

Forecasting the New Business Using TRIZ

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- TRIZ Experience (Secretary General, Korea Academic TRIZ Association)
 - learned “Classical TRIZ” at LG Electronics in 1996 first
 - taught “TRIZ” in class of “Creative Mechanical Design” at Univ. for 10 yrs.
 - CEO & Chief Consultant at TRIZ Eng. & consulting company, “KID“
 - Visiting scholar at Wayne State University for TRIZ research in 2004
 - TRIZ related papers : 12 English (Mosquito trap, Toilet), 50 Korean papers
- Interests : (Mechanical) Conceptual Product Design, Kinematics and TRIZ
- Academic Background
 - Mechanical Engineering at Seoul National Univ. (B.S in ‘86)
 - KAIST (Korea Advanced Institute of Science and Tech.) (Master in ‘88, Ph.D. in ‘93)
 - Stanford University (Post Doctorial Visiting Scholar in ‘94-’95)

Abstract)

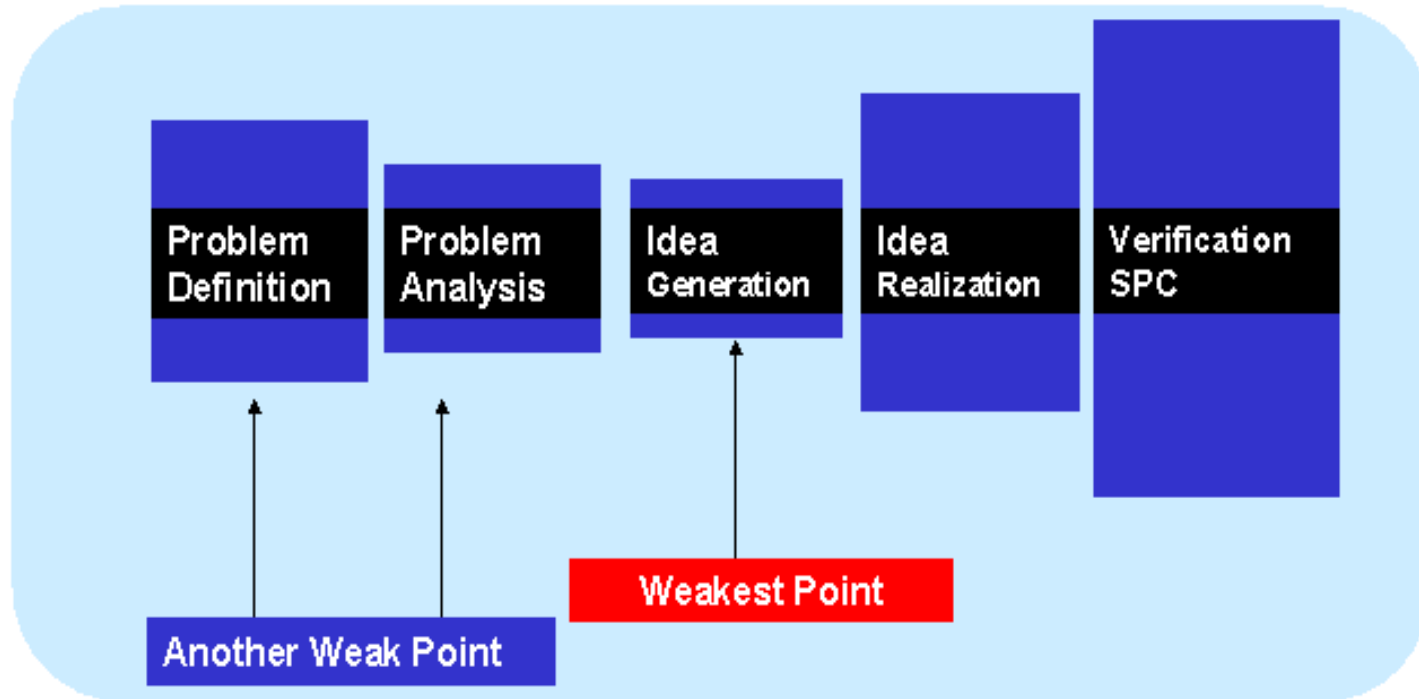
The Conventional TRIZ has just several evolutionary laws and patterns on technology. To forecast the new business in real, they are not sufficient.

Several evolutionary laws and patterns on business from business success stories and the changes of atmosphere in earth, government policy, the aging society and low birth rate and customers' needs, are added for forecasting the new business with TRIZ approach on evolutions of technology.

All trends and evolutions may be plotted in radar chart for forecasting the direction and guide for the new business. Some case studies are explained in the radar chart and the related knowledge in this paper.

General Trends of R&D in Korea

- No fundamental & basic strengths in technology development.
- We were busy at copying and reverse engineering.
- But **there is no original to copy because we are the frontier now.**



Market segmentation
Business Plan
Strategic FMEA

VOC collection
KJ method
Kano method
QFD-1,2,3
Scorecard

CPM
Concept engineering
Pugh concept selection
Brainstorming

DOE
Robust eng.
RSM
etc.

Control Plan
etc.

Korea TRIZ on rapid progressive curve

- '95, '96 : Introduction at LG & Samsung
- '04 : Good results with Russian Specialists
- '07 : Propagation inside big companies & Univ.

Introduction
Education

Good Results
at Samsung

Excellent Cases * at Samsung, LG, LS
Hyundai Motors, Hynix Semiconductor
& some Universities with Business TRIZ

← Currently, 2011

'96

'04

'07

2011

2015

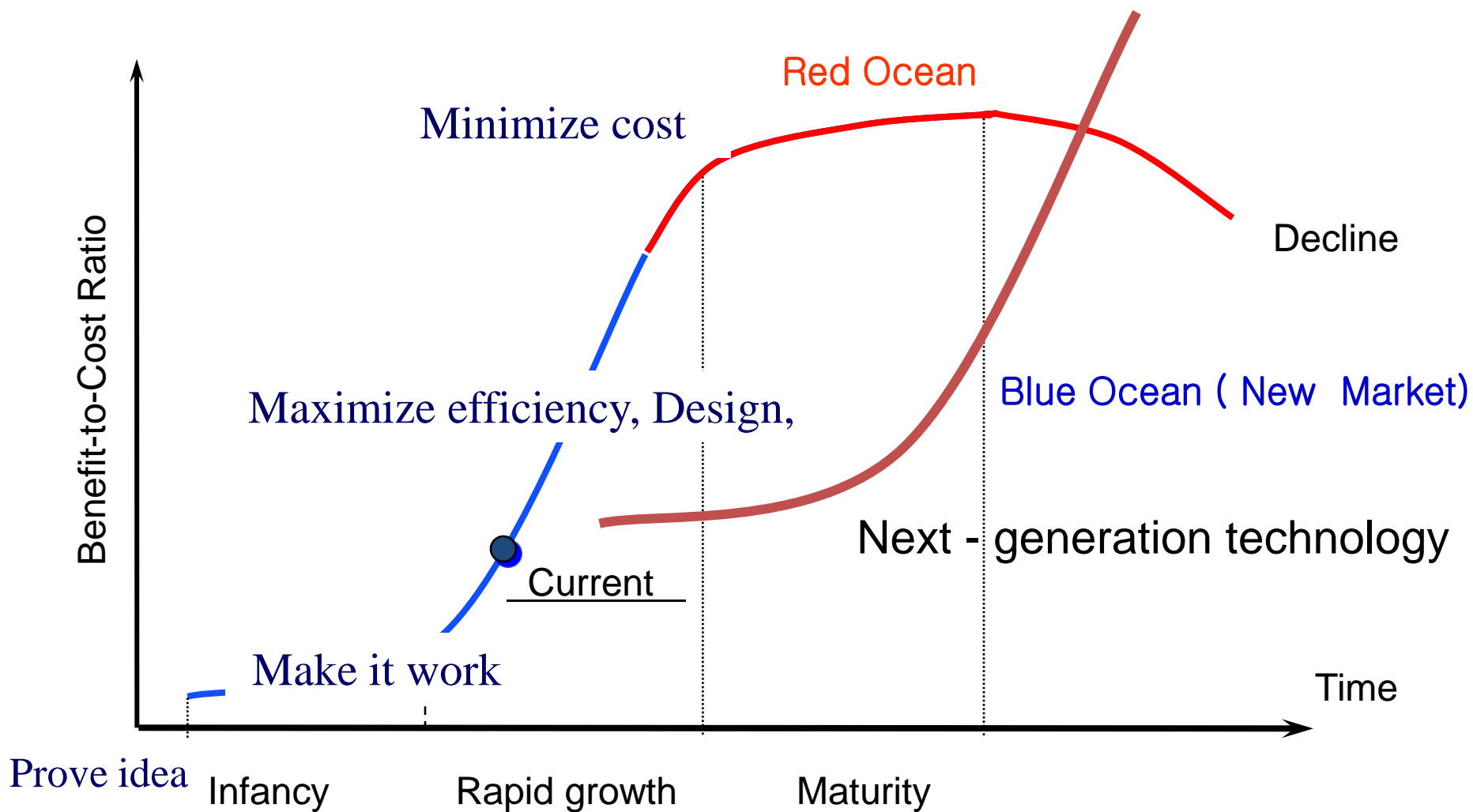
* The Cases are not opened by secret policy at companies in Korea

Price Destruction [價格 破壞]



Hammer Made in China, Retail Price in Korea : US 1 dollar

Technology (Business) improvement



Future Forecasting ; Weather Forecasting(?)

도시별예보/

큰거보기 도움말

지역선택 | 도별선택 서울,경기 지역선택 서울* 확인 * 표시된 지역은 3시간예보 제공지역입니다.

서울지역

날짜	11월 10일(금)		11월 11일(토)					
	18-21	21-00	00-03	03-06	06-09	09-12	12-15	
기온(°C)	11	8	7	6	5	8	10	11
날씨								
강수확률(%)	30%	30%	40%	60%	60%	30%	20%	
풍향/풍속 (m/s)	3~5	3~5	3~5	3~5	3~5	3~5	3~5	
최고/최저	아침 최저 4°C 낮 최고 11°C							

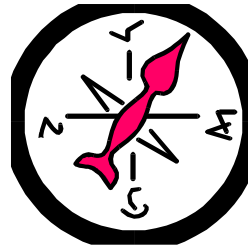


Laws of Technological System Evolution

- “A law of technological system evolution describes significant, stable, and repeatable interactions between elements of the system, and between the system and its environment in the process of its evolution”
- The known laws of technological evolution are
 - 1) Law of increasing degree of ideality (이상성 증가)
 - 2) Law of Non-uniform Evolution of Subsystems (불균등적 발전)
 - 3) Law of Transition to a Higher-level System (상위시스템으로 전이)
 - 4) Law of Increasing Dynamism (Flexibility) (역동성 증가)
 - 5) Law of Transition to Micro-level (미시계로의 전이)
 - 6) Law of Completeness (시스템 완전성)
 - 7) Law of Shortening of Energy Flow Path (에너지 전도성)
 - 8) Law of Increasing Substance-field Interactions (물질-장 수준 증가)
 - 9) Law of Harmonization of Rhythms (리듬조화)

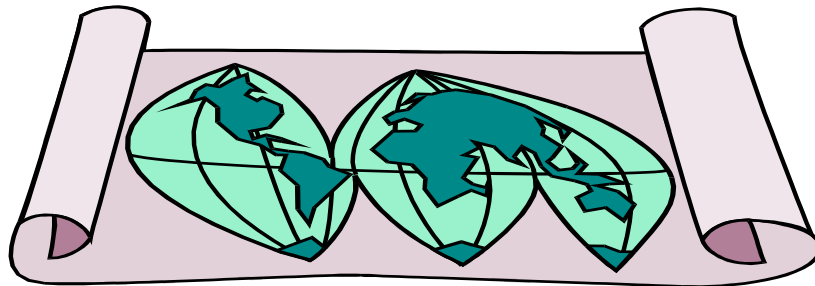
Laws and Lines (Pattern) of Evolution

Law of Evolution → Shows general direction of evolution (**compass**)



; Mega Trend (큰 흐름)

Line of Evolution → Shows evolutionary milestones (Pattern) ; Steps along the certain direction



(**roadmap**)

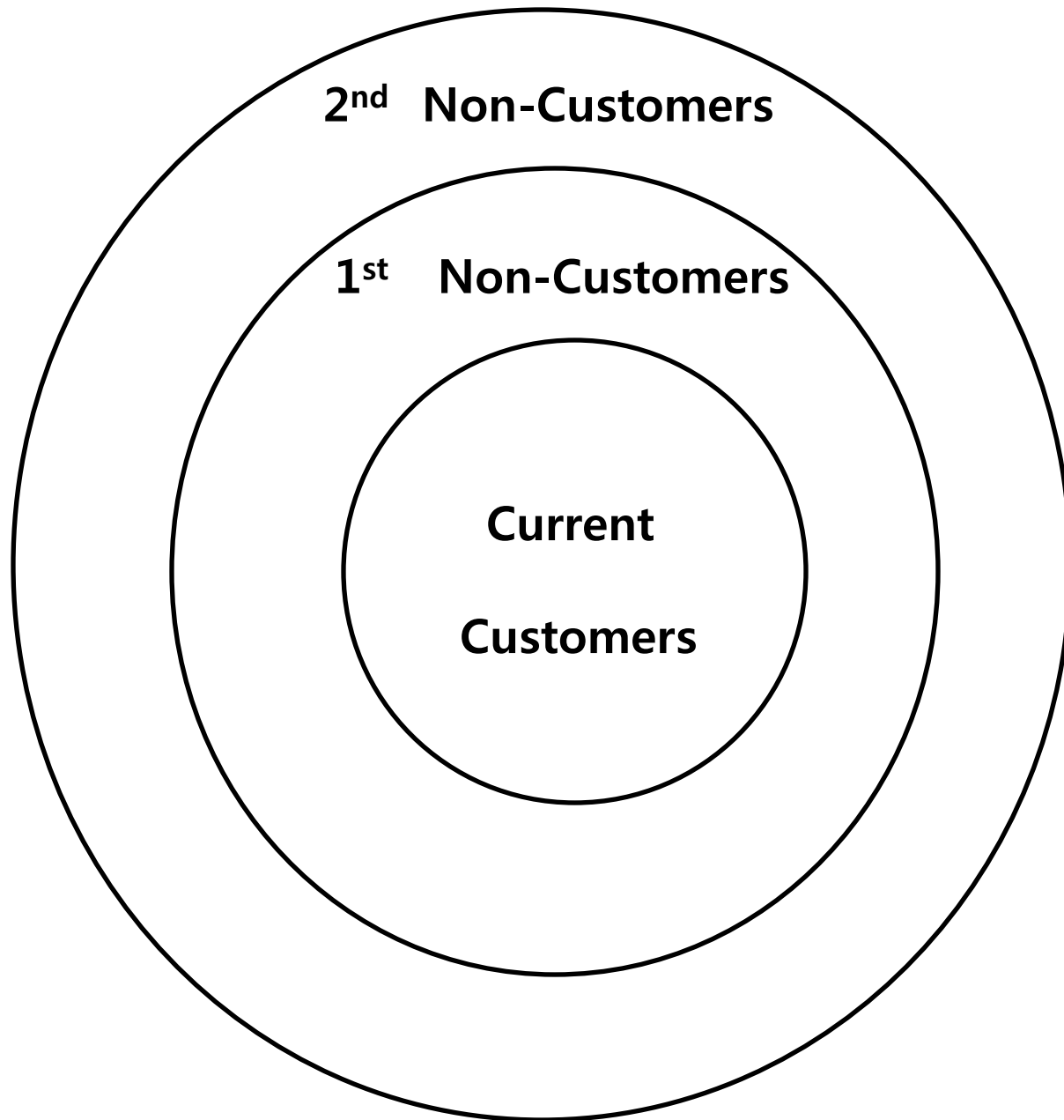
; Technology Roadmap

Creative (Business) Management ;

Customer-Centered Breakthrough Strategy



(Source : Professor YoungTaekPark , 2010.3.12, Korea Global TRIZCON 2010)



To find the **Blue Ocean**
(New big market)
by Prof. Chan W. Kim

→ Find new Values to
Non-customers

→ (for small size,
one-man company)

Hard to find suitable size
business with other
blue ocean strategic tools
(canvas, 6 paths, BUM)

Ideas for new business

3. Non- Customers

2. 1st Expandable Customers

1. Current Customers

()

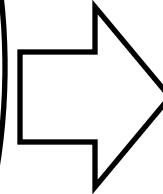
1-1

1-2

1-3

1-4

Segmentation
(Niche Market)



1. Market Segmentation

-
-
-

2. For expandable customers

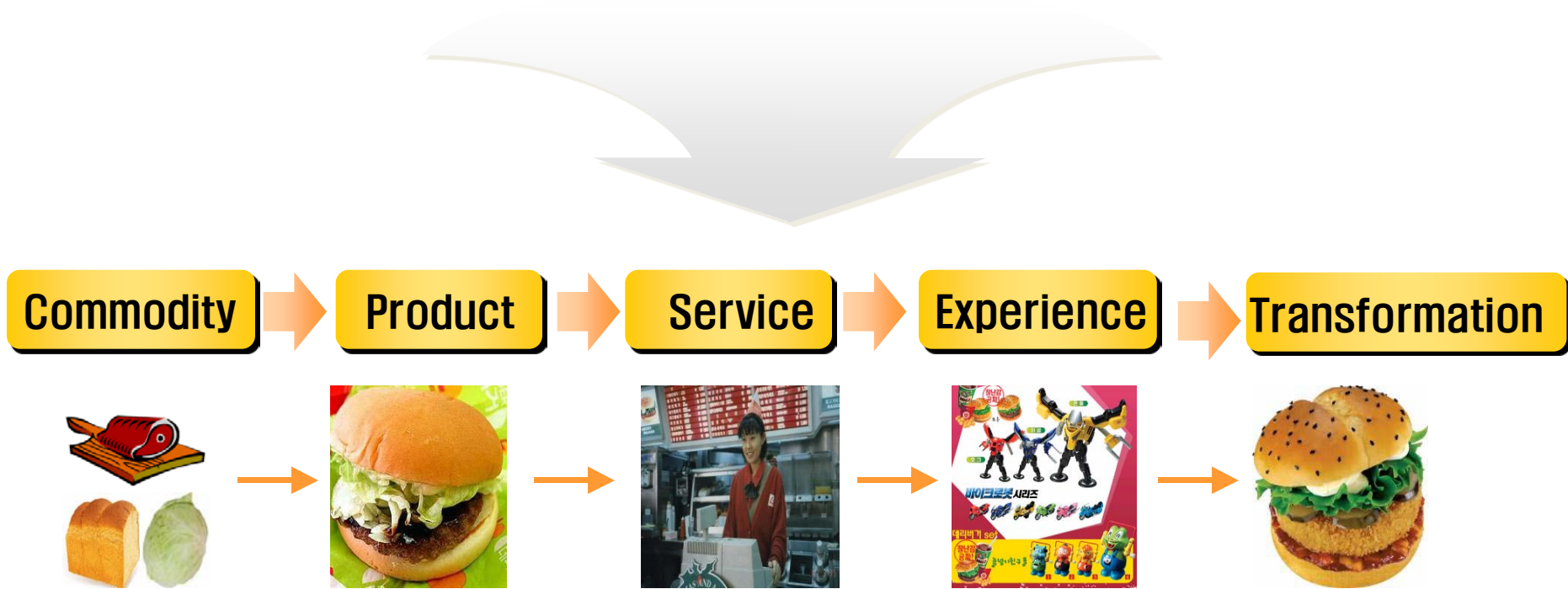
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3. For Non-customers

-
-

Laws for business evolutions;

derived from business success cases



(Ref. Darell Mann,

“Hands – on Systematic Innovation for business and Management”)

Cases by 'customer satisfaction' law of business evolution



Training service

Club meeting



Commodity → Product → Service → Experience → Transformation

Water Purifier,
Bidet



(+ Rental
Service)

Toys
business



(?)



"Anycall Plaza"

