New product concept development through TRIZ

2011.

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Resume

Name : Kim, Ik Cheol

Educational background and career:
1977.3 - 1982.1 Ajou university, Industry Engineering (bachelor)
1993.3 - 1995.8. Hannam university, Management Information (master)

1981.12 - 1988.12 Ssangyong R&D Center, Technical Information Management
1989.2 - 1996.1. Korean Research Institute for Standard and Science
1996.1. -1998.11. Samsung Advanced Institute of technology,
1998.12. - 2001.11. Infoclue, TRIZ, Technical Information Management
2002.-   Techinfo

TRIZ Experiment:
1997. Introduce TRIZ to Samsung Advanced Institute of technology & Electronics
1999. TRIZ Training(from Zinovy Royzen - 40 hours)
2000. TRIZ Training(from Nikolai Khomenko - 120 hours)
2000. R&D Support for Samsung VIP Center(3 Project -Air conditioning fin, Jar Cover, LCD injection)

-Present
-TRIZ teaching(approx. 600 times - more than 20,000 people)

Intro

- Most company want to develop new product which can sell on market: but less than 5% get success, Why?

신제품 실패의 주요 원인 (중복 응답)

순위	신제품 실패의 원인	비율(%)
1	Misunderstand Wants & Needs	45
2	Product Problem	29
3	Poor Marketing	25
4	High Cost	19
5	Competitive Action	17
6	Poor Timing	14
7	Technical Problem	12

자료: "Winning at New Products", Robert G. Cooper, 1996

What is Wants & Needs?

Concen/ Div.	Measure ment	Dire/Non direct	Harmful
Name/Sh ape	Method error	Stab/Uns table	Resource
Balan/Un balance	feedback	Differenc e	space
Hard/Sof t	•Condition Difference •Error of view	Error of problem	

time	transfo rming	Status	Moral
Safety	Comfor t	Affecti on	Beauty
Sex	Gender	Functio n	Intellig ent
Econo my	Healthy		

What is Wants & Needs?

- ## Needs:
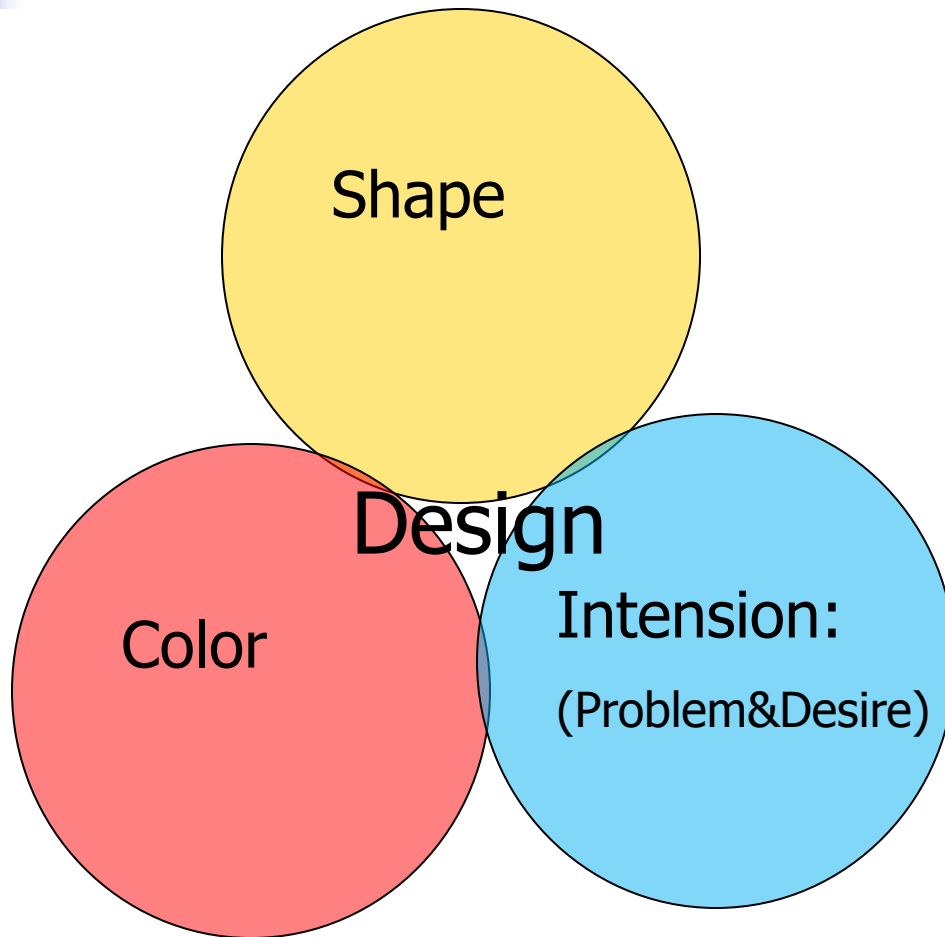 - Carrying many materials are difficult(problem)-> Bag(Answer), wrapping cloth (Answer)

- ## Wants:
  - Having noticeable bag by people(desire) ->Vintage bag(Value)

Three element of Design

Shape: Function
Color:Emotion
Intension: Think

Shape

Design

Color

Intension:

(Problem&Desire)

Present of Needs-Problem

- Tooth brush
  - Shape: Strait Line -> Curve
  - Color: Yellow -> Blue sky
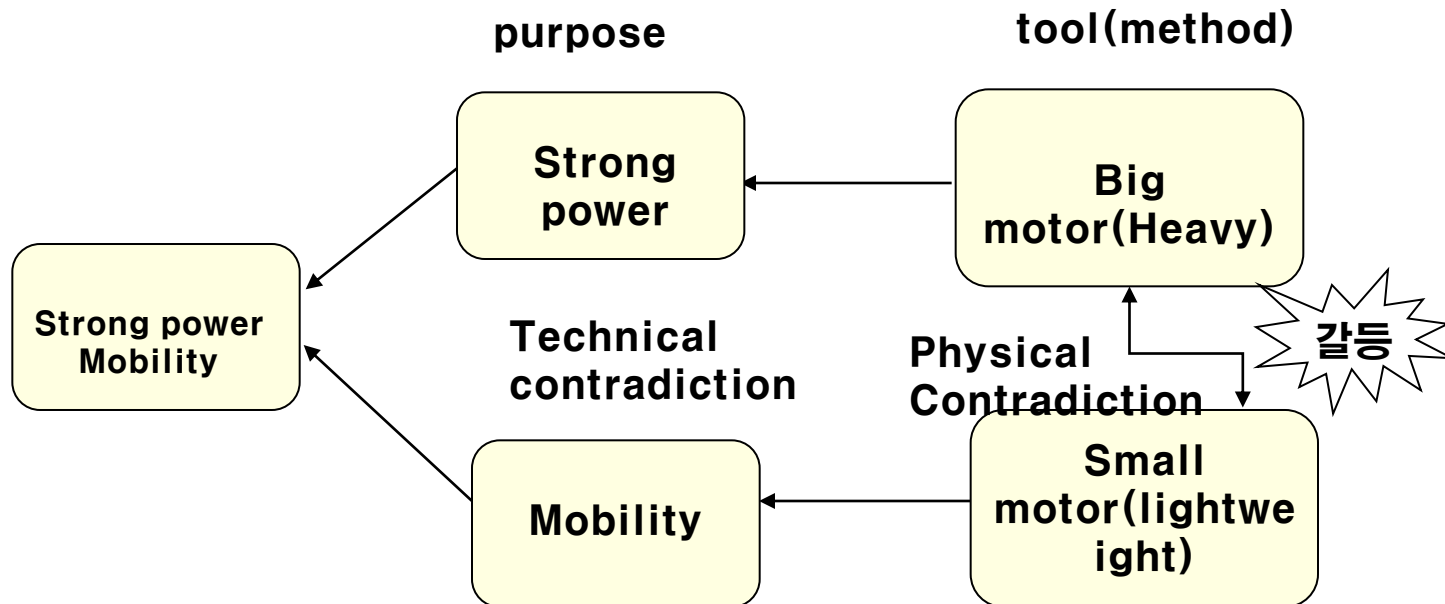 - Intention of engineer?

Present of Wants-Desire

- Shape – Square(not round)
- Color – Blue(not red or pink)
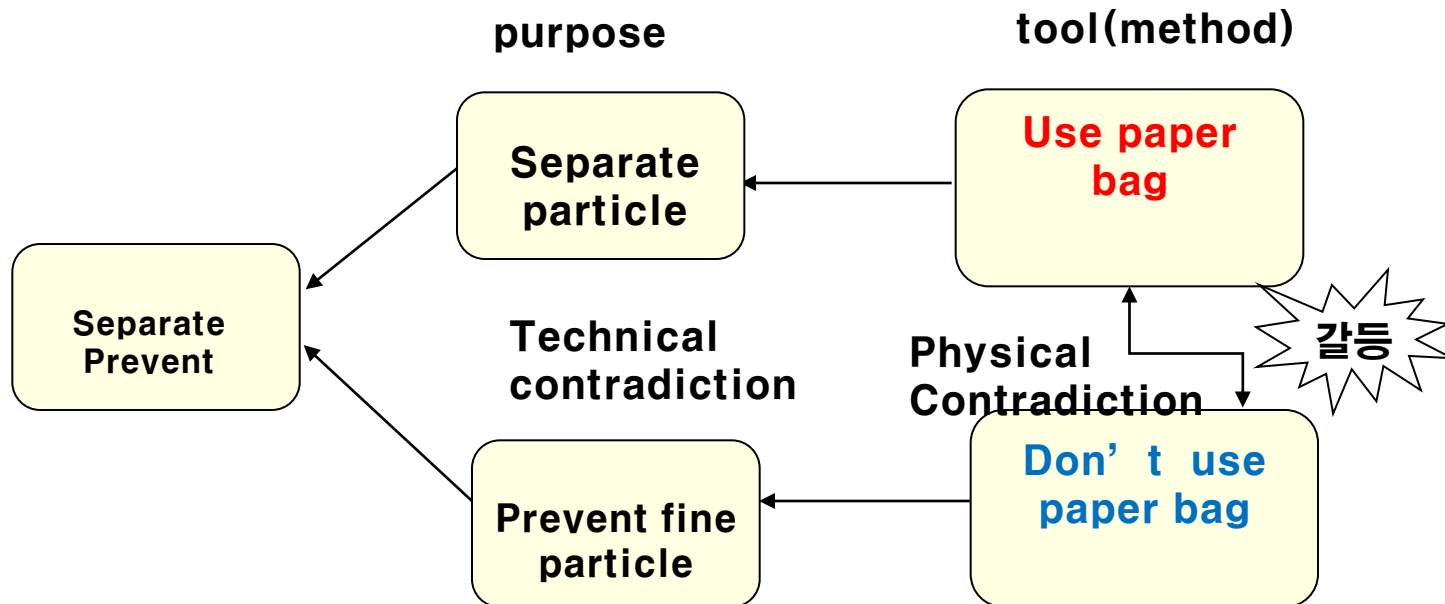- Intention of designer
    - Desire(Value) – Difference of gender
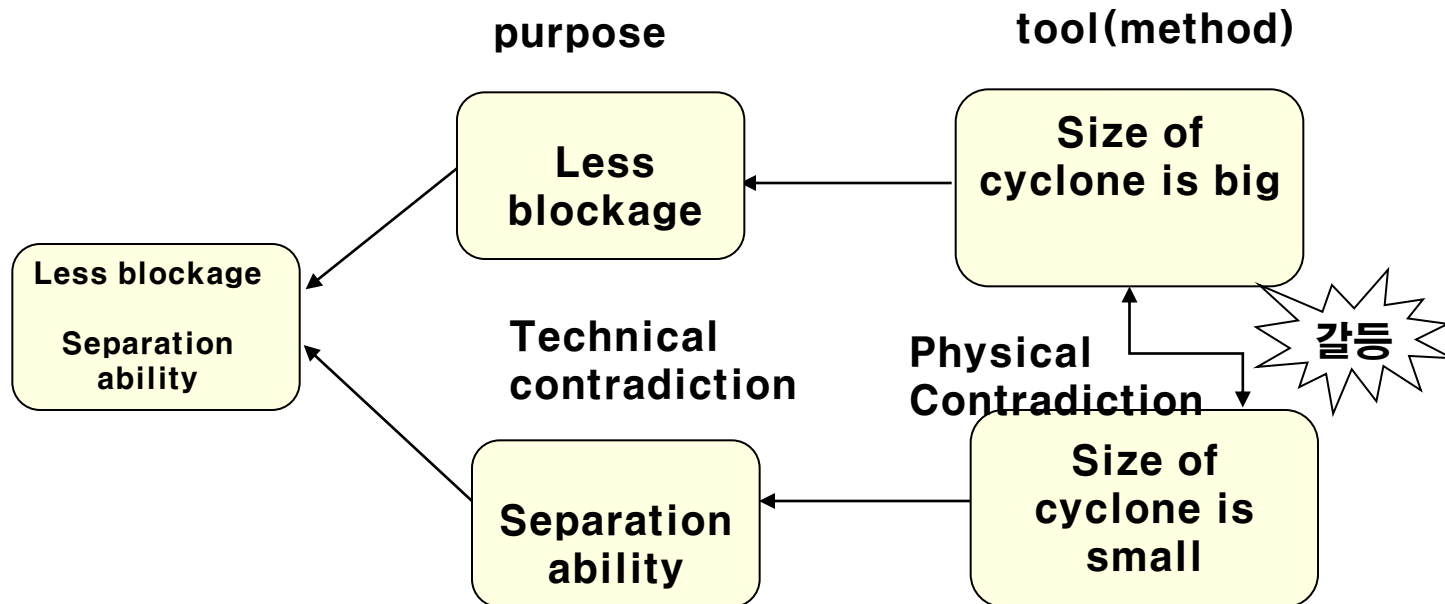
BLV Pour Homme E.D.T 100ml

BLV
POUR HOMME

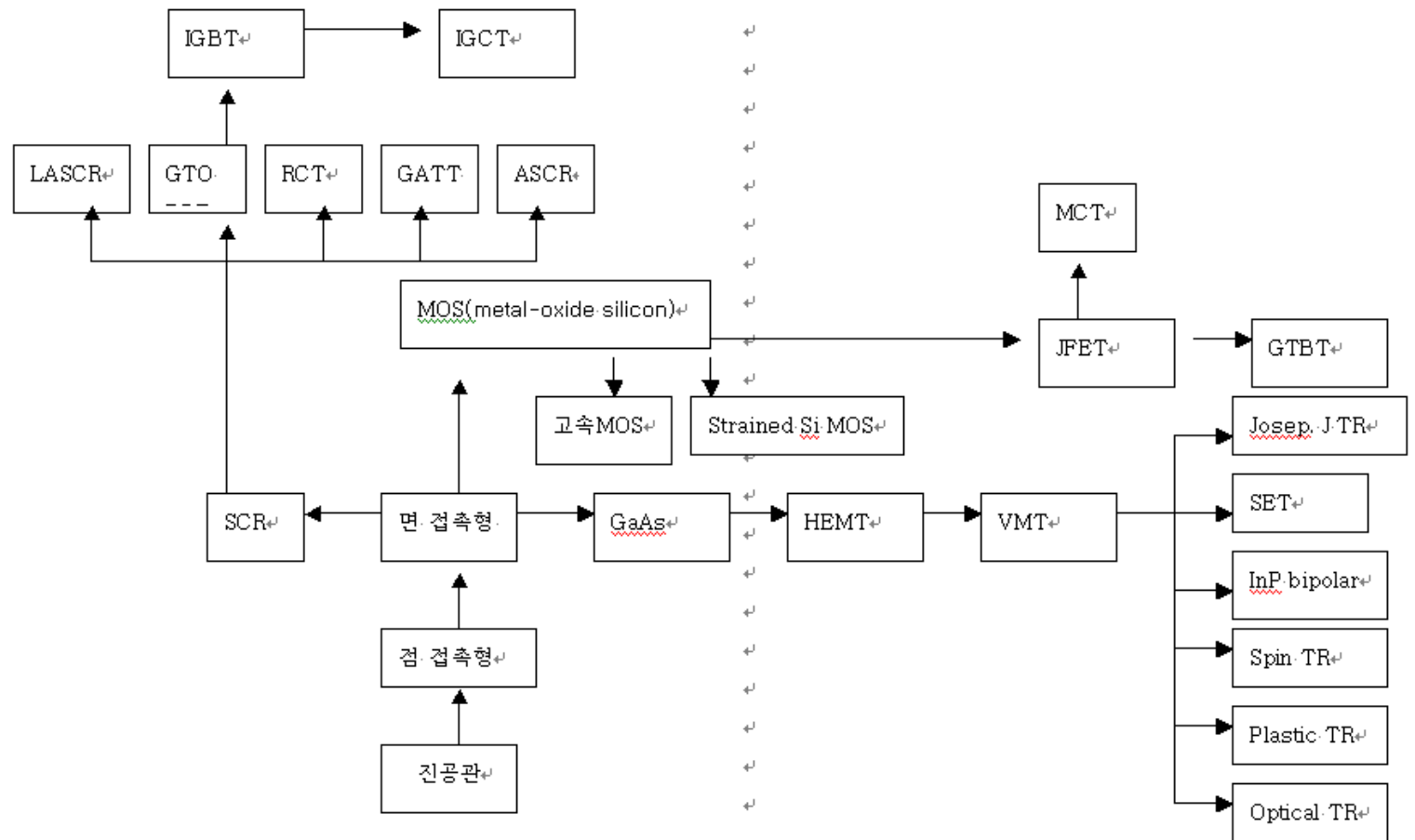# Problem based New product development(Needs)

Contradiction of Vacuum cleaner①

purpose

tool(method)

Strong power

Big motor(Heavy)

갈등

Strong power Mobility

Technical contradiction

Physical Contradiction

Mobility

Small motor(lightweight)

Contradiction of Vacuum cleaner②

purpose

tool(method)

Separate particle

Use paper bag

Separate Prevent

Technical contradiction

Physical Contradiction

갈등

Prevent fine particle

Don't use paper bag

Contradiction of Vacuum cleaner③

purpose   tool(method)

Less blockage   **Size of cyclone is big**

Less blockage
Separation ability

Technical contradiction   **Physical Contradiction**

갈등

Separation ability   **Size of cyclone is small**
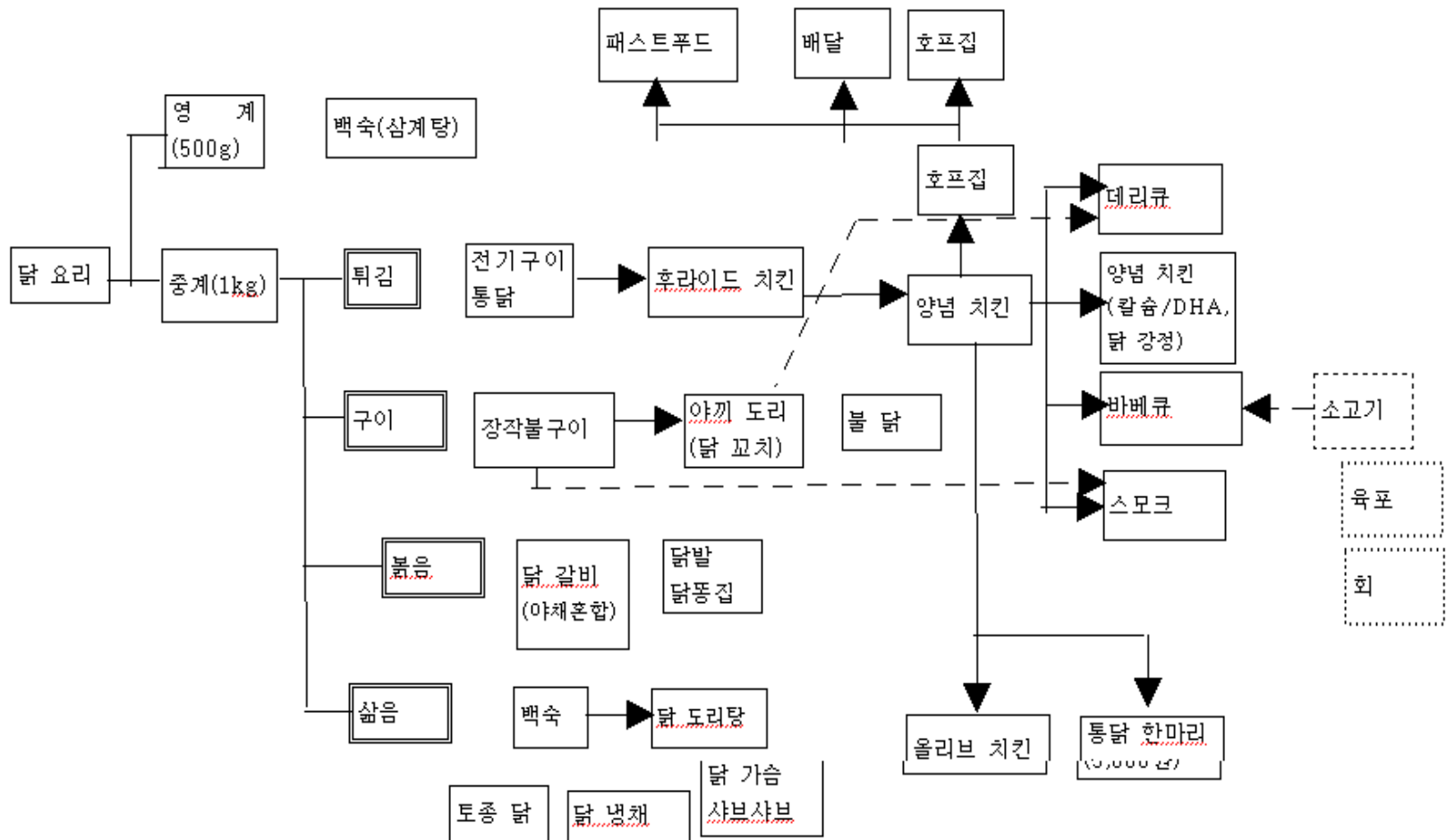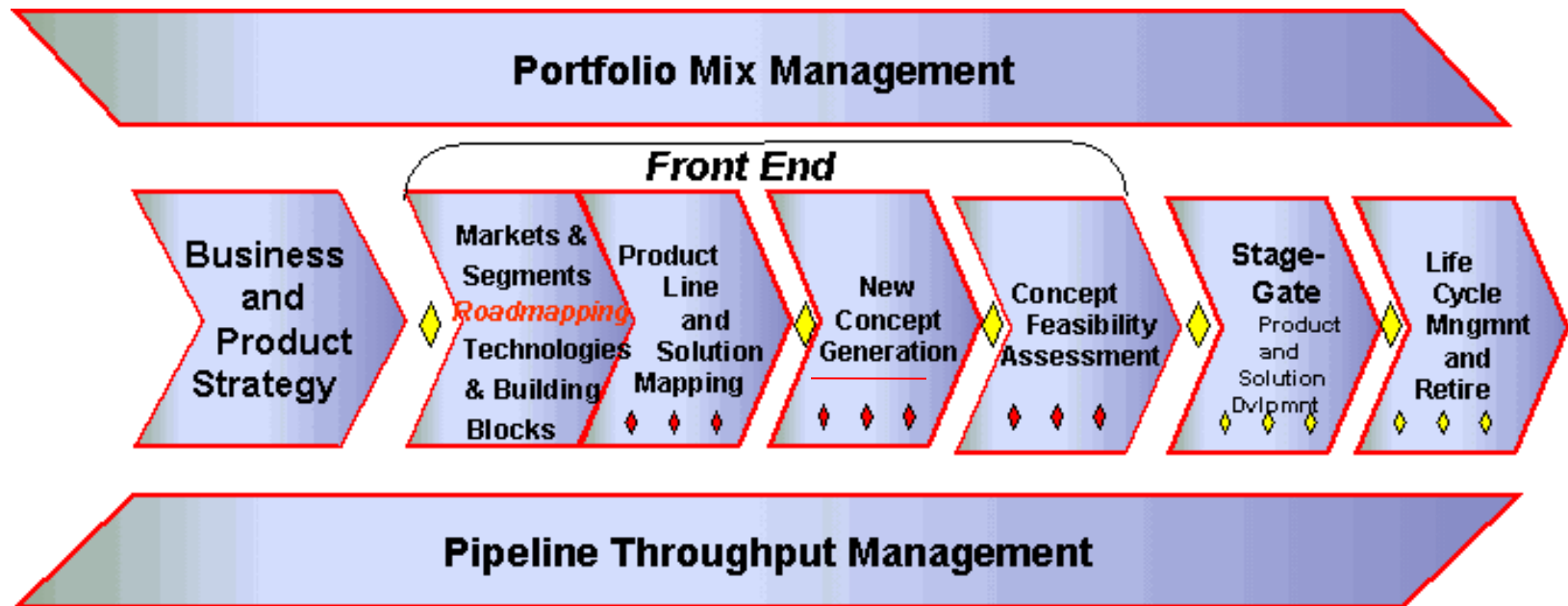
Problem based New product development(Parts)

Problem based New product development(Business)

New product development process

Type of Problems
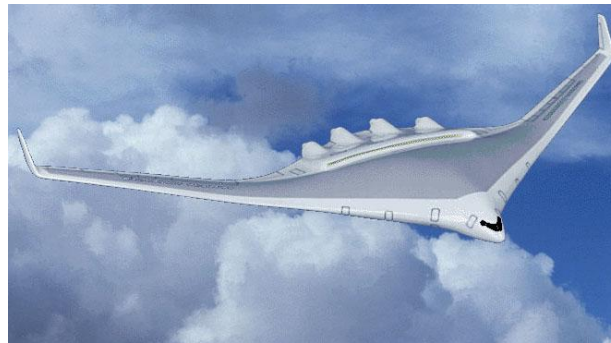
time天

space地

Condition
人

Concen/Div.

Balan/Unbalan.

Measurement

Dire/Non direct

Hard/Soft

Harmful

feedback

Resource

Difference

Stab/Unstable

Condition Difference

Method error

Error of problem

Name/Shape

Error of view

Product of time

- Managing time as intent
    - Reduce time
    - Holding time
    - Expand time
    - Return time
    - Etc.

Product of time

Product of space

- **Manage space**
  - Find space
  - Reduce/Expand space
  - Look for another space
  - Etc.

Product of space

Product of Measurement

- Change status of viewing
  - Change shape
  - Change color
  - Come into view or reverse
  - Etc.

Product of Measurement

Product of Resource

- Use of non usable Resource
    - Find Resource of artery
    - Find Resource of vein
    - Etc.

Product of Resource

Time value

Time

- Change value of time

Examples:

Automotive: Reduce time

Refrigerator: Slowing time

Botox: Return time

Photograph: Stop time

Time value

Transforming value

transforming

- Transforming from me to another person

Examples:

Harley Davison:

Middle age Rock band:

Custom Play:

Transforming value

Transforming

- Transforming from me to another person
- *The grass is always greener on the other side of the fence*

transforming value

http://blog.naver.com/cheshire98

Conclusion

- New product development
  - To solve problem and desire of human
  - Action for giving solution and value