

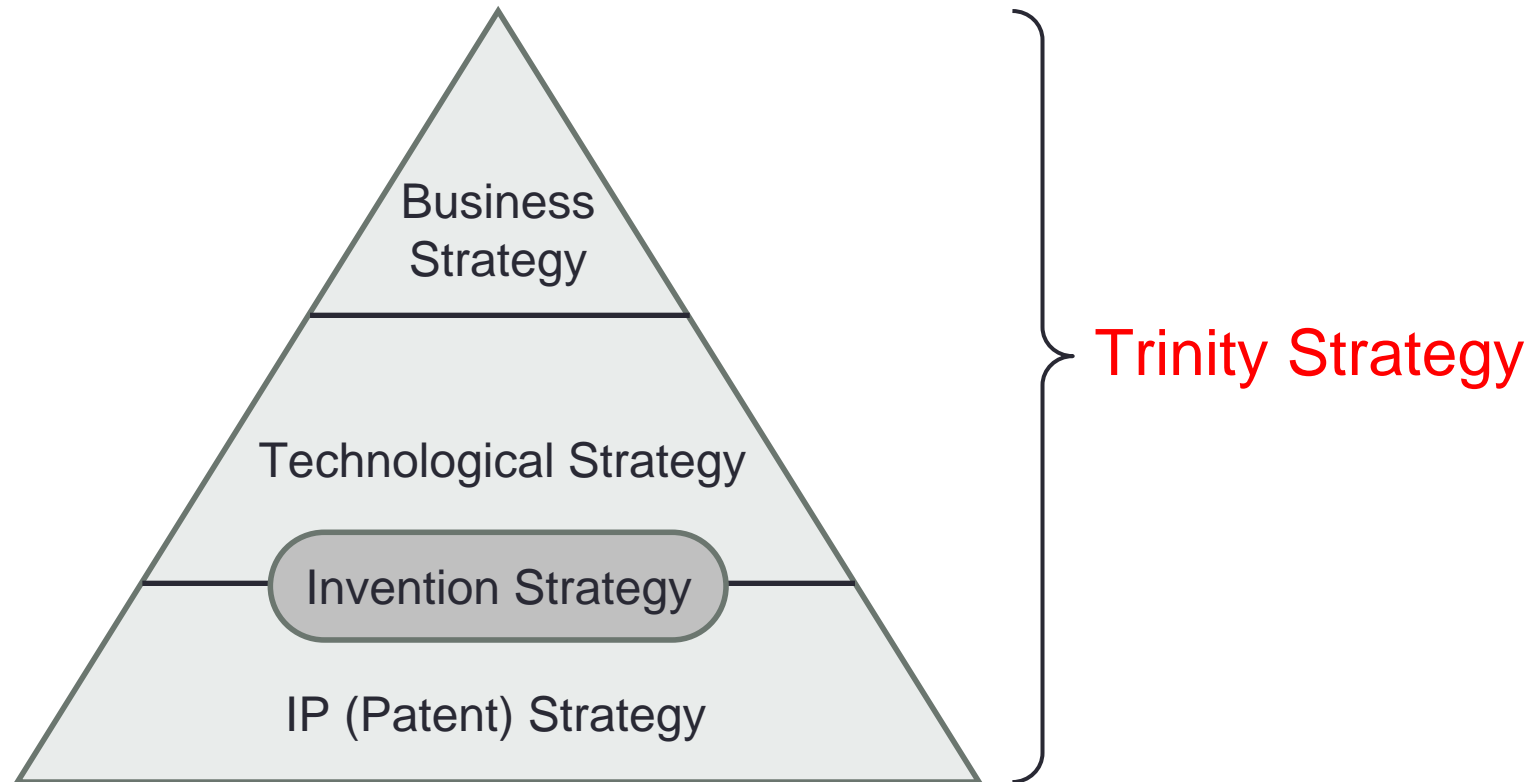
# Application of I-TRIZ for “Invention Strategy”

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- 1. About “Invention Strategy”
- 2. Competitive Strategy and Patent Strategy
- 3. Case (pencil not rolling)
- 4. Solution Tools (I-TRIZ etc.) and Competitive Strategy
- 5. “Trinity Strategy” and “Invention Strategy”
- 6. Conclusion



Strategic Invention: Creation of Ideas realizing "Trinity Strategy"

**Invention Strategy:** How to distribute resources for above

### Past

- Brand of “MADE IN JAPAN”
- Big domestic demand

Patents covering own products steadily

The role of patent has changed



Patents for gaining competitive power  
and monopolizing a market

### Present

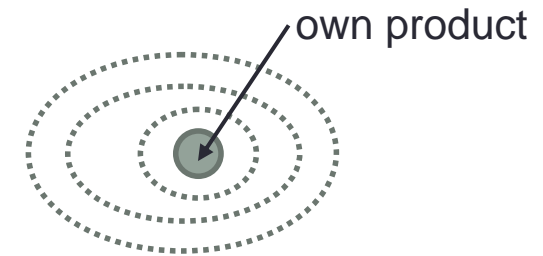
- Asian Era
- Reduction of domestic demand

Inventions realizing “business strategies” are strongly desired.

## 2. Competitive Strategy and Patent Strategy (Basis)

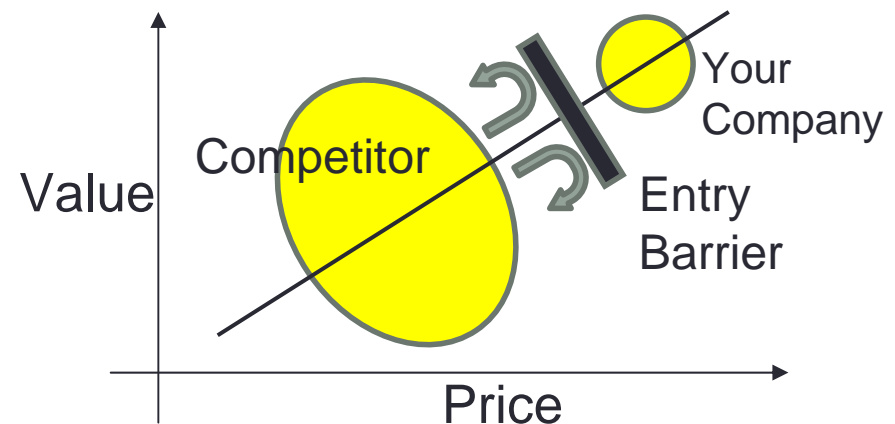
### Strategy of the Strong: Product homogenization

- **Securing sales and improvement** of own products
- License (Buying) Out



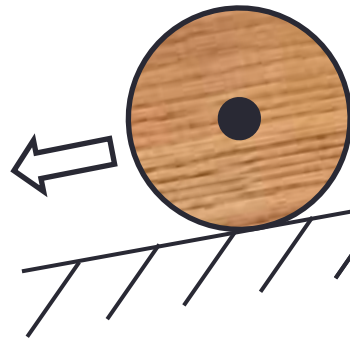
### Strategy of the Weak: Product differentiation

- **Building Entry Barrier** by Patent
- License (Buying) In

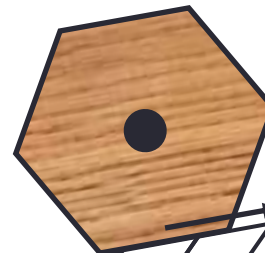


## Problem: A pencil rolls and falls from a desk

Prior Art:  
pencil with round section

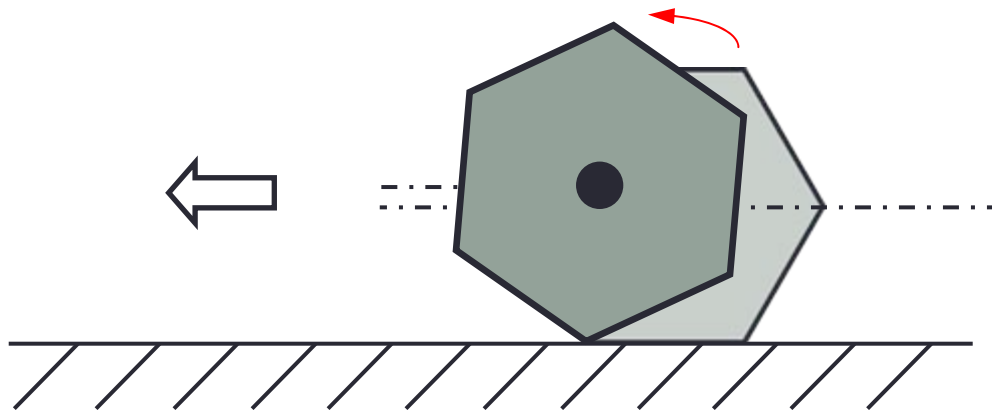


Invention:  
pencil with hexagonal section

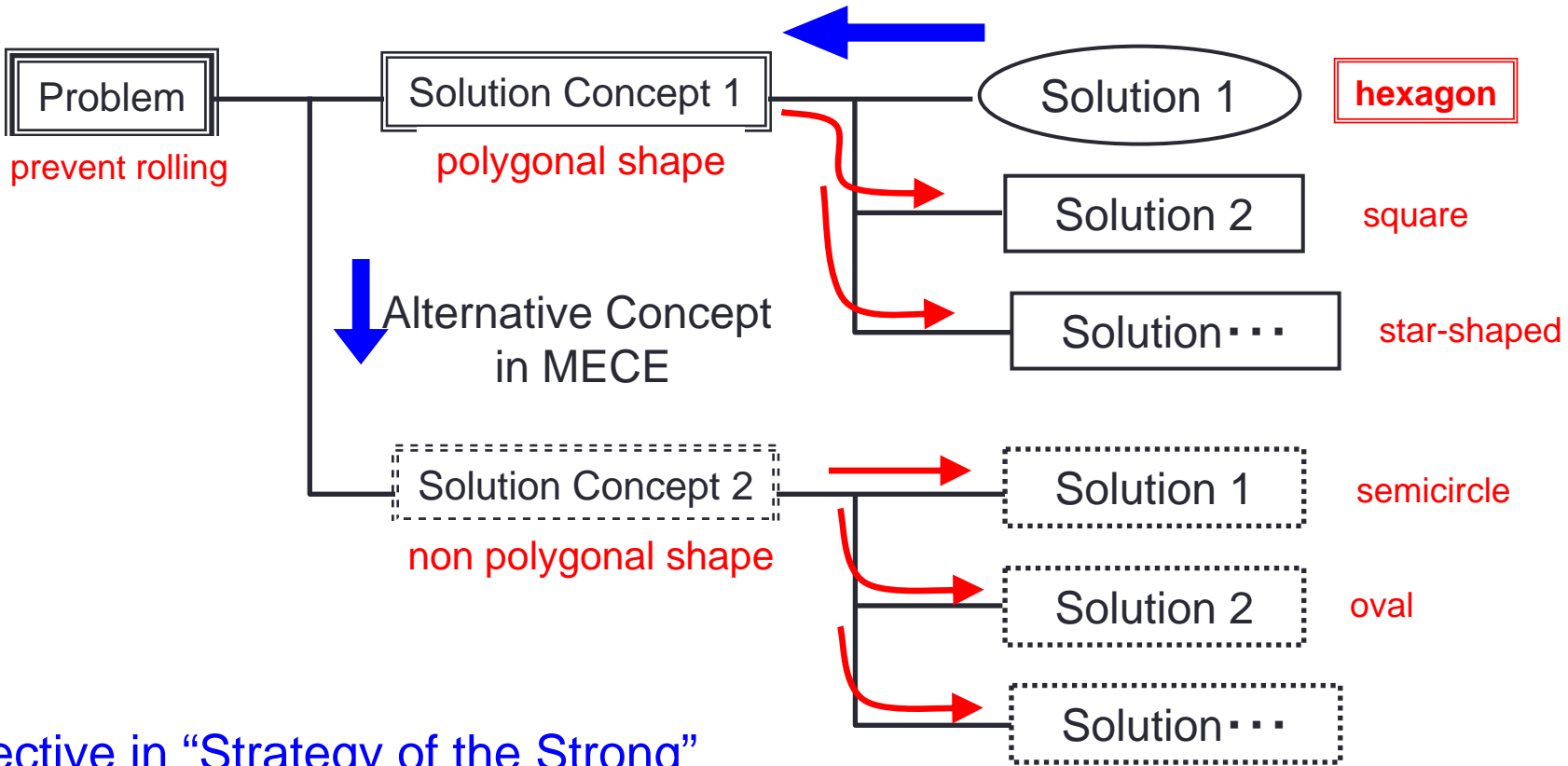


**Effect: does not roll**

well-known solution



COG is uplifted while rolling  
= convex outer surface



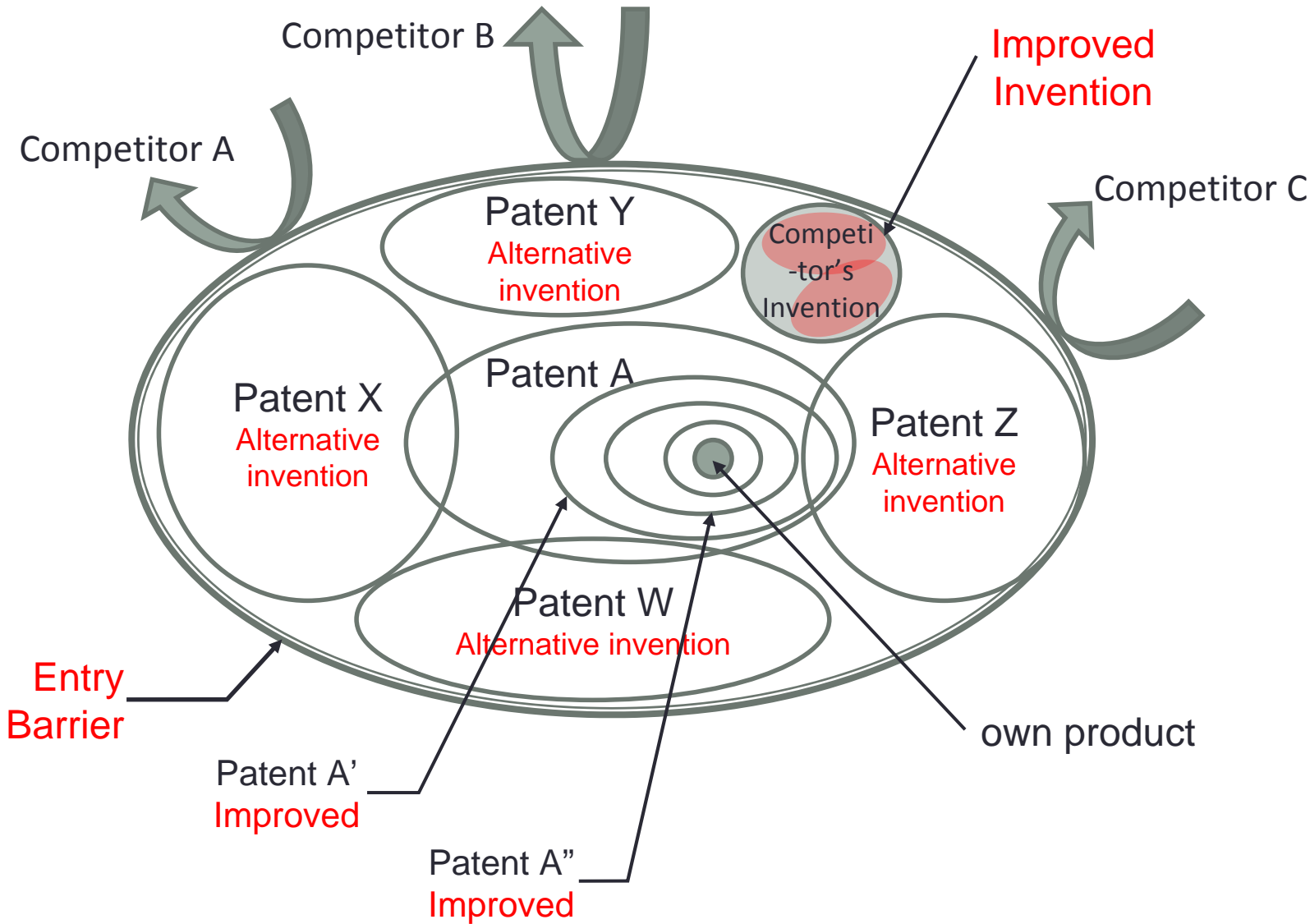
Effective in “Strategy of the Strong”  
however, not so in “Strategy of the Weak”

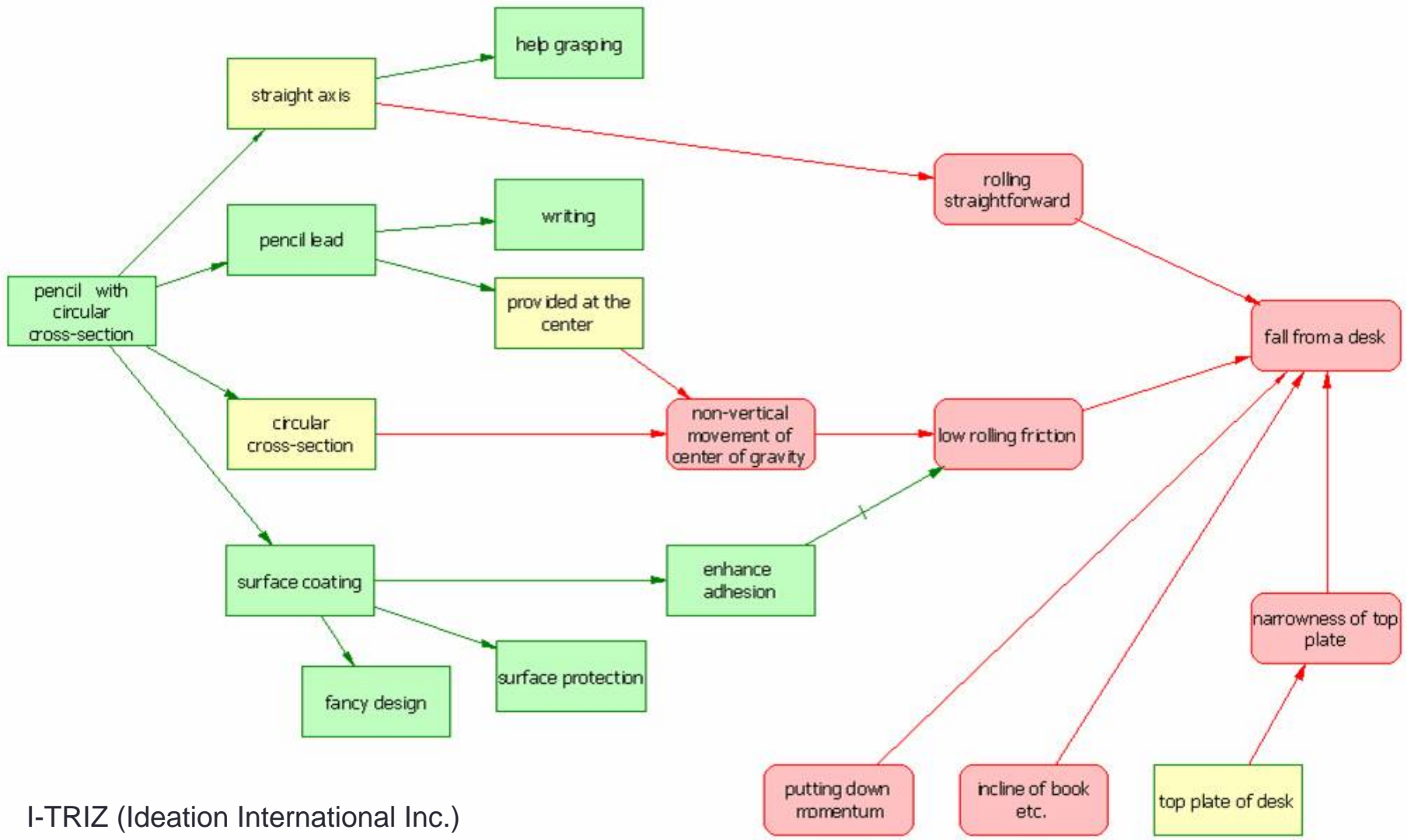
Securing sales and improvement

MECE:  
Mutually Exclusive and Collectively Exhaustive

Reference: Dr. Takashi TSURUMI

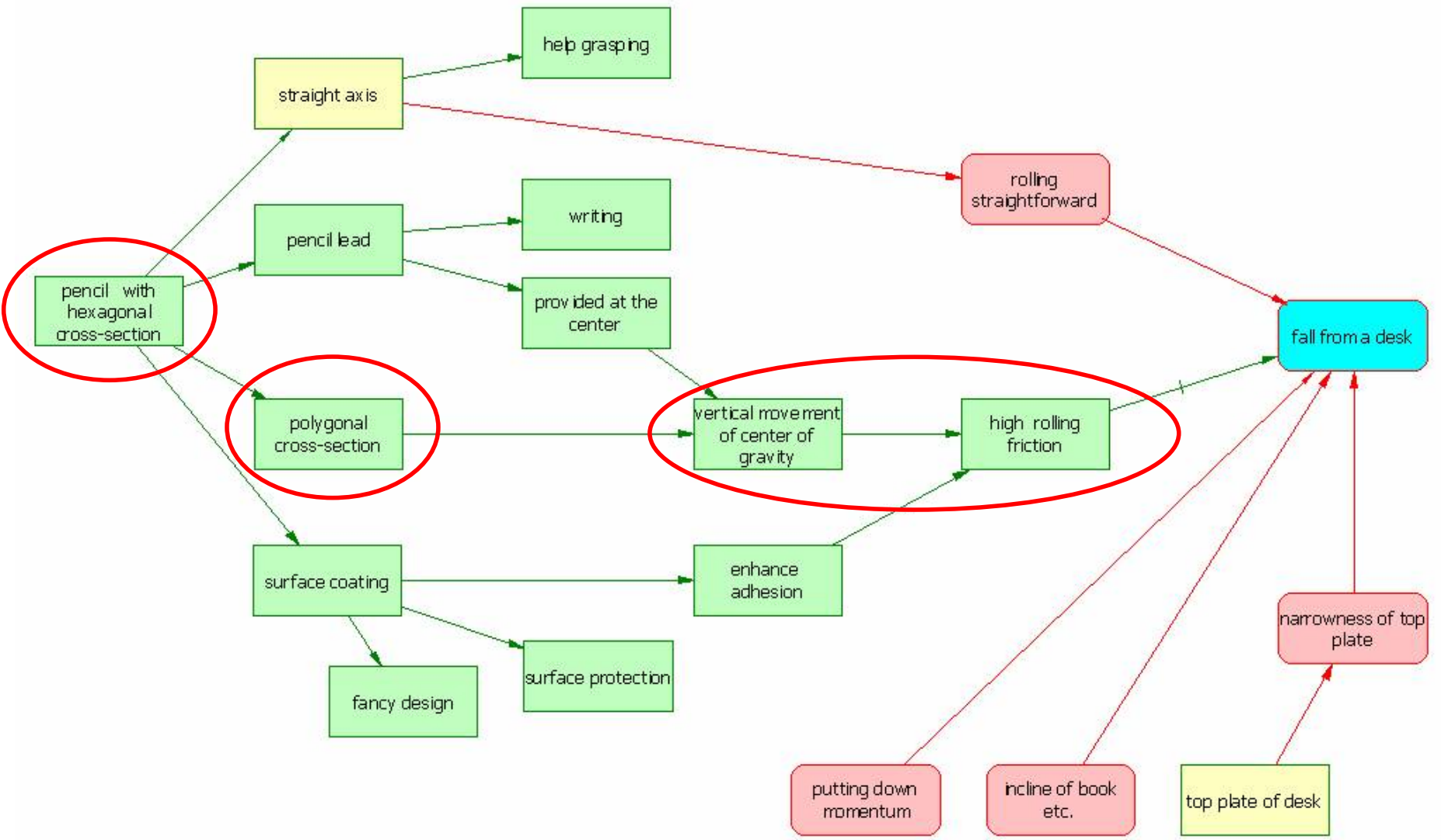




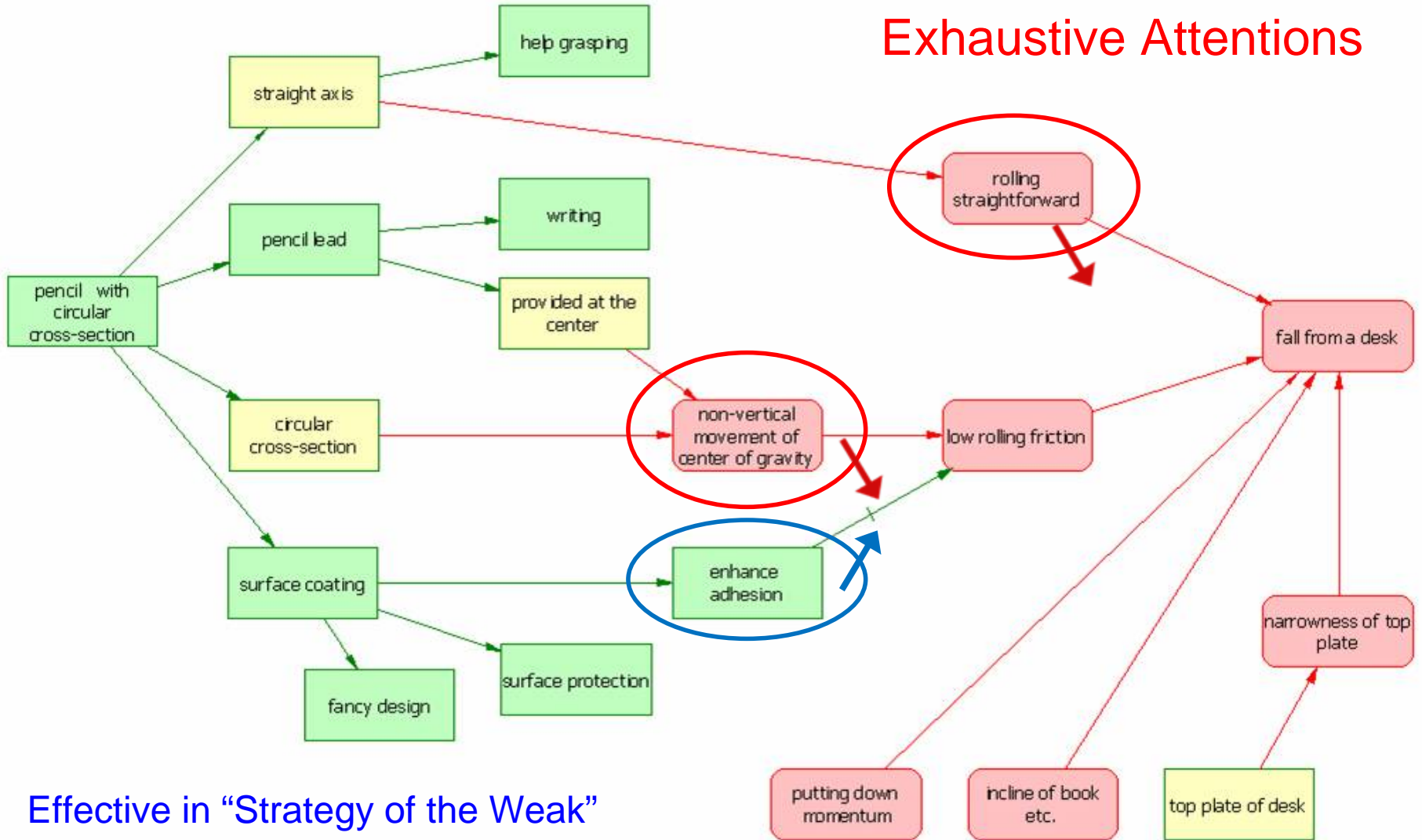


I-TRIZ (Ideation International Inc.)  
 PF (Problem Formulator ®)

PF (Solving by “hexagonal pencil”)

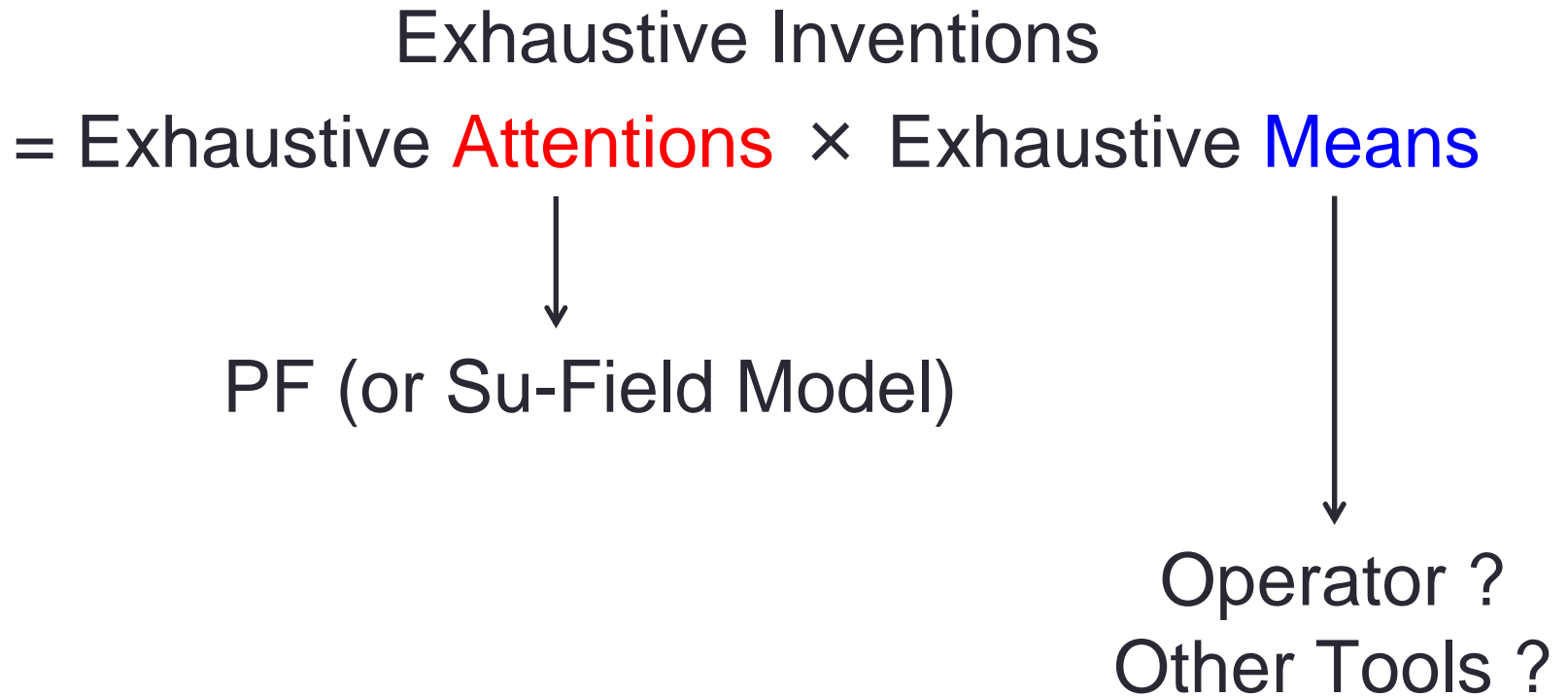


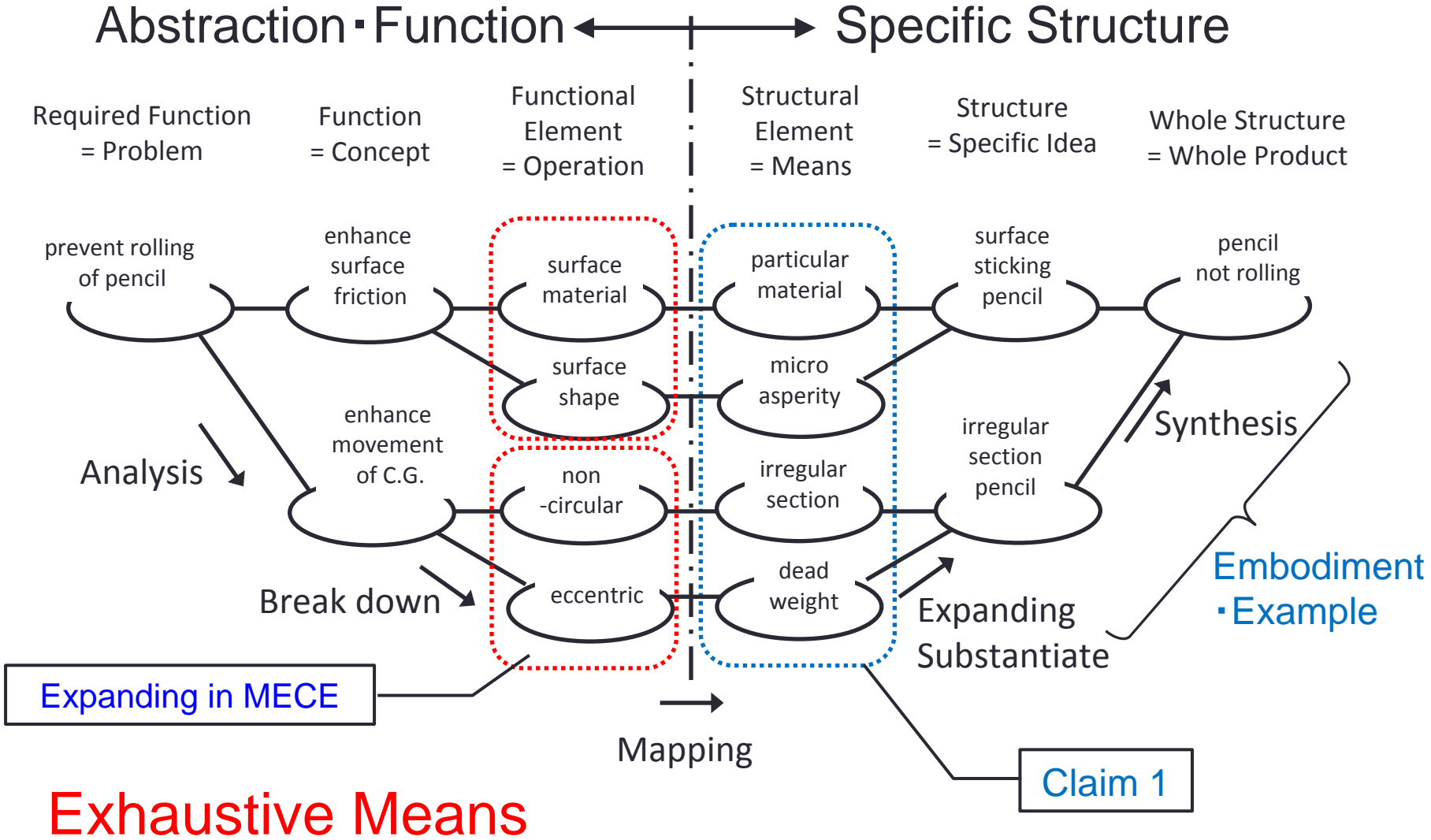
## Exhaustive Attentions



Effective in “Strategy of the Weak”  
also in “Strategy of the Strong”

Exhaustive Inventions  
= Exhaustive **Attentions** × Exhaustive **Means**





Reference: Prof. Yotaro HATAMURA

# Conclusion of Sec. 1 to 4

- Primary meaning of Patent = Entry Barrier
- Width of Entry Barrier is determined according to Business Strategy.
- “**Invention Strategy**” is required to realize “Patent Strategy”.
- “**Problem-Solution diagram**” is effective in “**Strategy of the Strong**”.
- “**I-TRIZ**” and “**Thinking Expanding diagram**” are effective in “**Strategy of the Weak**”, having subsidiarity mutually.



Planning of **Business strategy**



Planning of **Technological strategy**

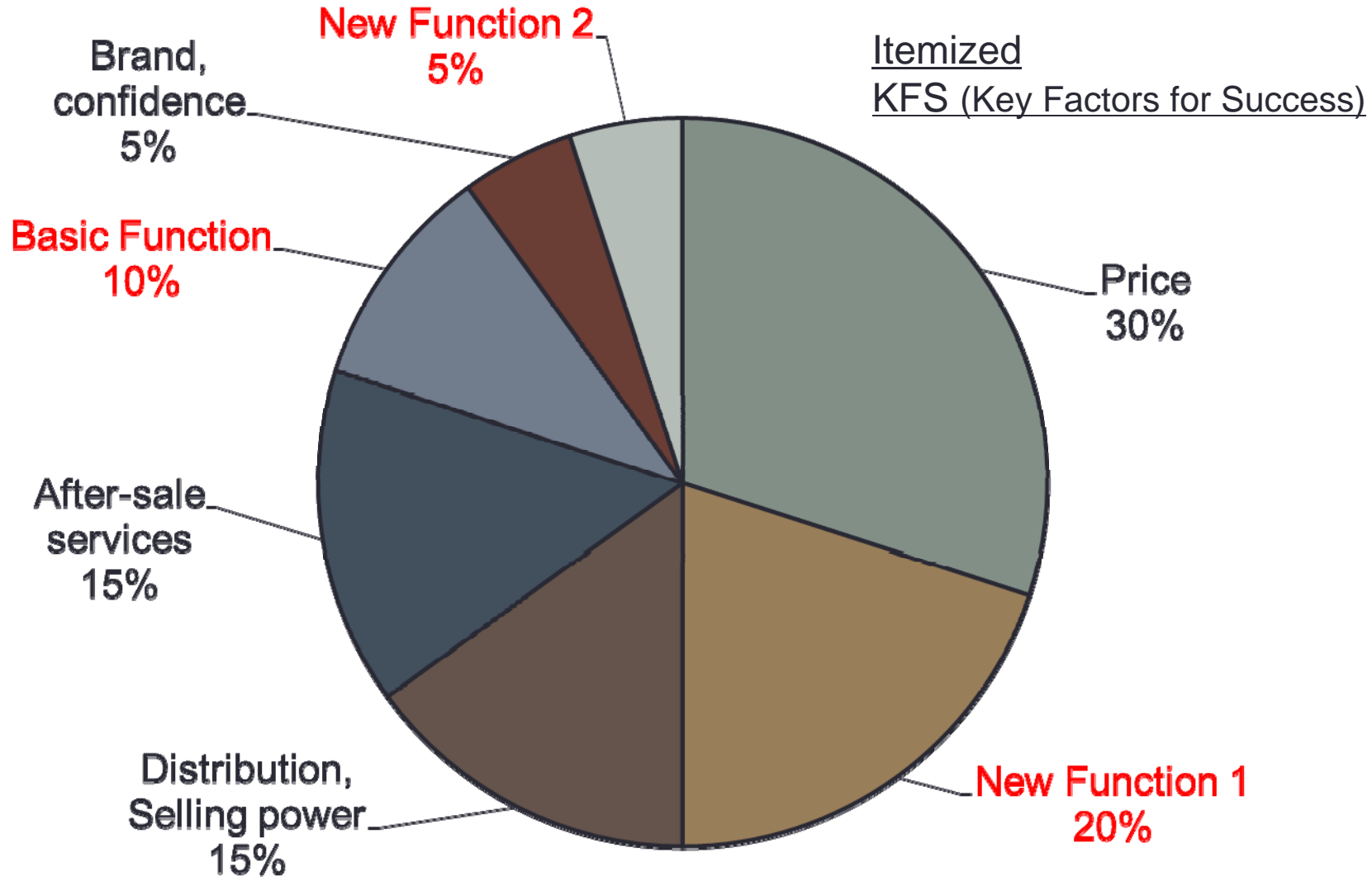


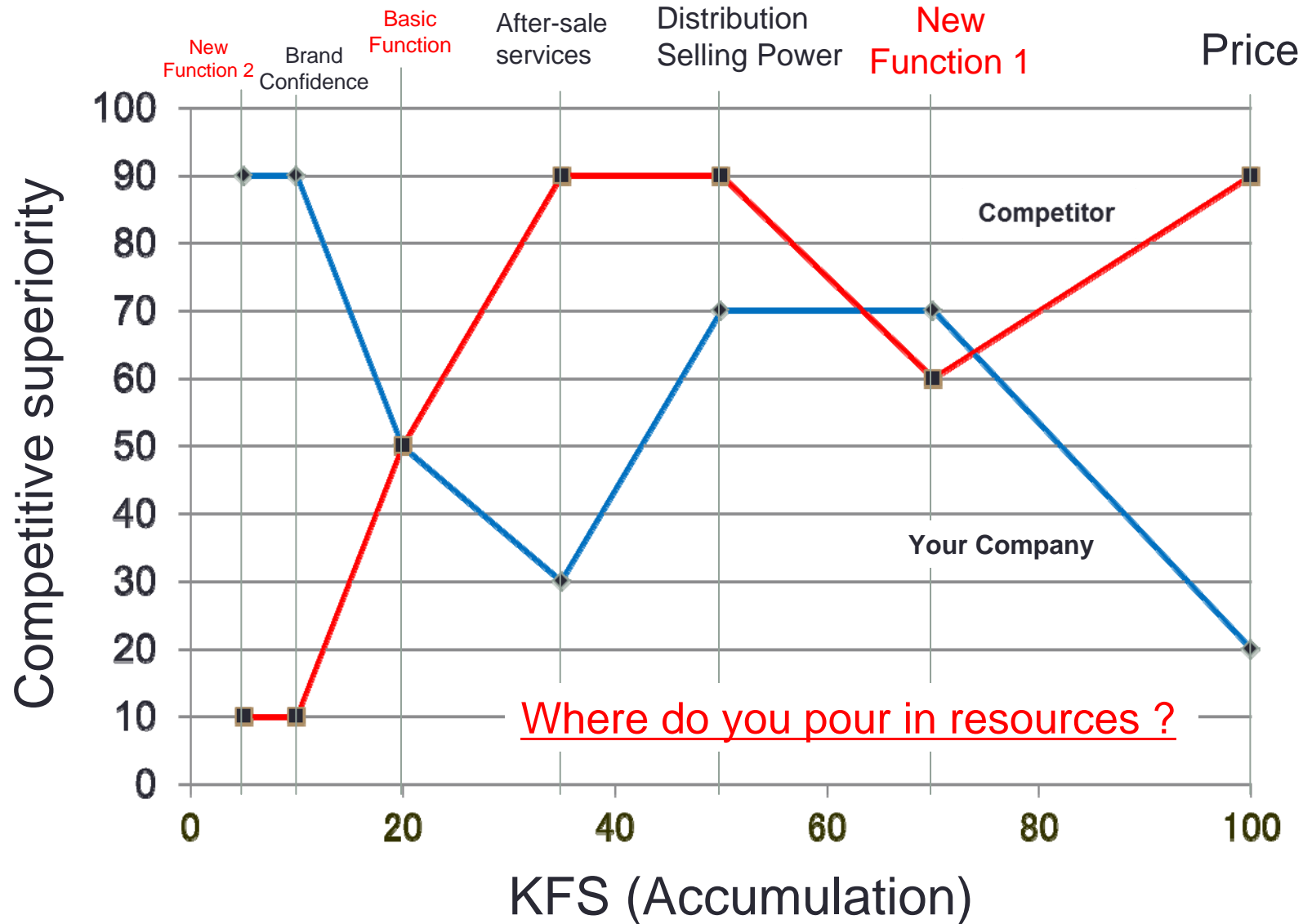
after-mentioned

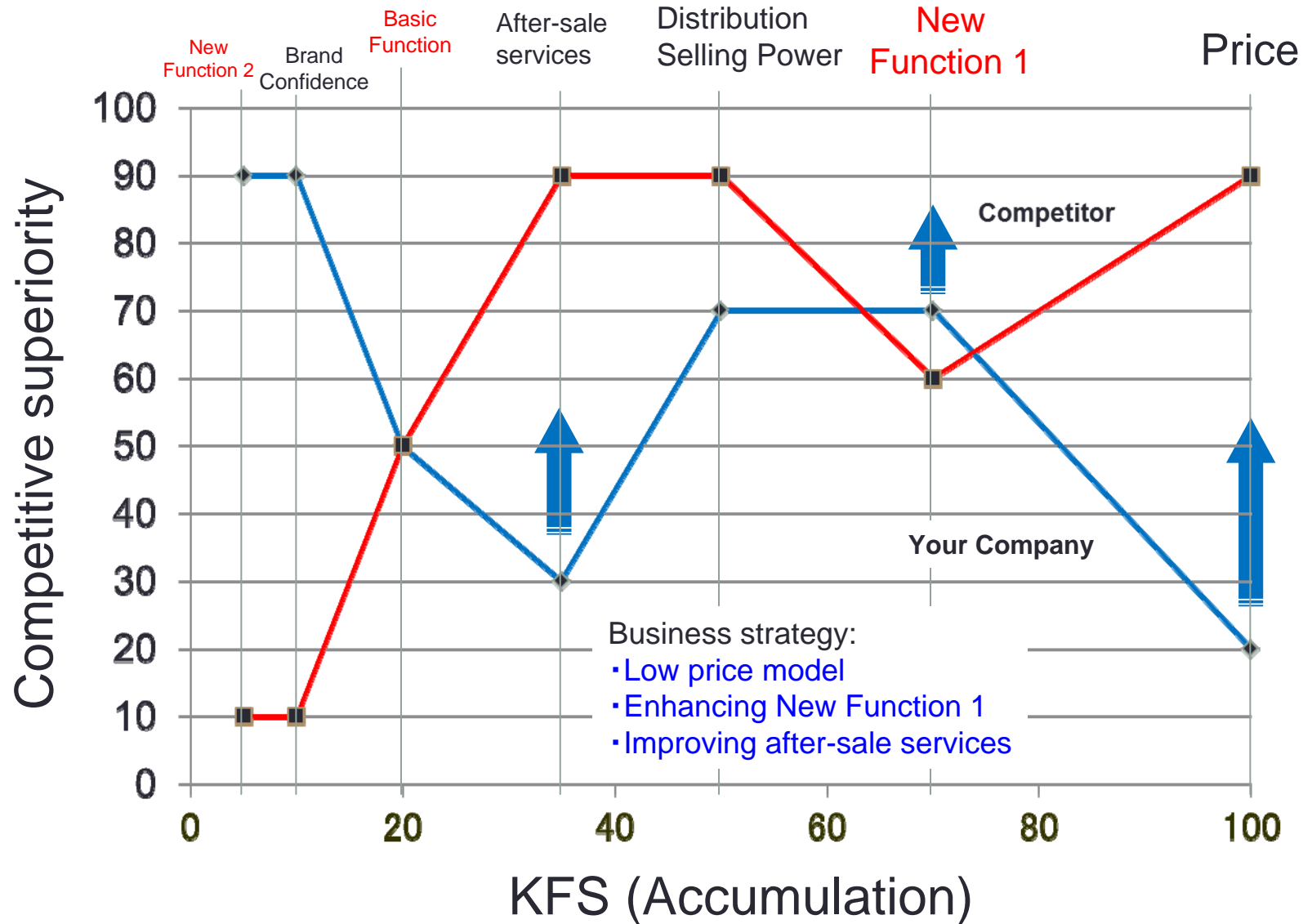


aforementioned

Planning of **Patent strategy**







(Business strategy) “Low price model”

(Technological strategy) developing for cost-reduction

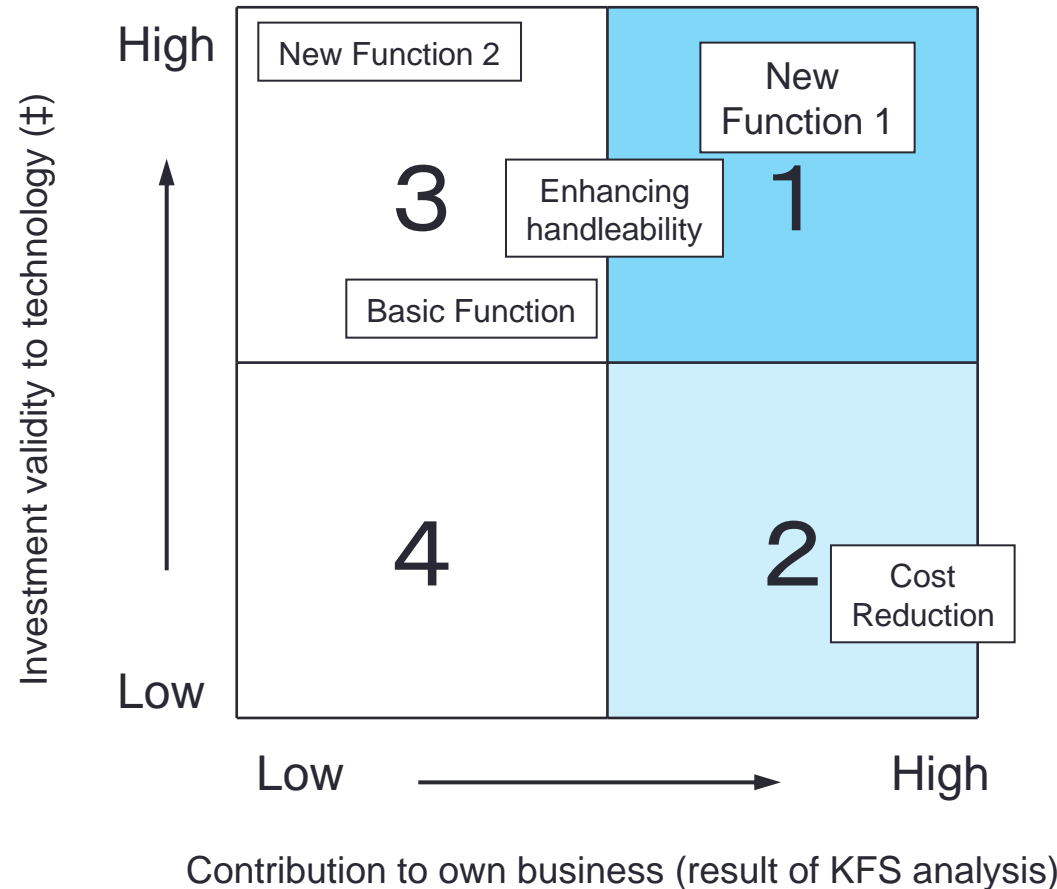
(Business strategy) “Enhancing New Function 1”

(Technological strategy) evolving New Function 1 to discourage competitors

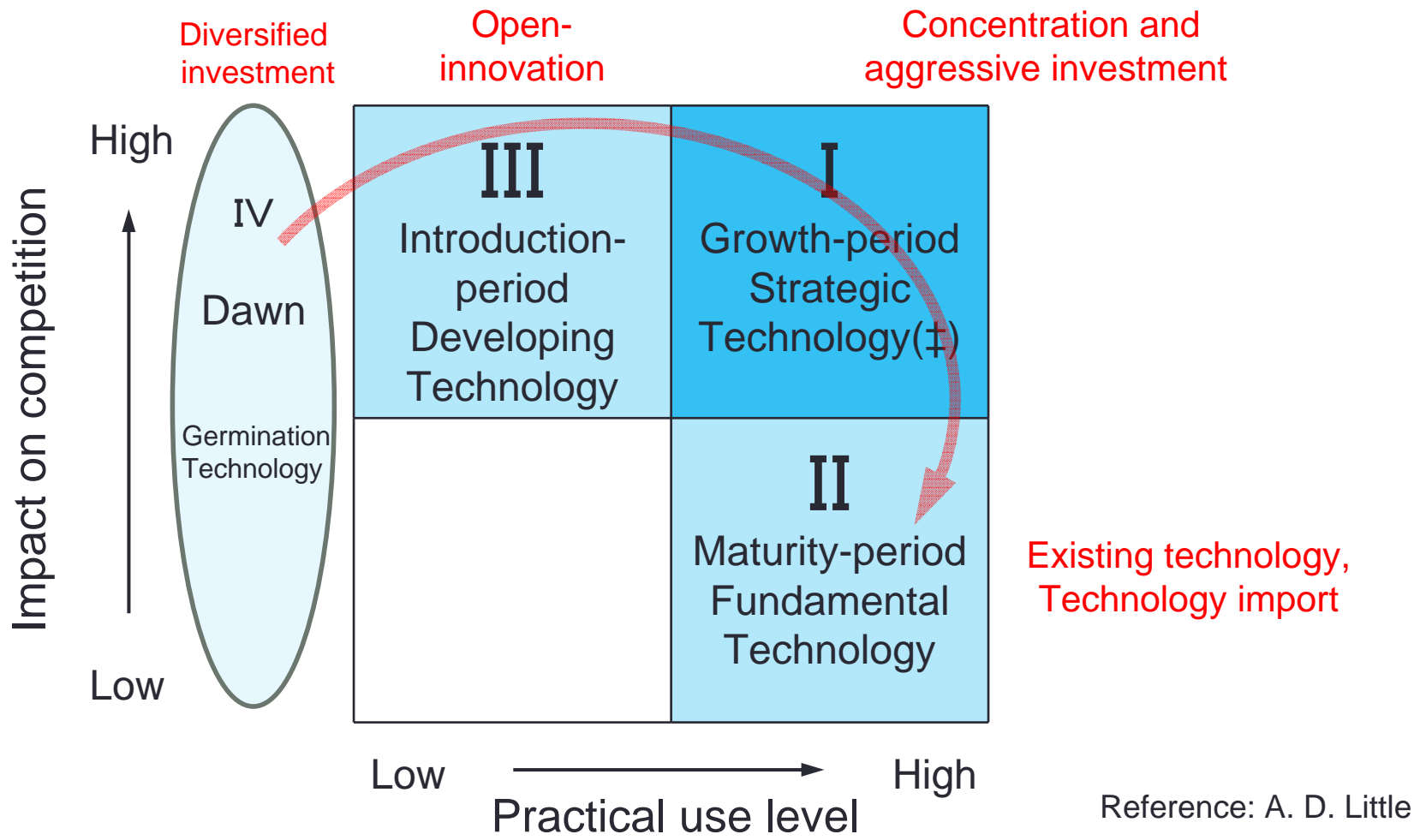
(Business strategy) “Improving after-sale services”

(Technological strategy) developing structures enhancing handle-ability

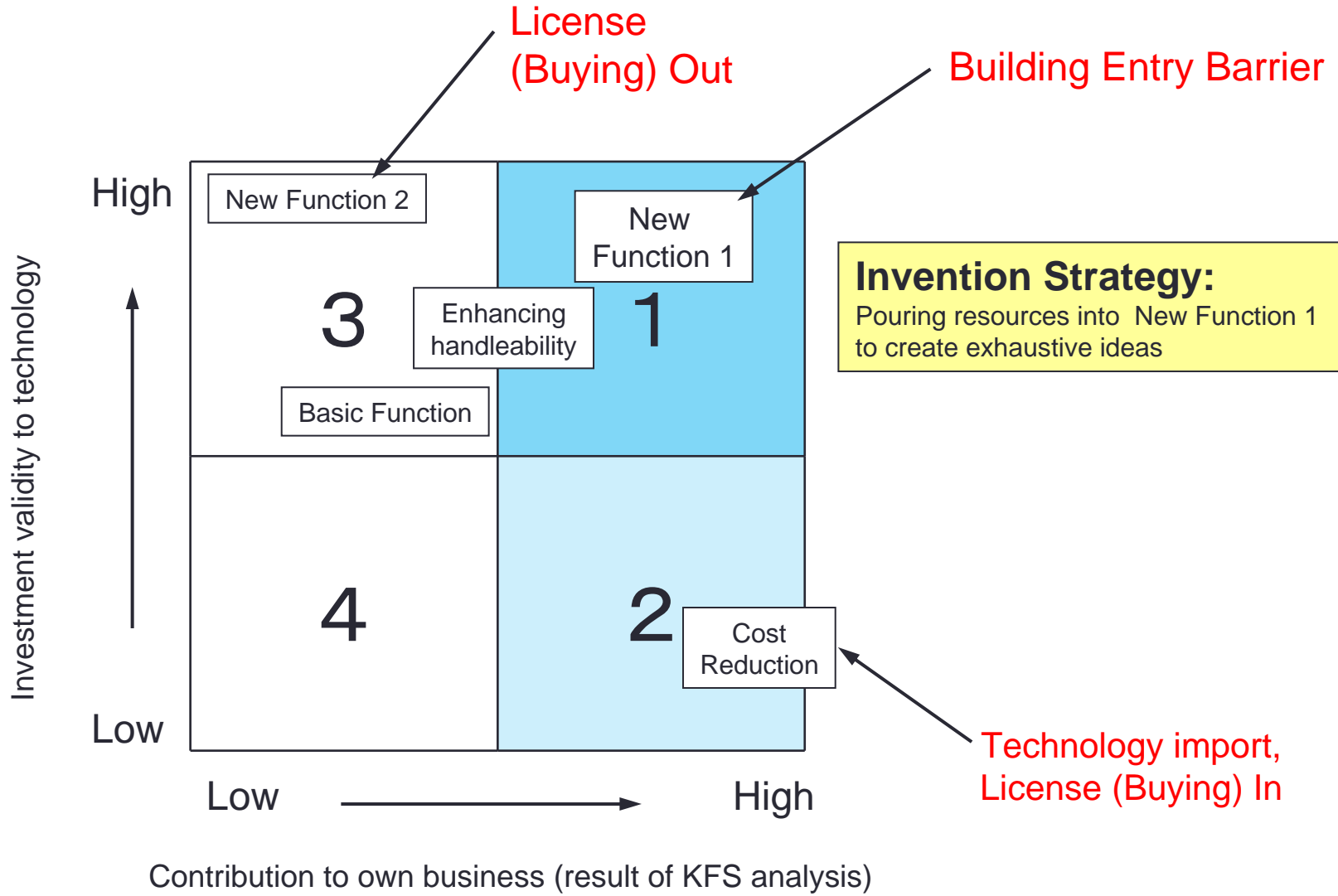
### Analysis of own technology



(‡) Investment validity to technology: An index judged from the predominance of its own technology, technical maturity, and the degree of monopoly expectation by patents



(‡)Strategic Technology: A technology of which KBF (Key Buying Factor) is high and can be differentiated with competitors





**Impossible** to build Entry Barrier to all the technologies



Desirable to give a **priority** to technologies by “KFS analysis” and “Strong Point analysis”, and to **modify** “Strategy of the Strong / Weak”



in this case,

**New Function 1:** Building Entry Barrier (= Strategy of the Weak )

**New Function 2:** Securing sales and improvement (= Strategy of the Strong )

- “Strategy of the Strong / Weak” should be **modified** according to the result of Business analysis such as KFS. Thereby, Business strategy, Technological strategy and Patent strategy are **connected**.
- **Invention Strategy** is a driving power which concretely realizes the **Trinity Strategy**.  
Problem-solving techniques, such as I-TRIZ, serve as the engine.