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비즈니스 혁신을 위한 디자인 전략

Design Strategies for Business Innovation

Credit: fuseproject, inc.
Client: Birkenstock USA

Credit: ZIBA Design Team
Client: Warn Industries, Inc.

Client: Nike, Inc

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목 차 Contents

1. 디자인과 가치 Design and Values

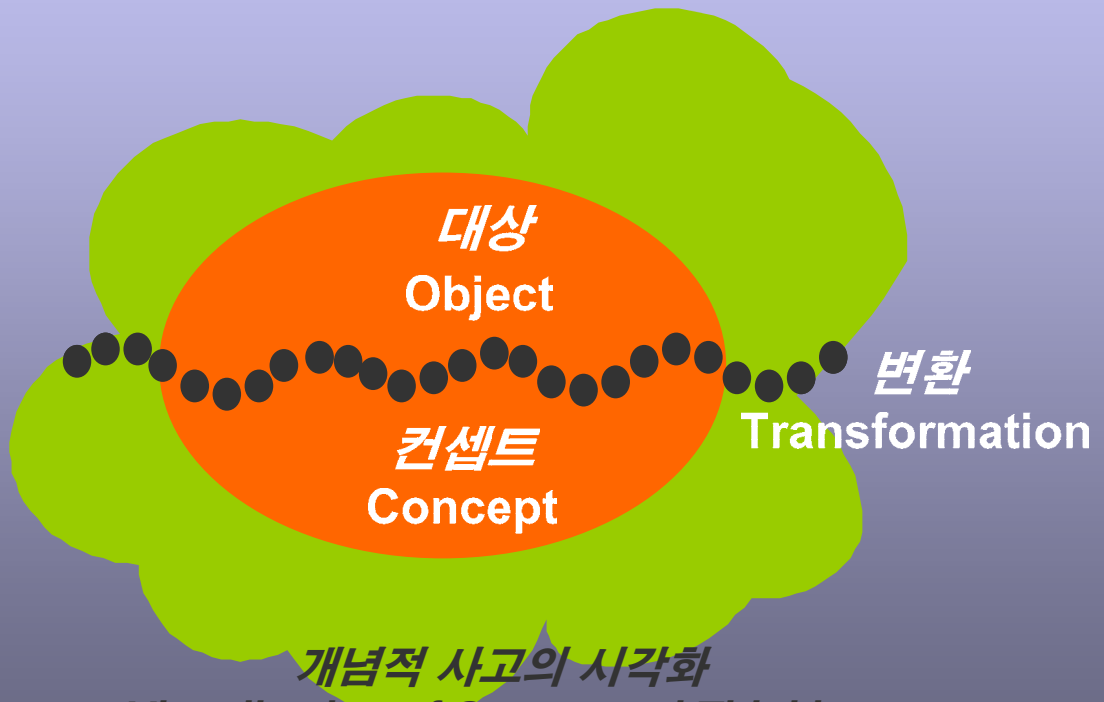
디자인 정의 Definition of Design

대상(제품), 프로세스, 서비스, 그리고 시스템의 여러 질을 정하는 창조적인 활동

A creative activity whose aim is to establish the multi-faceted qualities of objects, processes, services and their systems in whole life-cycles. (ICSID)

Mint Inc.

디자인현상 Design Phenomena



디자인 가치 Design Value

Superior Value:

Satisfying Customers' Needs and Wants,

Benefits:

Functional, Social, Personal, and Experiential

Cost:

Monetary, Temporal, Psychological, Behavioral, and Transactional

디자인.기획 Planning and Designing

Product planning

Form	Properties	Function	Need	Values
	speed weight stability price	sailing staying	recreation physical exercise adventure pleasure	health beauty profit work

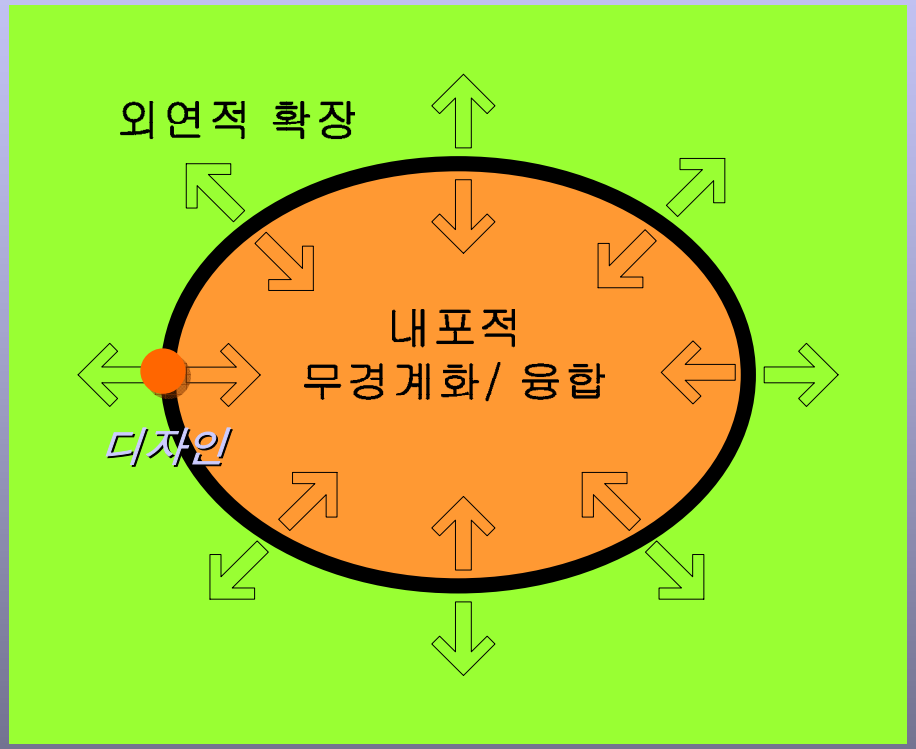
Product designing (strict development)

고객을 위한 가치창조
Creating Value for Customers

- Value = perceived quality / perceived cost
- Perceived quality
  - physical attributes
  - image
  - service attributes
- Perceived cost
  - Acquisition costs
  - Possession costs
  - Usage costs

Value Pricing = Perceived Benefits - Perceived Cost

디자인 패러다임의 변화



- 산업간 경계가 약화 / 융합화 현상
- 디자인분야 경계 붕괴
- 전통적인 디자인산업 범위 확장

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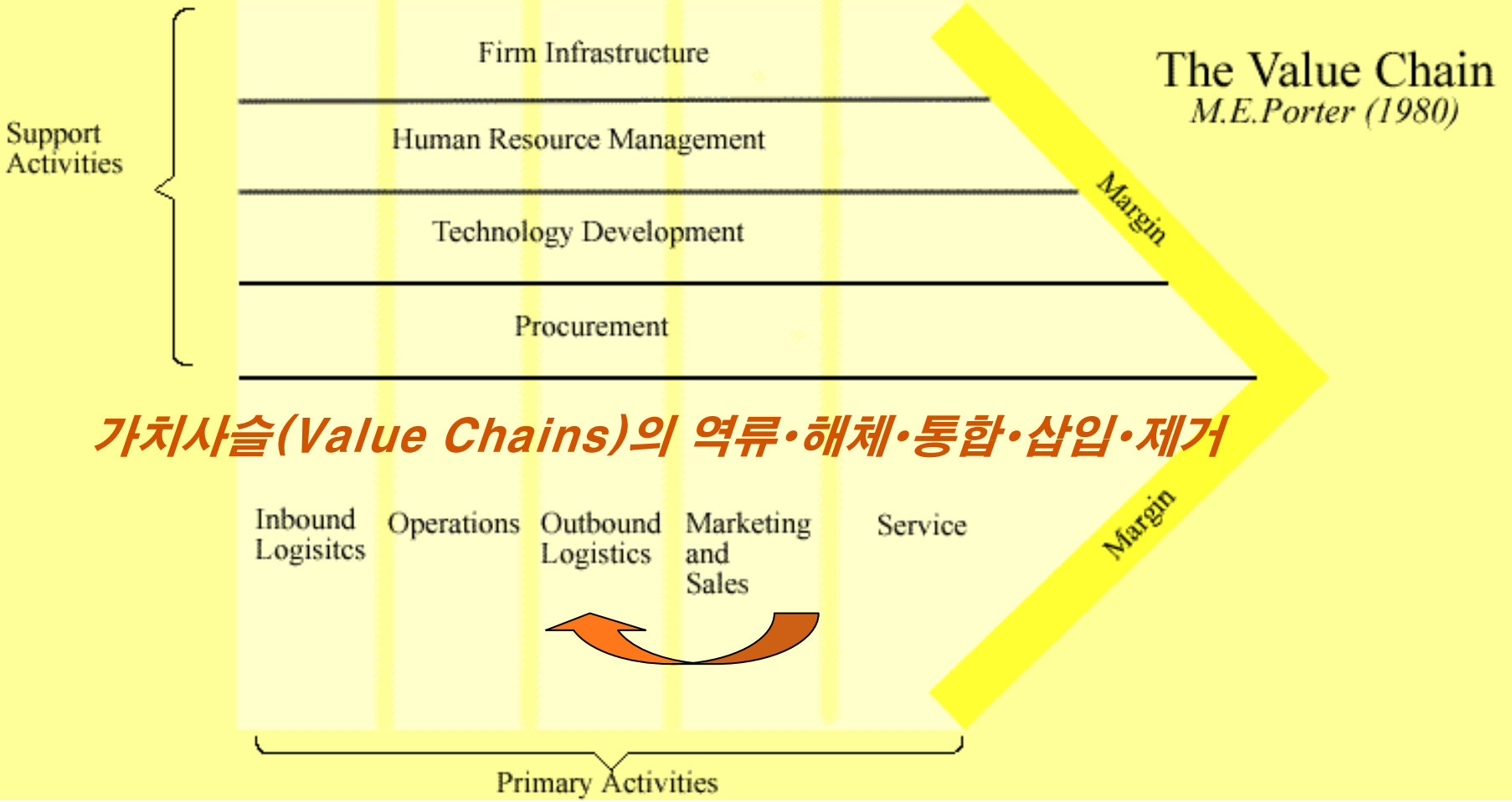
가치사슬과 디자인 Value Chain & Design



가치사슬(Value Chains)의 역류·해체·통합·삽입·제거

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가치창출 Value Creation

the 20th century

the conversion of heuristics to algorithms

글로벌 규모집약산업
global scale-intensive industries

the 21st century

the conversion of mysteries to heuristics

비전통적 상상집약산업
non-traditional, imagination-intensive industries

개념화 Conceptualization

- Identify components, systems, chunks in various combinations to satisfy customer's needs
- Employ inventiveness and creativity
- Employ models
- Synthesize
- Think across disciplines and products
  - Trend analysis, Hierarchical Analysis
- Be curious -- How things work?

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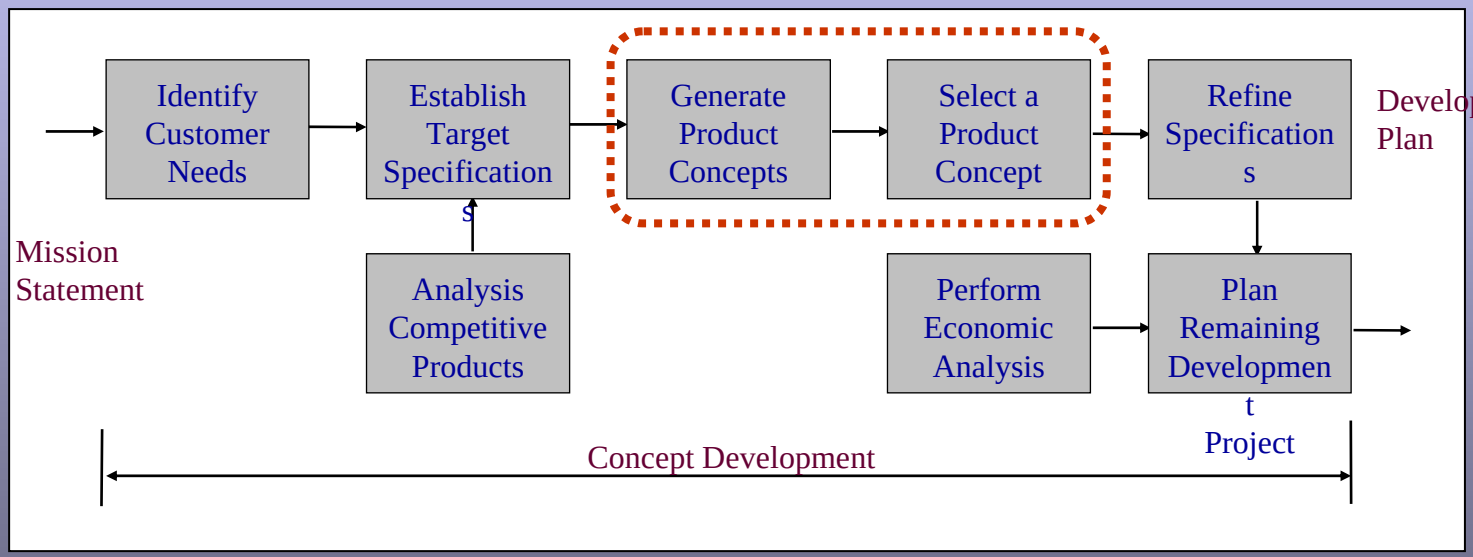
컨셉디자인 개발 Concept Design Development



(Karl T. Ulrich, Steven D. Eppinger, *Product Design and Development*. (P18)

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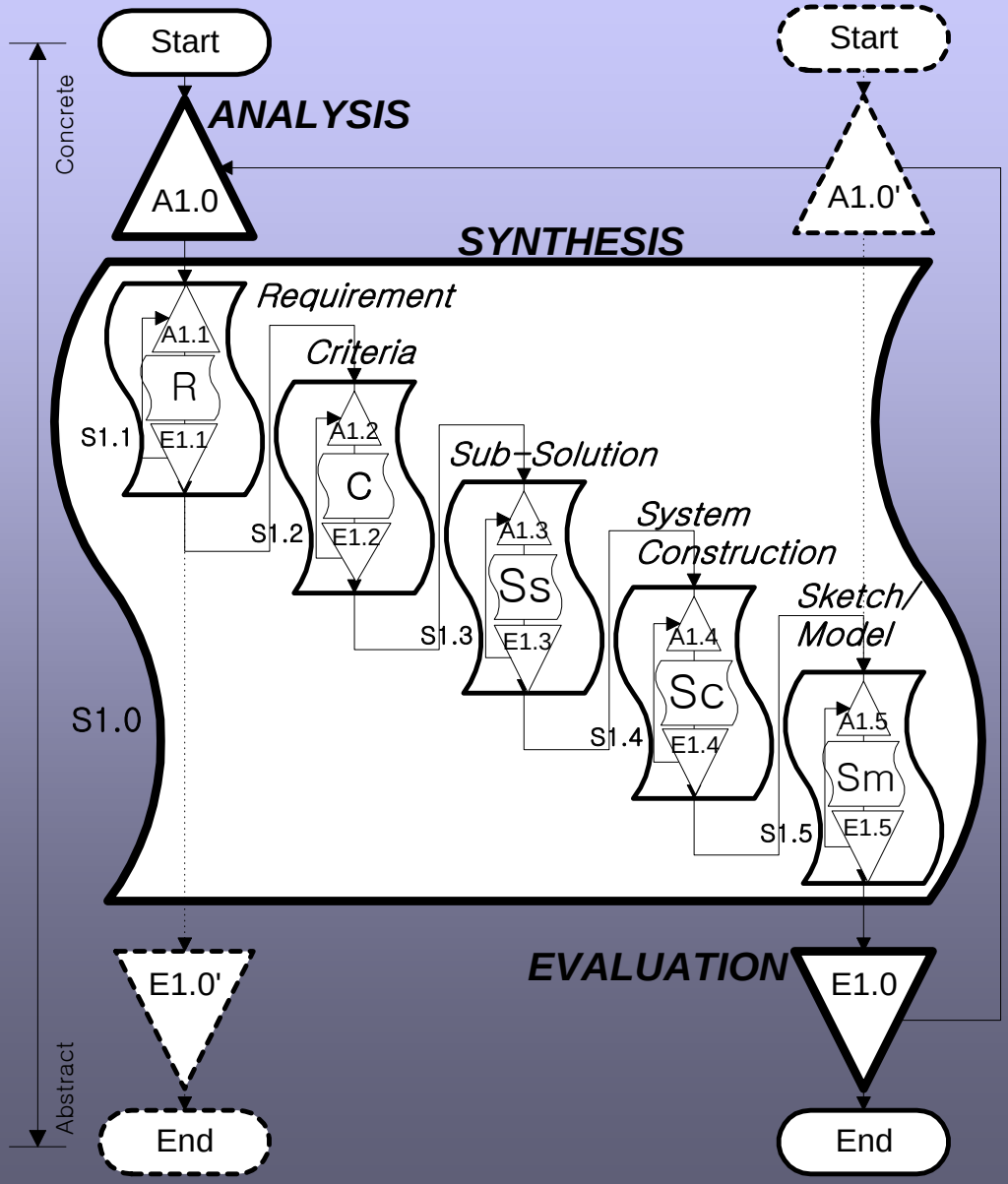
디자인 종합 모델 Design Synthesis Model



2. 비즈니스 디자인 The design of BUSINESS

— *Dean Roger Martin*

> *Business people don't just need to understand designers better – they need to **become** designers.*

경쟁은 규모집약적산업의 지배력창출에 있는 것이 아니라 상상집약산업의 우아하고 세련된 제품을 산출하는 데 있다.

Competing is no longer about creating dominance in scale-intensive industries, it's about producing elegant, refined products and services in imagination-intensive industries.

비즈니스 환경변화
Turbulent times for business

the globalization of markets and competition

the expansion of the service-based economy

the impact of deregulation and privatization

the explosion of the knowledge revolution

디자인과 비즈니스의 사고전환

비즈니스 디자인
The design of business

Designing our businesses to provide elegant products and services in the most graceful manner possible.

디자인 비즈니스
The business of design

What designers do, how they do it, and how best to manage them. This misses the point fundamentally, and it won't save the traditional firm.

Design skills and business skills are converging.

Apply the creativity, innovation and mastery necessary to convert the mystery to a heuristic – a way of knowing and understanding.

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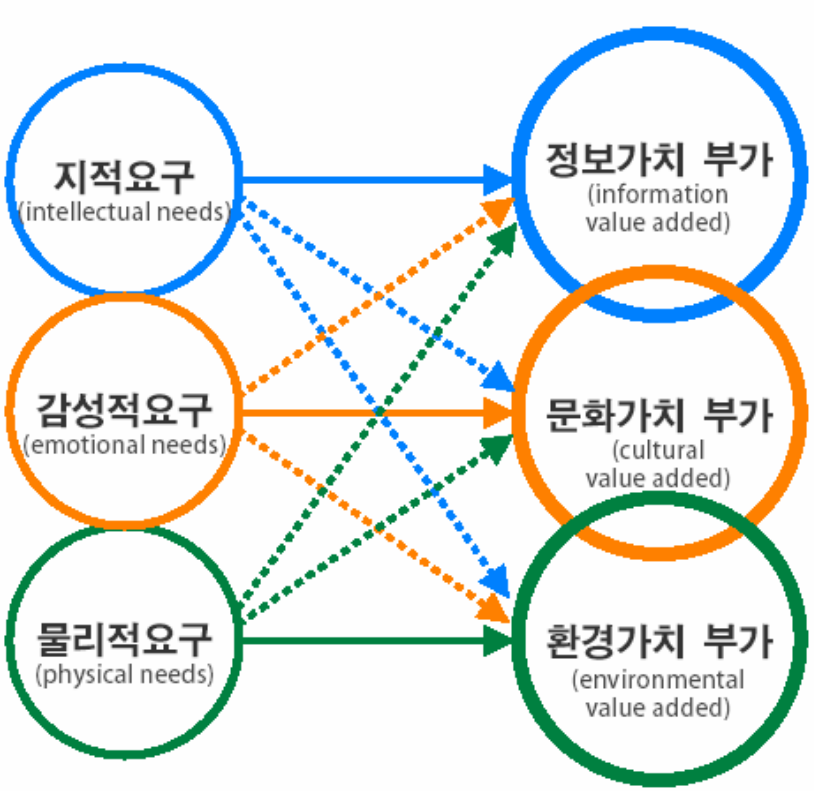
Modern Firms Must Become More Like Design Shops

FEATURE	FROM "TRADITIONAL FIRM…"	…TO "DESIGN SHOP"
Flow of Work Life	Ongoing tasks Permanent assignments	Projects Defined Terms
Source of Status	Managing big budgets and large staffs	Solving 'wicked problems'
Style of Work	Defined roles Wait until it is 'right'	Collaborative Iterative
Mode of Thinking	Deductive Inductive	Deductive Inductive Abductive
Dominant Attitude	We can only do what we have budget to do Constraints are the enemy	Nothing can't be done Constraints increase the challenge and excitement

비즈니스 디자인의 방향


지적요구
(intellectual needs)
감성적요구
(emotional needs)
물리적요구
(physical needs)
정보가치 부가
(information value added)
문화가치 부가
(cultural value added)
환경가치 부가
(environmental value added)

3. 디자인적 사고 Designery Way of Thinking

"디자인은 예측할 수 없는 문제를 해결하는 도구"
Design is "a tool to solve unpredictable problems."

-Tim Brown (IDEO)

Business leaders are faced with solving unpredictable problems every day – so to have the design skill set in your repertoire is immensely valuable.

Algorithm

a logical, arithmetic or computational procedure

if correctly applied, ensures the solution of the problem.

Heuristics

rules of thumb or sets of guidelines

don't guarantee success

디자이너의 사고방식
How do designers think? Claudia Kotchka (P&G)

디자이너는 감정이입적이다.
Designers are very empathetic. They start out by getting inside the head of the user, and determining what they would want or need.

디자이너는 전체론적으로 문제를 해결한다.
Designers problem-solve holistically, not in a linear fashion.

디자이너는 시각화에 의해 반복.순환적으로 문제를 해결한다.
Designers start with a variety of possible solutions, prototype them, get feedback, revisit the problem, and evolve solutions.

The style of thinking

inductive - proving that something actually operates

Traditional firms

deductive - proving that something must be.

abductive - suggesting that something may be
- reaching out to explore it.

Design shops

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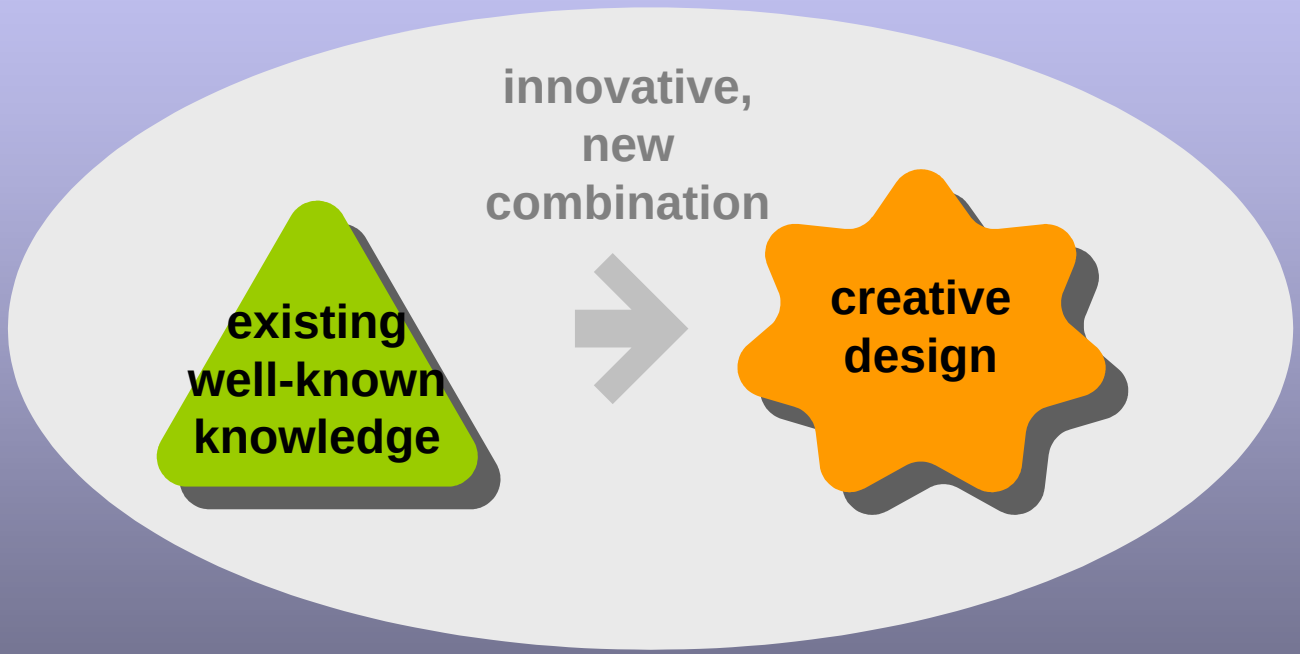
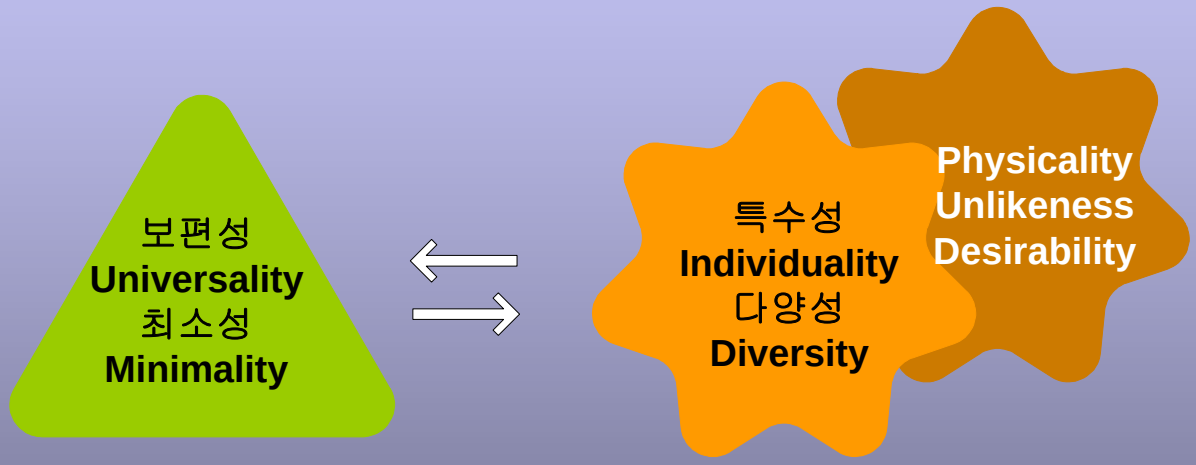
창의적 디자인을 위한 상정논법
Abduction for Creative Design



Abduction for Creative Design, Tetsuo Tomiyama et. al, Faculty of Design, Engineering and Production, Delft University of Technology

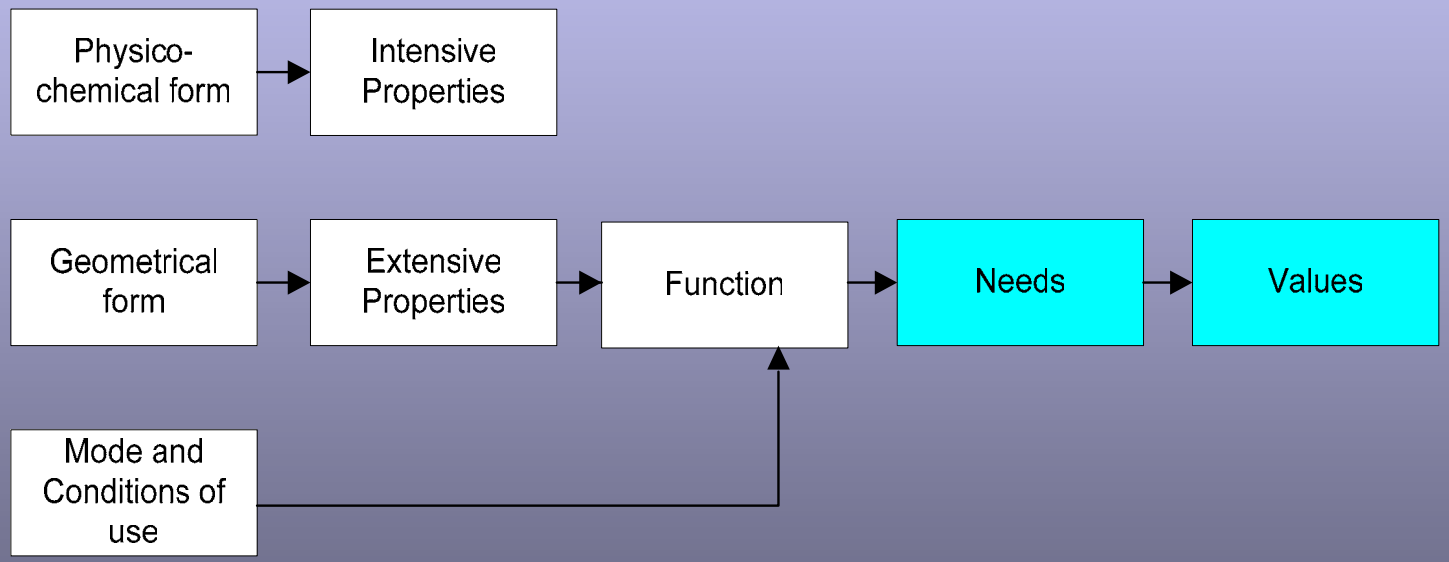
종합은 지식중심의 디자인활동
synthesis is a knowledge-centered activity.



abduction can be a guiding principle for not only creation (such as design) but also integration of superficially unrelated knowledge systems (theories).

Tetsuo Tomiyama et. al, Abduction for Creative Design, Faculty of Design, Engineering and Production, Delft University of Technology,

Product Functioning



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Design Reasoning

	Deduction	Reduction		
		Induction	**Abduction**	**Innoduction**
Premise	$p \rightarrow q$ p	P q	$p \rightarrow q$ q	q
Conclusion	q	$p \rightarrow q$	p	p $p \rightarrow q$
Pattern of reasoning	From general to particular	From particular to general	From particular to particular	From general to general
Characteristics for	Mathematics logic	Natural sciences Social sciences	Legal sciences Historical sciences Medicine	Technology Pedagogy

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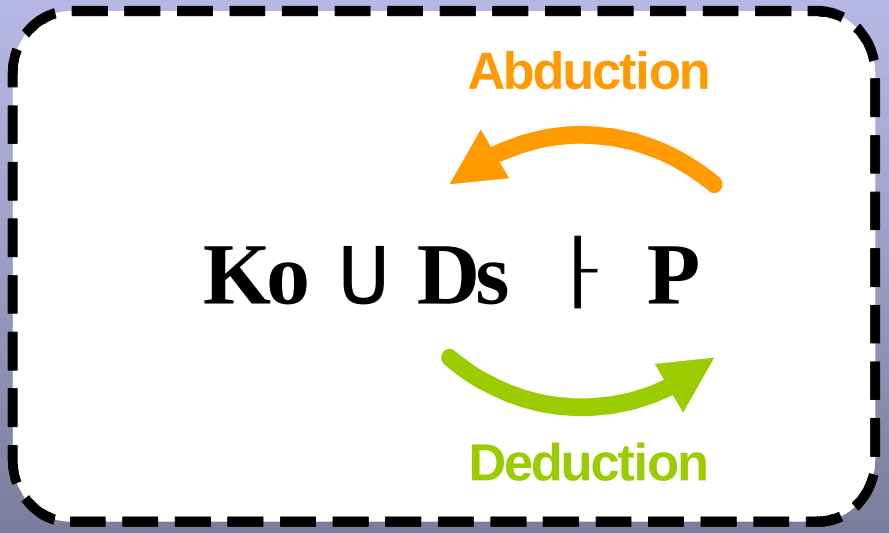
Ex: Dishwasher for sailing-boats

Function	unbroken, dirty dishes must become unbroken, clean dishes, within one hour and with the help of seawater	
Desired Properties	Dirty dishes should follow the ship's movements as little as possible. The apparatus must be able to withstand seawater and should use a detergent that works with seawater	**Reduction**
Design Specification		
Function → Form	How can the dishes be kept in a horizontal position?	**Innoduction**
Simulation		**Deduction**
Help of laboratory	Stainless steel can take seawater. They make a detergent which will lather well in a seawater	**Induction**
Prototype	Dirty dishes are not clean.	**Abduction**

디자인 프로세스의 논리

A Logical Framework of design process



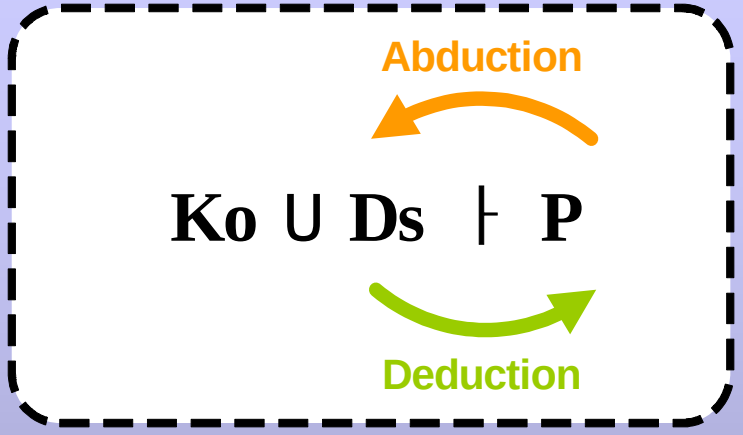
Ds: Design Solution
P: Properties and Behavior of Design Solution
Ko: Knowledge on Objects

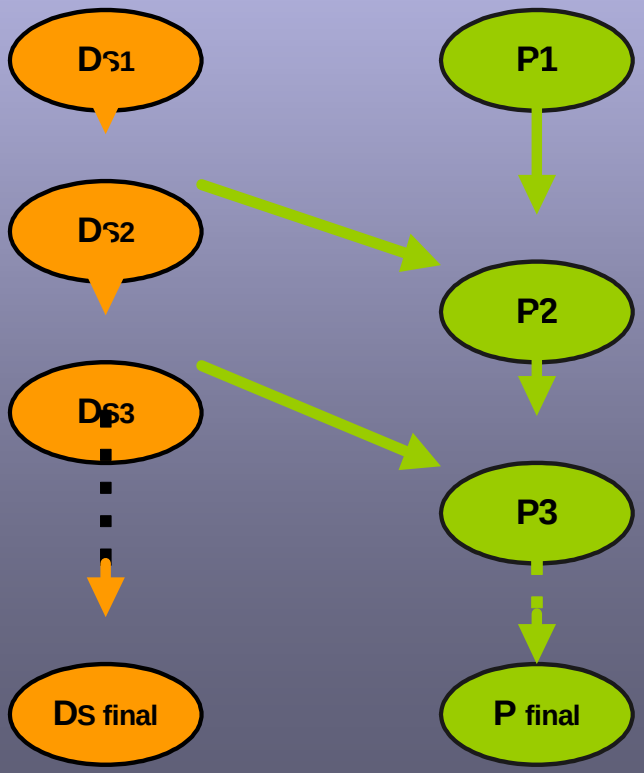
연역법과 상정법의

반복적 수행

Iteration of abduction

and deduction





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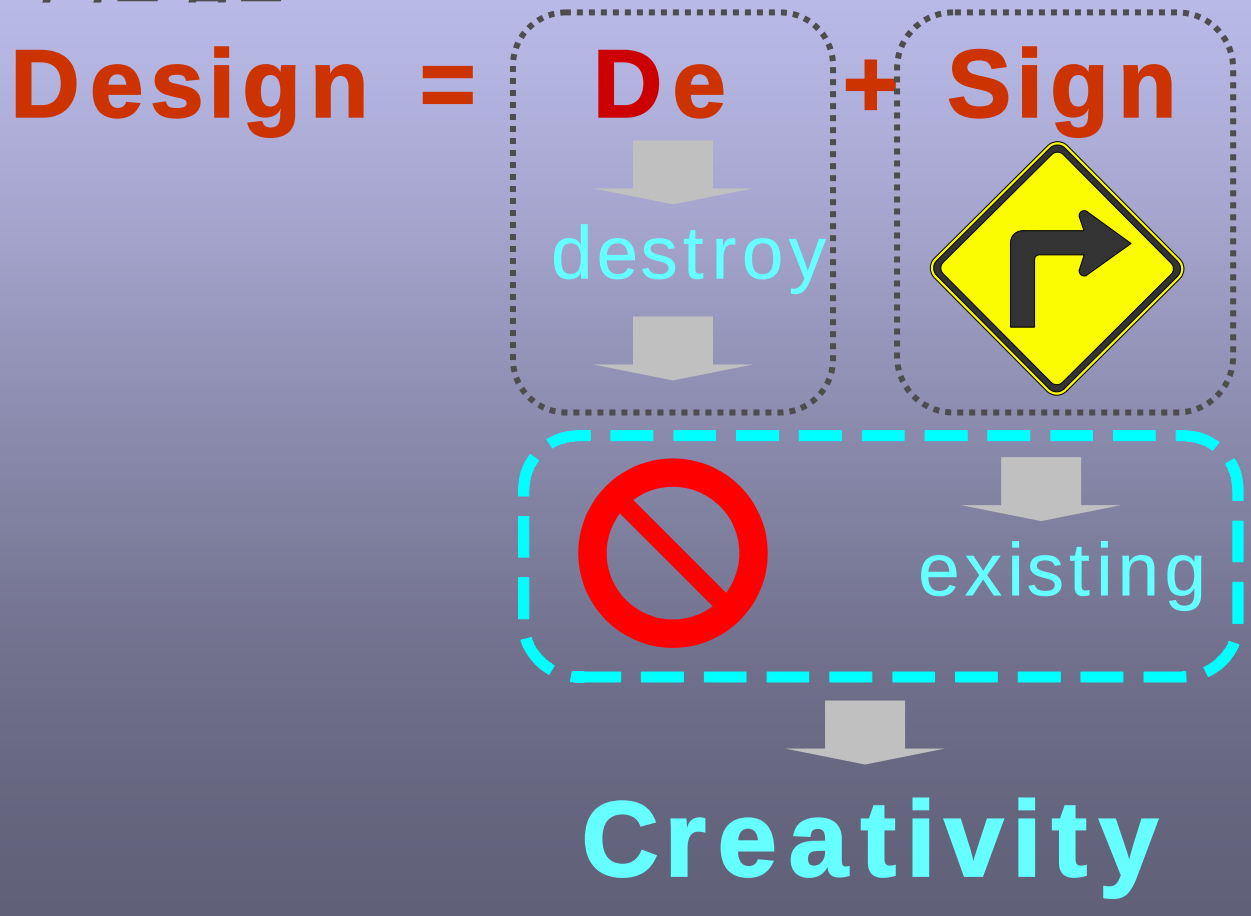
Functional requirements (FRs) and design parameters (DPs)

Functional requirements (FRs)				Design Parameters (DPs)	
FR 1	store food and provide access to it	FR 11	store the food in storage	storage space (S)	an enclosed space (E)
		FR 12	access the food in the storage		an access method to it (A)
FR 2	keep the food cool	FR 21	generate cool air	a cooling device (C)	a cooling device (Cd)
		FR 22	maintain cool temperature in the storage with cool air		thermal conduction and insulation for the space (Tc).

4. 비즈니스 디자인 이노베이션
Business Design Innovation

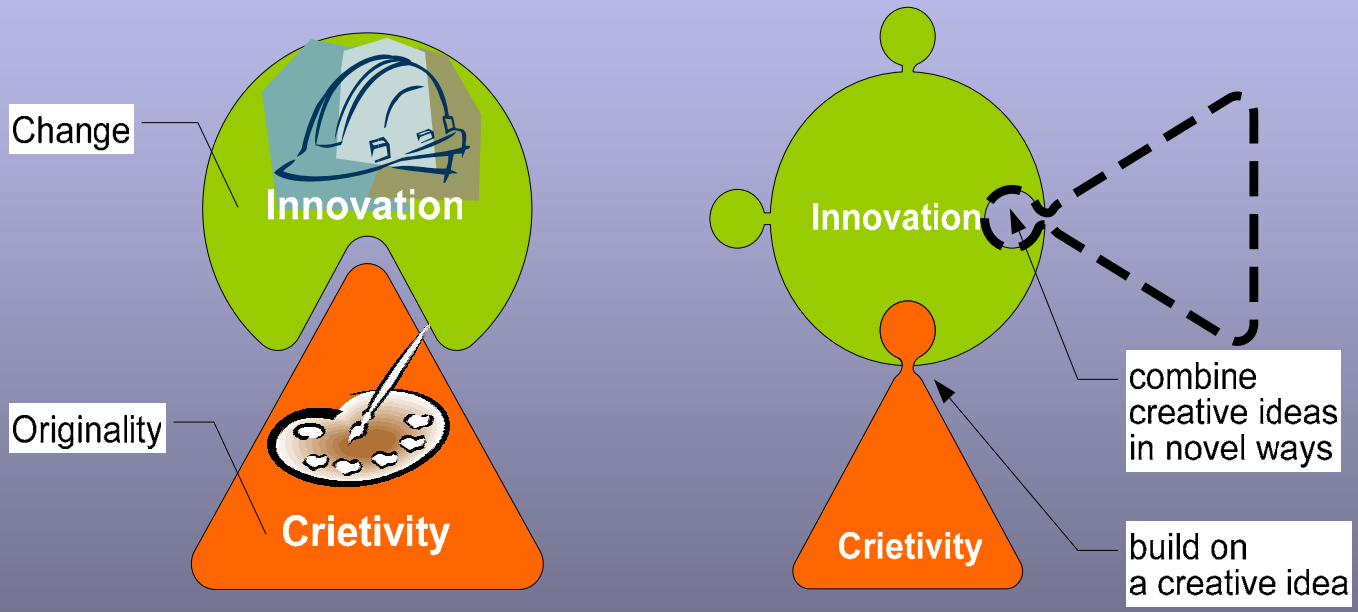
디자인 담론



창의성의 정의

- **새롭고 유용한 어떤 것을 생산해내는 행동 또는 정신과정을 창의성이라 부른다.**

이노베이션과 창의성
Innovation and Creativity

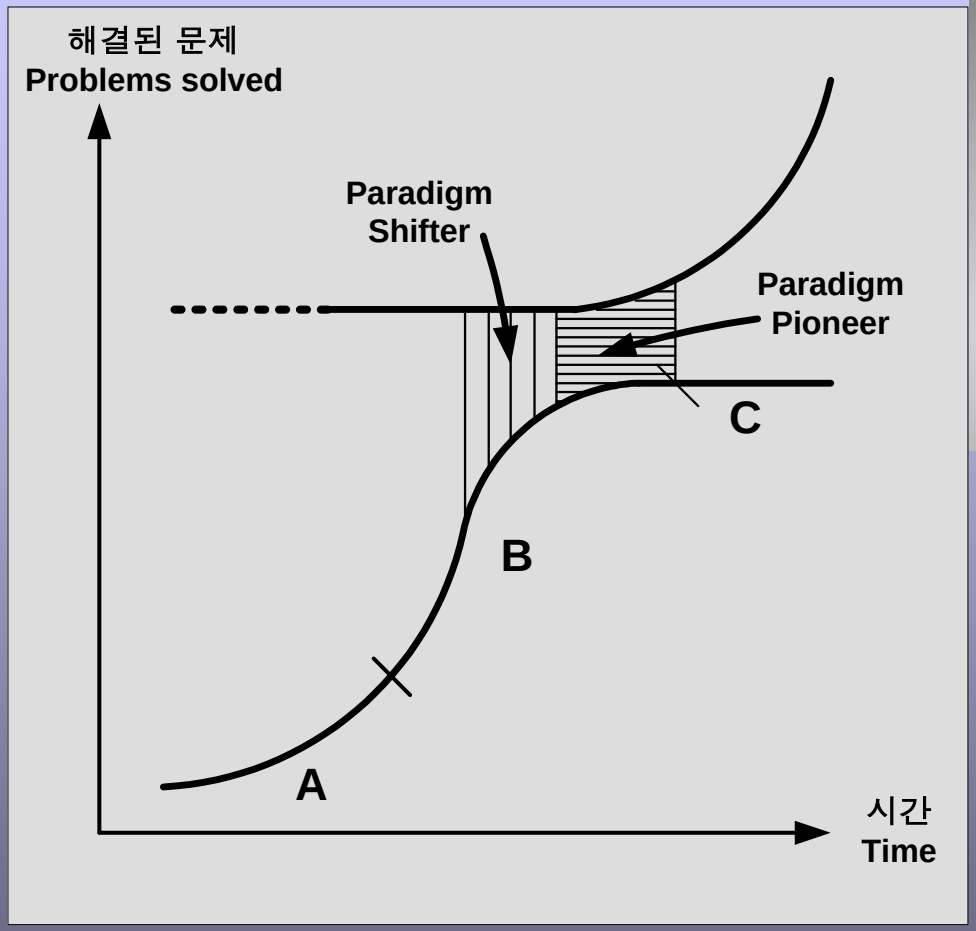


Innovation and Creativity

Edward Lumsdane, et al. Creative Problem Solving and Engineering Design, McGrawHill,1999

이노베이션과 패러다임 전환

Innovation and Paradigm shift



Bombardier Design Group, Canada

패러다임 일주기 곡선

The paradigm life-cycle curve

Edward Lumsdane, et al. Creative Problem Solving and Engineering Design, McGrawHill 1999

상상력

cutemonkeyspace

Design enter

Imagination

Apache Warrior Concept Bike

디자인 성공사례

● Apple **iMac**

NOKIA 7250

VW New Beetle

Samaung SCH-3500

Spirited Away

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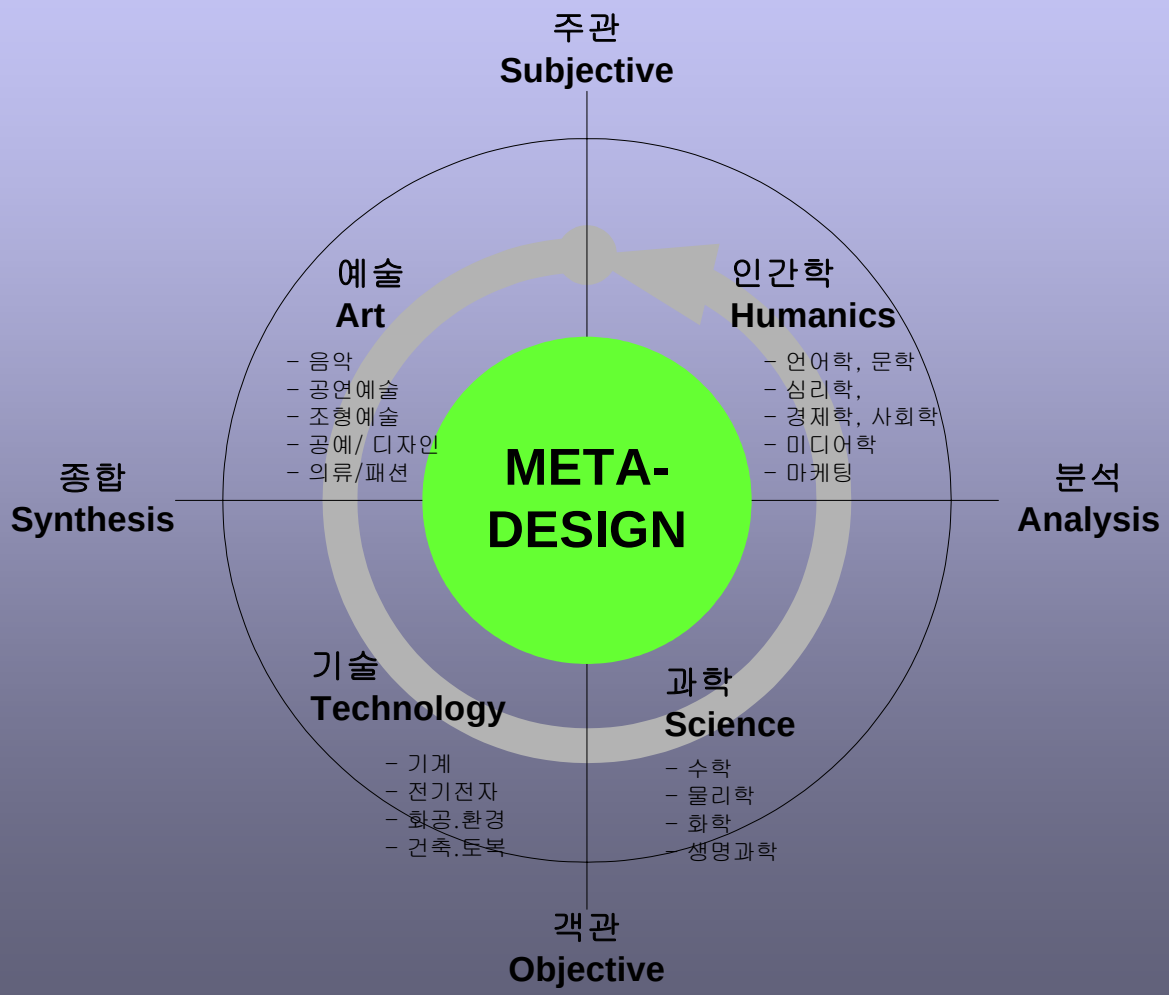
디자인학 Design Disciplines



5. 결론 Conclusion

기업전략

- 문화+예술의 기술적 융합
- 기업의 창작산업화

기업전술

- 통합적 디자인 사고로 비즈니스 디자인 구현
- 비즈니스 디자인 핵심기술 인력 보유 및 팀 양성
- 지식기반의 창의적 문제해결 역량 확보

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감사합니다!

Many Thanks !

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