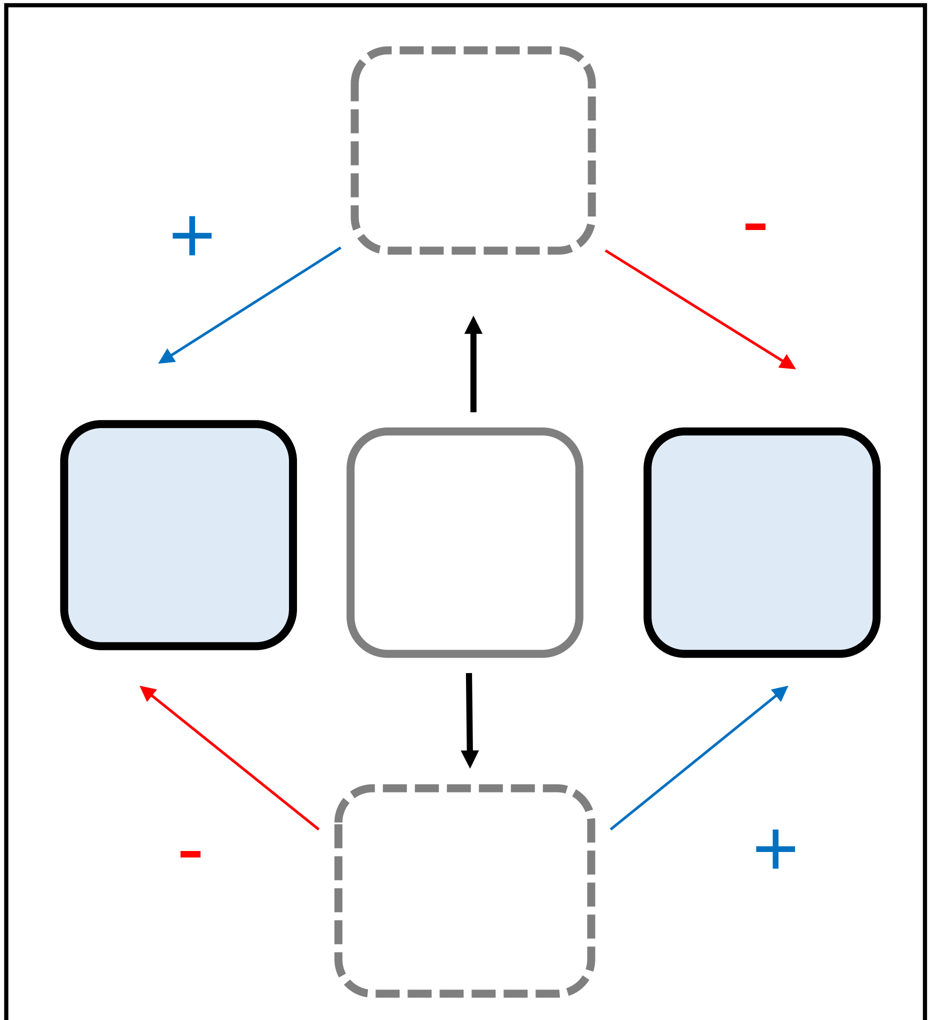
Ideal Question 1 ☐ Check

Ideal Question 2 ☐ Check

*Reference : Jeongho Shin, "Development and Application of the Simple Contradiction Modeling and the invention Song", TRIZ Future conference, Dublin, Ireland, 2011

Diamond Model Example: Professional

Diamond Model



Ideal Question 1 ☐ Check

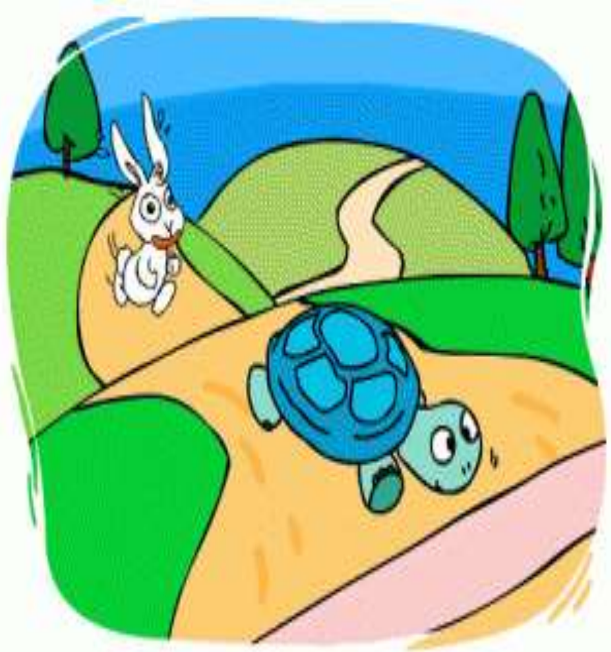
Ideal Question 2 ☐ Check

*Reference : Jeongho Shin, “Development and Application of the Simple Contradiction Modeling and the invention Song”, TRIZ Future conference, Dublin, Ireland, 2011

One day a rabbit was boasting about how fast he could run. He was laughing at the turtle for being so slow. Much to the rabbit's surprise, the turtle challenged him to a race. The rabbit thought this was a good joke and accepted the challenge. The fox was to be the umpire of the race. As the race began, the rabbit raced way ahead of the turtle, just like everyone thought.

The rabbit got to the halfway point and could not see the turtle anywhere. He was hot and tired and decided to stop and take a short nap. Even if the turtle passed him, he would be able to race to the finish line ahead of him. All this time the turtle kept walking step by step by step. He never quit no matter how hot or tired he got. He just kept going.

However, the rabbit slept longer than he had thought and woke up. He could not see the turtle anywhere! He went at full-speed to the finish line but found the turtle there waiting for him.



Altshuller's Research and Discovery

Founder of TRIZ
Genrich S. Altshuller
(1926-1998)

"Why is problem solving difficult?"

"What is the difference between a creative person and non creative person?"

"How can we use the wisdom of the past in our situation today?"

"How can I be creative?"

Altshuller’s Research and Discovery

Screened over 2 million patents from all over the world

“Every invention has consistent pattern to solve the contradiction”

“Creativity isn’t a talent, it’s a way of operating.”

Analyzed patterns and principles of the patents

Phone

Youtube

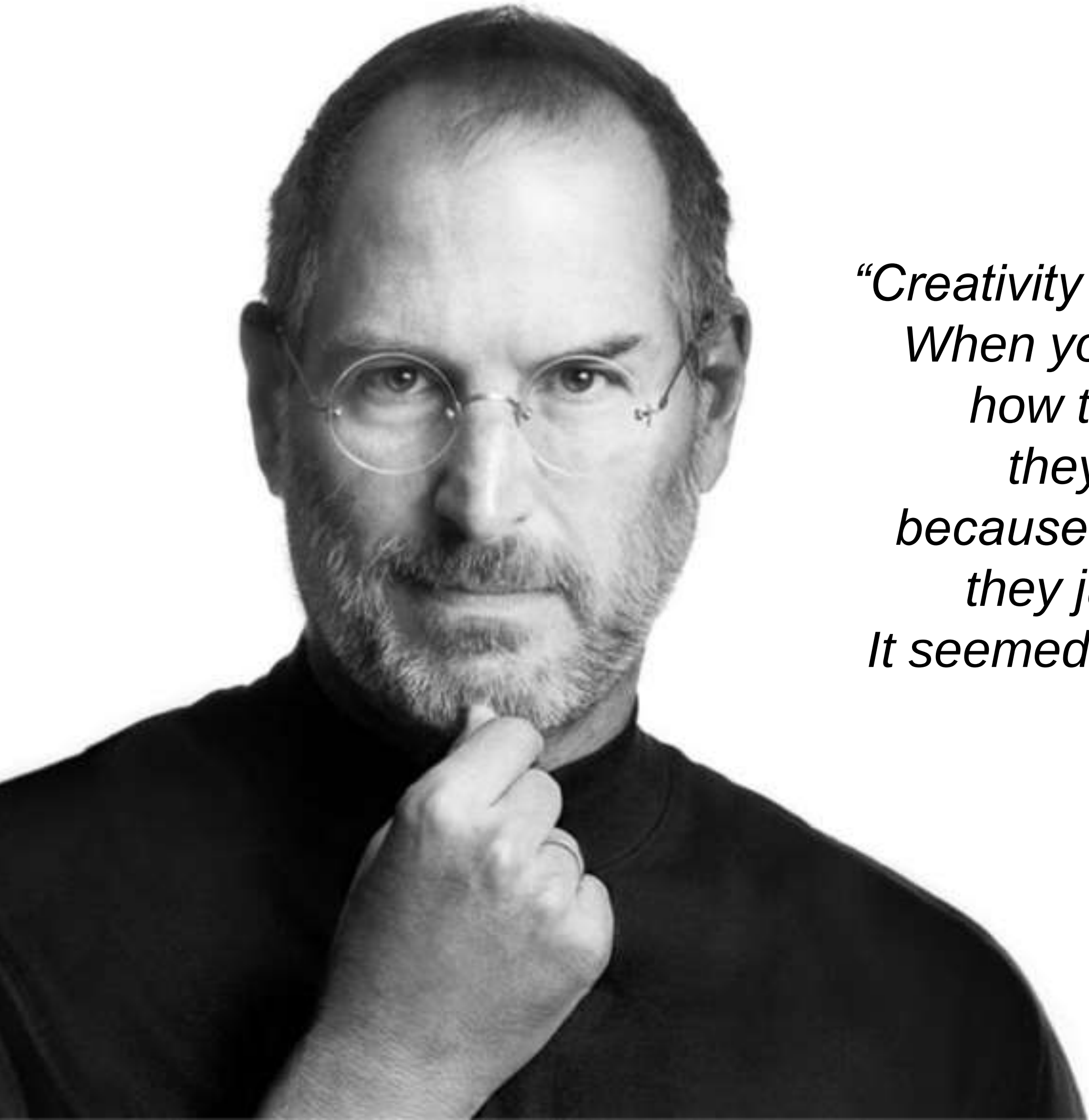
Internet

Compass

E-mail

Radio & TV


iPhone 1st Generation
iPhone 3G
iPhone 3GS
iPhone 4
iPhone 4S
iPhone 5
iPhone 5C
iPhone 5S
iPhone 6
iPhone 6 Plus
iPhone 7



"Creativity is just connecting things.
When you ask creative people
how they did something,
they feel a little guilty
because they didn't really do it,
they just saw something.
It seemed obvious to them after a while."

Mirror Iron Board

+

=

Coffee Cup Holding Umbrella

+

=

Skateboard Baby Carriage

+

=

Foggy Mirror Wiper

+

=

Pizza Scissors Spatula

+

=

Glove Towel

+

=


EASY CUT!
Maxim

Importance of Combining

Cookie Mug

+

=

Pull out plug

+

=

Importance of Combining

Lobster designed portable stove

+

=

Importance of Combining

Mirror closet

Mirror

Closet

Importance of Combining

Latte

+

=

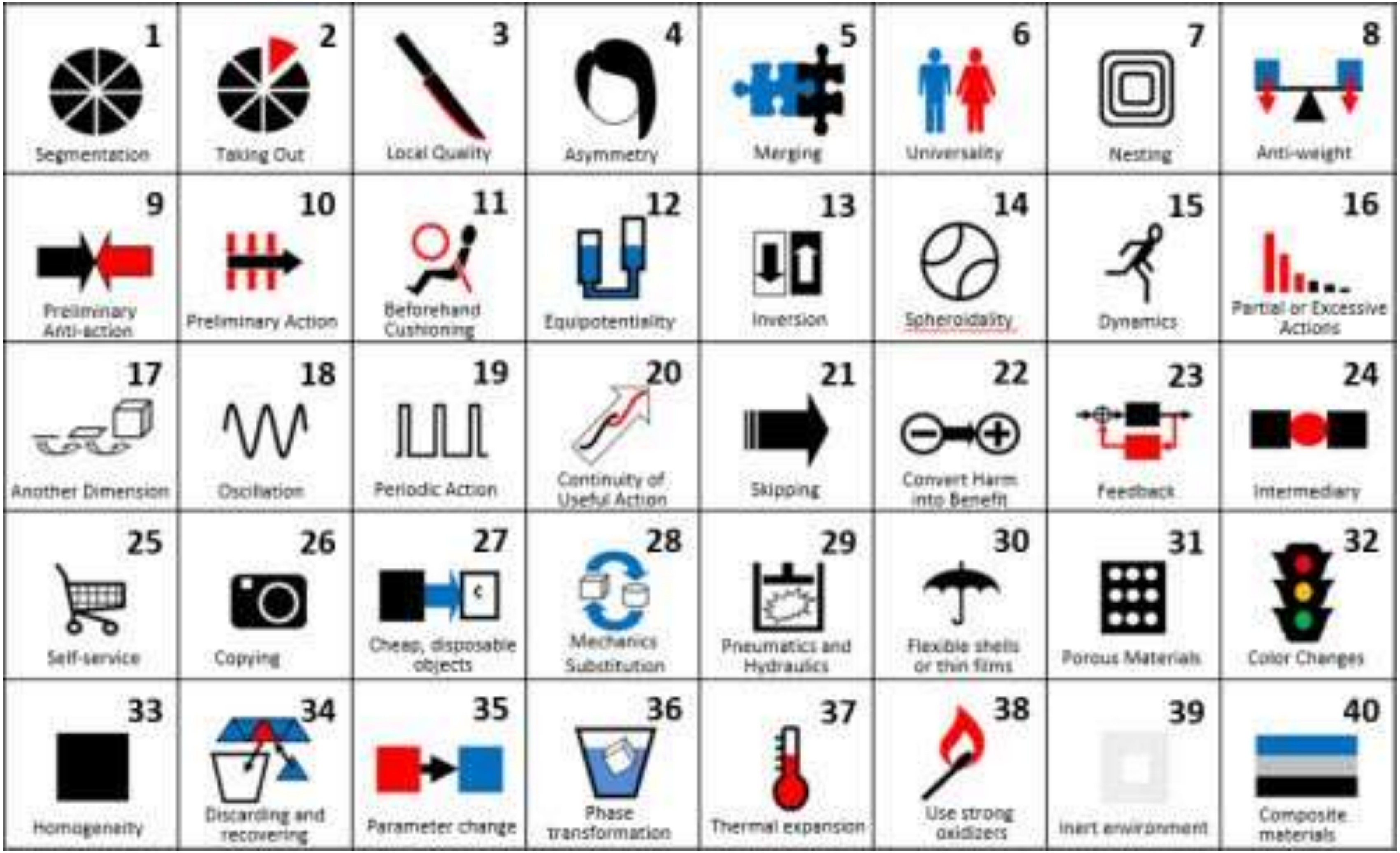
Importance of Combining

Importance of Combining

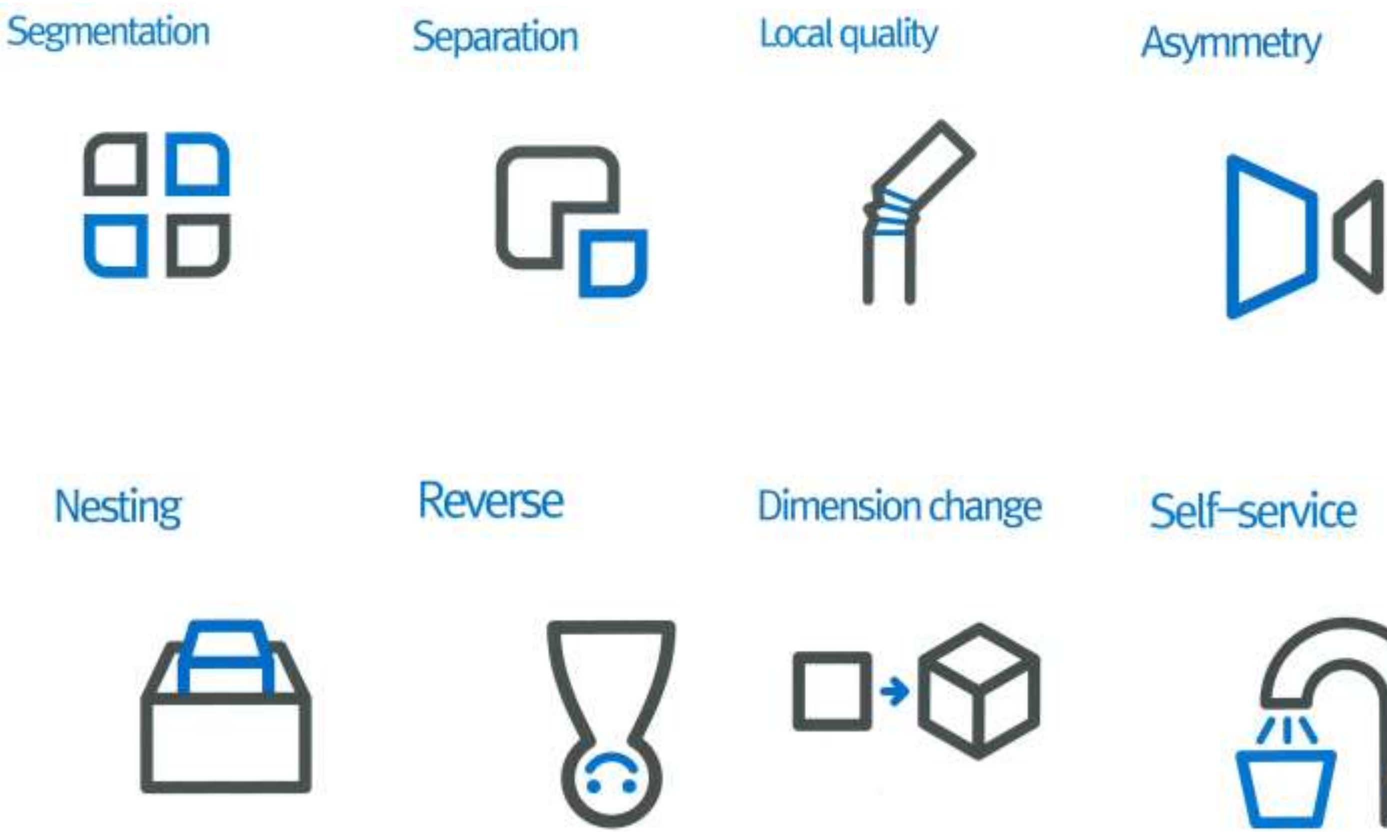
Importance of Combining

Importance of Combining

40 Inventive Principles



8 Principles of Invention



8 Principles of Invention: Example

Segmentation

What happens if you divide the object?

Pizza slice

Puzzle mat

Cutter knife

8 Principles of Invention: Example

Separation

What part can you take out?

Contact Lenses

DHA/Calcium

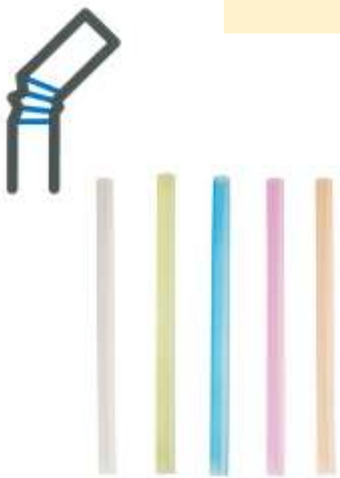
Nutritional Supplements

Arm/Knee pads

8 Principles of Invention: Example

Local quality

Change any part of the object?



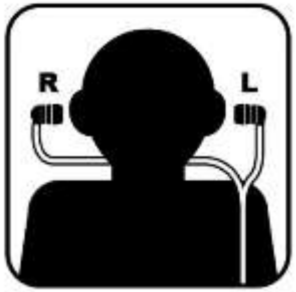
Bending straw

Open here Packaging

Bus only lane

Asymmetry

What happens if you change an object asymmetrically?



Earphones

Chopsticks

Asymmetric Umbrella

8 Principles of Invention: Example

Nesting

What happens if you place one inside the other?

Ladder truck

Hamburger

Portable pots and pans

8 Principles of Invention: Example

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Reverse

What can you do it in reverse?

Treadmill

Auction

Mobile Library

8 Principles of Invention: Example

Reverse

8 Principles of Invention: Example

Dimension change

What happens in the other dimensional space?

Pop up Book

Apartment

3D Movie

8 Principles of Invention: Example

Dimension change

8 Principles of Invention: Example

Dimension change

8 Principles of Invention: Example

8 Principles of Invention: Example

Self-service

How can you make an object automatic?

Robot Vacuum Cleaner

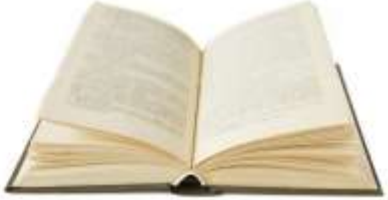
Auto water tap

Car wash machine

Idea Deducting Activity: Topic









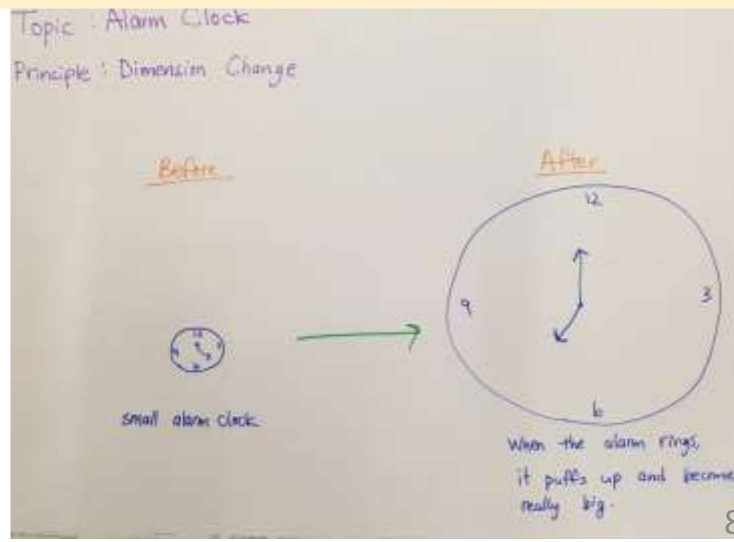
Idea Deducting Activity: Steps

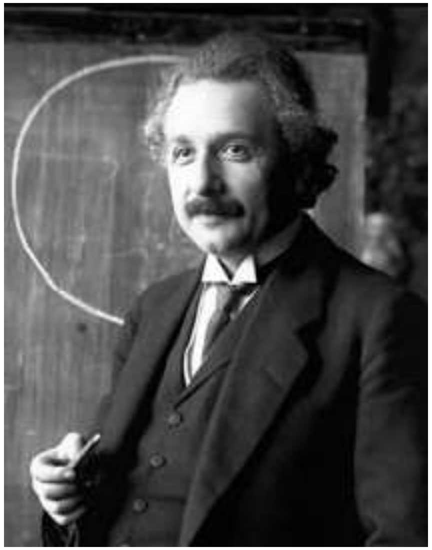
1. Choose a topic

2. Choose one of the principles

3. Imagine a new product implementing the principle

4. Draw out your idea

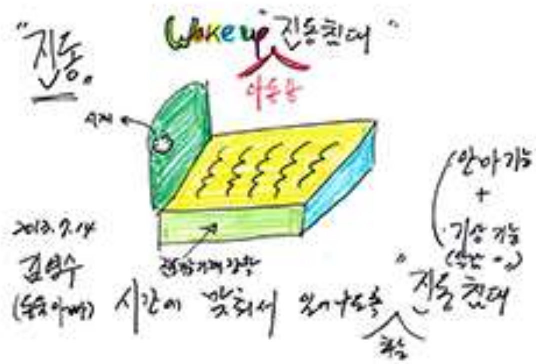


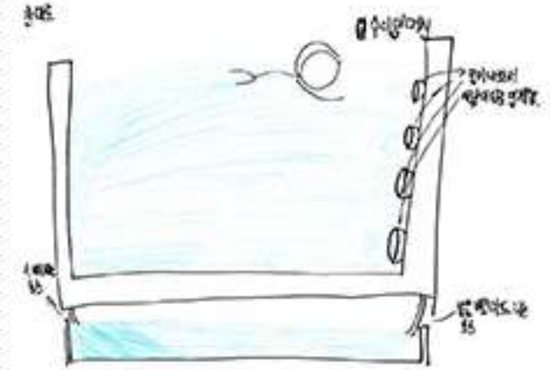


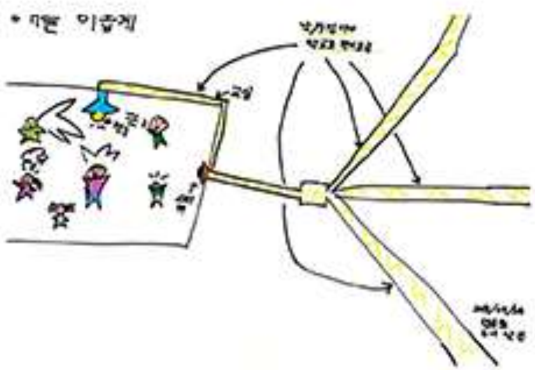
If at first the idea is not absurd
then there is no hope for it.

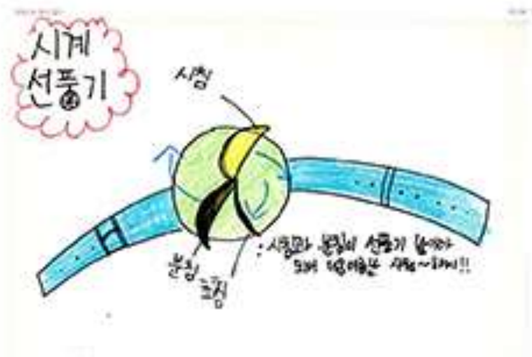
- Albert Einstein

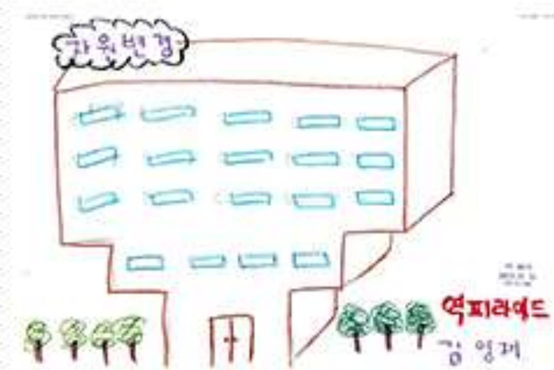
Examples











Let's find a solution

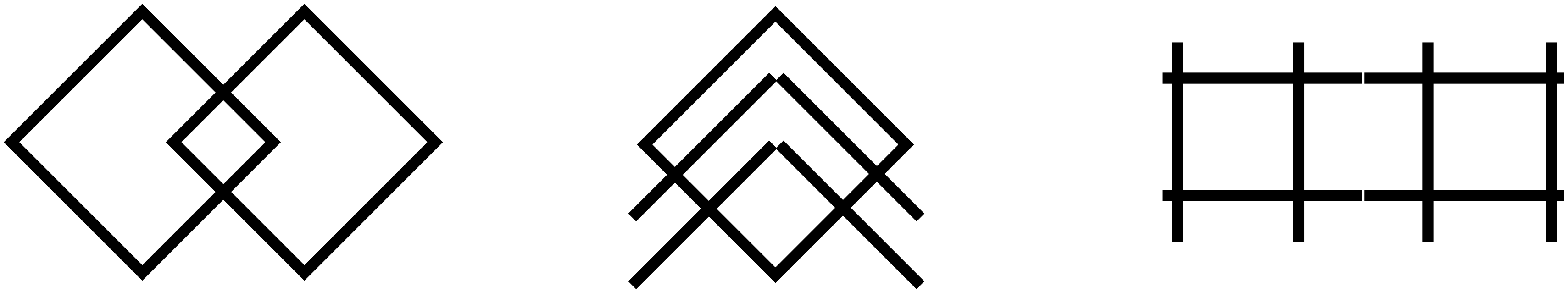
Using all 8 chopsticks, make squares

Square:

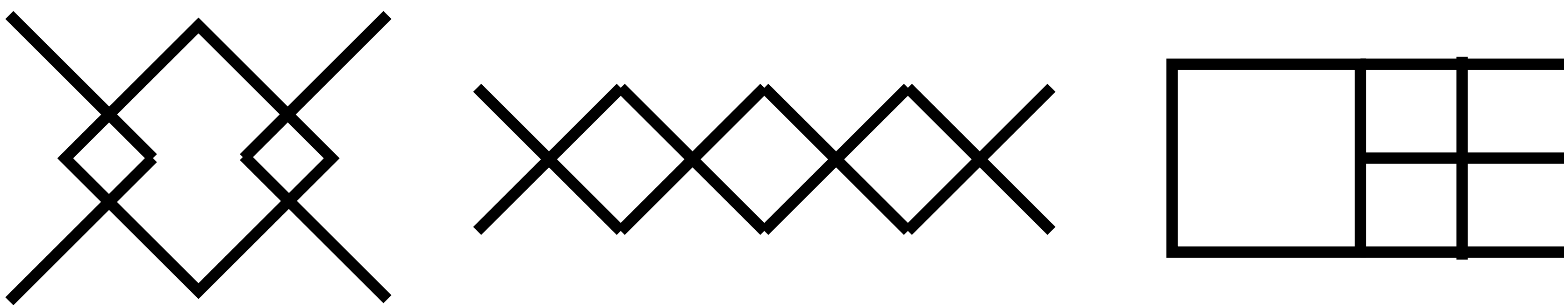
① The four sides are equal in length.

② Every angle is 90˚

The right answer



More than one answer

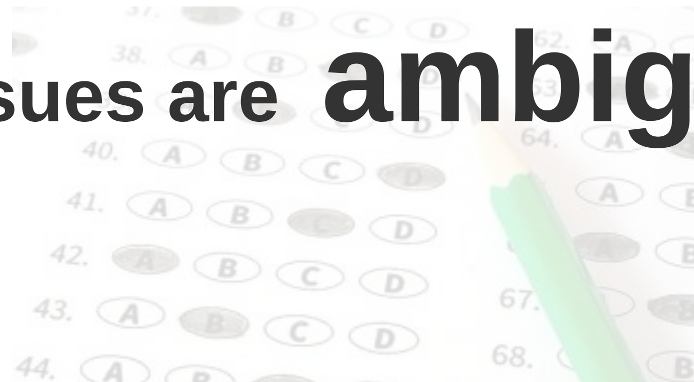


The right answer

Answer Answer

Answer Answer

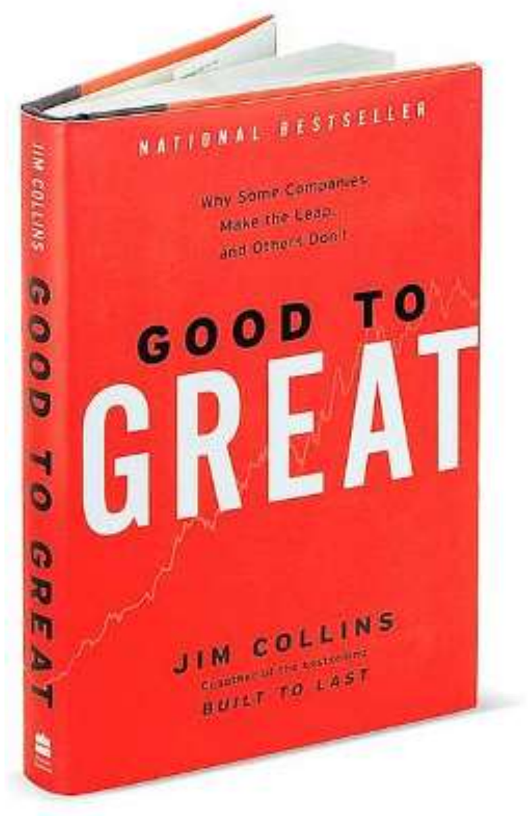
Answer



But, real life issues are ambiguous

Formal education → The correct answer

Good is the enemy of Great.



Examples

Space Station Wire

Examples

Examples

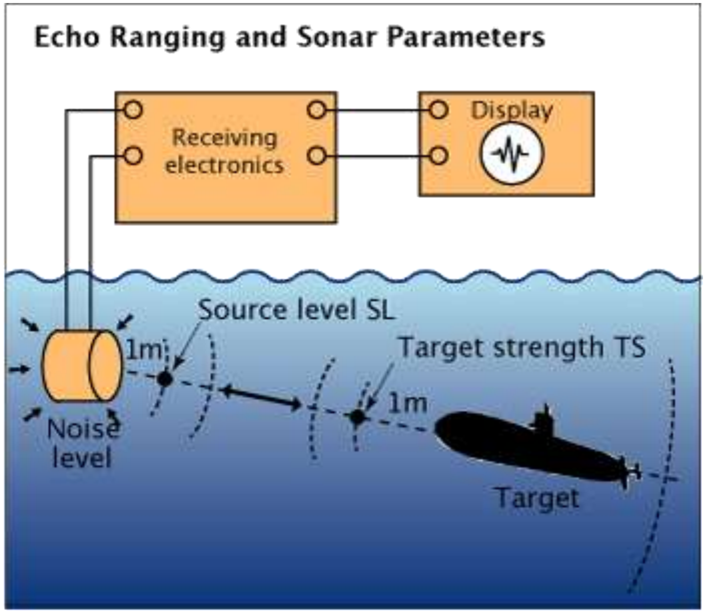
Examples

Examples

Examples

Sidewinder (Missile)

Examples



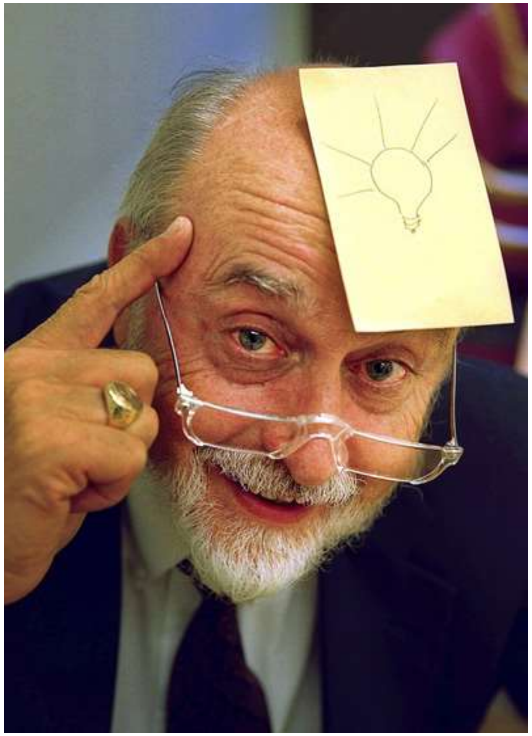
Sonar (underwater audio detector) and Radar

Examples

Examples

Dorothy Gerber: invented baby food – canned food preservation

Examples



Arthur Fry: invented Post-It – use of glue

Examples

Sam Walton: Founder of Walmart –
Competitors' Placement of check-out counters

Example: Marketing Innovation

What is Continuous Improvement

Continuous Improvement is the ongoing improvement of products, services or processes through **incremental** & **breakthrough** improvements

Need for Continuous Improvement through Innovation

Reducing the 7 Wastes

T

Transport

with
no value

I

Inventory

Extra
materials

M

Motion

Needless
movement

W

Waiting

Any Delays

O

Over Production

O

Over processing

D

Defects

Example : Toyota Motor Corporation

“Innovation can not happen in one day, it can only be accomplished through continuous improvement”

- Katsuaki Watanabe, CEO Toyota

Pioneer in Continuous Improvement

Cars sold in US market 1957 : 300 cars sold

2007 : 2.6 million cars

Example: Toyota Motor Corporation

Continuous Improvement : Toyota Way

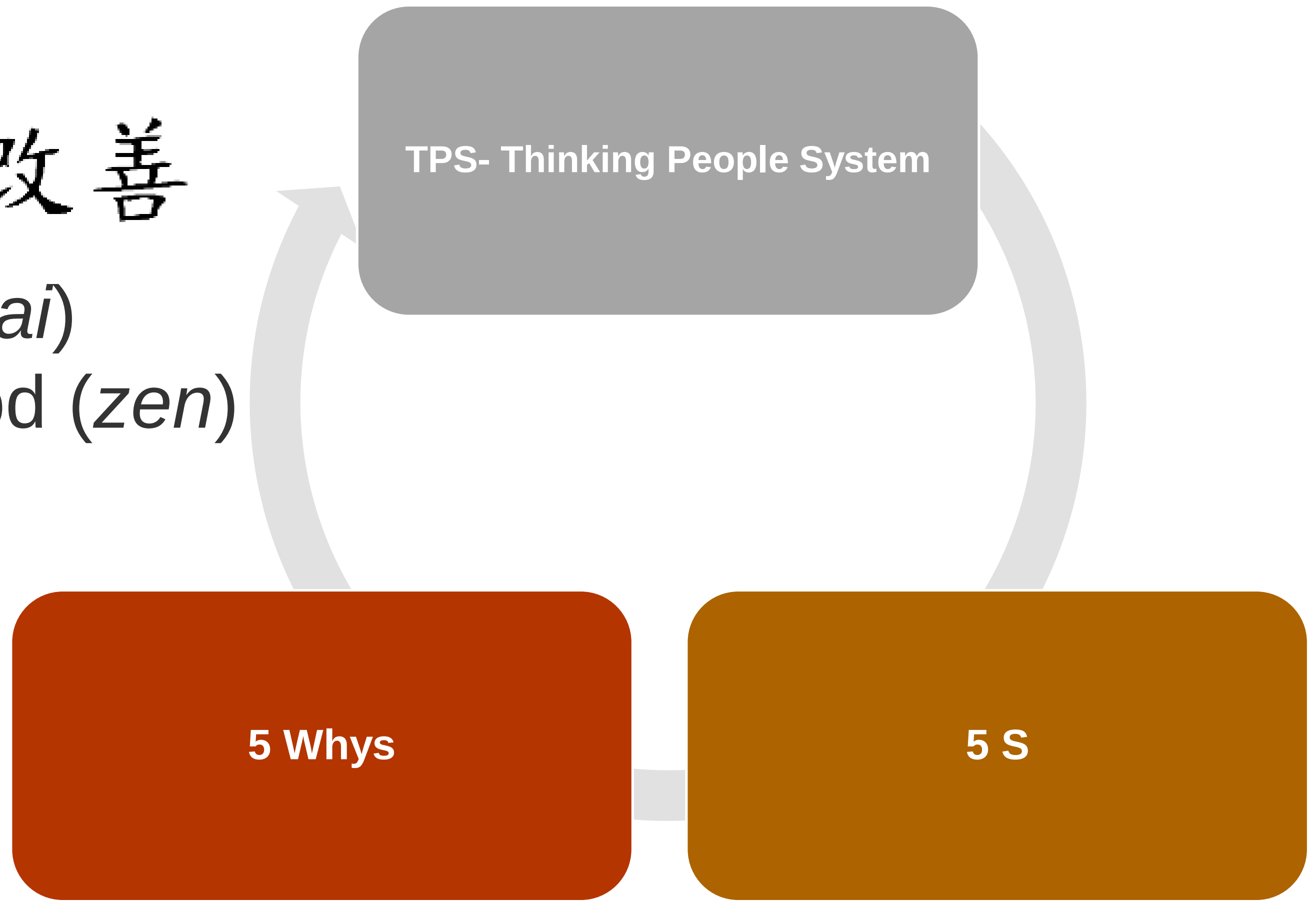
- Reduction in time spent on preparation and minor tasks
- Improvement in in small areas by using the kaizen strategy
- Going beyond Kaizen : Kaikaku

Toyota's Kaizen Principle

TOYOTA DAEWON

Kaizen 改善

Change (*kai*)
for the good (*zen*)



Kaizen: 5 Why's

Problem: Oil spilled on the factory floor

Why ?

1. Spitted oil on factory floor
2. Leaking Machine
3. Faulty Ring mechanism
4. Poor Quality
5. Cheapest Price Availed




Source of Problem: Cheapest price of machine part purchased

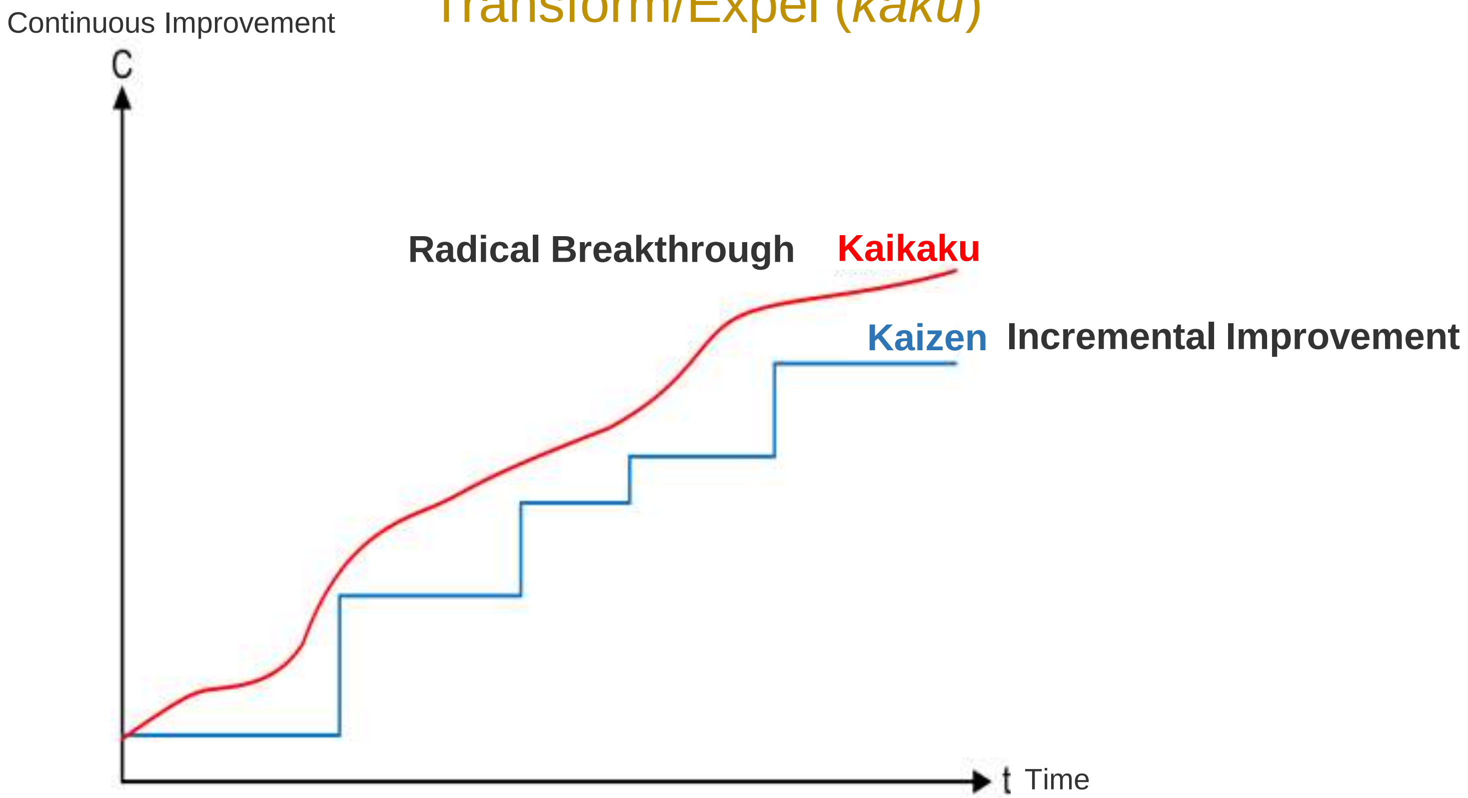
Kaizen: 5S

TOYOTA DAEWON

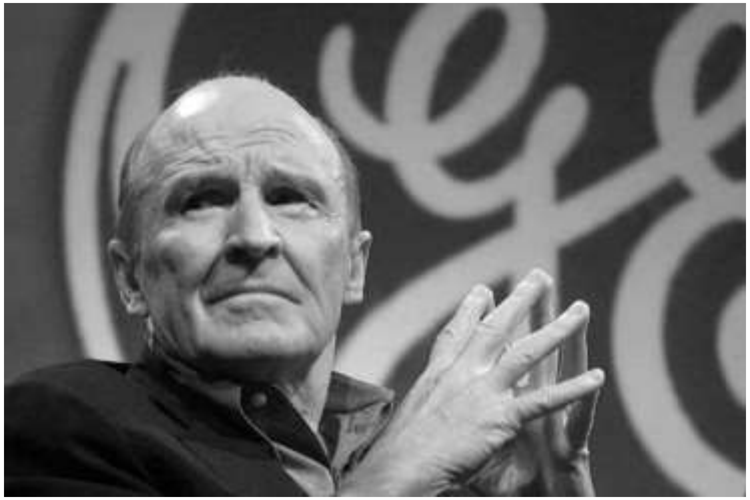
Sustaining the previous 4 S once they have been established by assigning responsibility for maintaining the change.

Kaikaku 改革

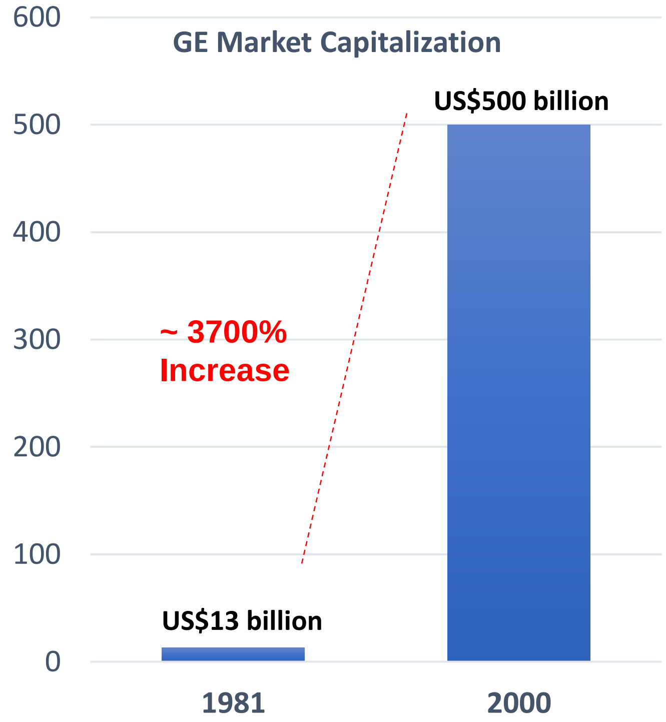
Change (*kai*)
Transform/Expel (*kaku*)

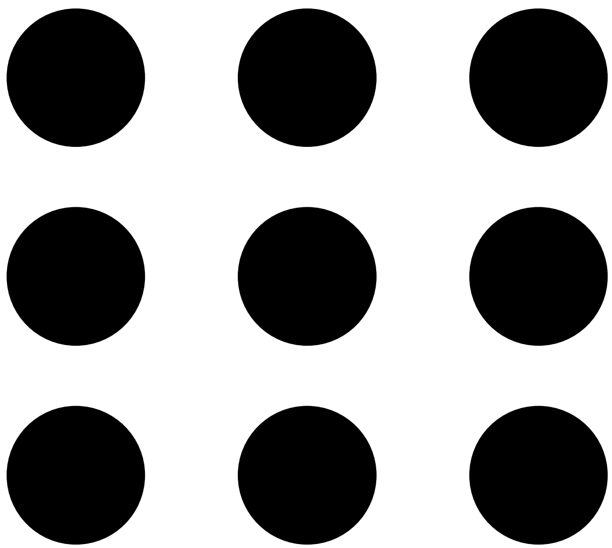


Jack Welch's Tenure as CEO at GE

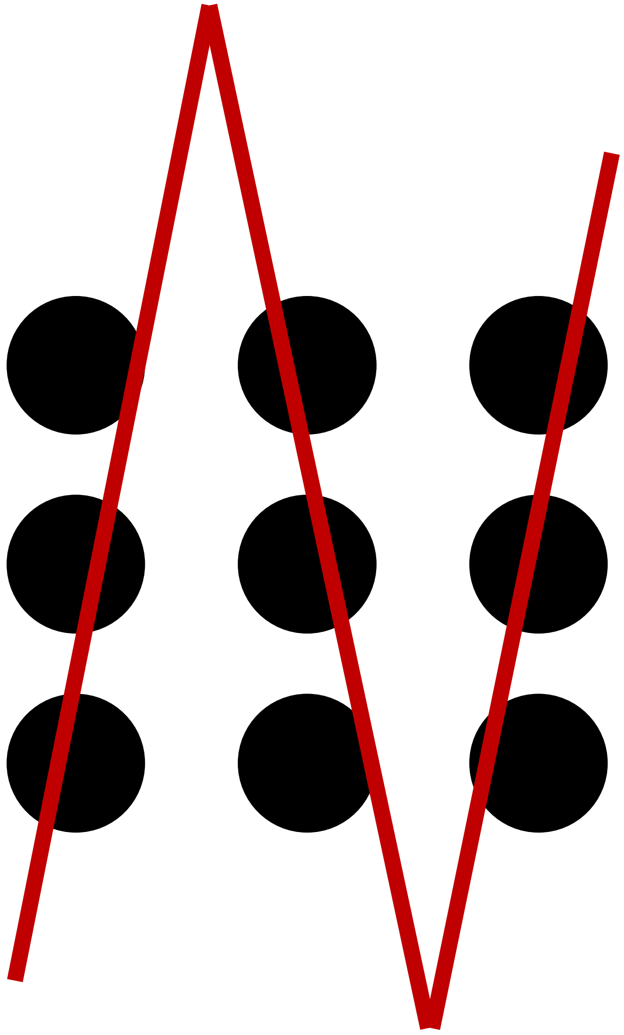


"If you've got a company that has a mentality filled with searching for a better idea every day … you will have innovation around you all the time"
– *Jack Welch*

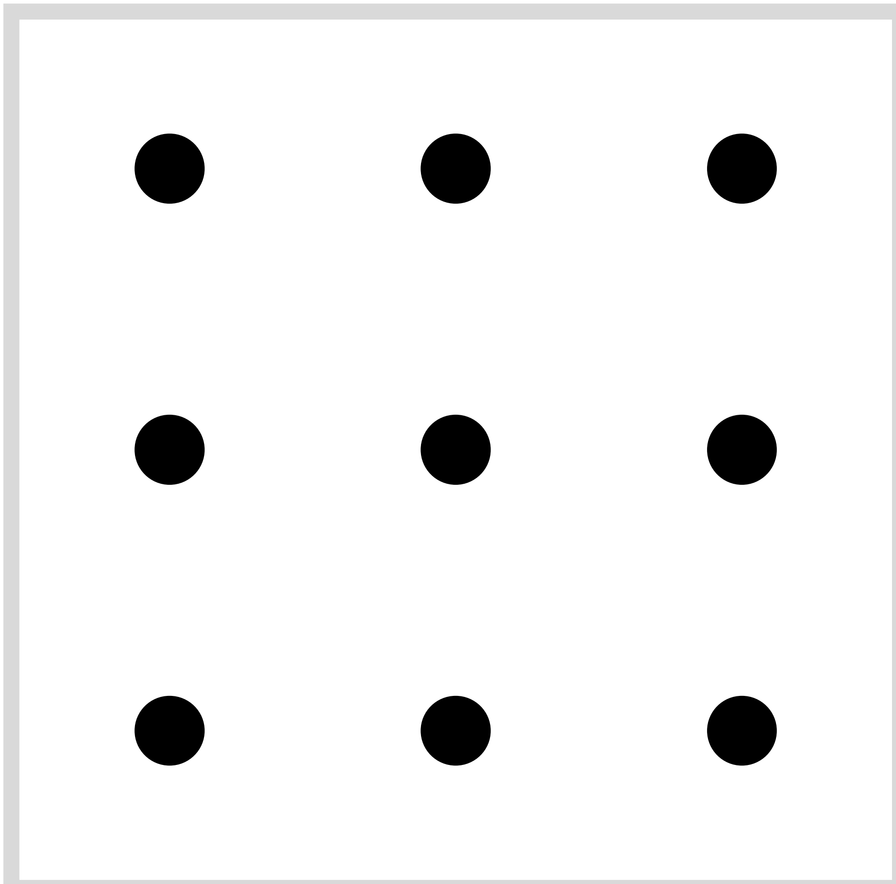




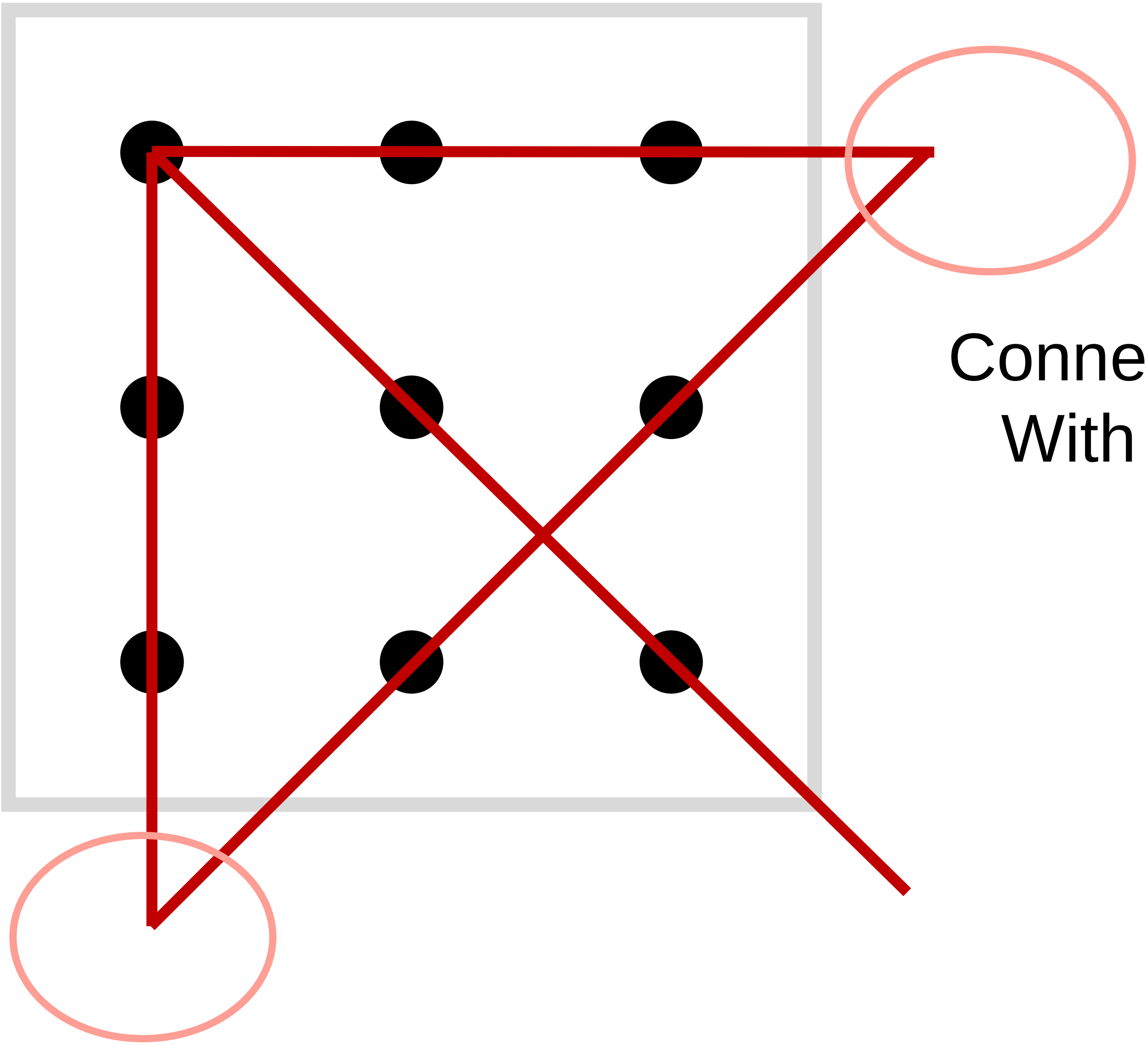
Connect 9 dots
With 3 lines



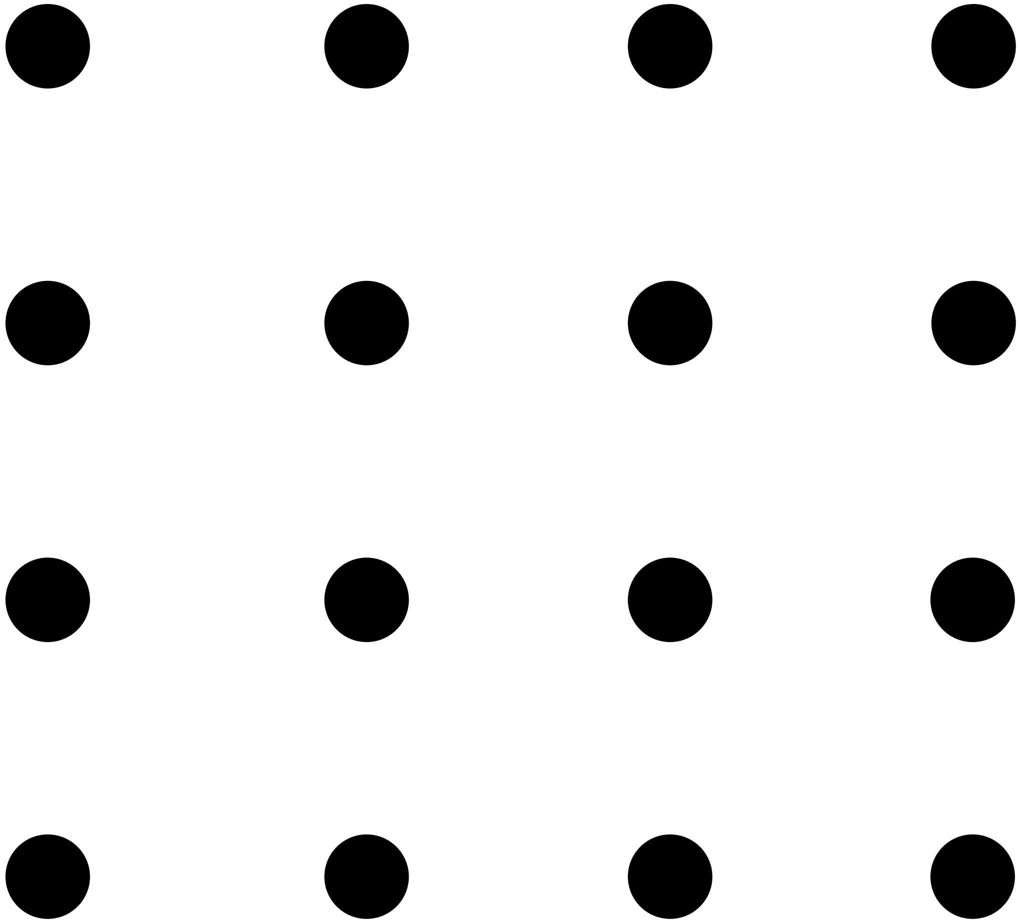
Connect 9 dots
With 3 lines



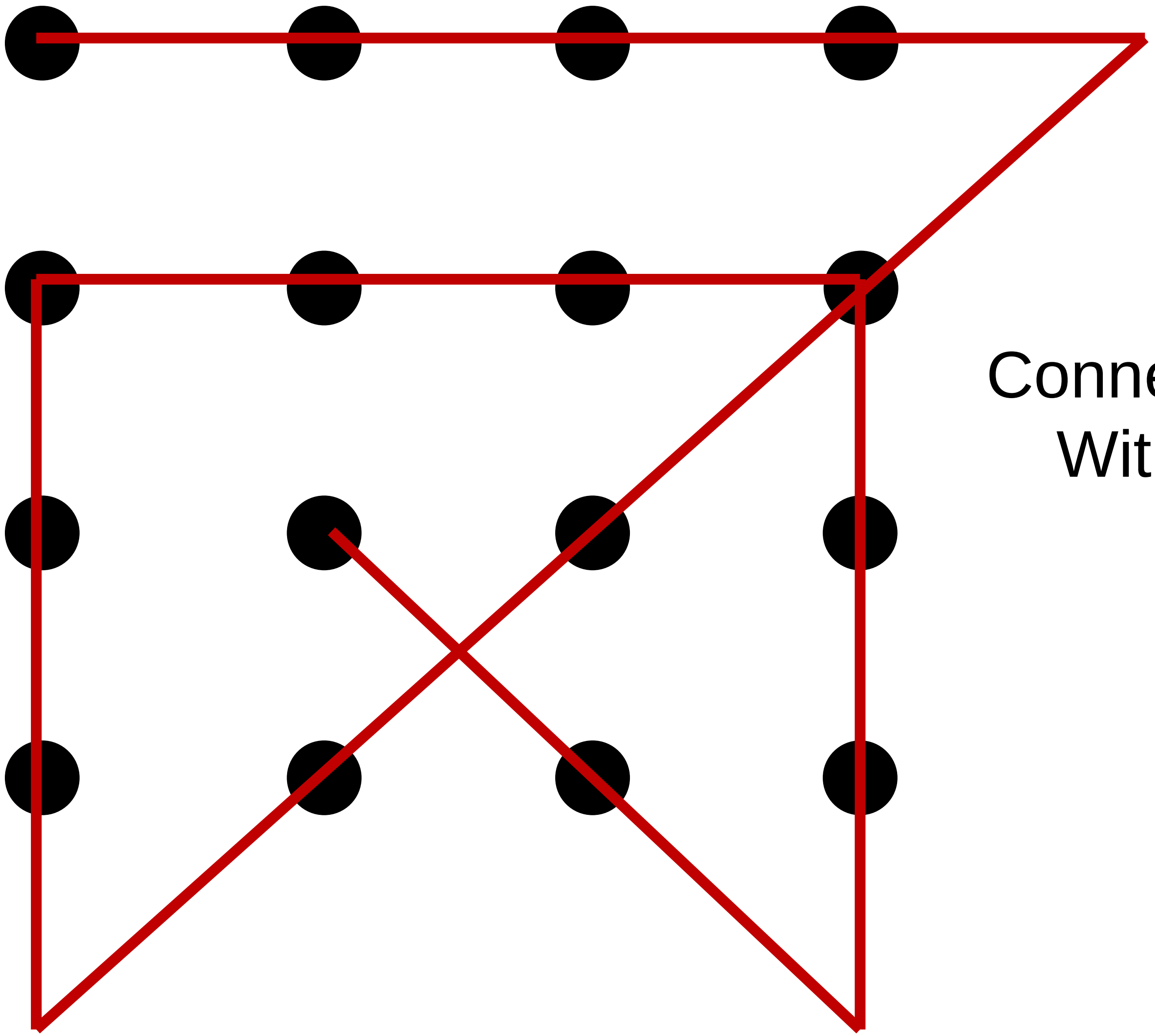
Connect 9 dots
With 4 lines



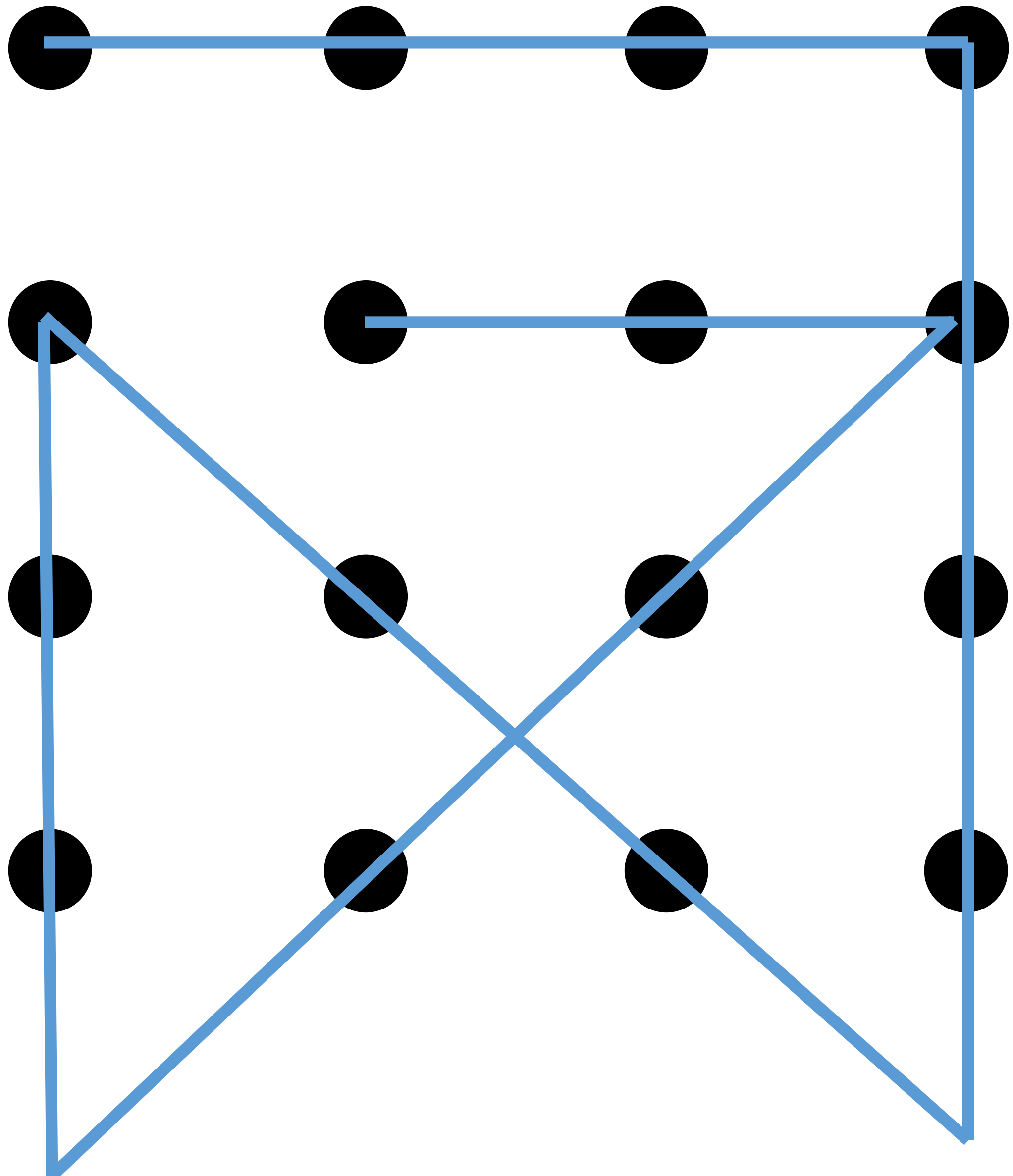
Connect 9 dots
With 4 lines



Connect 16 dots
With 6 lines

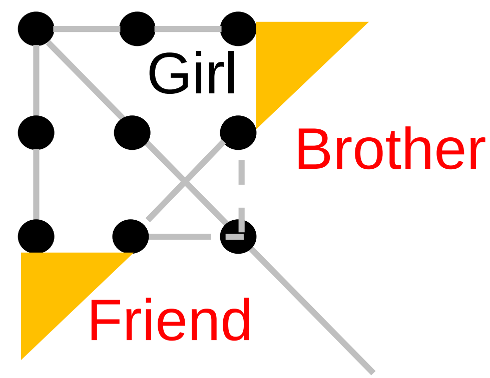


Connect 16 dots
With 6 lines



Connect 16 dots
With 6 lines

Thinking outside of the box



Honey Butter Chips Chaos

Thinking outside of the box

DAEWON

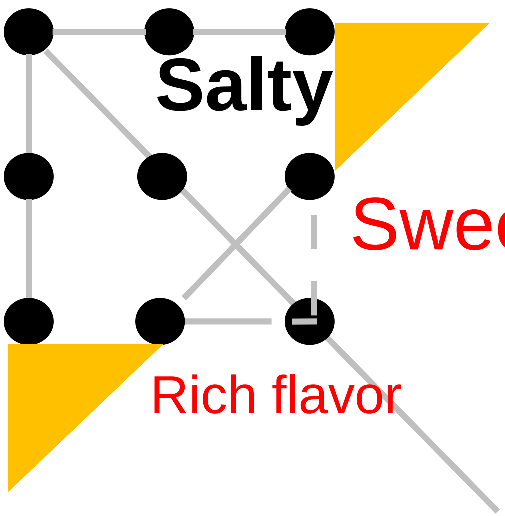
Haetae

해태

- Entered the market last
- Last in the market share
- Low Factory utilization rate

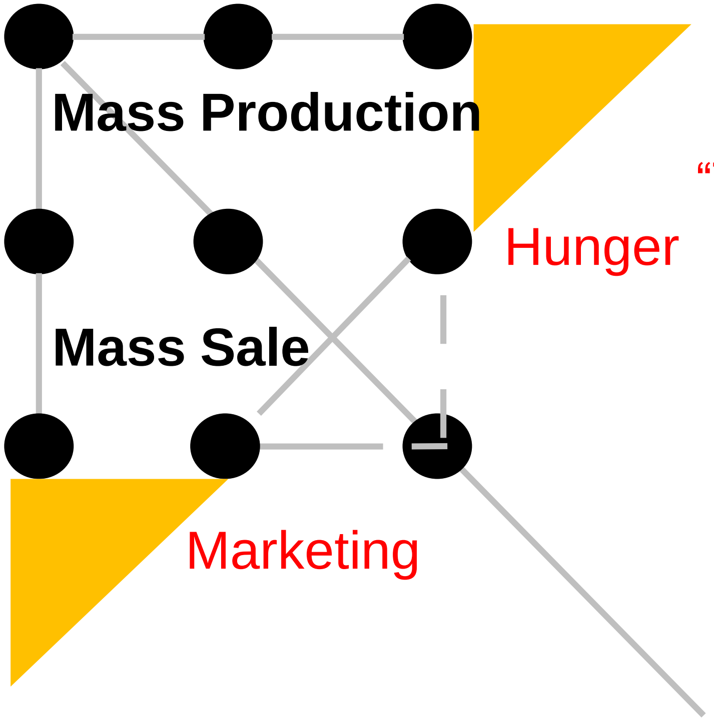
Chips
=
Salty

Thinking outside of the box



Potato + Honey + Butter =

Thinking outside of the box



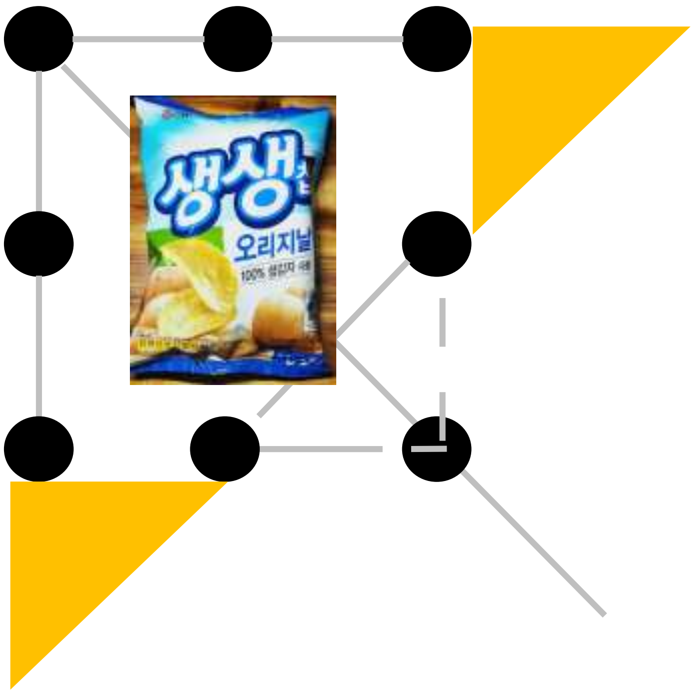
"Today Honey Butter Chips will be sold at 3pm and 7pm, first come first serve, maximum 3 bags"

Intentionally make the potential customers curious and hungry.

Adjusting output to meet only 70~80% of the total demanded

Thinking outside of the box

Thinking outside of the box

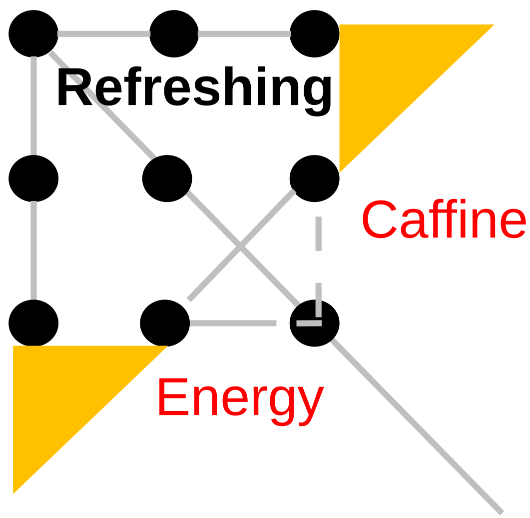


Instead of bold colored design
used calm pastel tone

Beverages

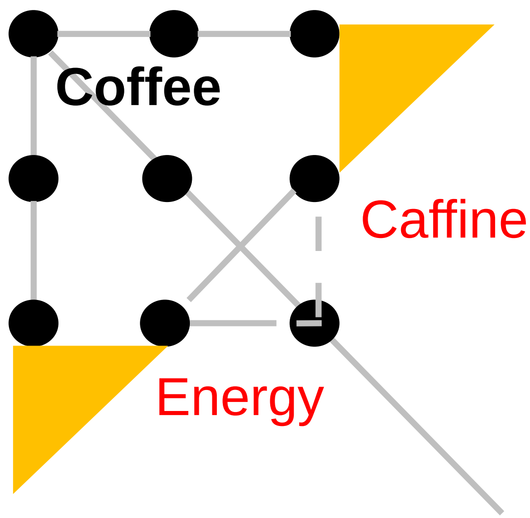
Drinks
=
Refreshing

Thinking outside of the box



Unique flavor + Boost of energy

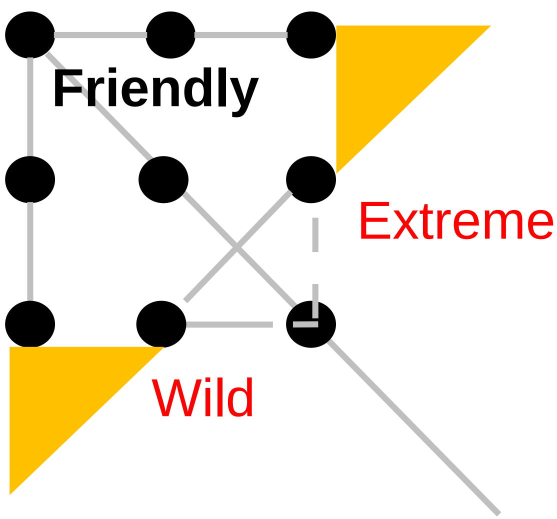
Thinking outside of the box



Everyone thinks of coffee to stay awake

Thinking outside of the box

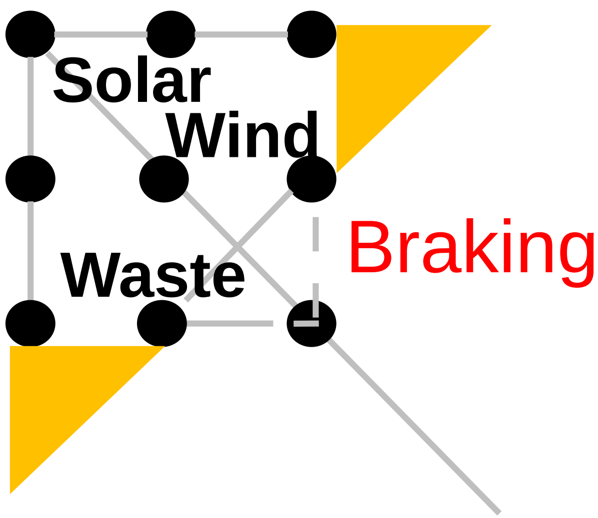
Marketing Concept




Red Bull
#AIR DROP

Thinking outside of the box

imagination at work

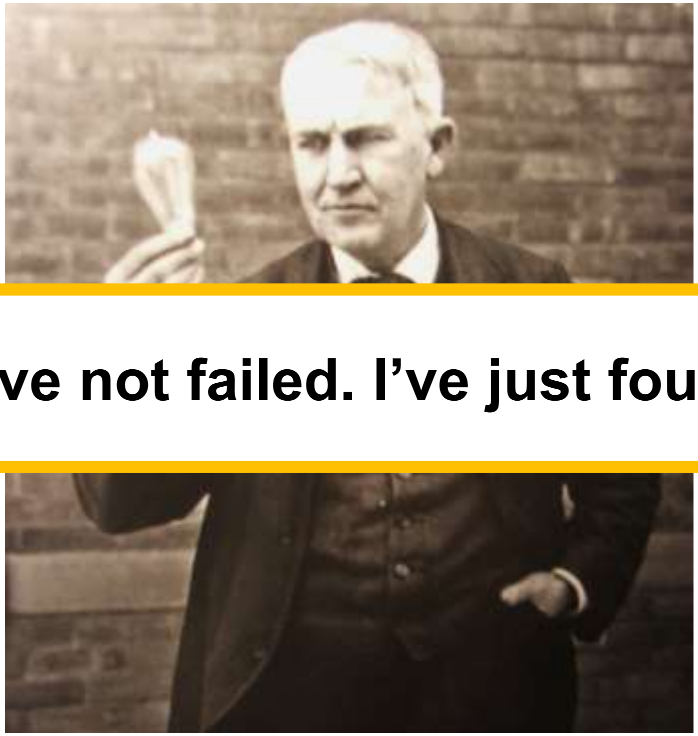


When you slow down the train with brakes, energy dissipates into the air as heat.

Force transferred from braking a 200 ton train : 1000,000 Newtons

Powering 160 households for a year

Importance of Quantity



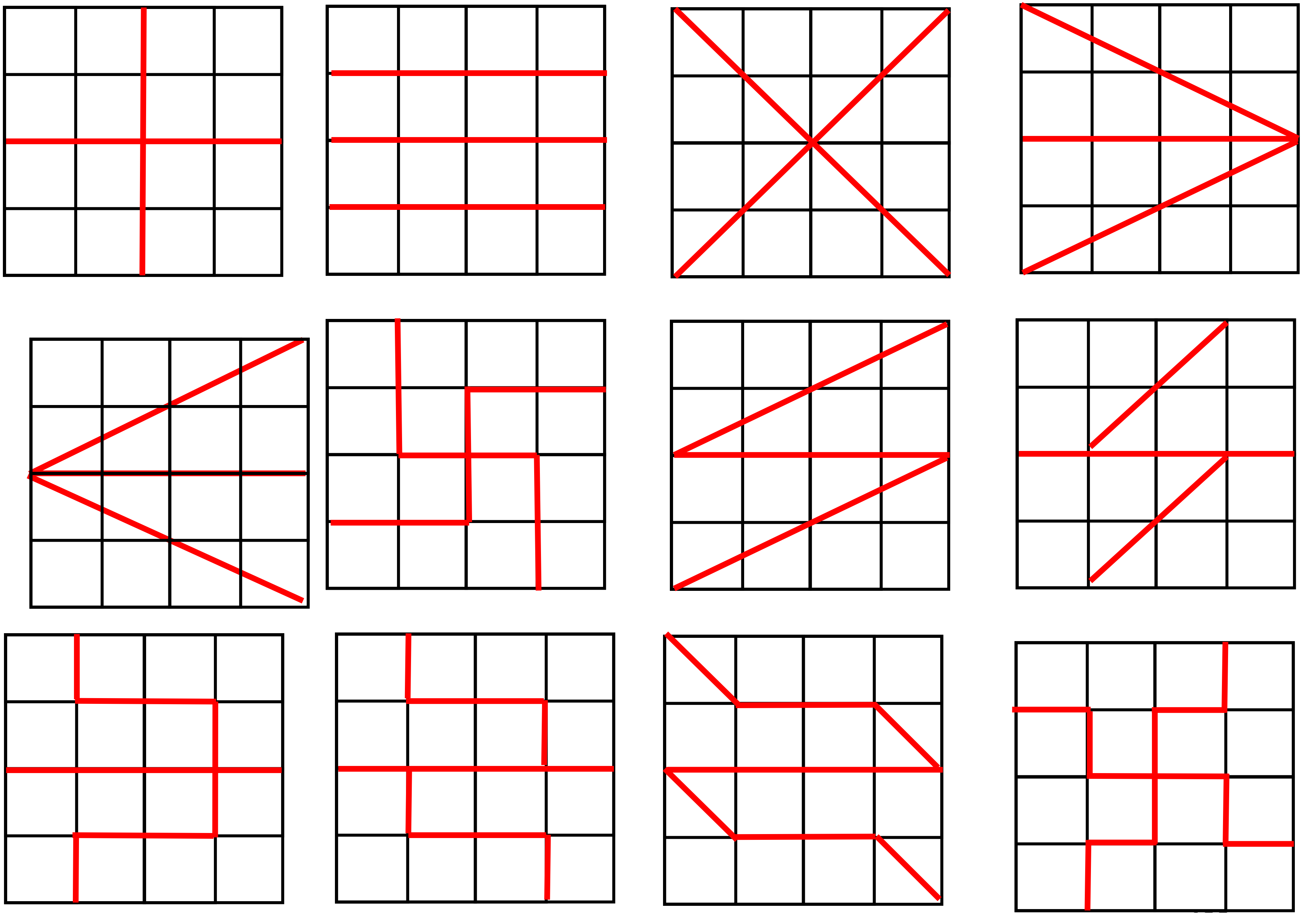
Thomas Edison

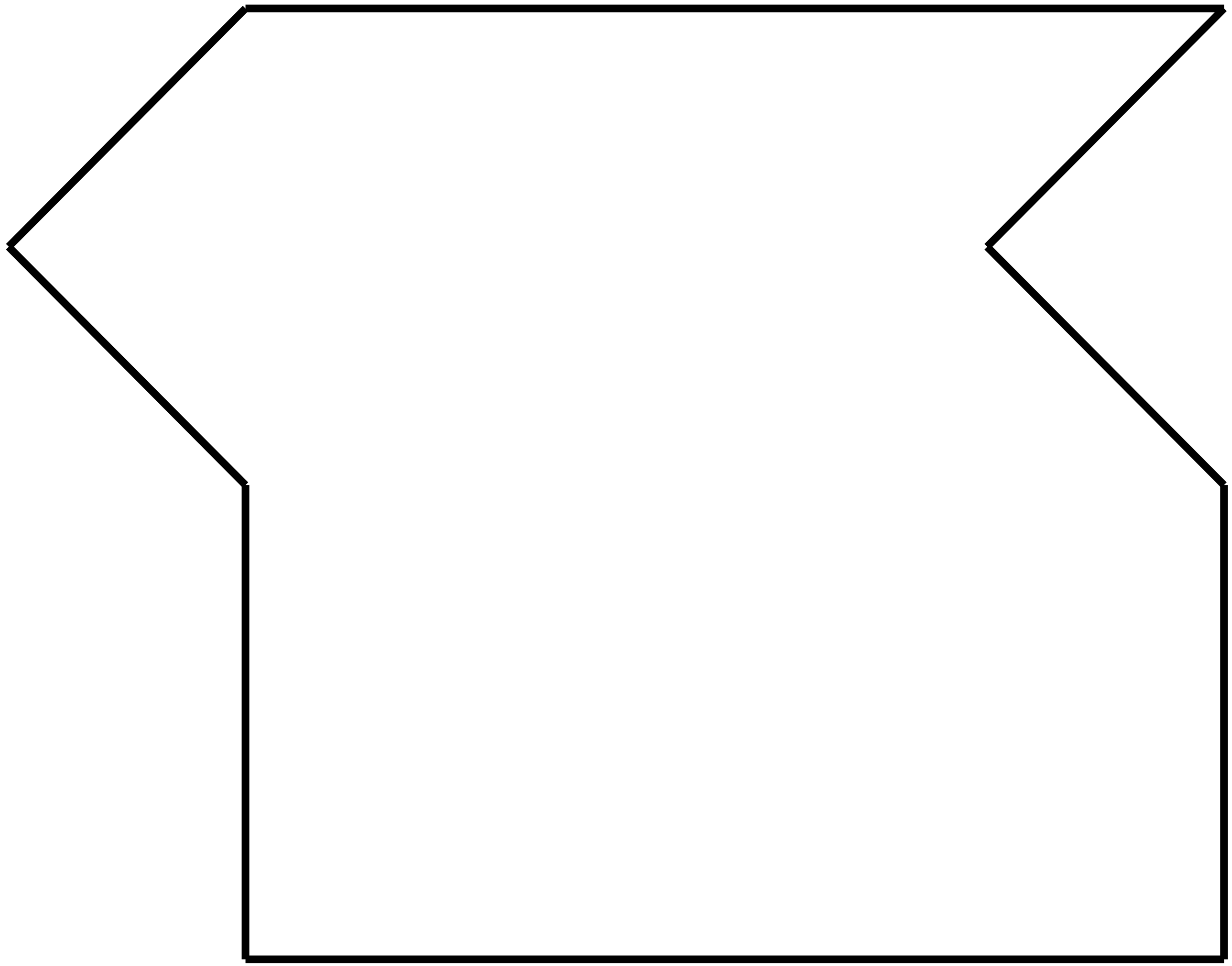
Out of quantity comes quality

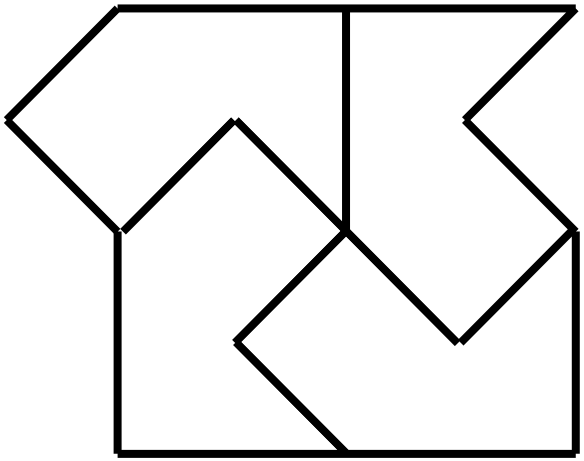
Brainstorm on ONE topic

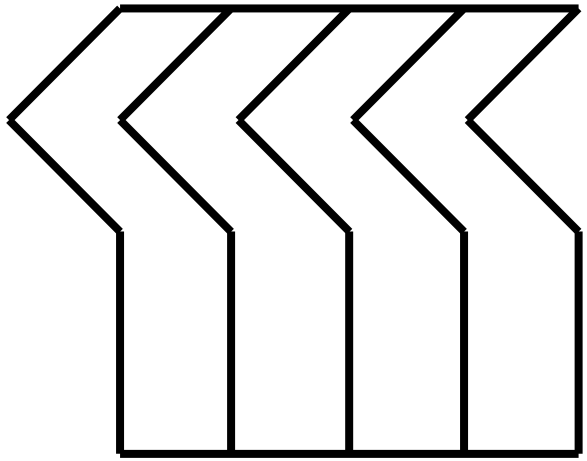
"I have not failed. I've just found 10,000 ways that won't work."

- 35 Idea notebooks
- 6,000Failure
- 1,093 Patents









P R □ D

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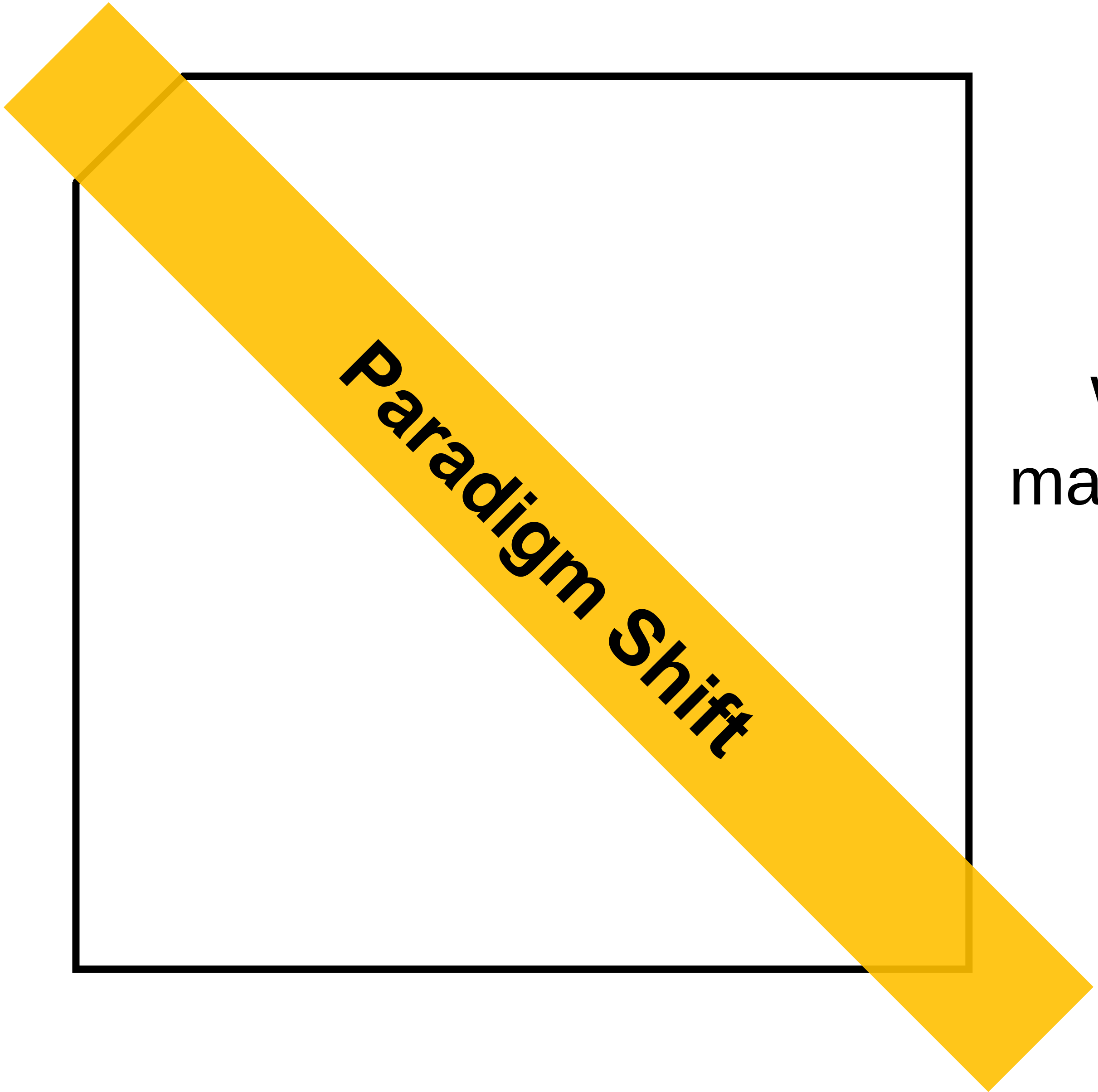

With 1 line,
make 2 triangles

Chung Ju-Yung Method

Chung Ju-Yung
Founder of Hyundai Groups