

Essentials of Micro- Economics & Strategic Management



Partha S Ghosh

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Perspectives on the design of strategy in an uncertain & high velocity environment

1

Micro Economic & Strategic levers?

2

What is Strategy?

3

Review of Evolution of strategic management?

4

Strategic Degrees of Freedom & Strategic Game-board ?

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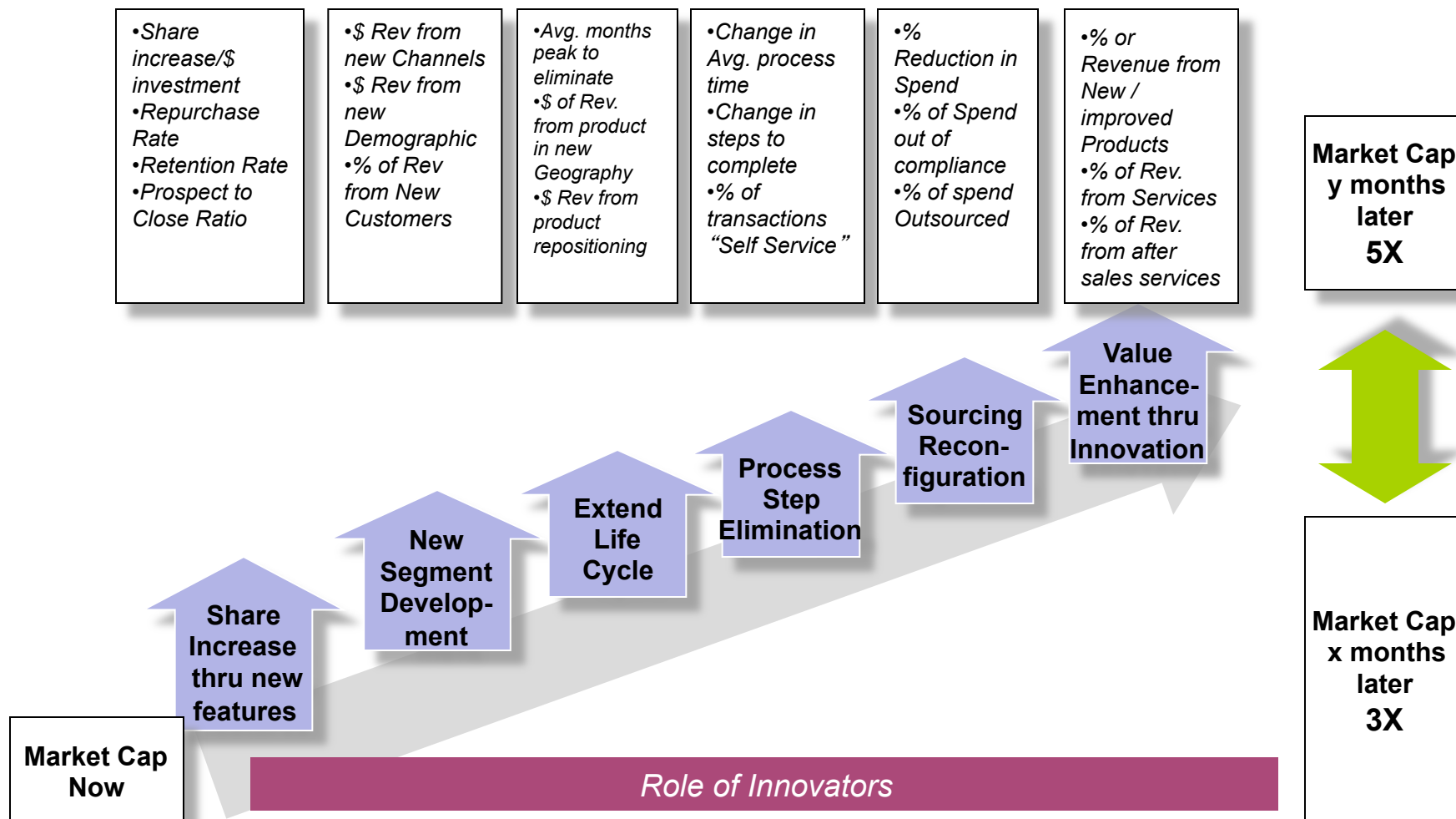
Review of Evolution of strategic management?

4

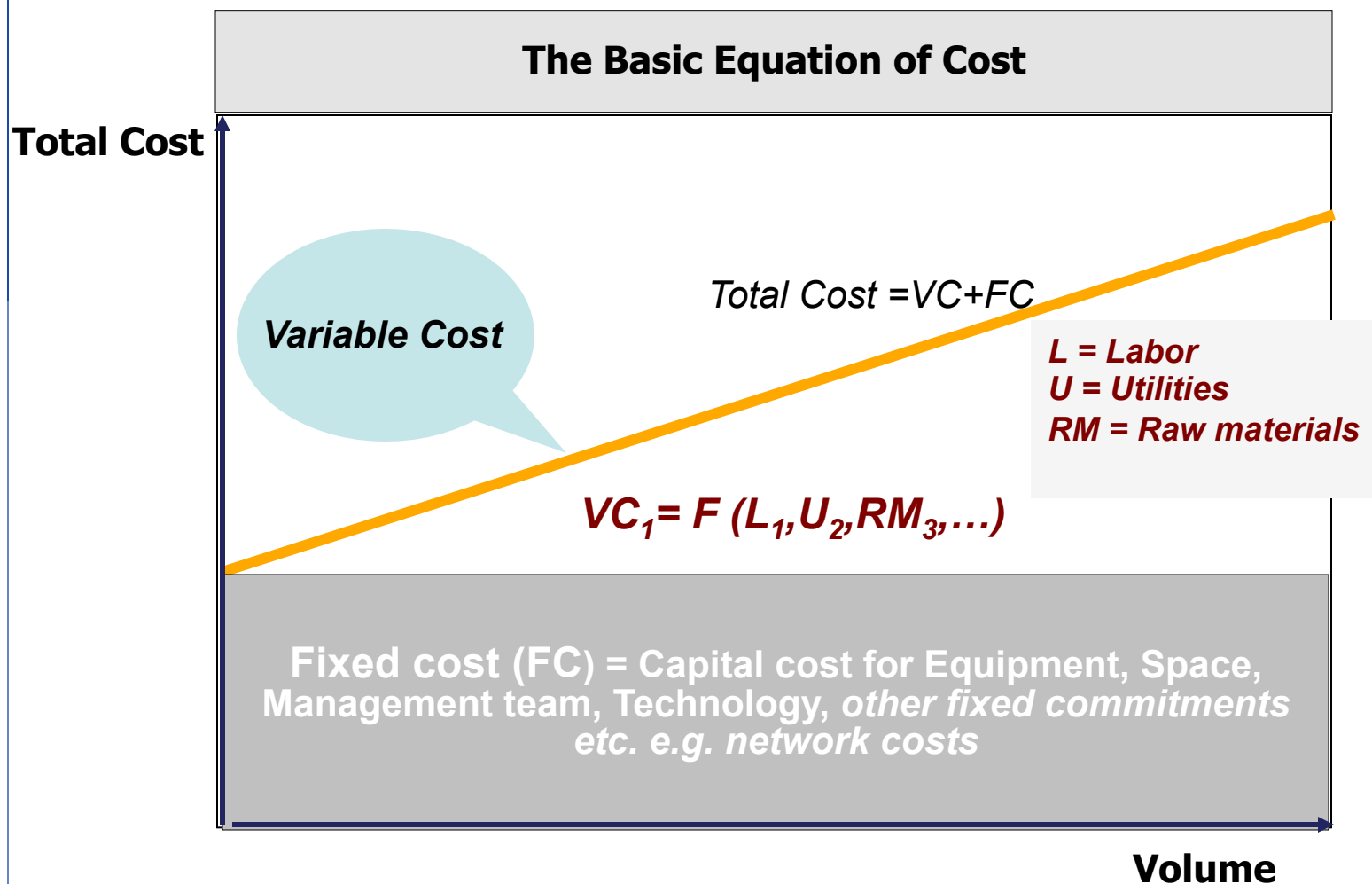
Strategic Degrees of Freedom & Strategic Game-board ?

Typical steps to increase Shareholder Value; for each step you should be able to assess likely financial outcomes

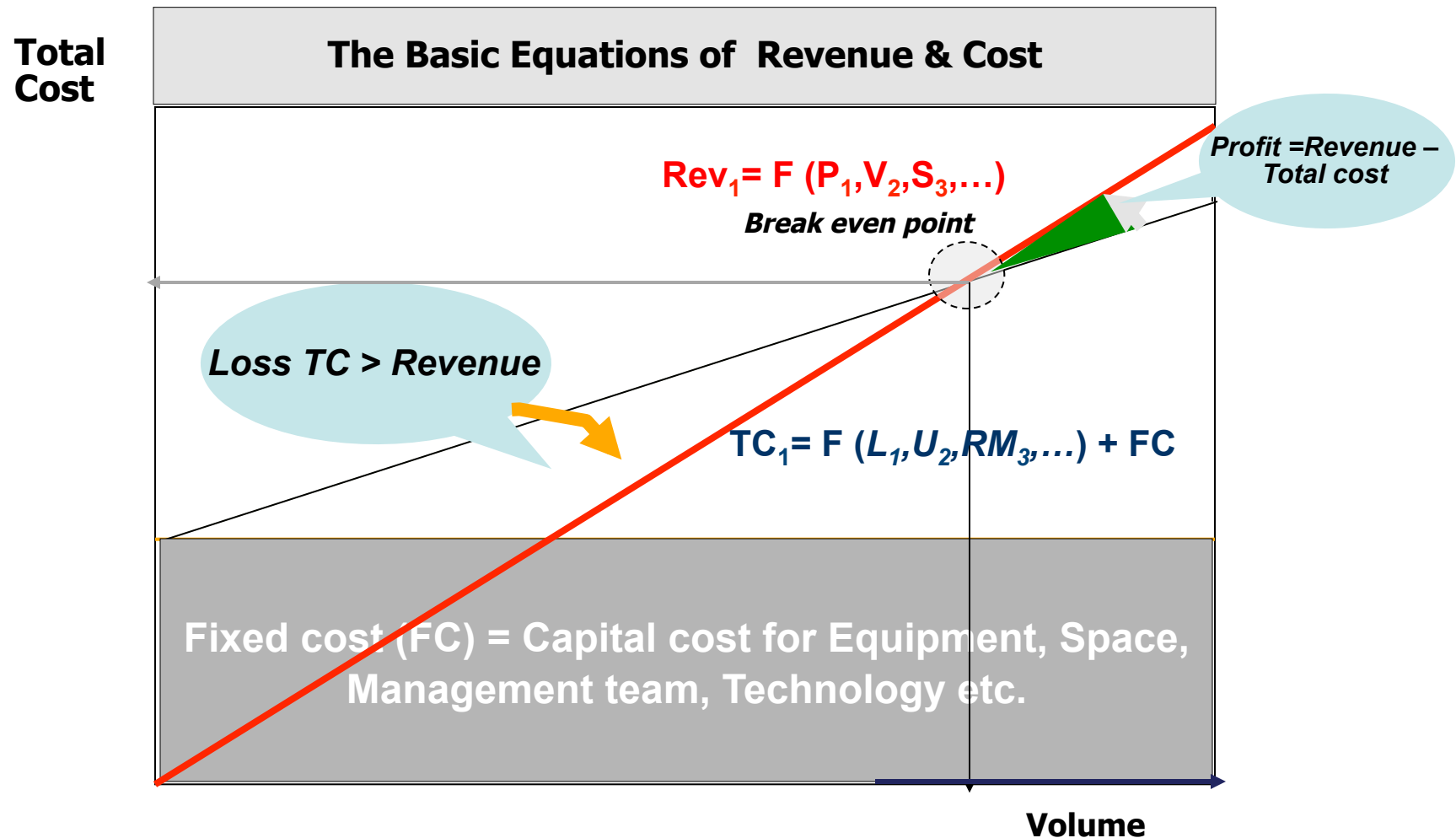
Likely Management Metrics



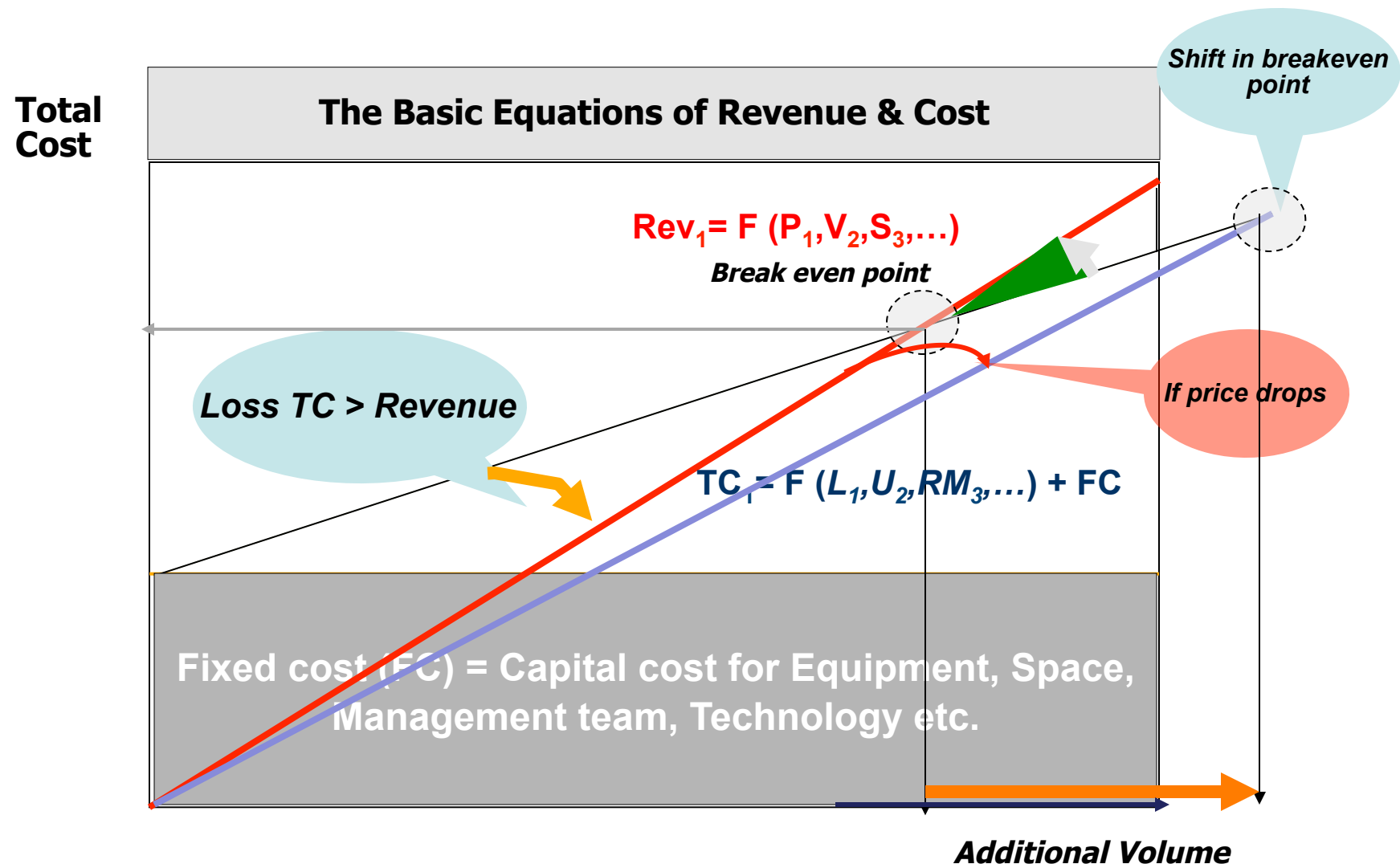
In any organization cost is essentially made up two components:
Fixed cost and Variable costs



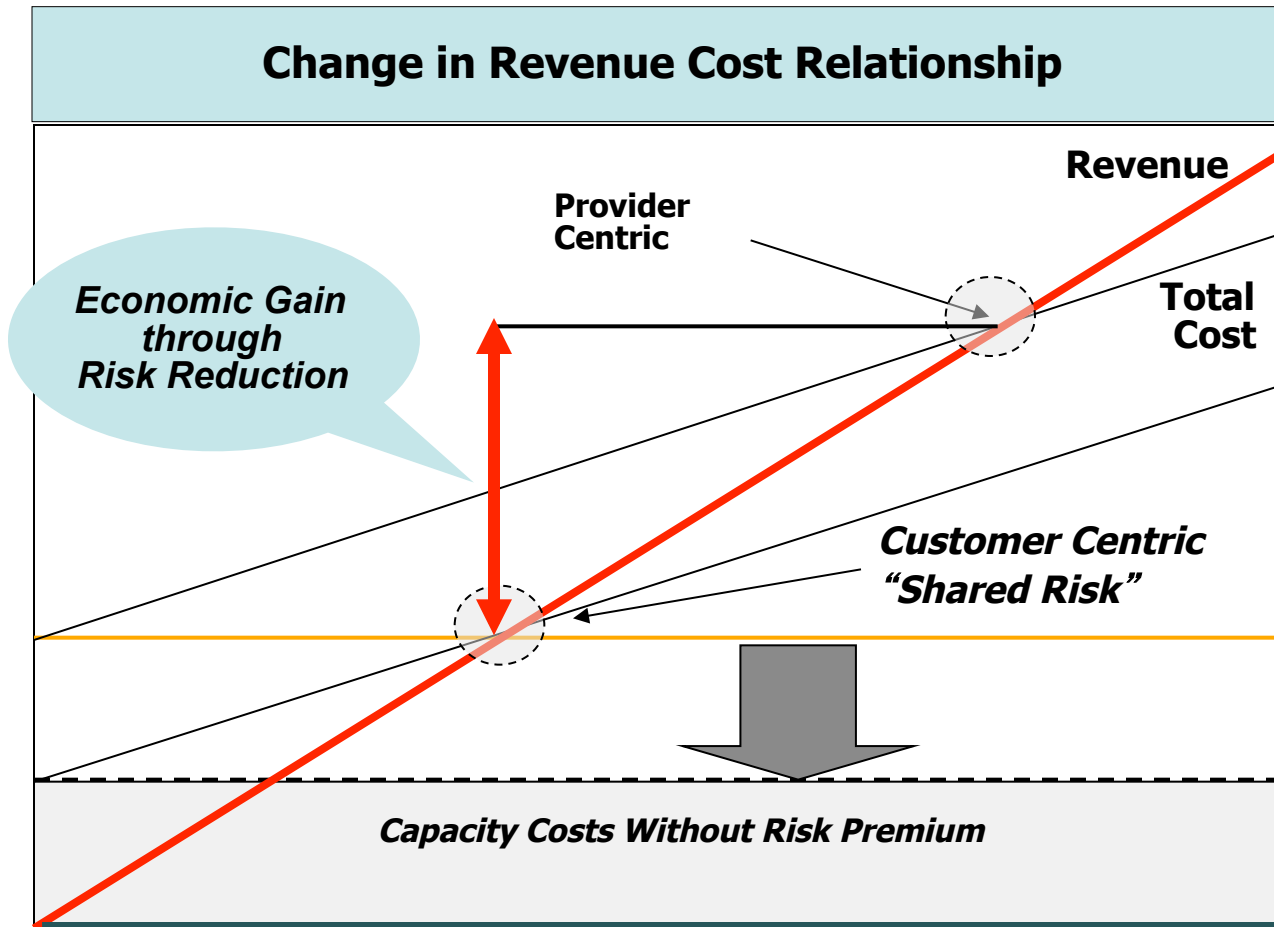
Depending upon how the Revenue line changes with volume the breakeven point of the organization is determined



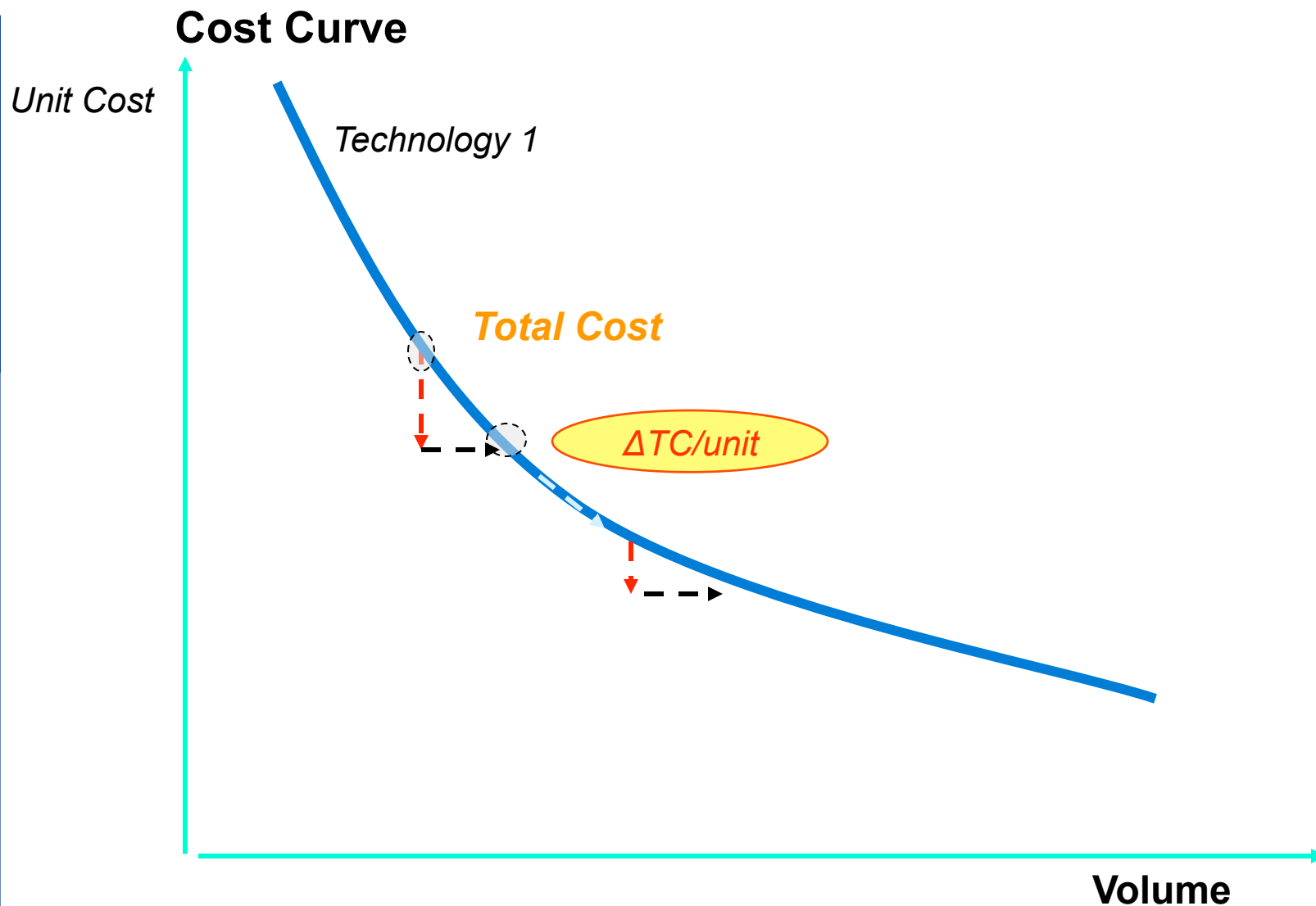
Depending upon how the Revenue line changes with volume the breakeven point of the organization is determined



How fixed cost is managed drives the location of break even point;
shared capacity and/or creative outsourcing help organizations
“variabilize” fixed costs

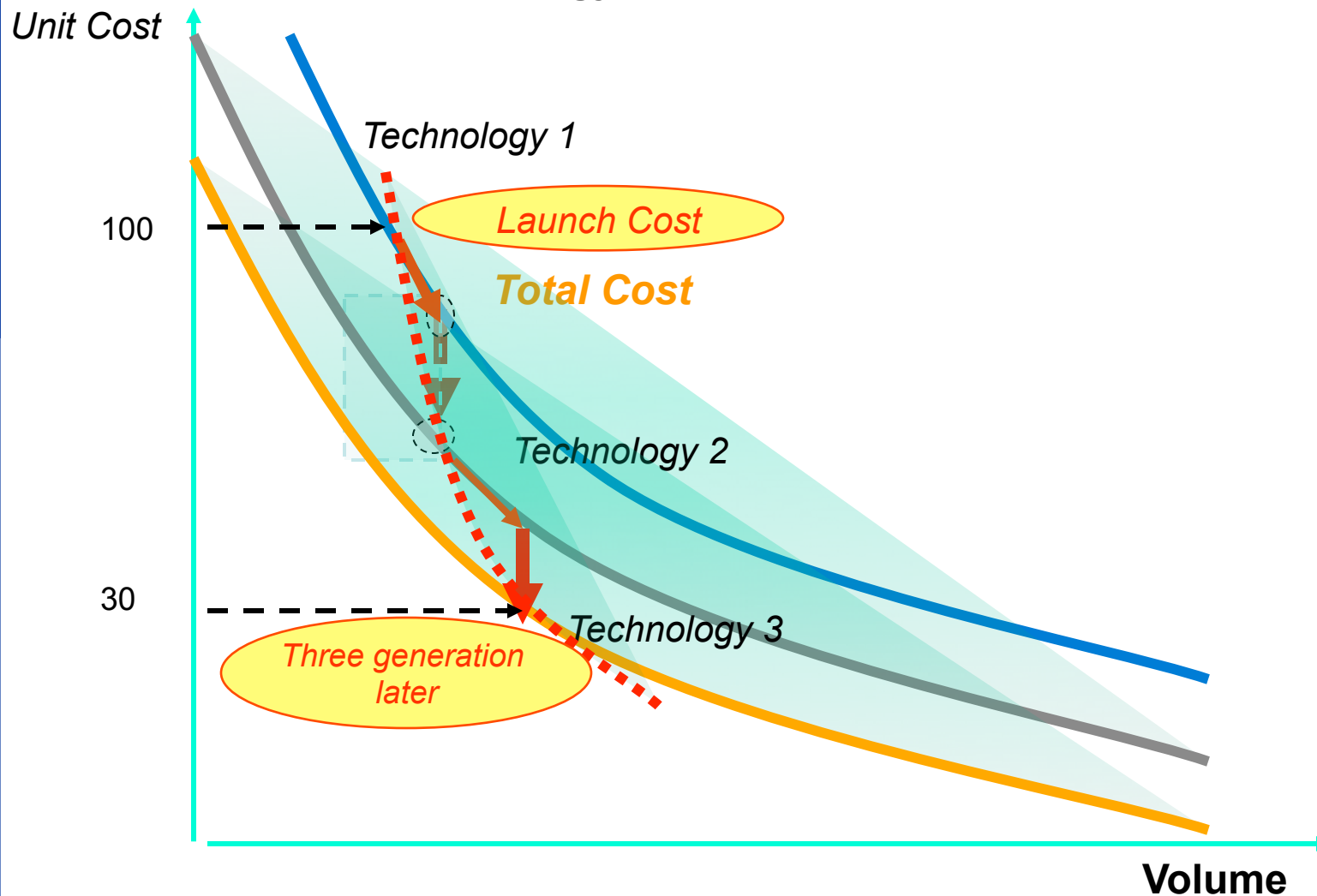


Cost per unit change with volume as fixed cost get shared over larger number of units

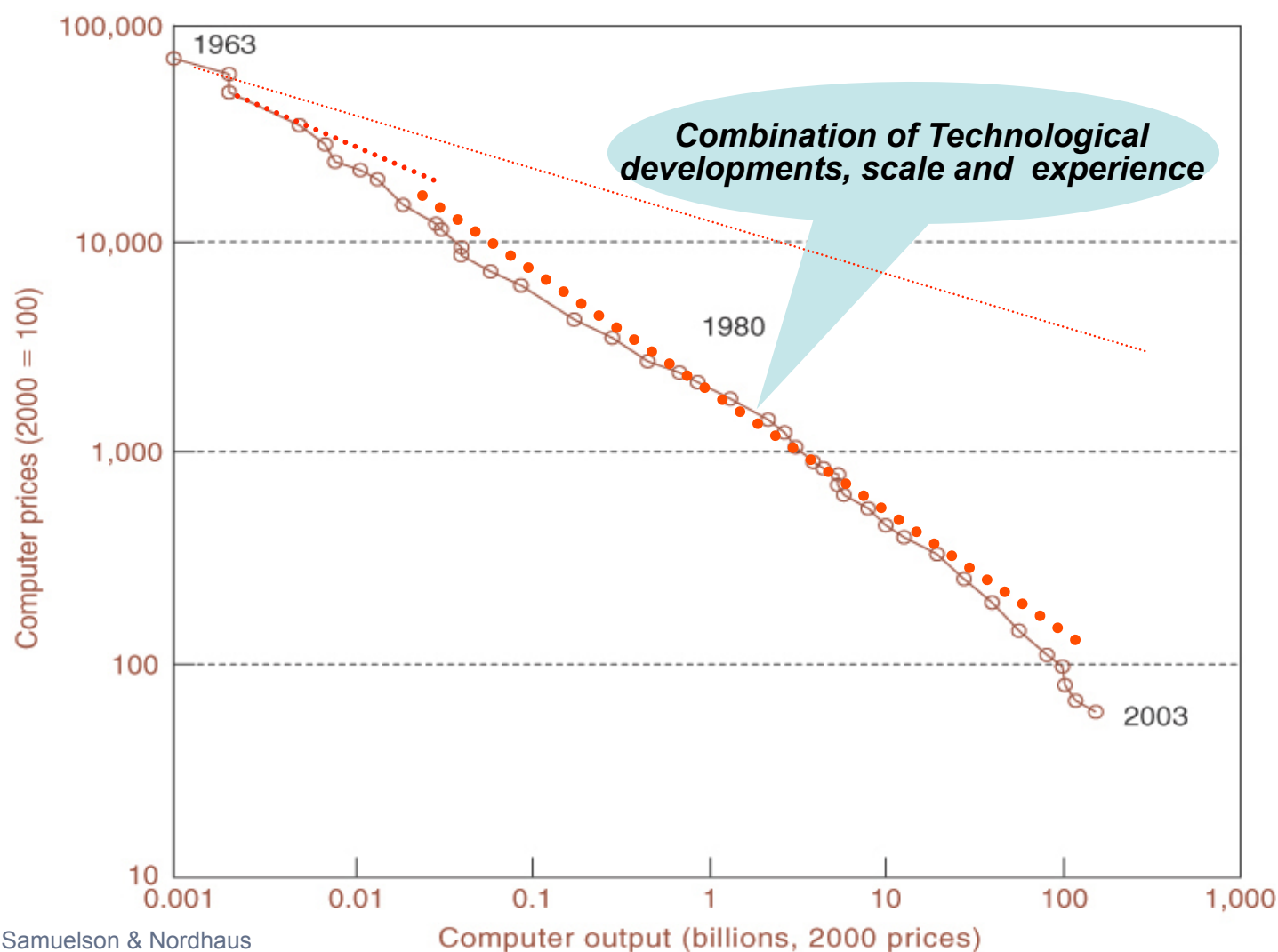


As new technologies come into play cost volume relationships change

Cost Curve and Technology



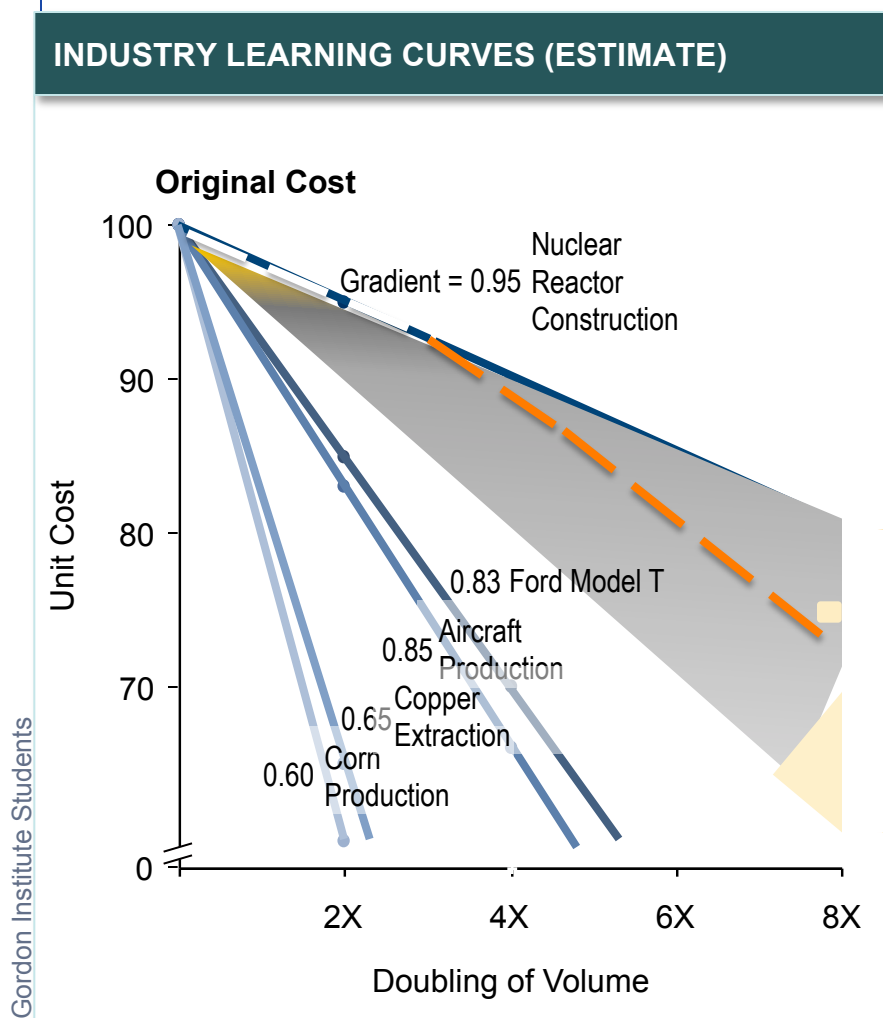
Understanding the effect of experience and technology on market dynamics is essential in driving the economics of businesses



Source: Samuelson & Nordhaus

Economics: Partha S Ghosh
Tufts Gordon Institute 2017

And then unleashing multiplicative value through the “learning curve”



How could your company take advantage of this fundamental law of nature?”

Source: PetroVR Solutions

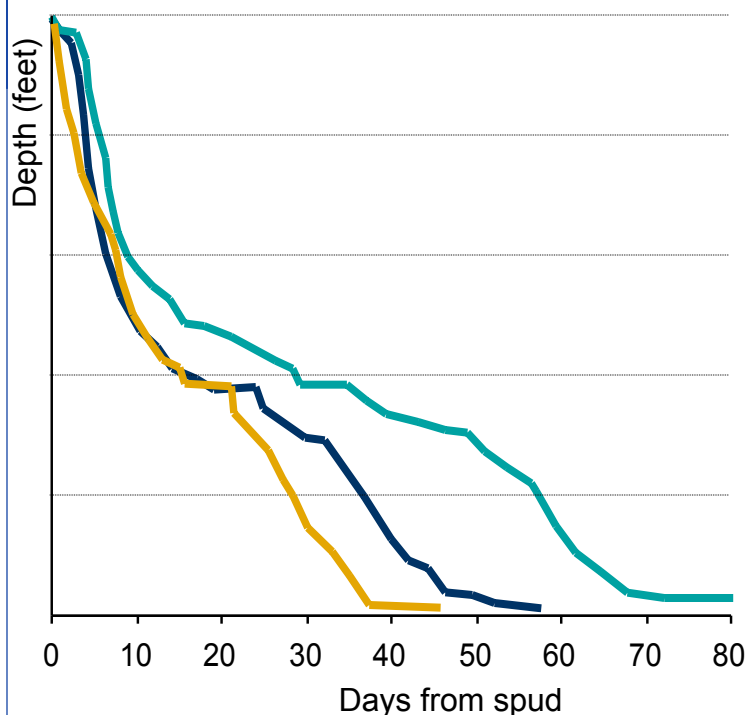
Economics: Partha S Ghosh
Tufts Gordon Institute 2017

And has been proven in O&G - for example, NA unconventional

HAYNESVILLE HORIZONTAL DRILLING DAYS

Days to depth from spud

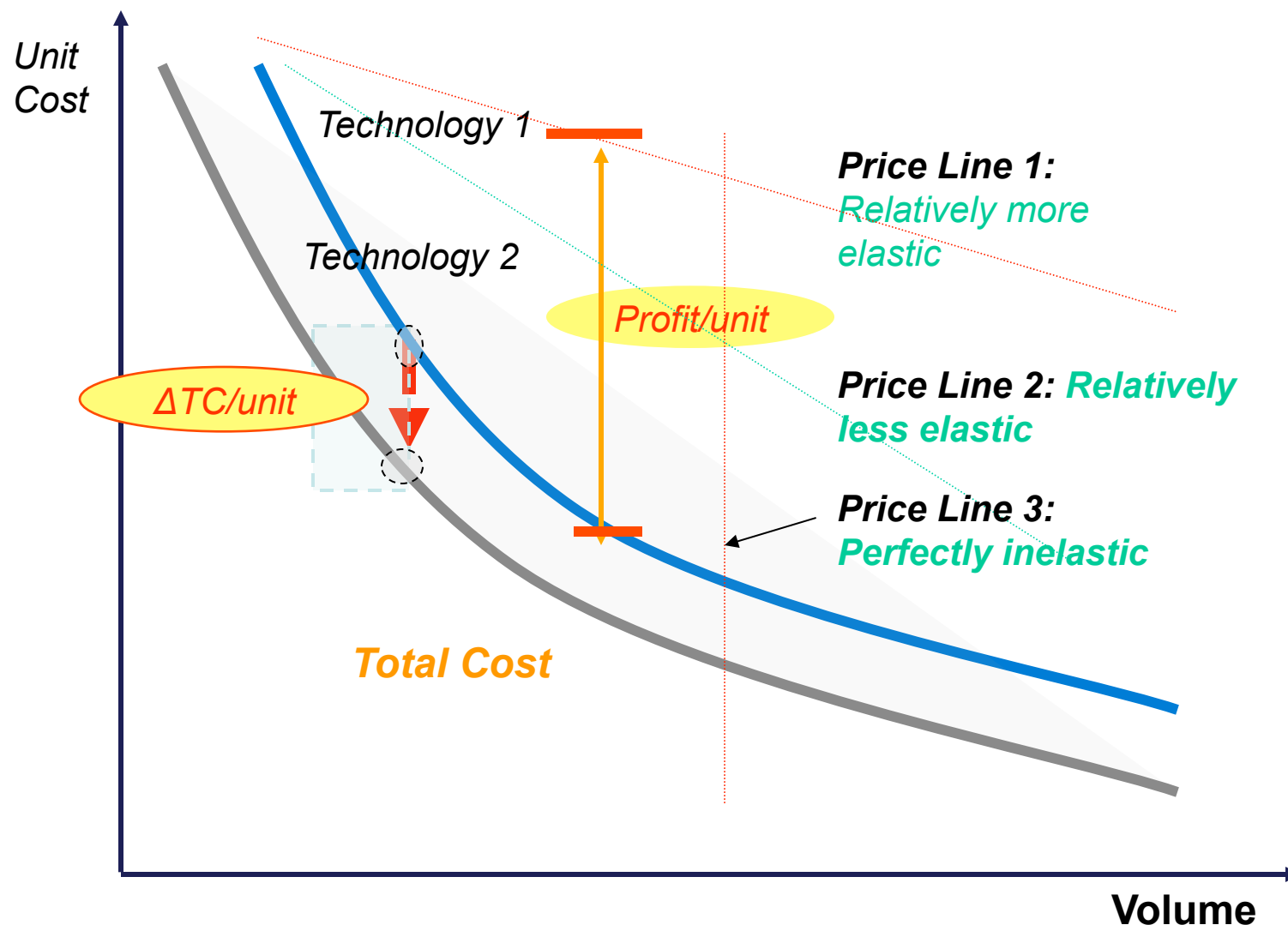
— First three wells — Last three wells — Middle three wells



ENABLERS

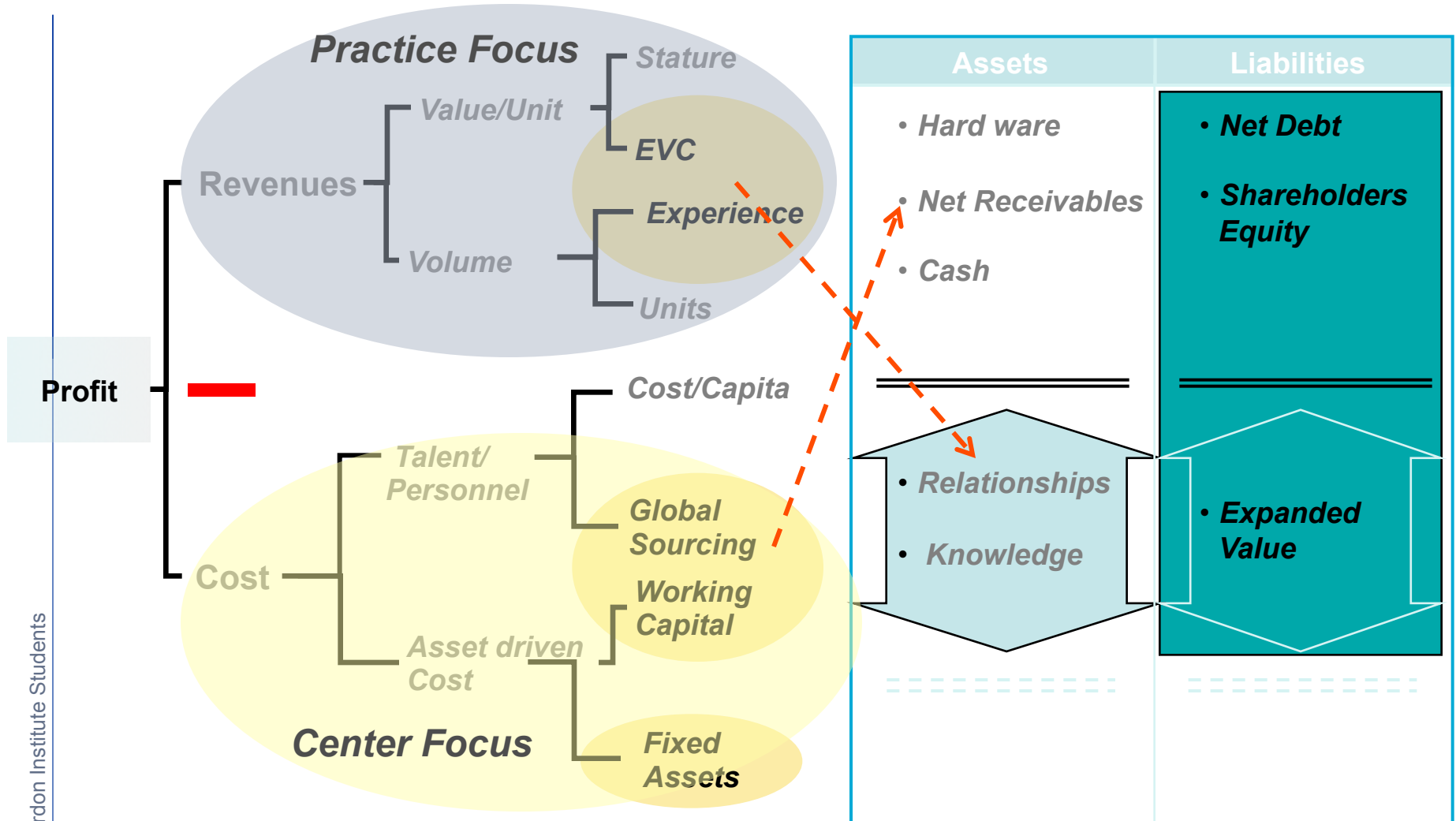
- Minimize rig NPT through e.g.
 - rig design (faster rig up and down),
 - sliding rigs on a drilling pad,
 - thru-the-bit-logging
- Work faster (Increasing Rate of Penetration)
 - Use of synthetic fluids in Drilling muds
 - Well design with smaller bore holes
 - Improved drill bit (life and size)
- Work smarter
 - Mixed fleet – different drilling rigs performing what they do best in sequence
 - Rig design with multiple well centres and movable tools
 - Identifying problems early through MWD, LWD and TBL
- Design & Decision making
 - Pad drilling
 - Multi lateral drilling
- Well completions
 - Drilling longer laterals
 - Closer lateral spacing between adjacent wells
 - Increasing the number of frac stages per well

Now at a plant level if you superimpose price line on cost curve you could develop a picture of how profit changes with volume

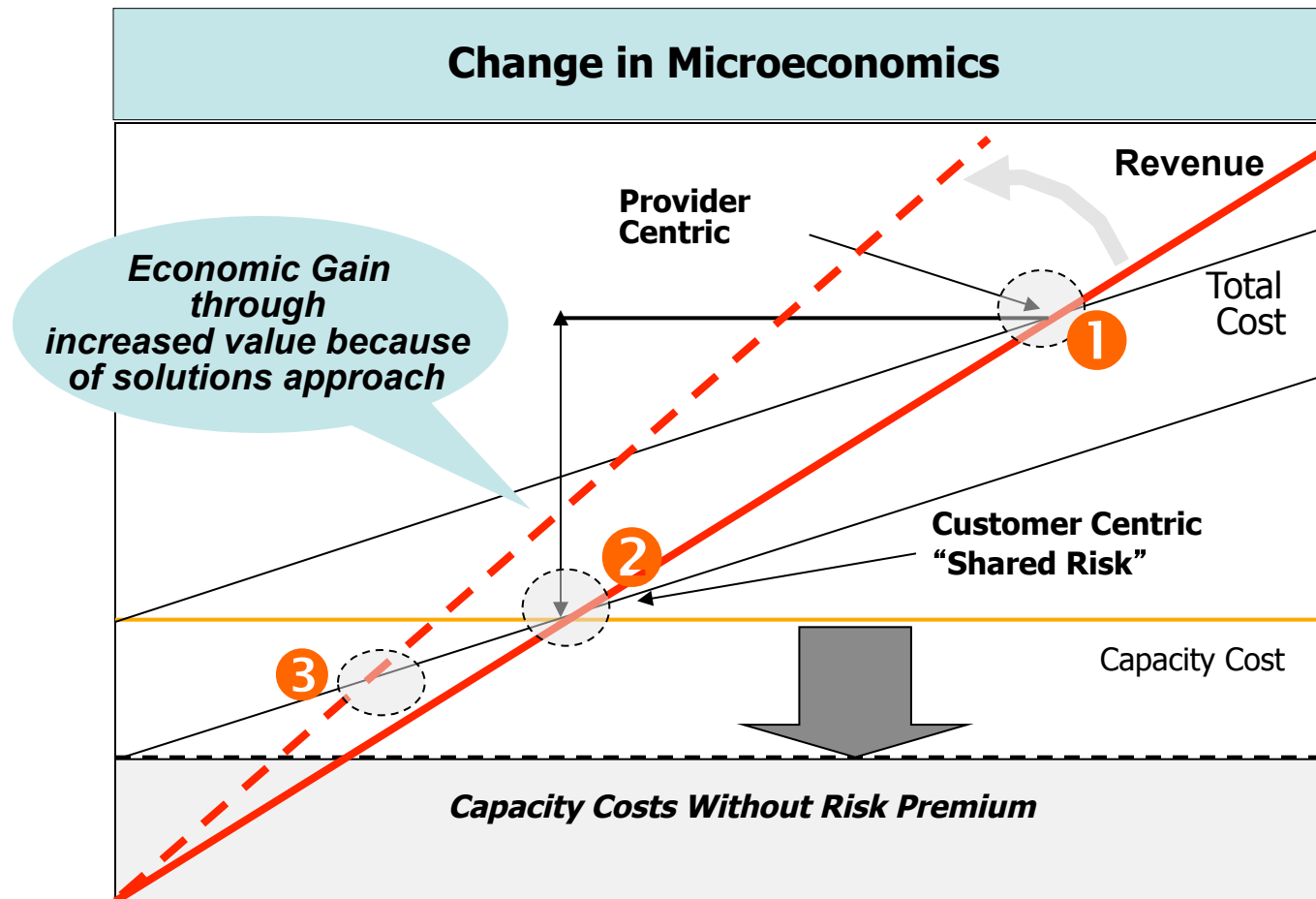


Realizing the “Upside”

Profit & Loss Structure: Practice & Center Focus



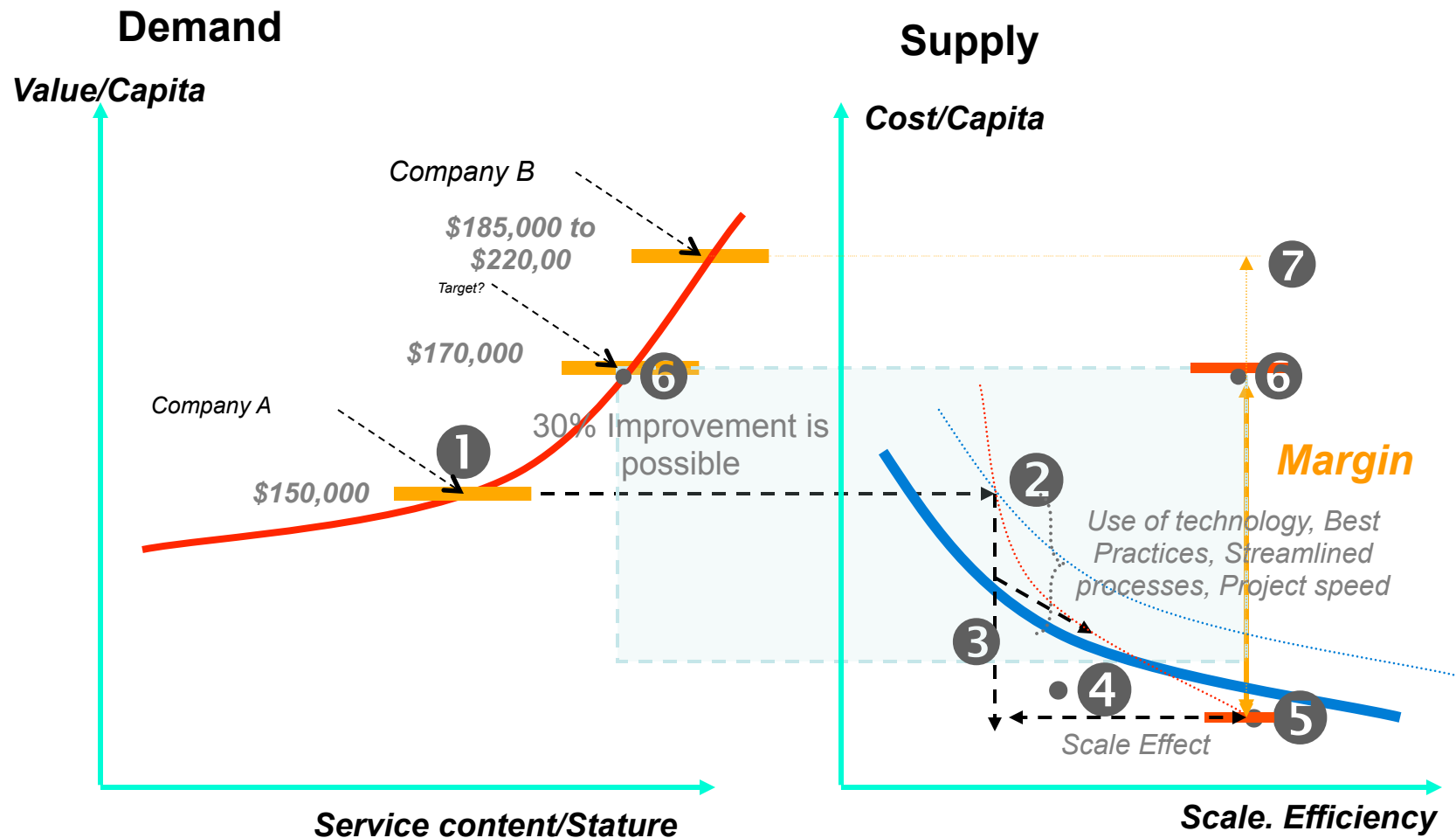
The Solutions approach could enable fundamental shift in microeconomics; *movement of breakeven point (from 1 to 2 to 3) of the business because of innovative capacity sharing & pricing of solutions approach*



■ *Dynamic business model*

Improving value added/capita...

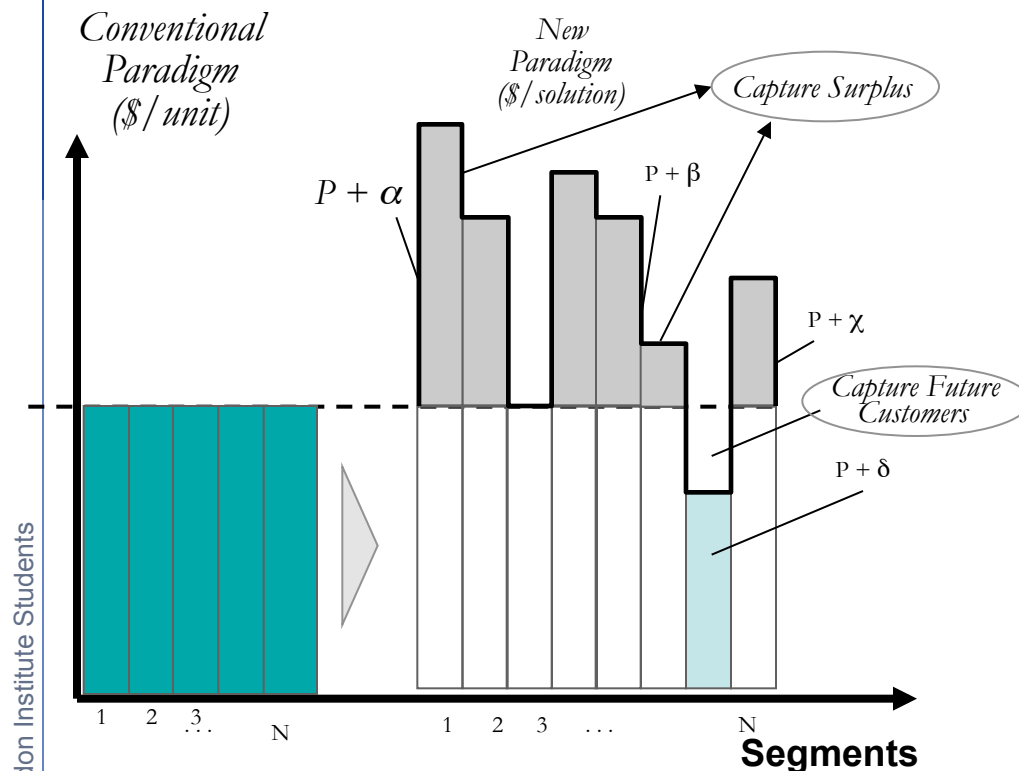
...while securing improved cost position



■ *Dynamic business model – increasing complexity*

Unbundling Invisible Customer Requirements for Sustained Pricing Gains: Pricing model through Hyper Segmentation

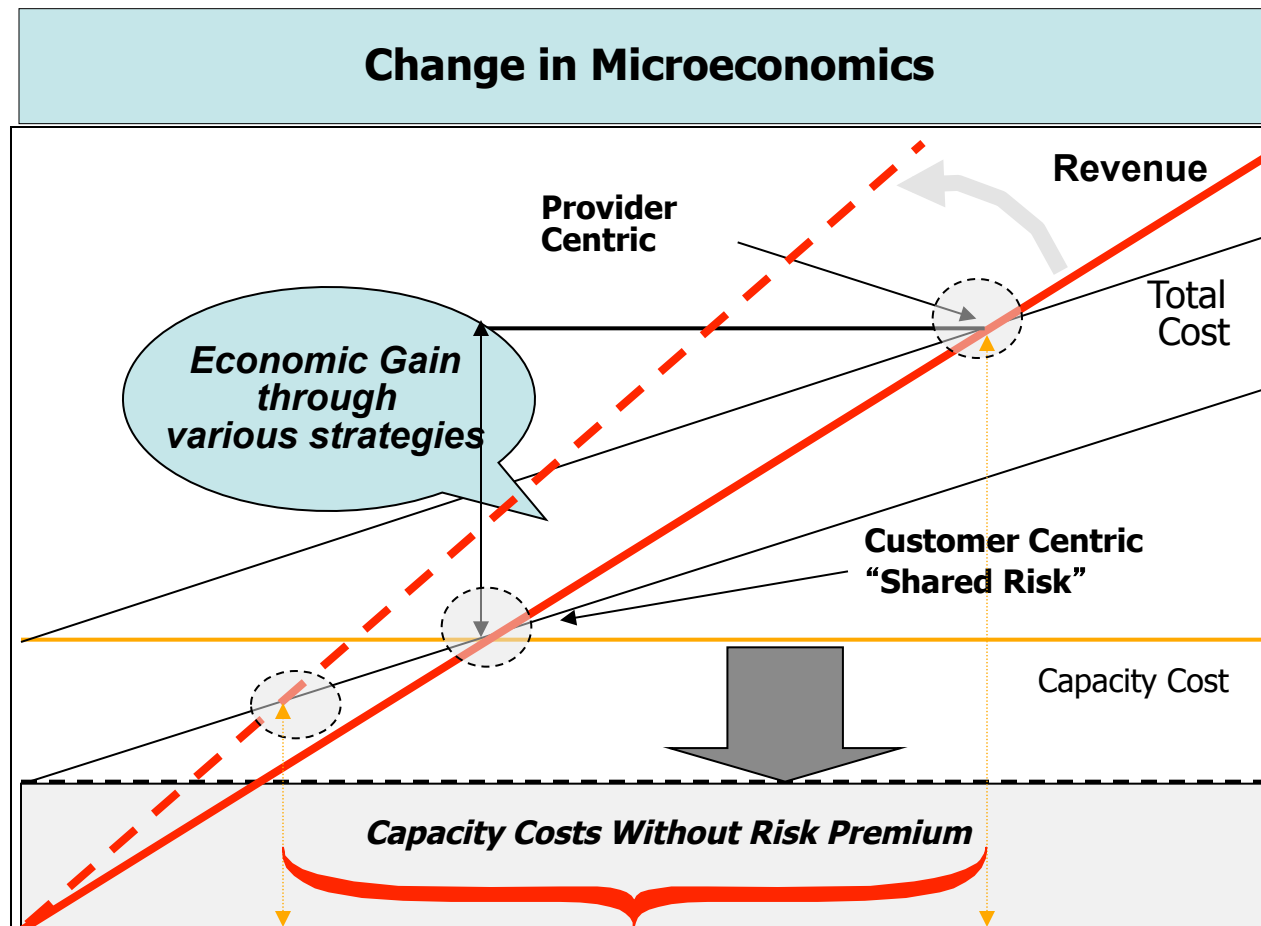
Illustrative



Likely Options in the New Environment

Differentiation	Illustrative Actions
α = Technical Cognoscenti	<ul style="list-style-type: none"> Availability of latest technology on “trial” basis
β = Convenience Shoppers	<ul style="list-style-type: none"> Postalized pricing “All in one” plans
γ = Affinity Group	<ul style="list-style-type: none"> Targeted programs
δ = Pricing Anchors	<ul style="list-style-type: none"> Price competitive on anchor item only to pull through high margin items

All the factors together successful companies strategize and manage both value and cost equations in a dynamic fashion



This is how the economics of a few dominant companies work



Largest **retailer** without retail stores



U B E R

Largest **Taxi Company without CARS**

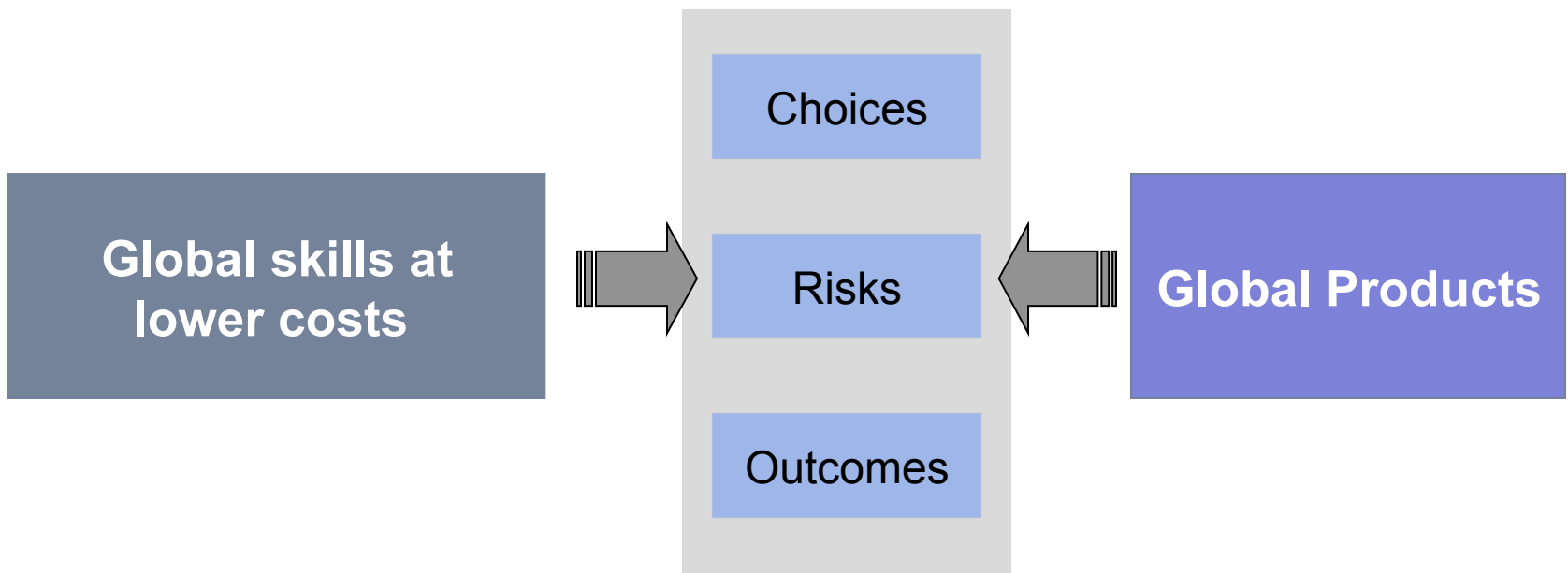


Largest in **hospitality** without real estate



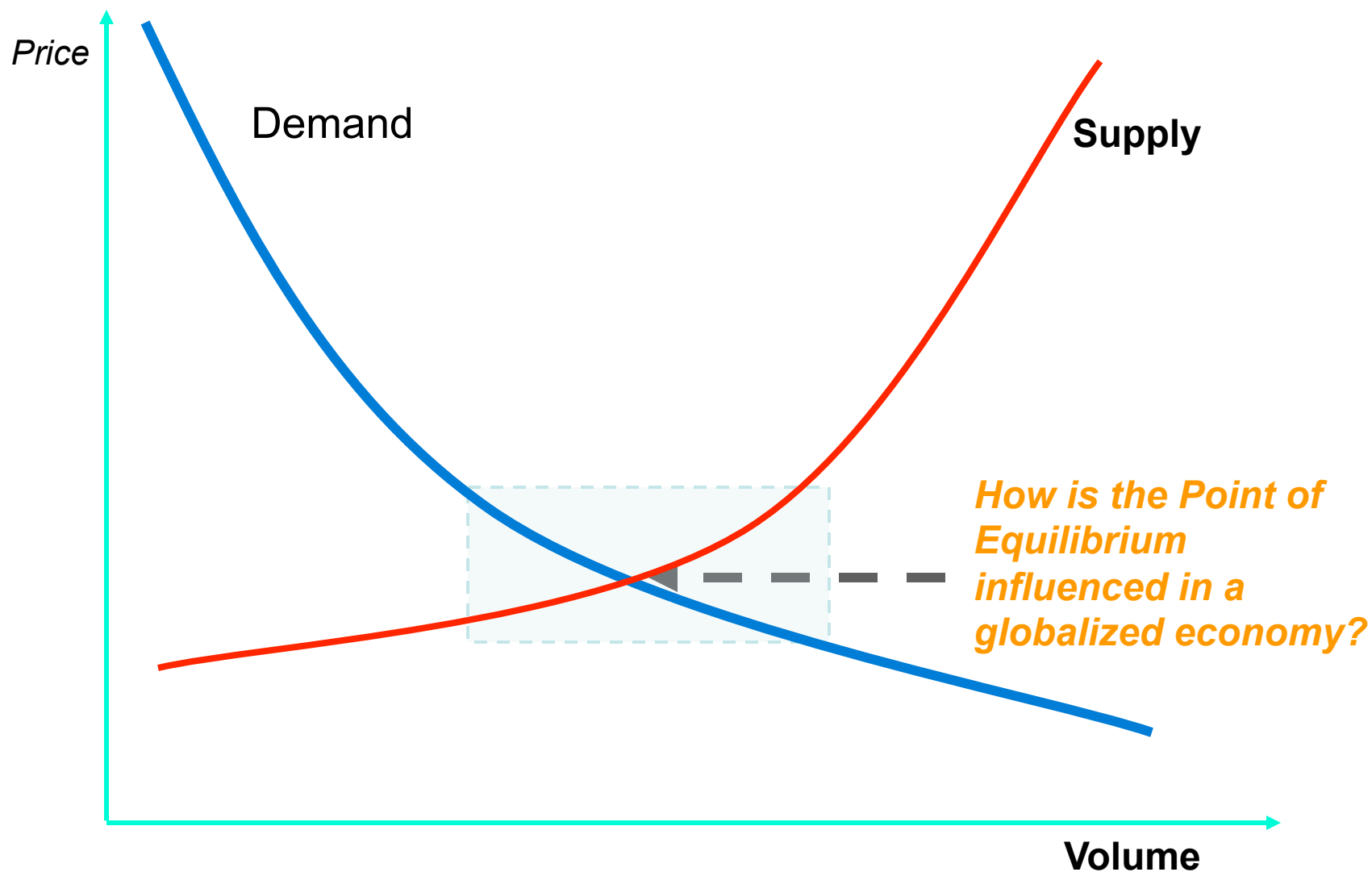
Largest in **social media** without content

Supply-demand in the context of Globalization



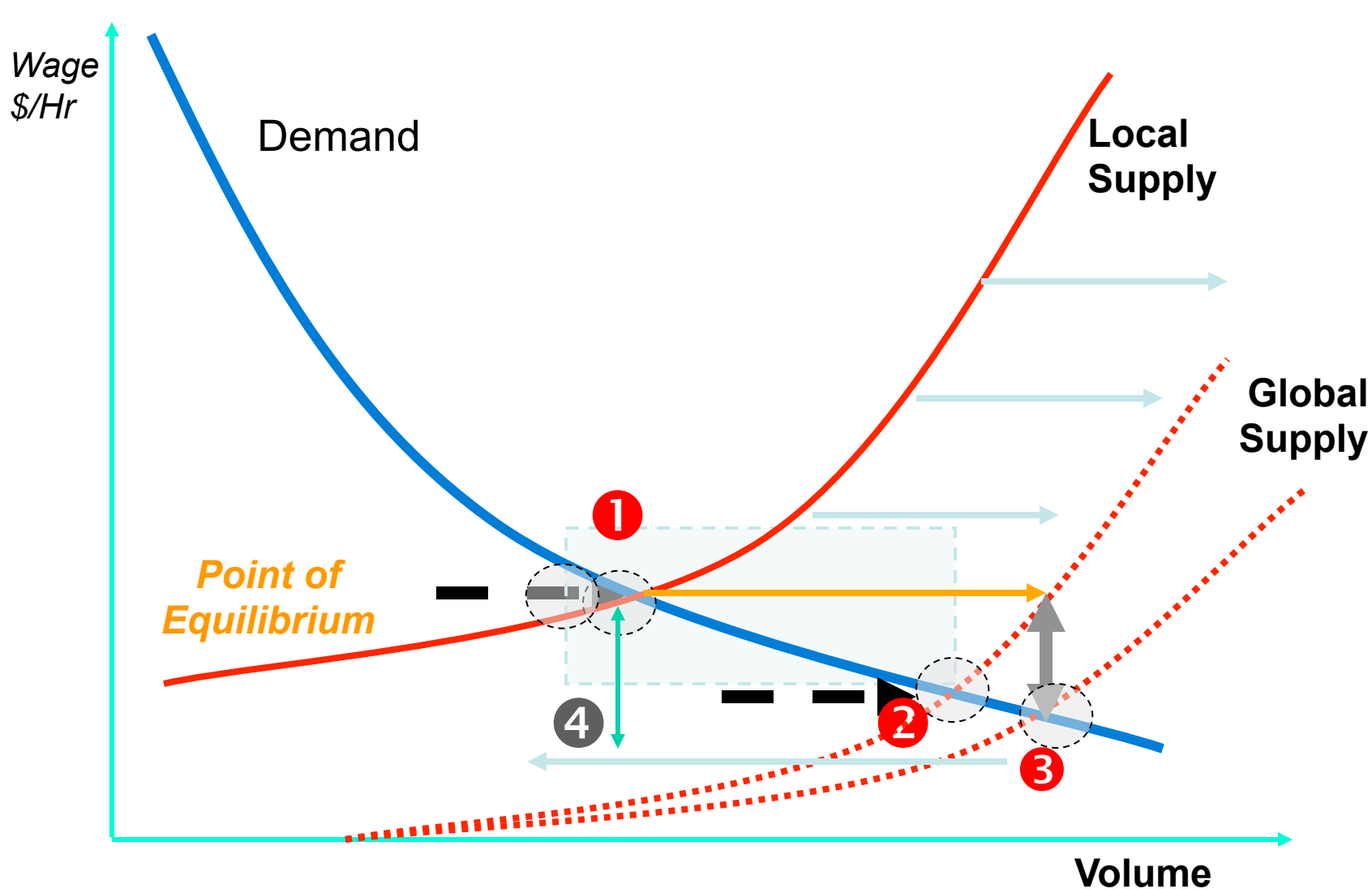
Identifying points of Equilibrium beyond National Borders

■ Science of Equilibrium



Identifying points of Equilibrium

- *Globalization of markets*

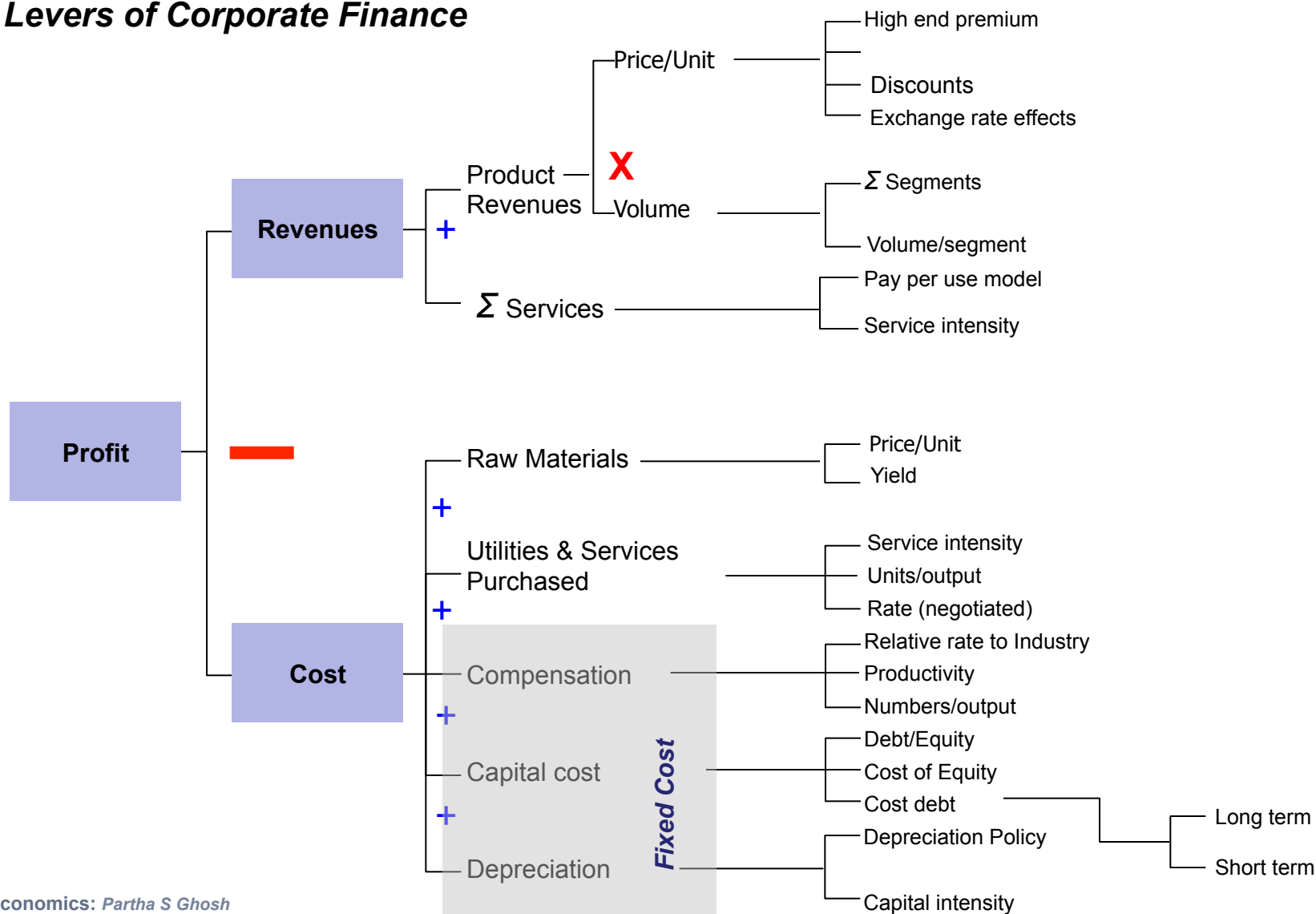


Micro Economics Map and Strategy

Strategic & Operational Levers of Corporate Finance

Key Strategic Levers

Specifics (Not Comprehensive)



Perspectives on the design of strategy in an uncertain & high velocity environment

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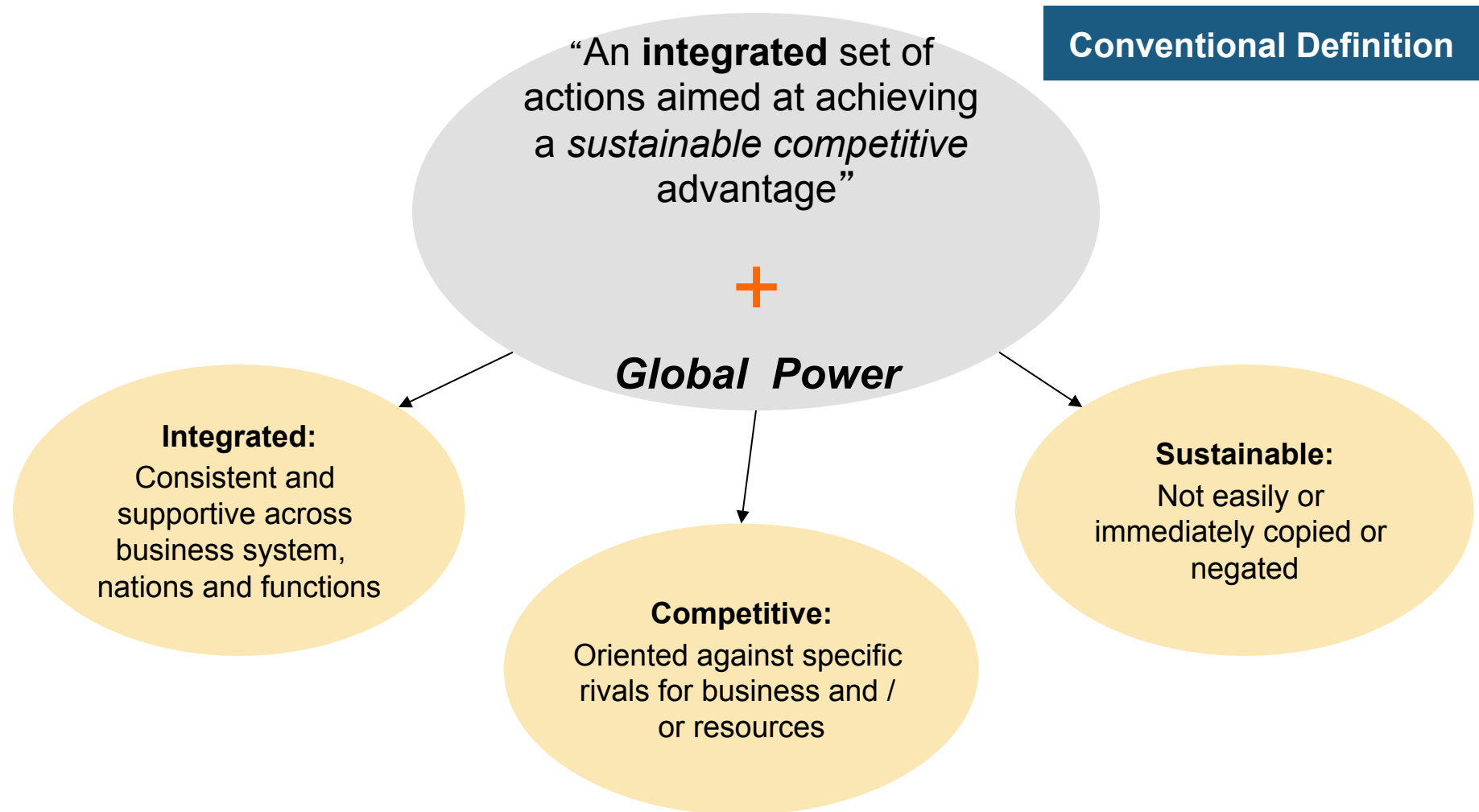
Review of Evolution of strategic management?

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Strategic Degrees of Freedom & Strategic Game-board ?

Basics of Global Strategy

A robust Global strategy must ensure that the fundamental requirements are satisfied



Intellectual Challenge in the New Environment – *How to Define Strategy?*

Preliminary


A Prestigious Consulting Firm's Definition

~~“An integrated set of actions to secure competitive advantage”~~

Purpose?
Setting standards in creating “first mover advantage”

Proposed Definitions in the New Paradigm (Ghosh Definition)

“Synchronized **set of creative and collaborative power plays** to secure **superior influence** in the **confluence of Digital and Cartesian economies**”

Where?
Digital

Physical

Driver?
Innovative network

* Included in Appendix

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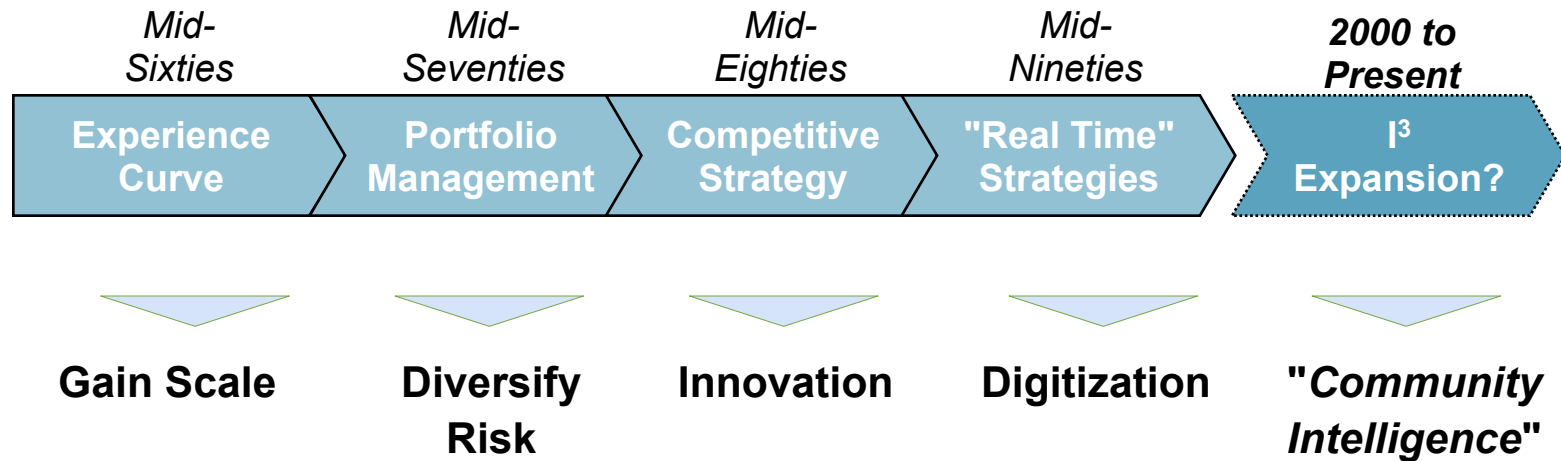
4

Strategic Degrees of Freedom & Strategic Game-board ?

Cultivating a Strategic Mind-Set

Milestones in Strategic Management

Since Early Sixties



Environmental Impact on the Evolution of SM

1950-73

STABILITY AND GROWTH

- Post WWII boom
- Predictable growth
- Social responsibility
-

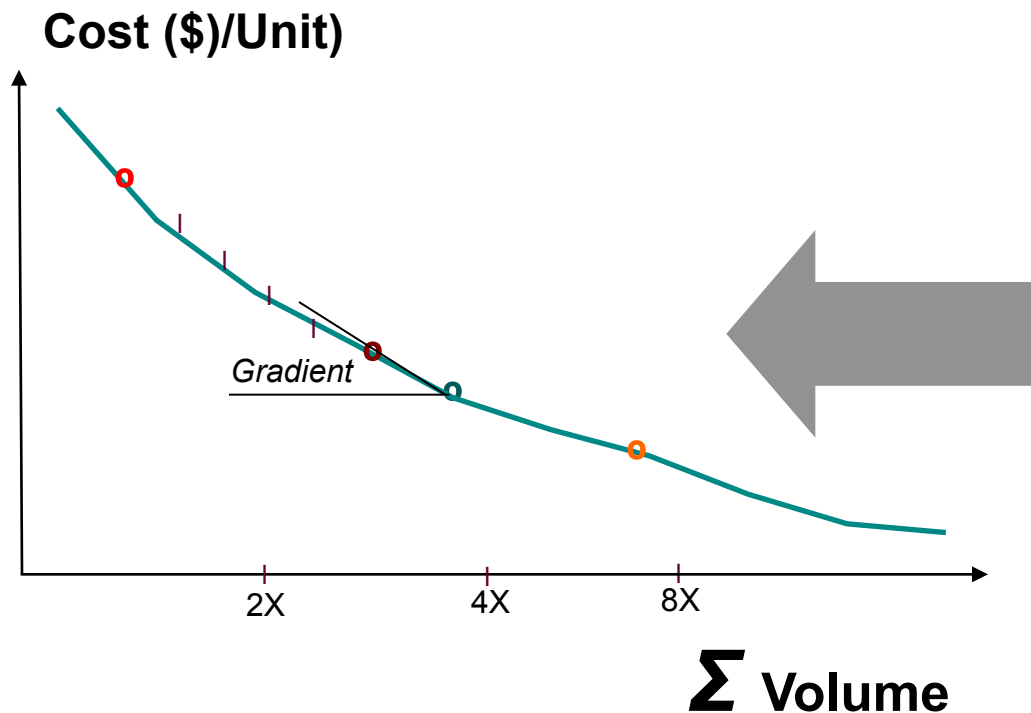
1950-73

Competitive & preemptive Investment

- *Experience Curve*
- *R & D/Capex management*

Mid Sixties: During times of certainty the corporate world embraced the power of “experience curve”

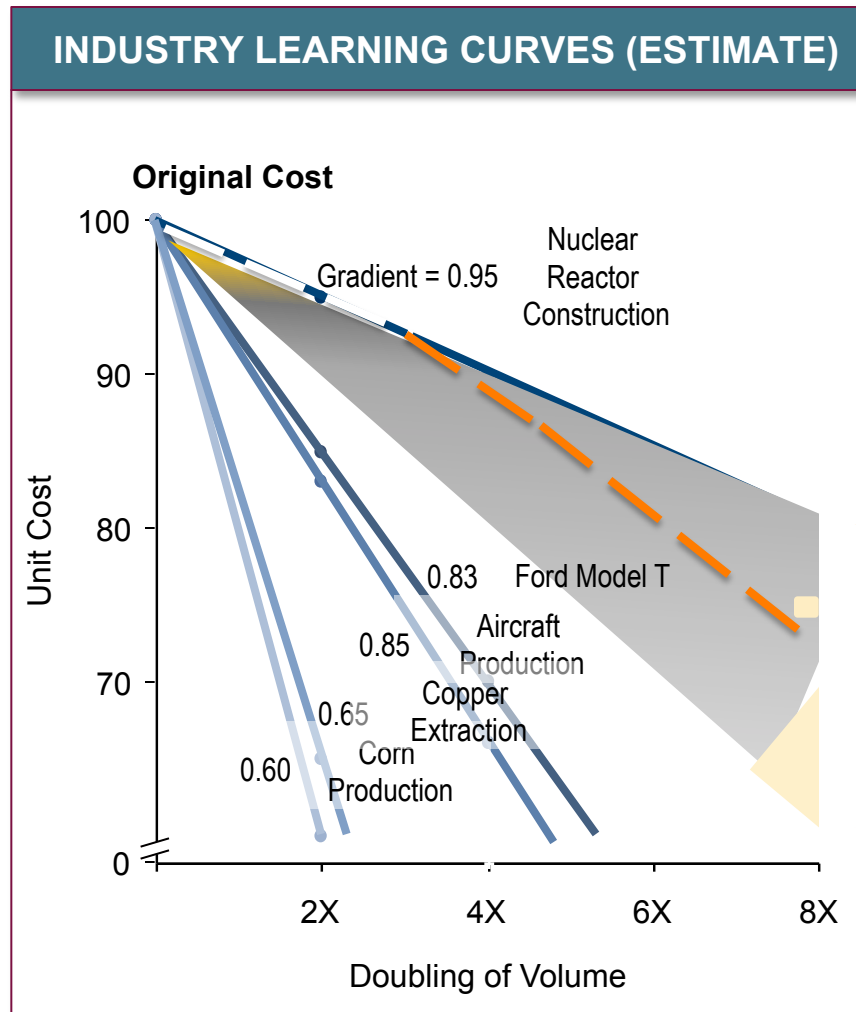
INDUSTRY LEARNING CURVES (ESTIMATE)



1. Experience Curve

Industry	Experience Curve
Nuclear Reactor Construction	95%
Aircraft Production	85%
Canadian Oil Sands	85%
Ford Model T	83%
Drilling (South Texas)	80%
Drilling (North Sea)	75%
Tension Leg Platforms (Gulf of Mexico)	65%
Copper Extraction	65%
Corn Production	60%

And then unleashing its multiplicative value



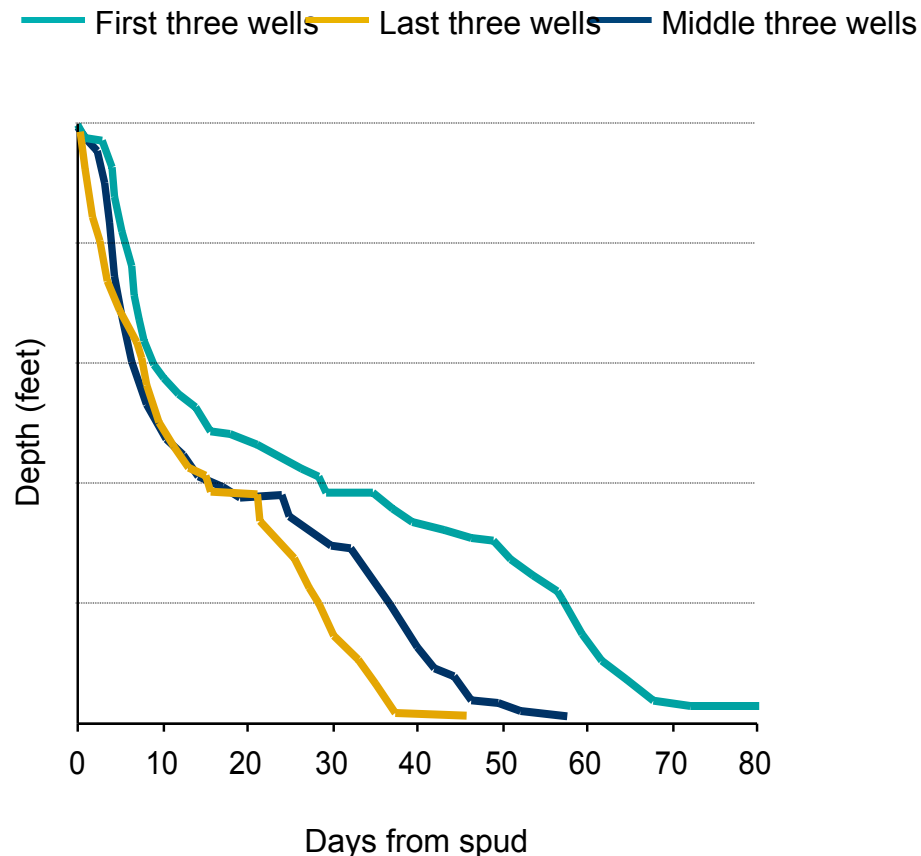
How through globalization of operations you could accelerate the learning curve effect on your cost competitiveness?

Source: PetroVR Solutions

For example in the US Unconventional learning experience effect is very evident...

HAYNESVILLE HORIZONTAL DRILLING

Days to depth from spud



ENABLERS

Minimize rig NPT through e.g.

- rig design (faster rig up and down),
- sliding rigs on a drilling pad,
- thru-the-bit-logging

Work faster (Increasing Rate of Penetration)

- Use of synthetic fluids in Drilling muds
- Well design with smaller boreholes
- Improved drill bit (life and size)
- Xyz
- abc
- Rig design with multiple well centres and movable tools
- Identifying problems early through MWD, LWD and TBL

Design & Decision making

- Pad drilling
- Multi lateral drilling
- Drilling longer laterals
- Closer lateral spacing between adjacent wells
- Increasing the number of frac stages per well

Source: US EIA paper "Quantifying Drilling Efficiency", June 2010

Environmental Impact on the Evolution of SM

1974-79

ENTERPRISES UNDER PRESSURE

- Oil shocks
- Stronger business Cycles
- Quality of working life
- Civic and women's rights
- Environmental protection

1974-79

Management of Risks

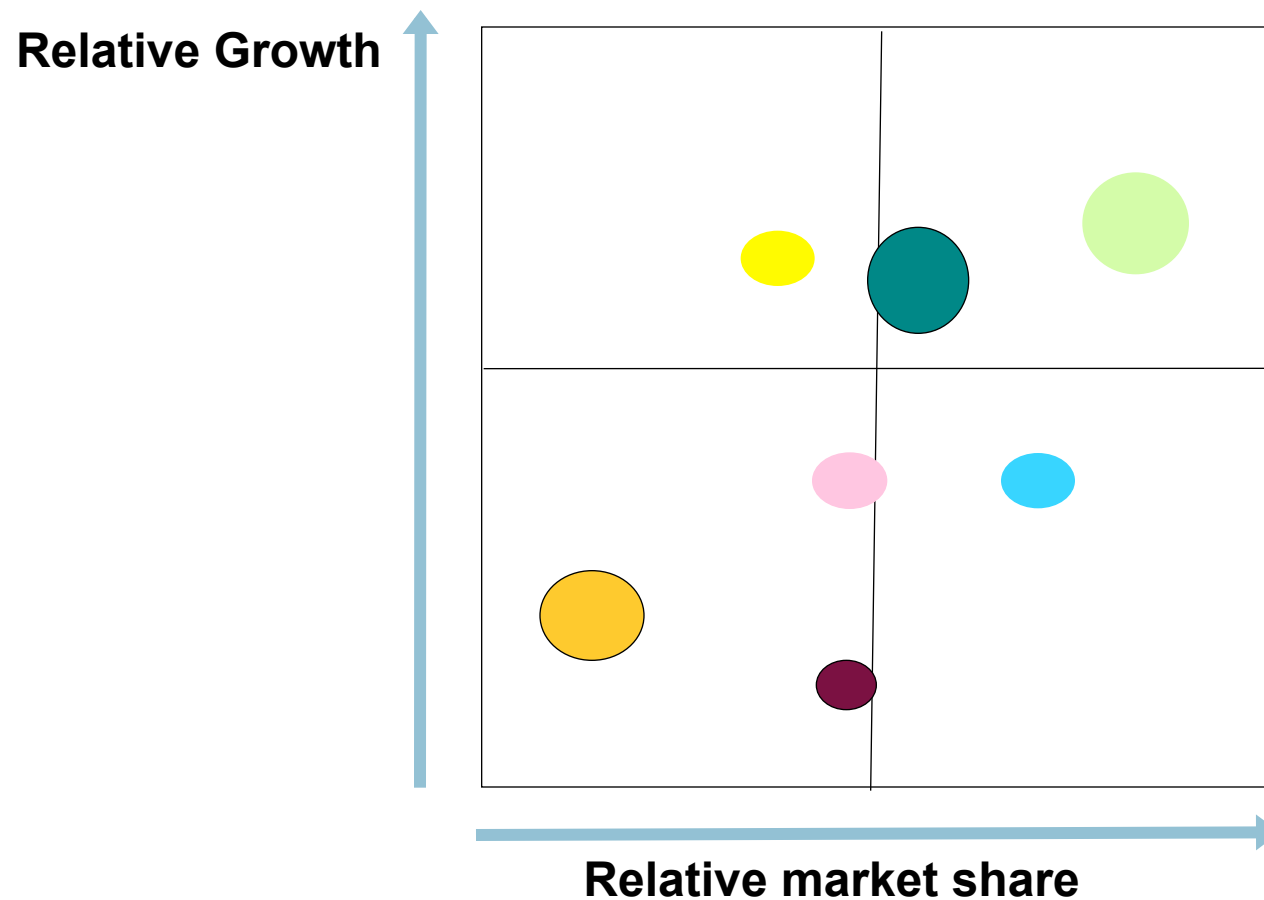
- **Portfolio management**
- **Offset cycles**

Seventies: Era of Portfolio debates(?)

BCG's Portfolio Model

1. Experience Curve

2. Portfolio Management

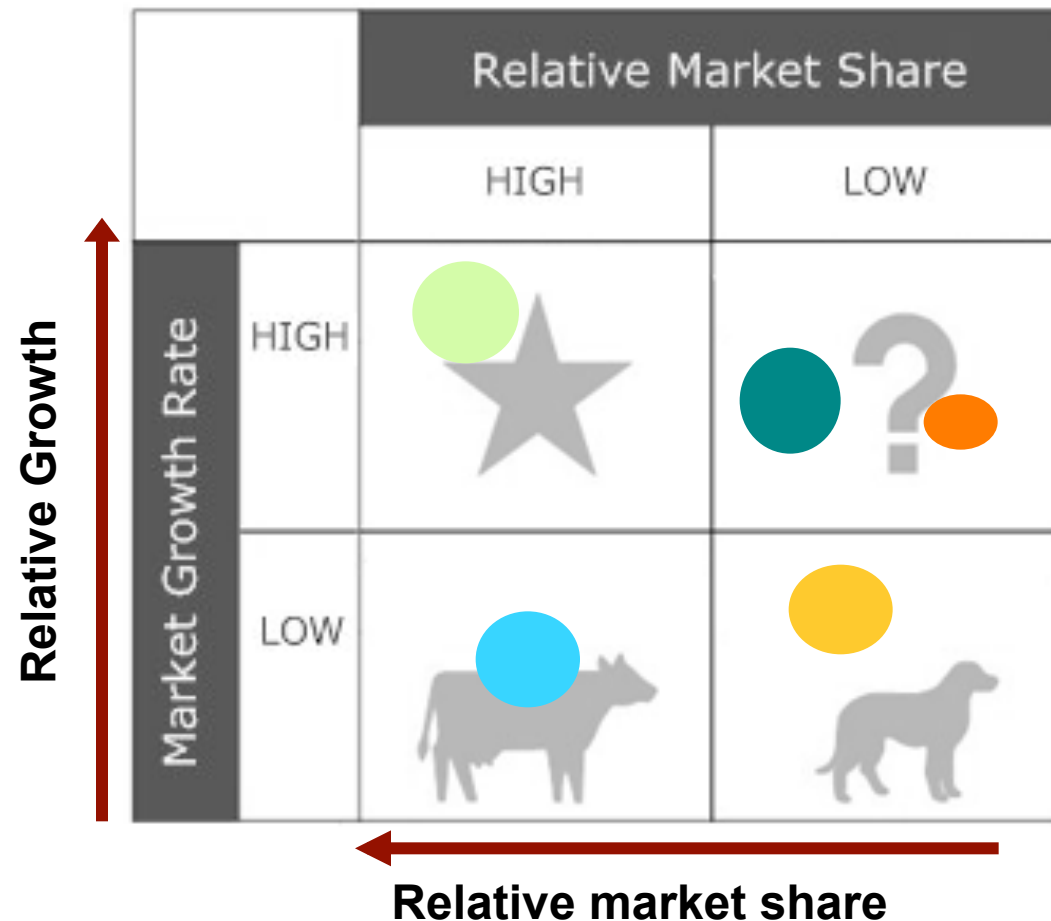


Seventies: Era of Portfolio debates(?)

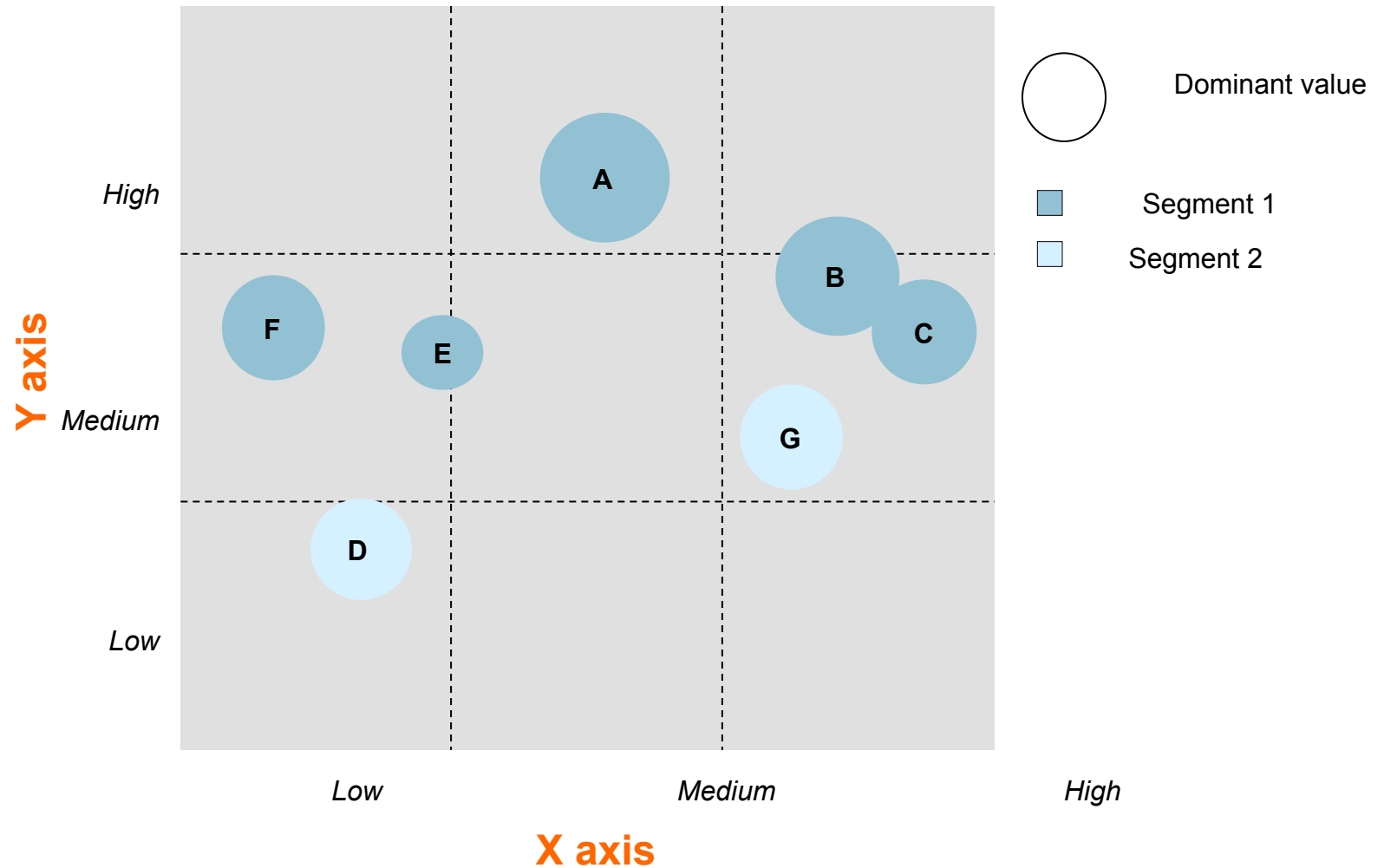
BCG's Portfolio Model

1. Experience Curve

2. Portfolio Management



Rise of Portfolio Mapping



Environmental Impact on the Evolution of SM

1980-88/89

CUTBACK AND RATIONALIZATION

- Unemployment
- Rise of Japan/ GE
- Cut in public services

1980-88/89

Back to basics

- Competitive Strategy
- Rationalization of Ops
- Linear vs Discontinuous

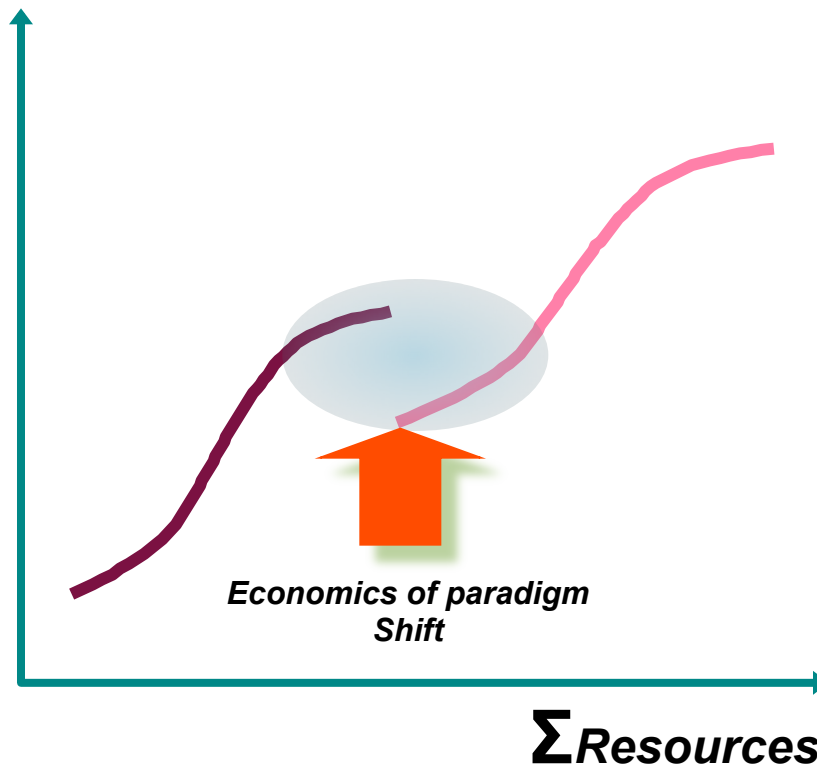
Mid eighties to mid nineties

Economics of S curves & Technological Limits
Value/Impact

1. Experience Curve

2. Portfolio Management

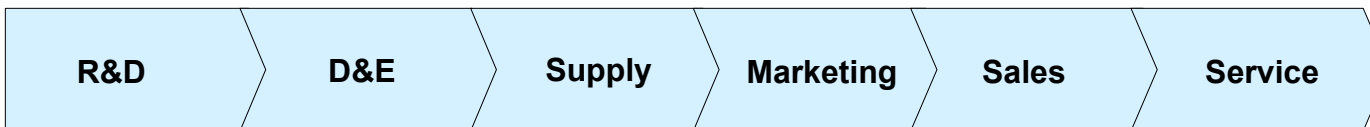
3. Competitive Strategy



Back to basics

Reengineering Business system

Business System



Key words:

Benchmarking best practices
Kaizen
Ishikawa Diagram
Just in Time/Kanban
Ringi approach

Environmental Impact on the Evolution of Strategic Management

1990-00

REVIVAL OR
CONTINUED
DECLINE

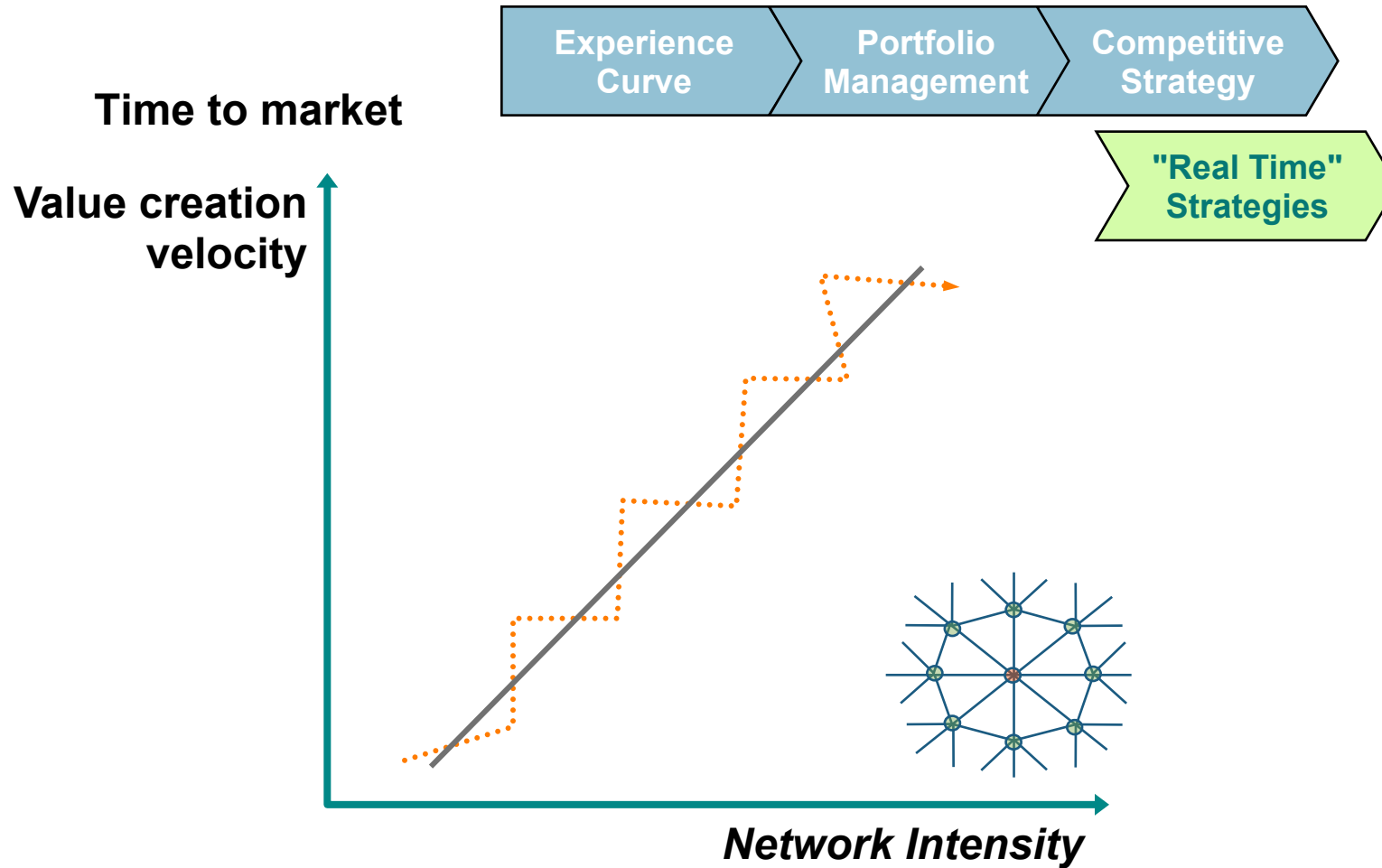
- Privatization & deregulation
- New world of Digitization

1990-00

Web based
strategy

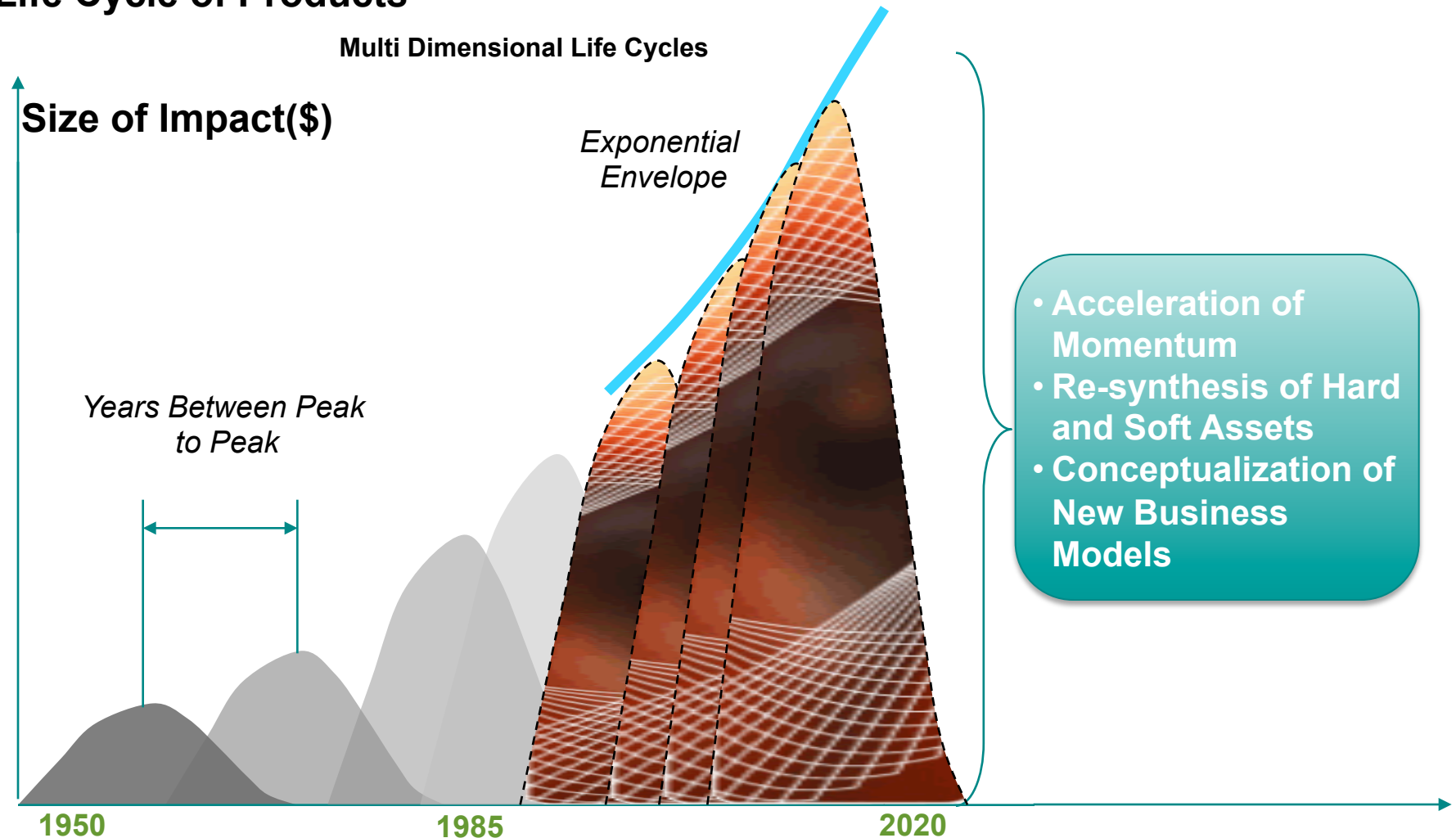
- Time to value
- Renewal of cultures

Nineties: Effect of digitization



“Exponentiality” (?) of Imagination Driven Opportunities

Life Cycle of Products



Present and the Next 10 years: “*Digital Open Economy*”

Social Intelligence

Innovation
Speed

Experience
Curve

Portfolio
Management

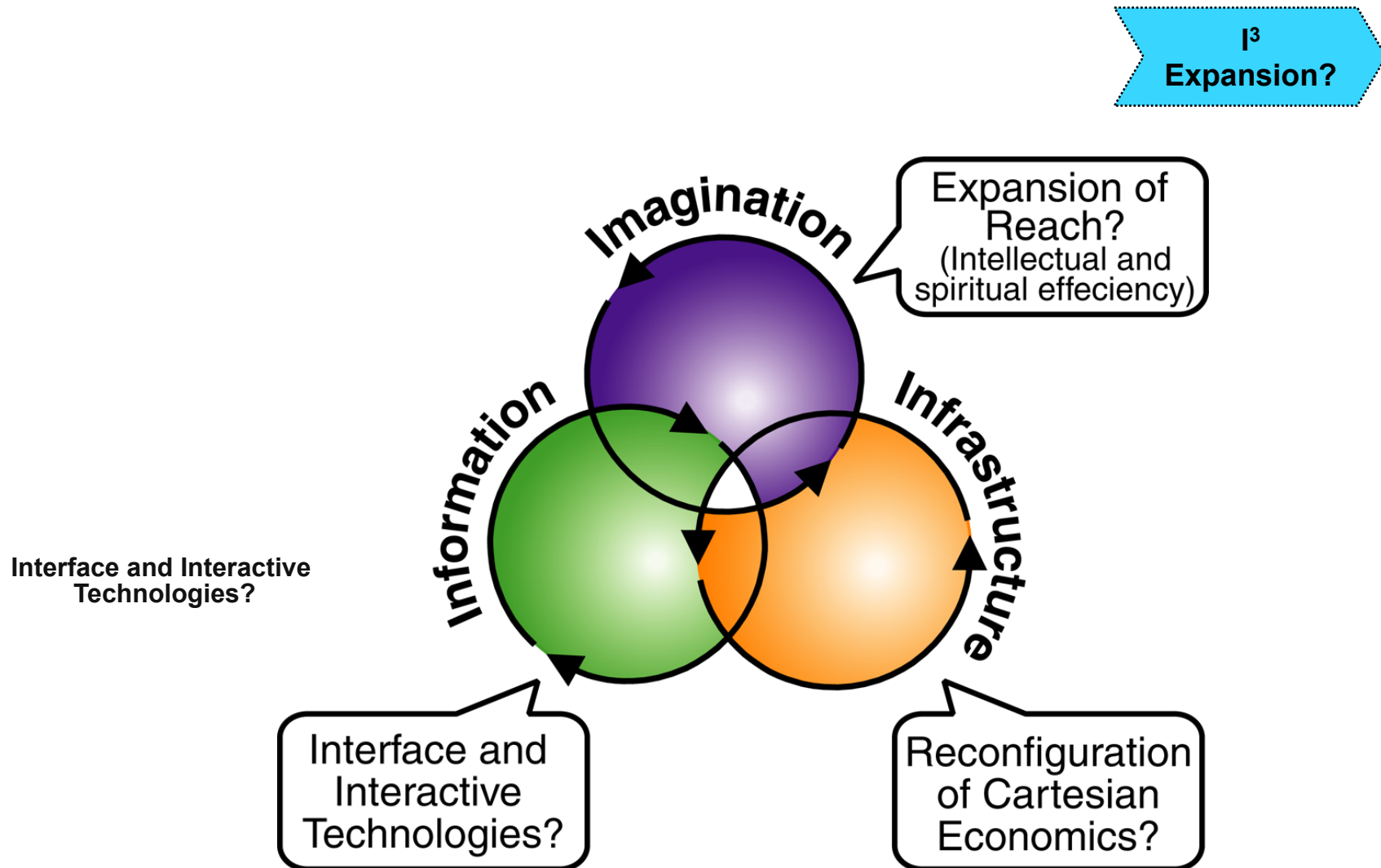
Competitive
Strategy

"Real Time"
Strategies

I^3
Expansion?

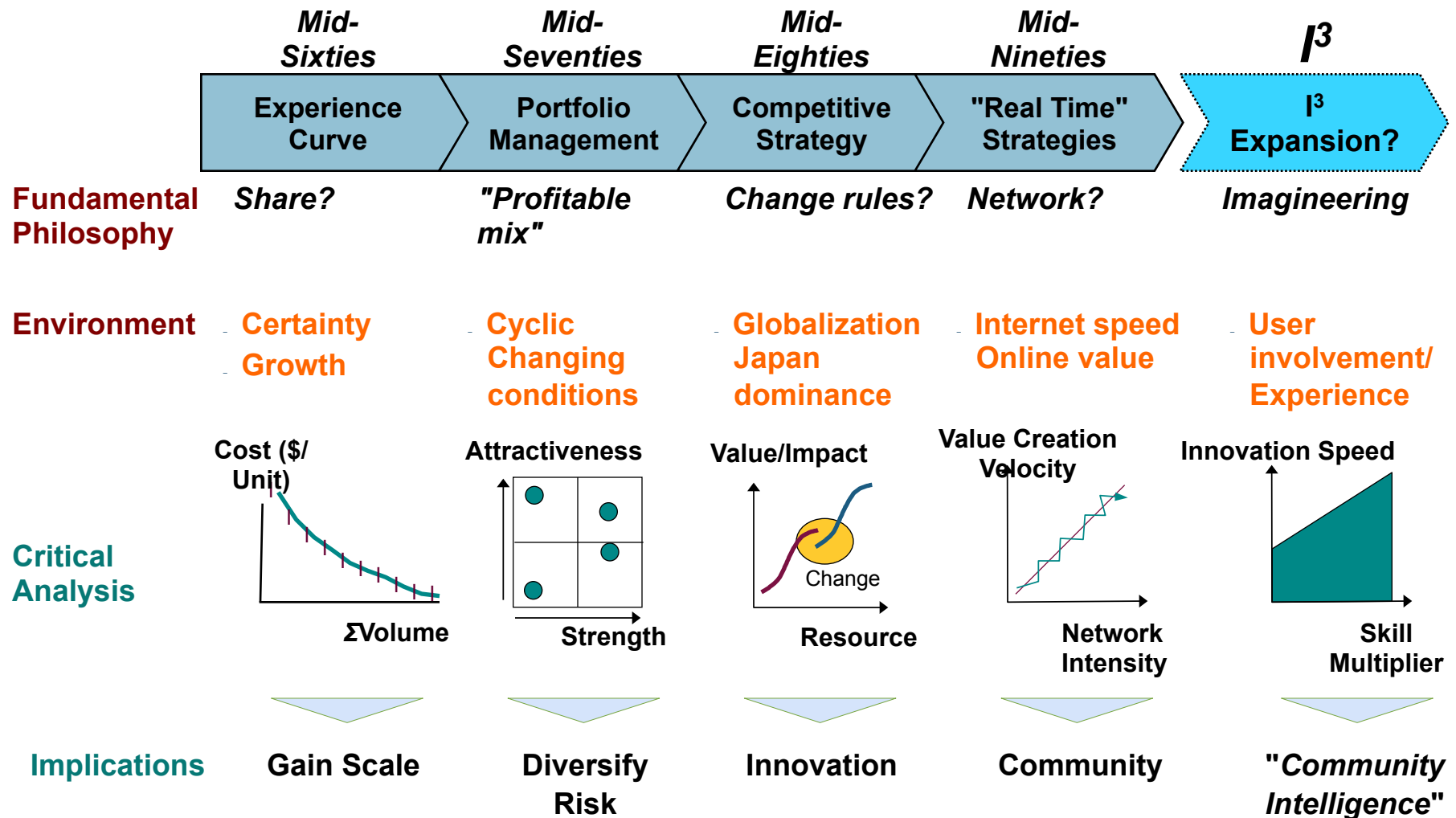
Skill Multiplier
(Convergence effect)

I³=IQ Model



Cultivating a Strategic Mind-Set

Milestones in Strategic Management (Since Early Sixties)



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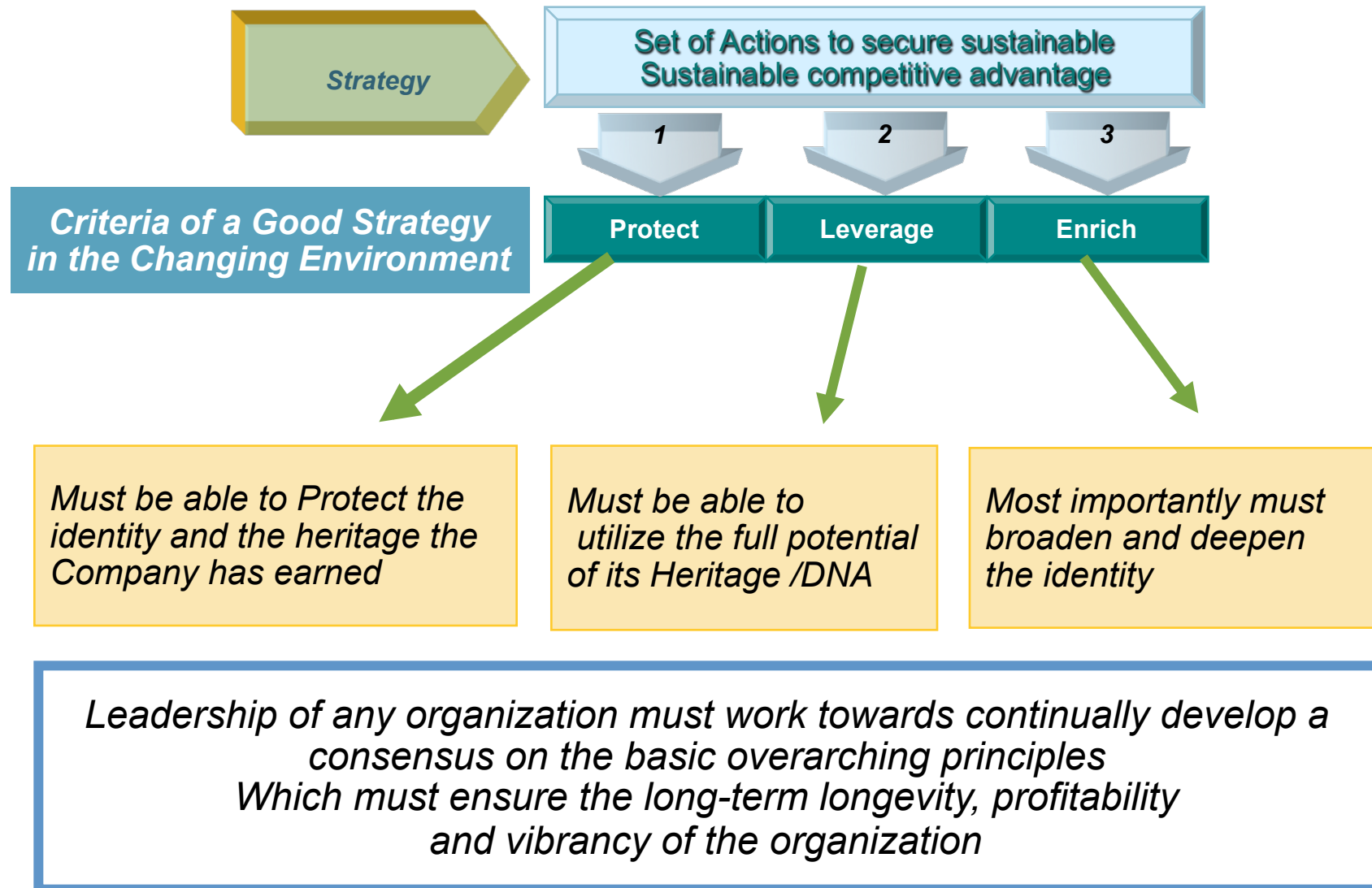
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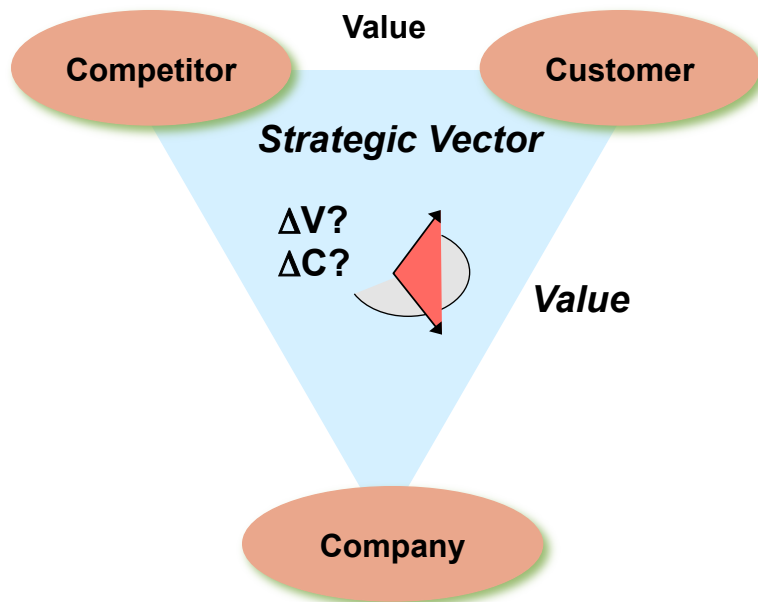
Strategic Degrees of Freedom & Strategic Game-board ?

Several Fundamental Clues in Structuring Strategic choices

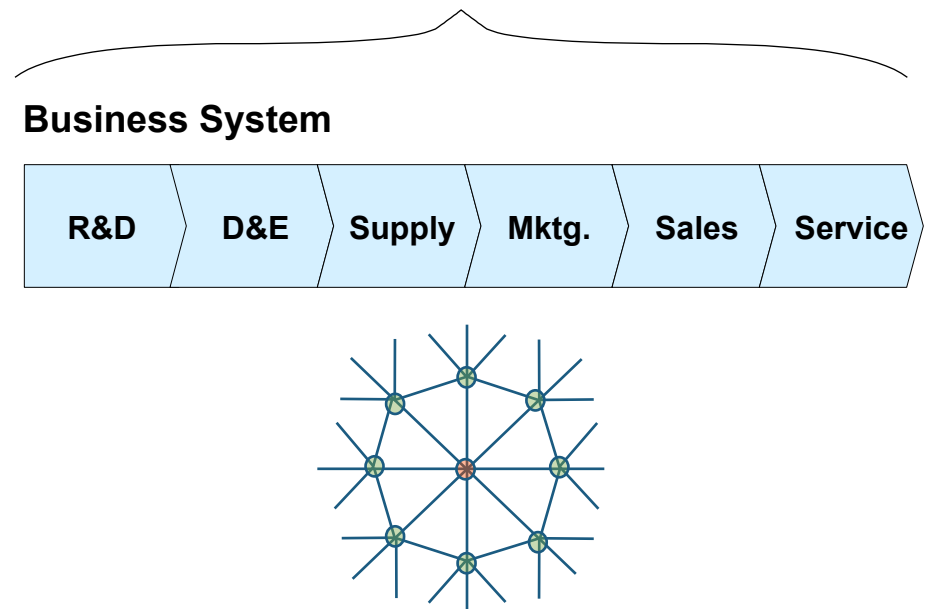


The Basic framework

Strategic Triangle

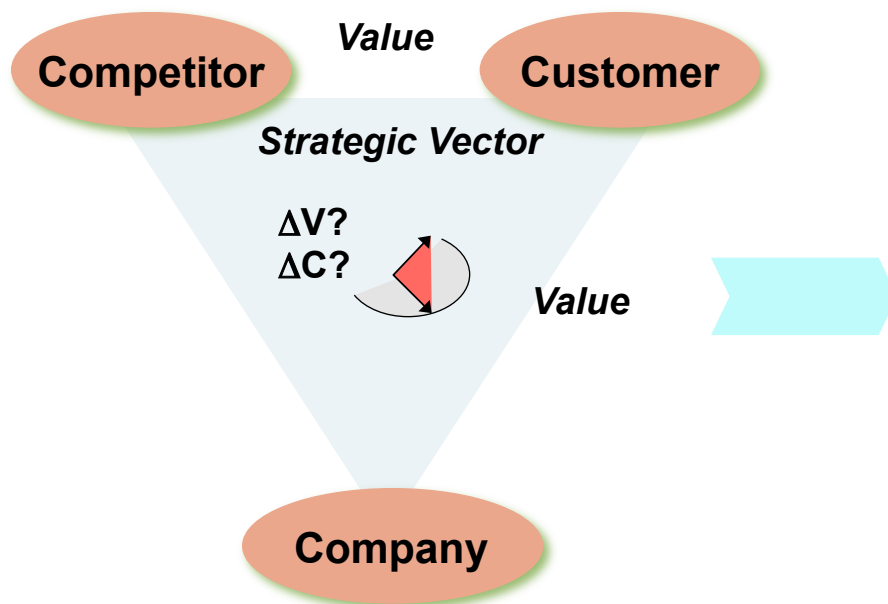


Value Delivery Process ...



Structuring a search process...

Strategic Triangle

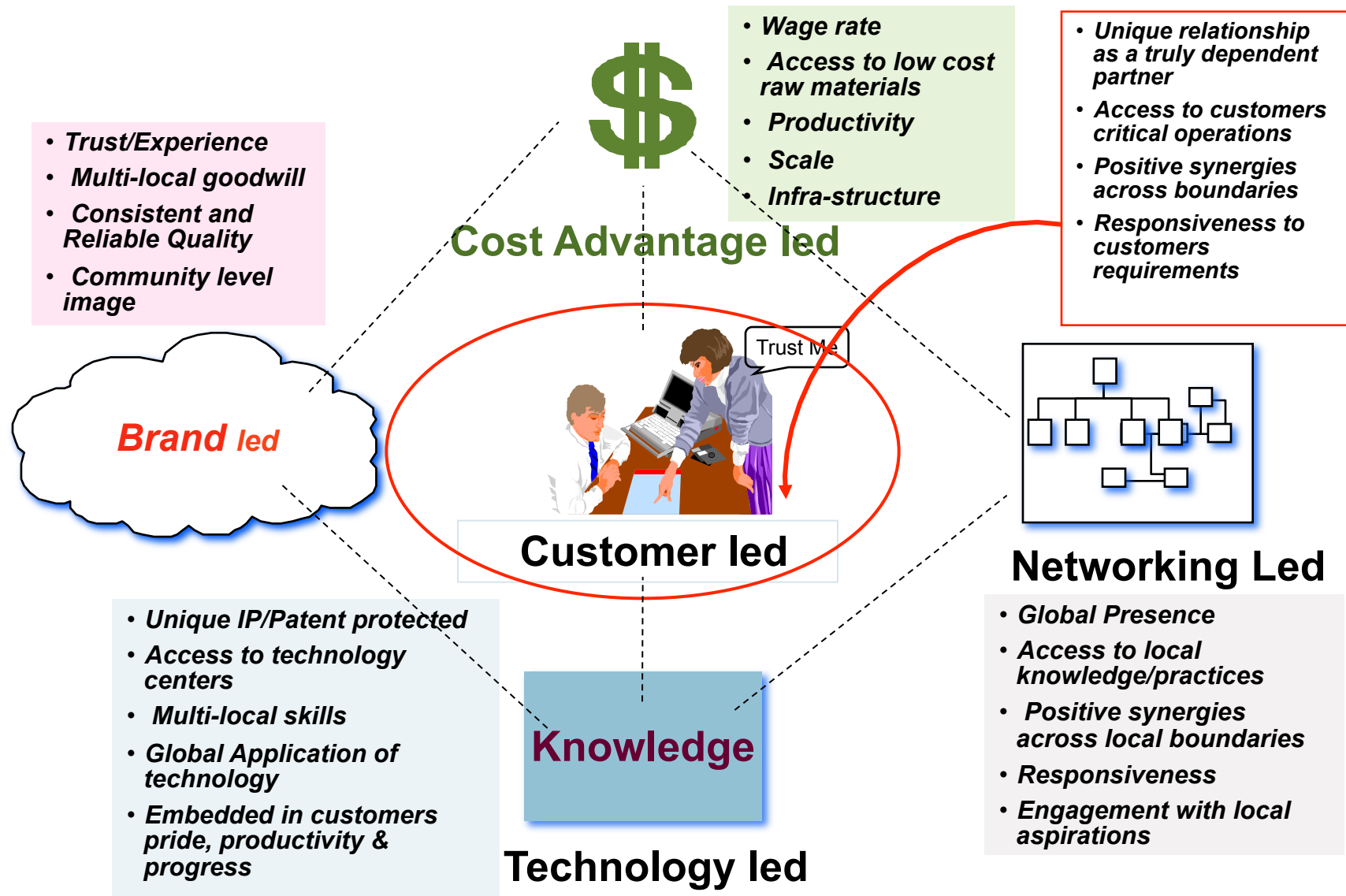


Sources of Competitive edge...

Sources of $\Delta V?$ $\Delta C?$

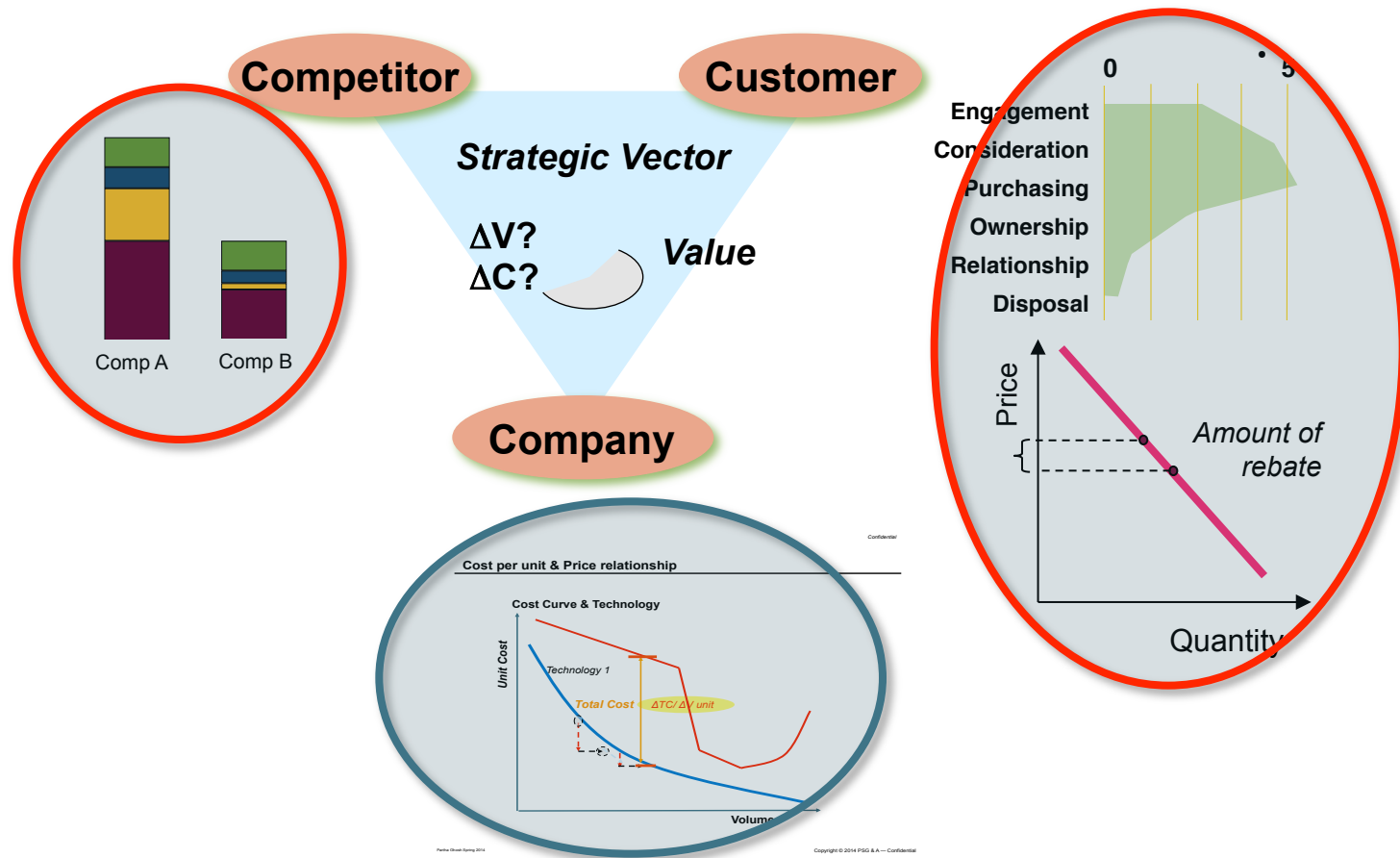
1. Cost differential
2. Brand
3. Technology/Knowledge
4. Network
5. Customer Relationship

Strategy normally evolves from how different factors are innovatively fused



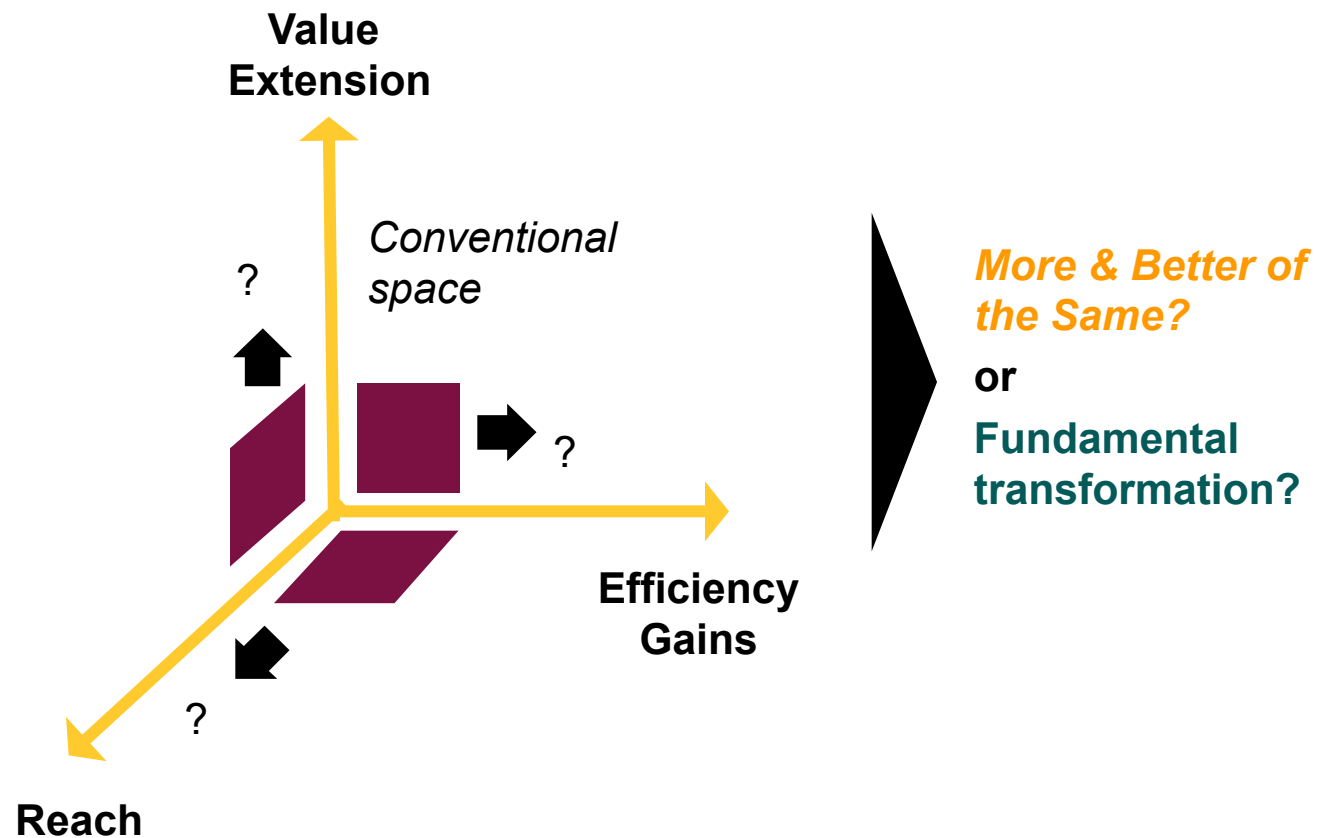
Analytics and Strategic Triangle

Strategic Triangle



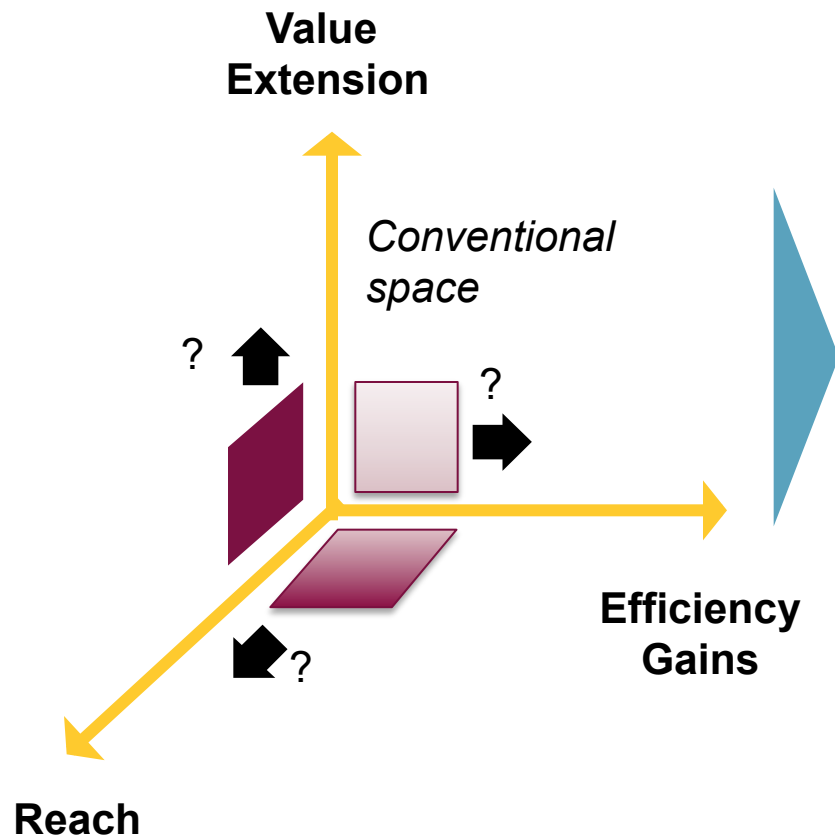
Strategy Design: Three Strategic Degrees of Freedom

Basic Strategic Framework Likely Strategic Plays



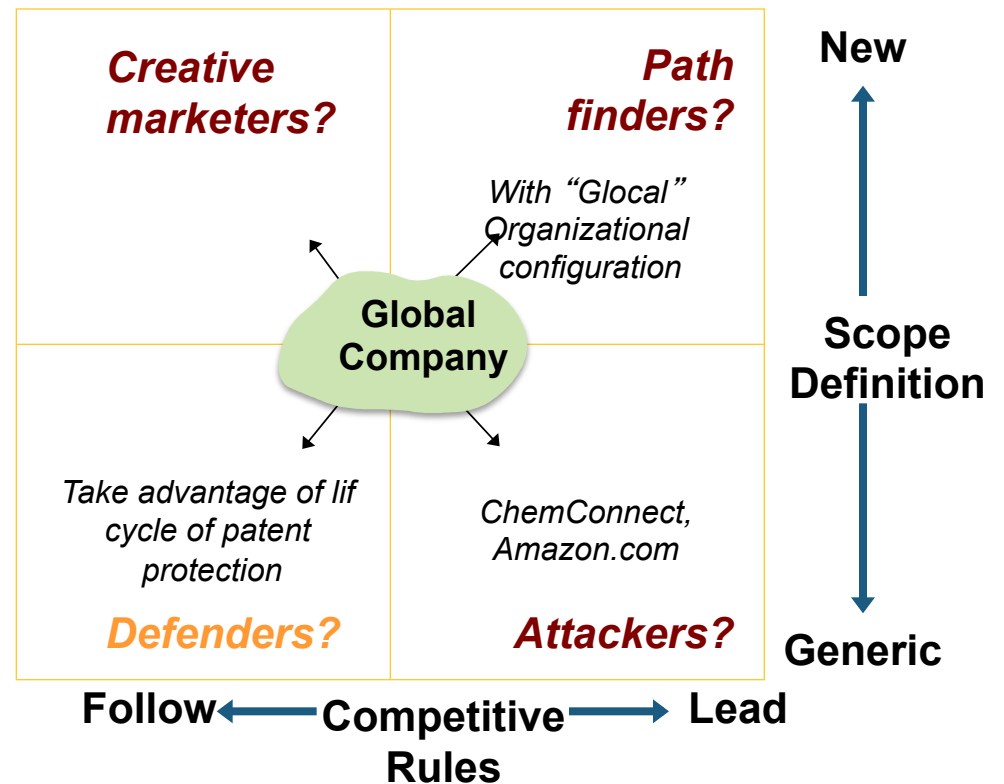
Strategic Options

Basic Strategic Framework Likely Strategic Plays



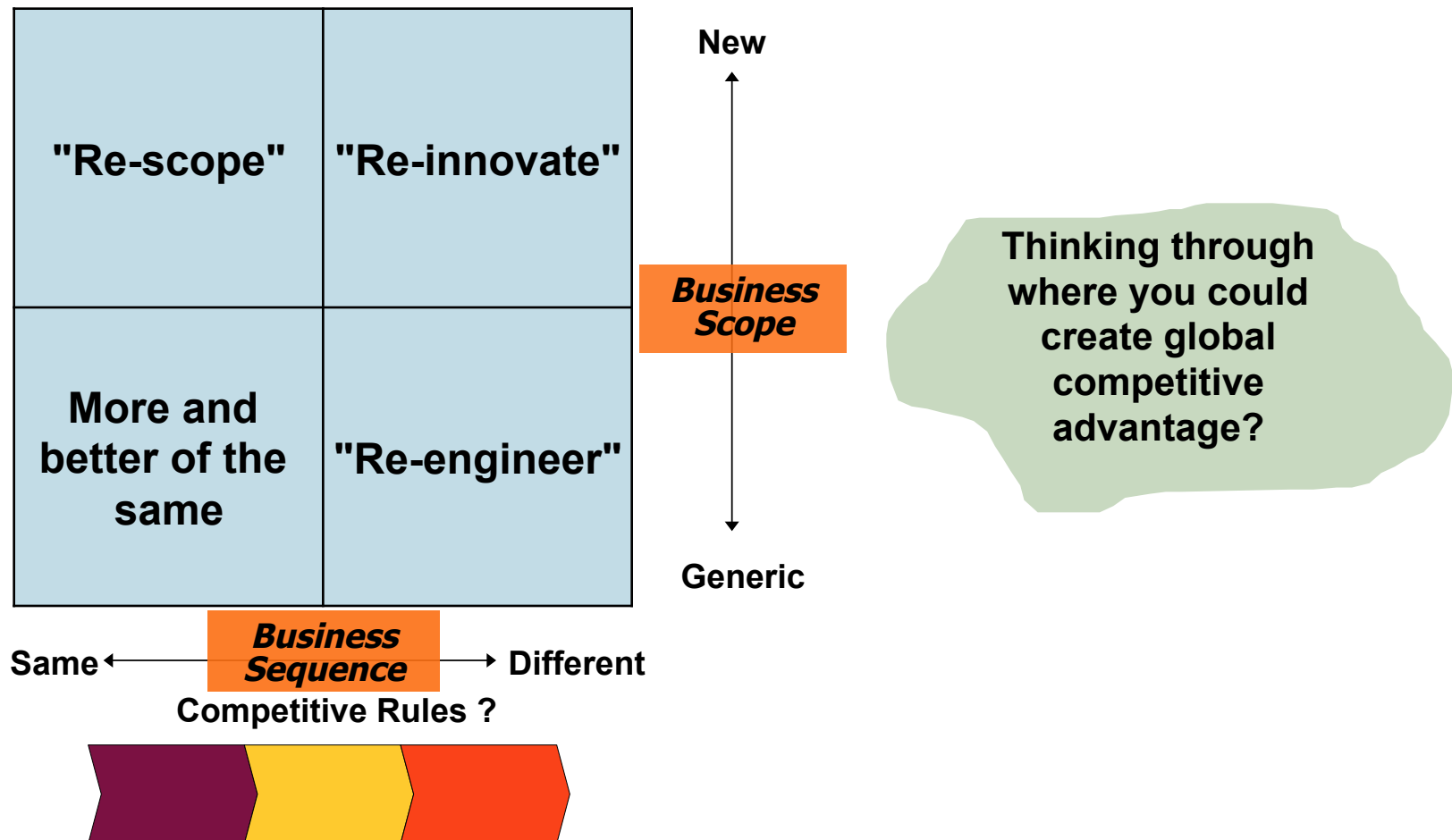
Strategic Gameboard Likely Strategic Plays

Illustrative



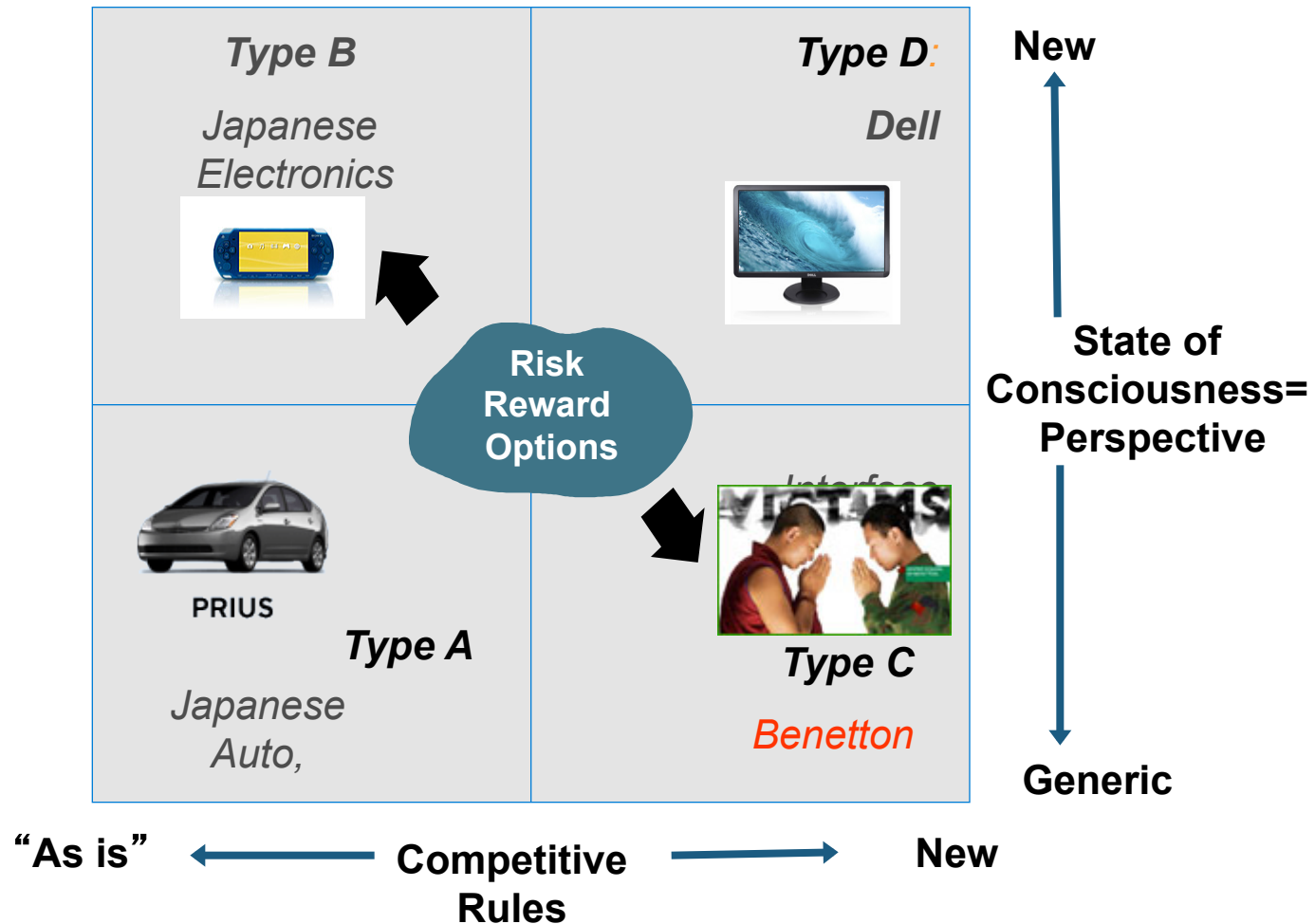
Strategic Plays

Strategic Game Board

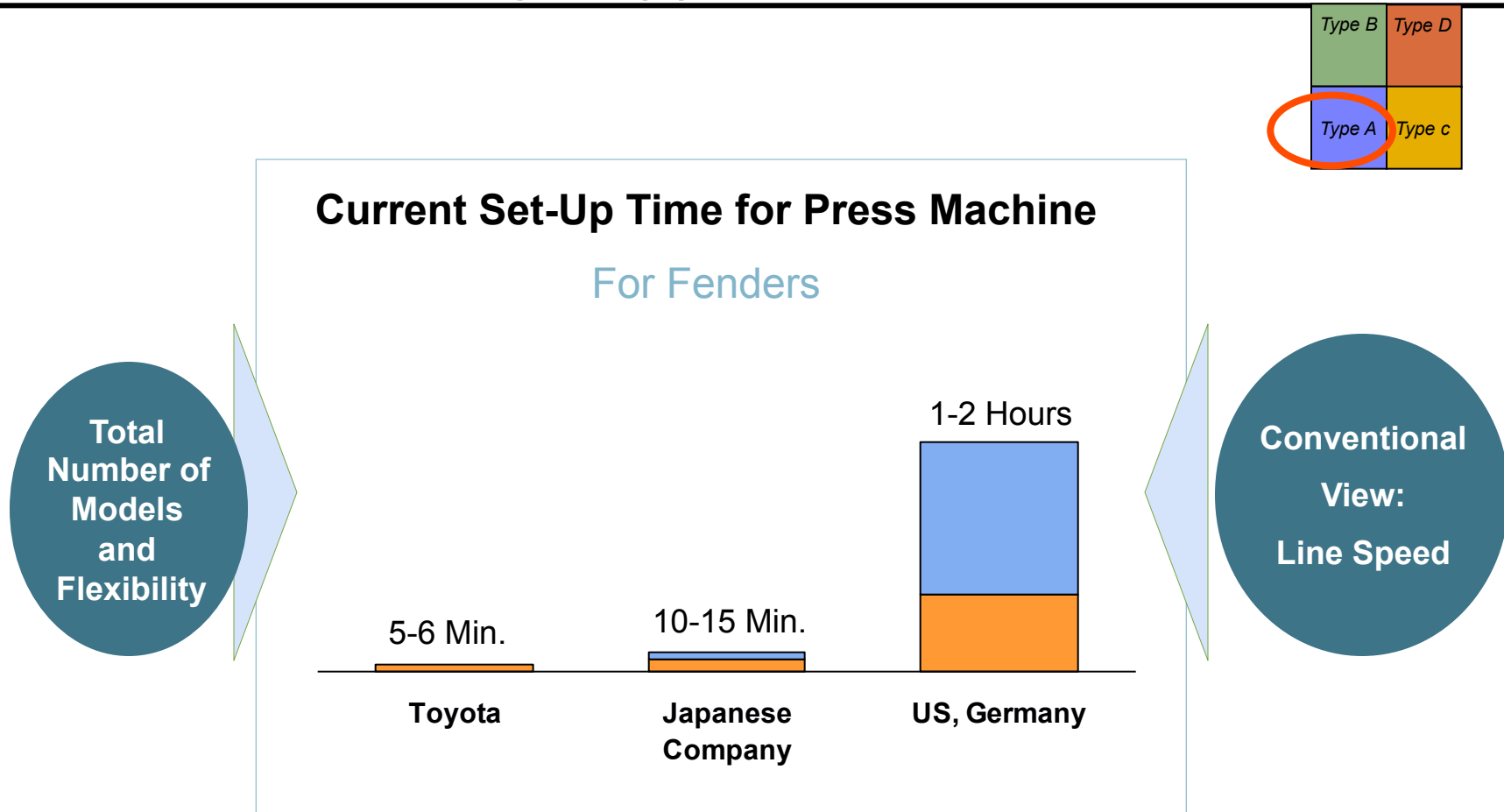


Strategic Framework: Global Cases

Strategic Game board:
Likely Strategic Plays

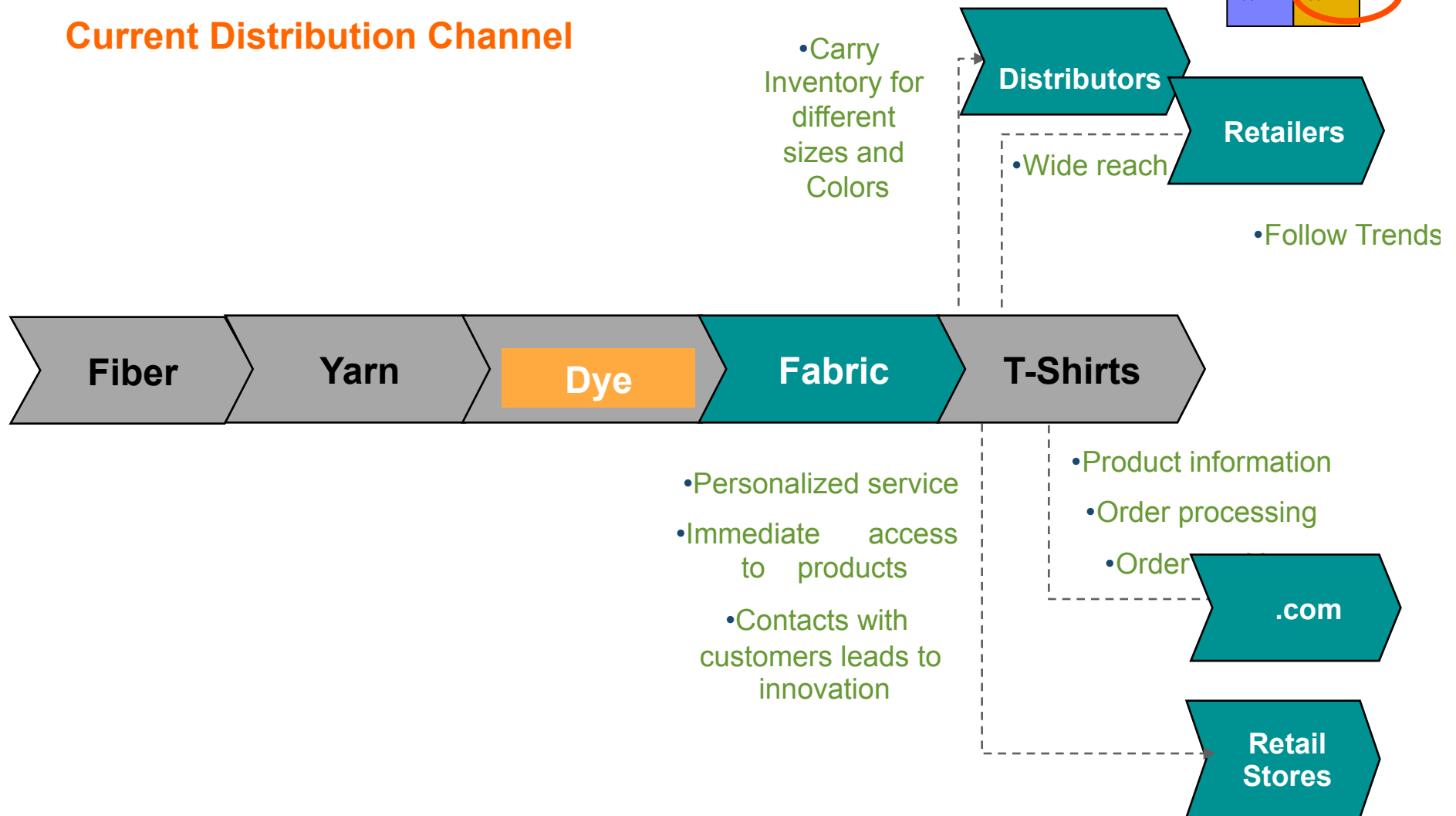


When Conditions Change ... (?).. Opportunities are created..



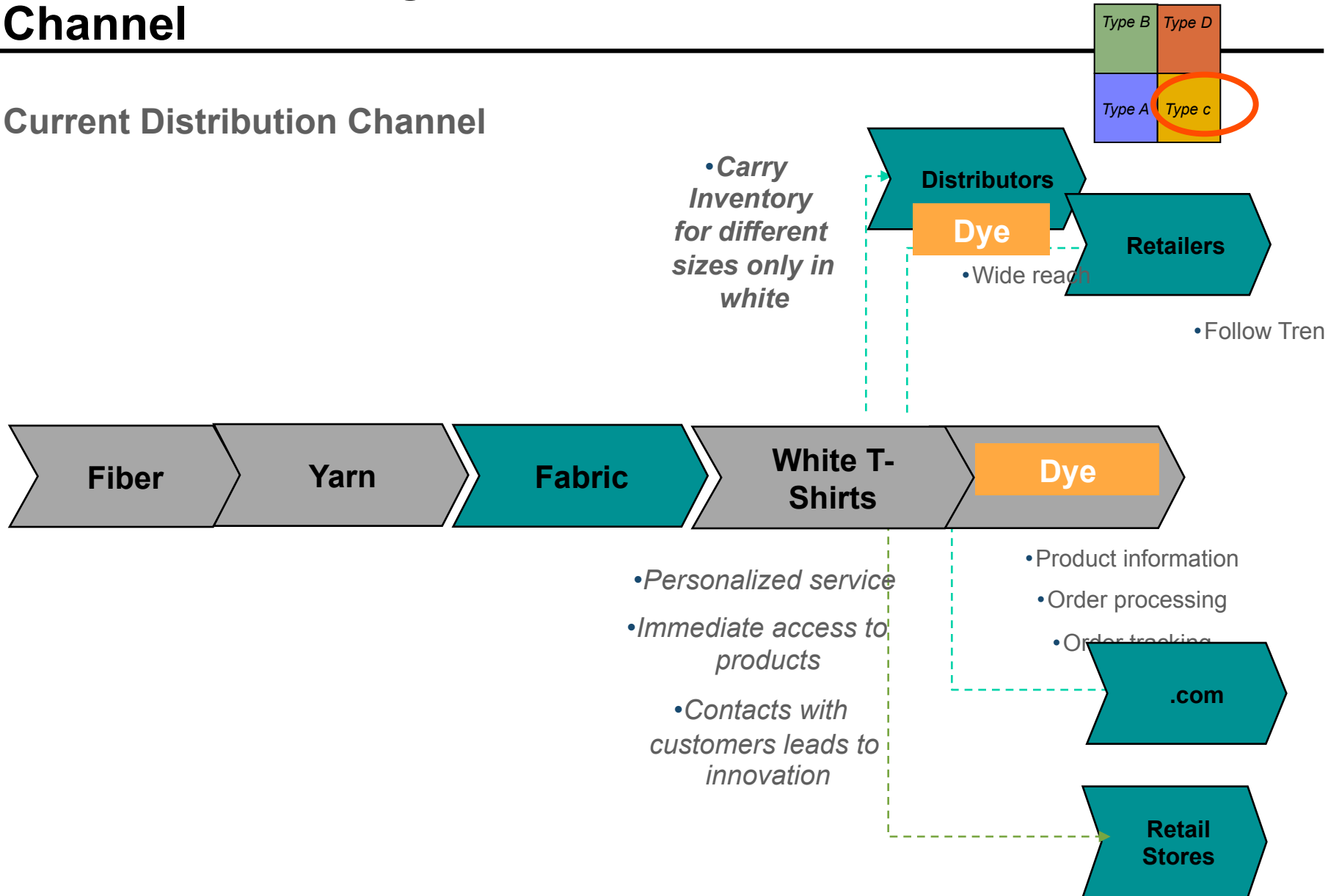
Sequencing Game: Typical Distribution Channel for T-Shirts

Current Distribution Channel

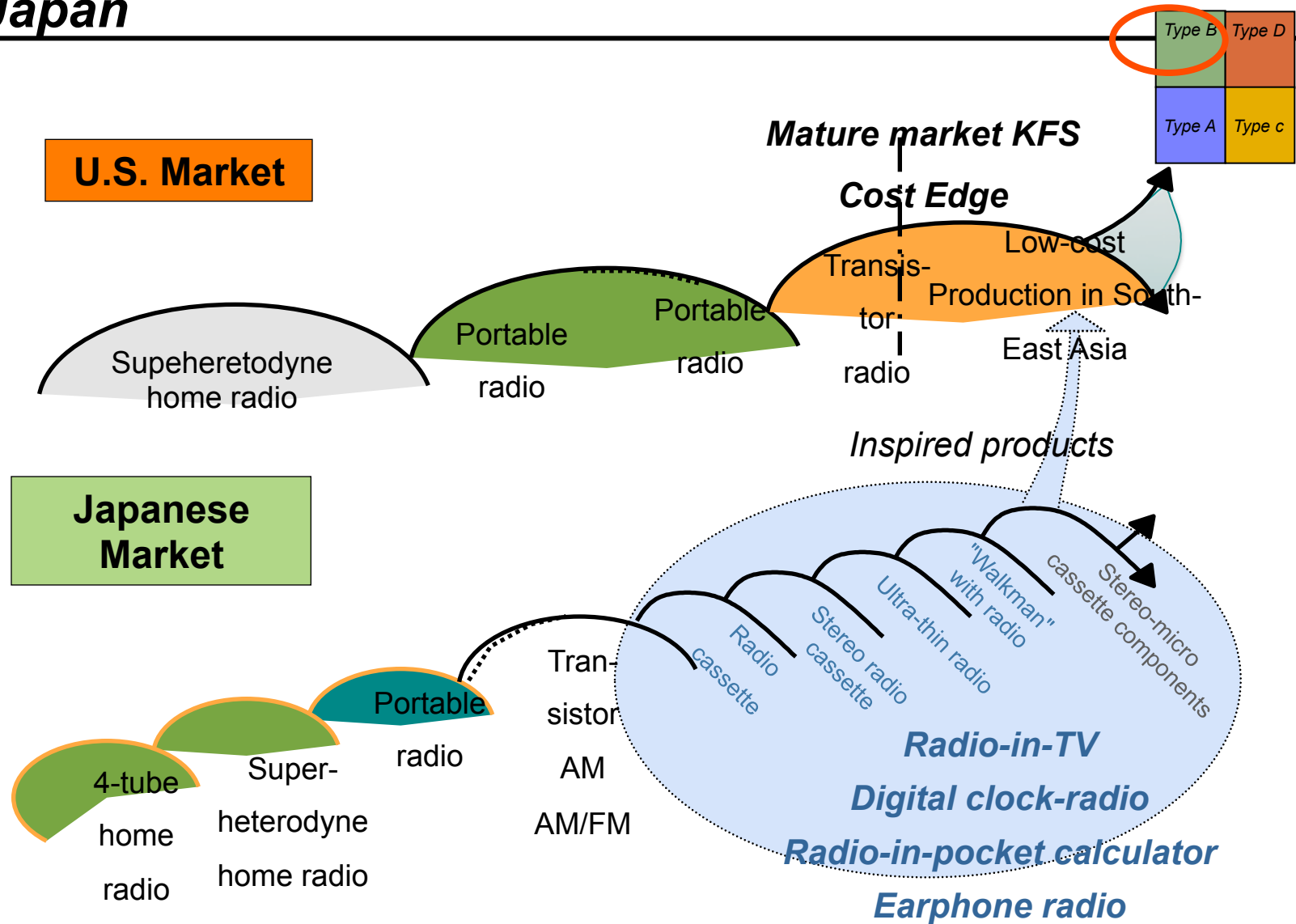


Benetton: Creating More Value out of the Distribution Channel

Current Distribution Channel



Product-Development History of Radio: *US versus Japan*



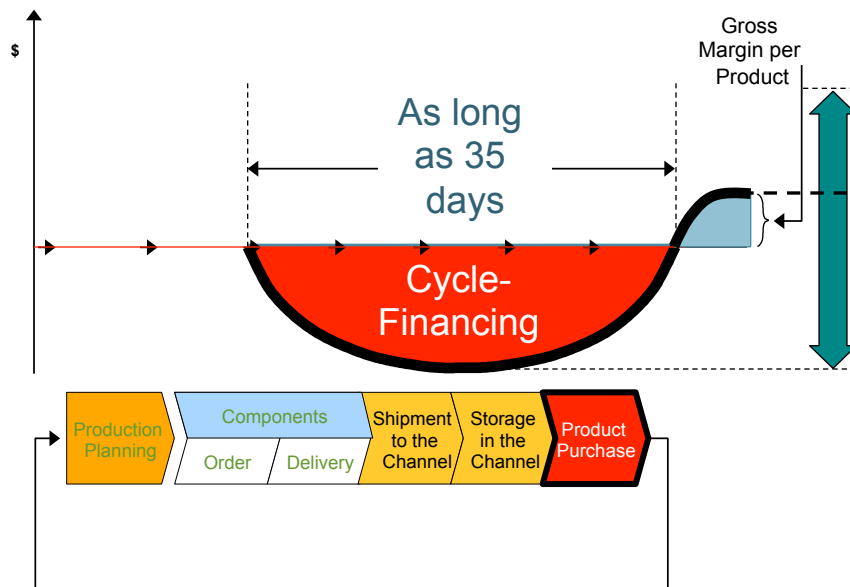
Network Manufacturing: Dells *Capital Efficiency Advantage*

The "new model" essentially accelerates physical flow of products while creating significant advantage in capital efficiency by moving from conventional "seller funded" to "buyer funded" working capital.

Illustrative

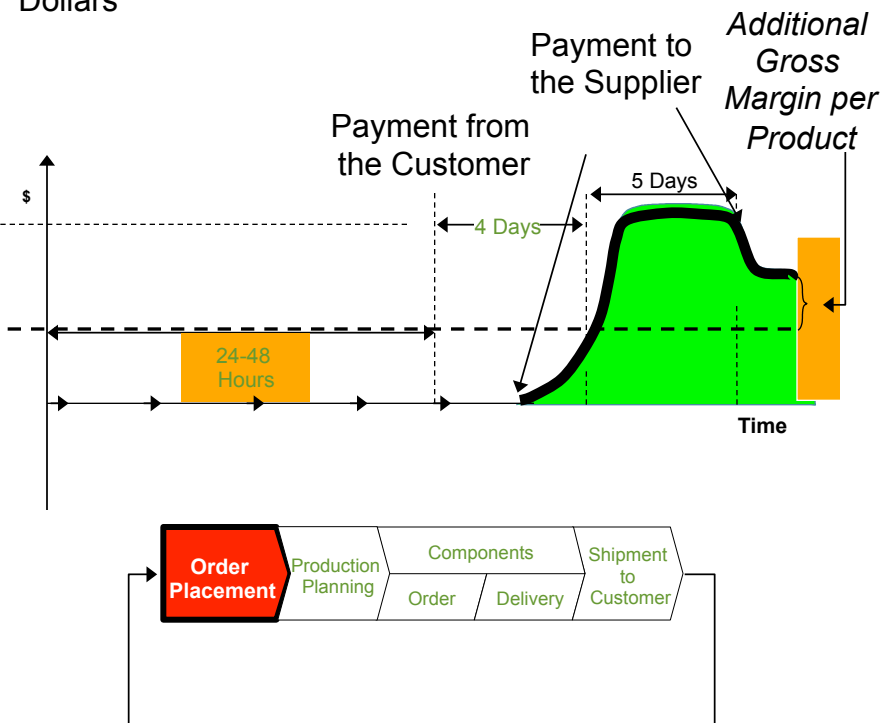
Conventional Model

Financial Flow/Production Cycle
Dollars



Direct/Internet Model

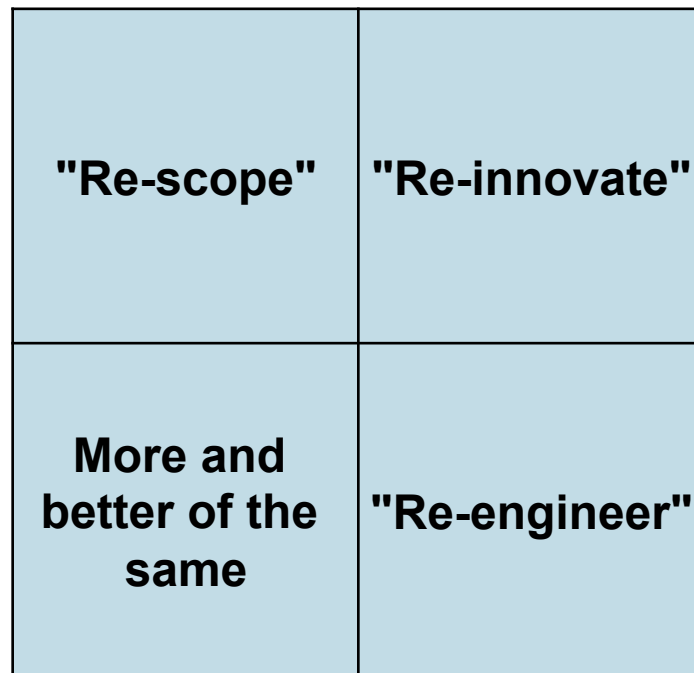
Financial Flow/Production Cycle
Dollars



Source: Company Information; Harvard Business Review; Journal of Interactive Marketing PSG & A analysis

Finally strategic plays result from creative combination of “5 sources of competitive edge”

Strategic Game Board



Same ← **Business Sequence** → Different

Competitive Rules ?



Sources of Competitive edge...

Sources of $\Delta V? \Delta C?$

1. Cost differential
2. Brand
3. Technology/Knowledge
4. Network
5. Customer Relationship

New
↑
Business Scope
↓
Generic

Bridging P & L with Strategic game-board along multiple periods

Strategic & Operational Levers of Corporate Finance

