

**ORCHESTRATING DYNAMIC
CAPABILITIES TO WIN UNDER DEEP
UNCERTAINTY:
The Importance of Urgency, Agility, and
Leadership (with Special Reference to Autos)**

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The fundamental question in Strategic Management: How do firms build long-run competitive advantage?

- Limited ability of a firm to sustain long-term robustness (lessons from history)
 - Competitive advantage is often fleeting
 - Few firms change and thrive long-term: GE, IBM, 3M, Apple, Xerox, Kodak

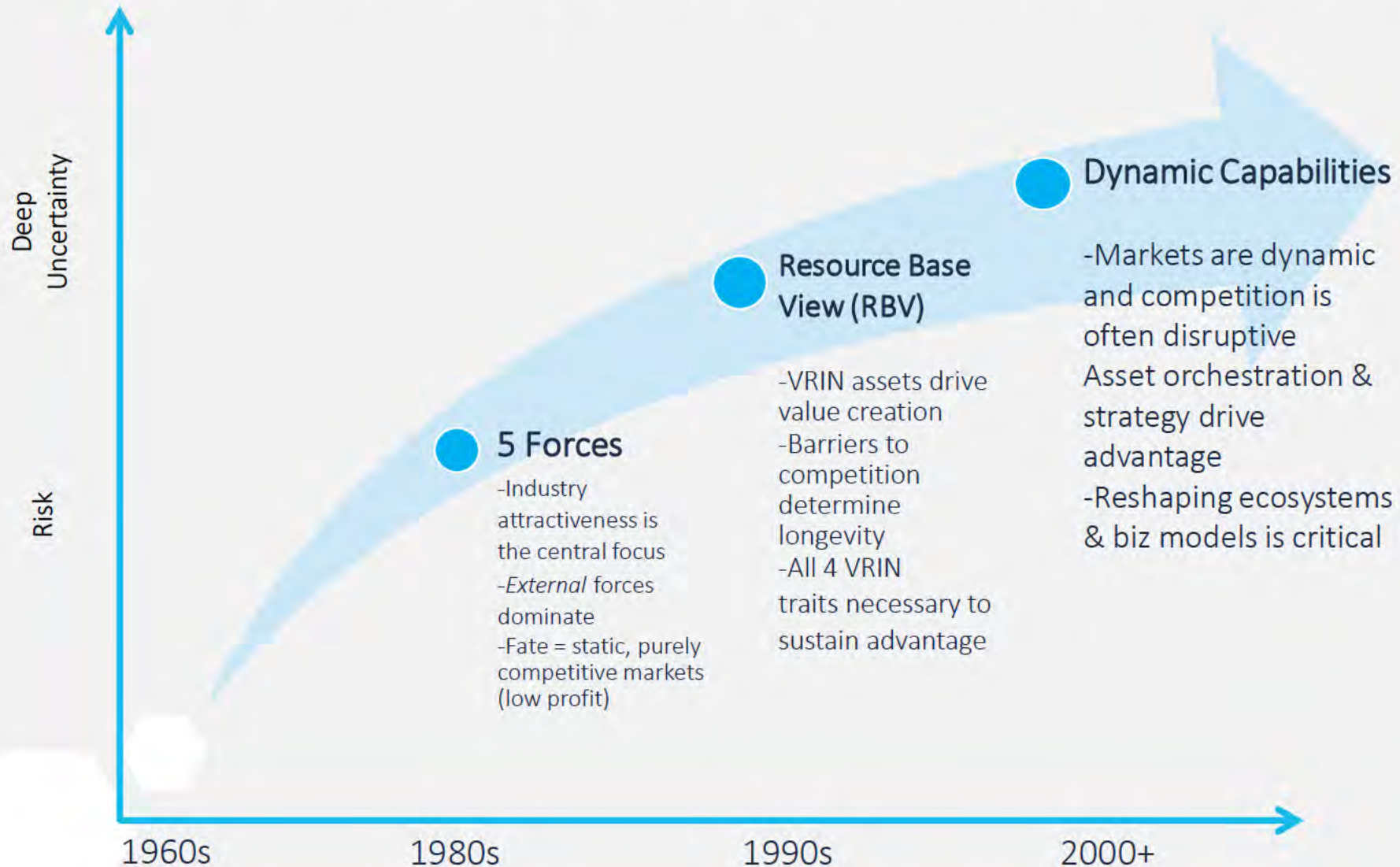


DEFINITION OF DYNAMIC CAPABILITIES: “THE ABILITY OF AN ORGANIZATION AND ITS MANAGEMENT TO INTEGRATE, BUILD, AND RECONFIGURE INTERNAL AND EXTERNAL COMPETENCIES TO ADDRESS RAPIDLY CHANGING ENVIRONMENTS.”*

- Dynamic Capabilities is critical to long-term robustness of firms facing deep uncertainty.
- Hallmarks of dynamic capabilities:
 - Strong leadership
 - Sensing & Sensemaking
 - Asset Orchestration
 - Agility
 - Urgency
- Not about efficiency; it’s all about effectiveness, adaptability, and entrepreneurship

*Teece, et. al., “Dynamic Capabilities and Strategic Management,” *Strategic Management Journal* 18:7, p. 516 (August 1997).

The evolution of strategic management & “research-based” thinking

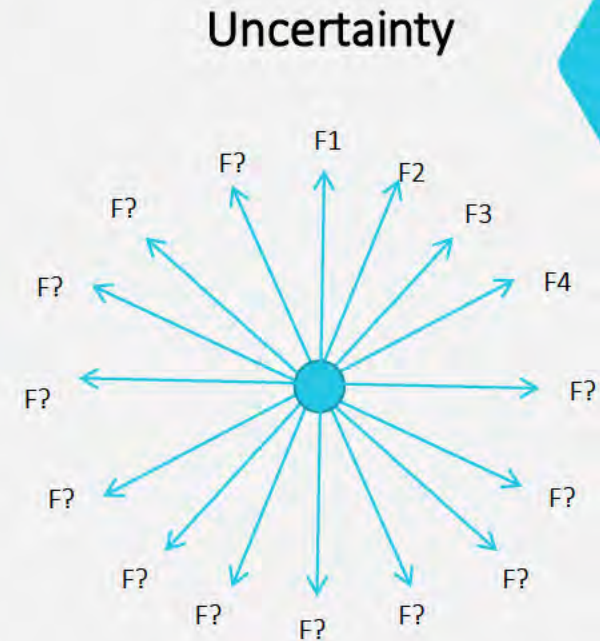


Strategic Management in a VUCA world requires differentiating between risk & uncertainty



Alternative futures with known probabilities & known conditional probabilities

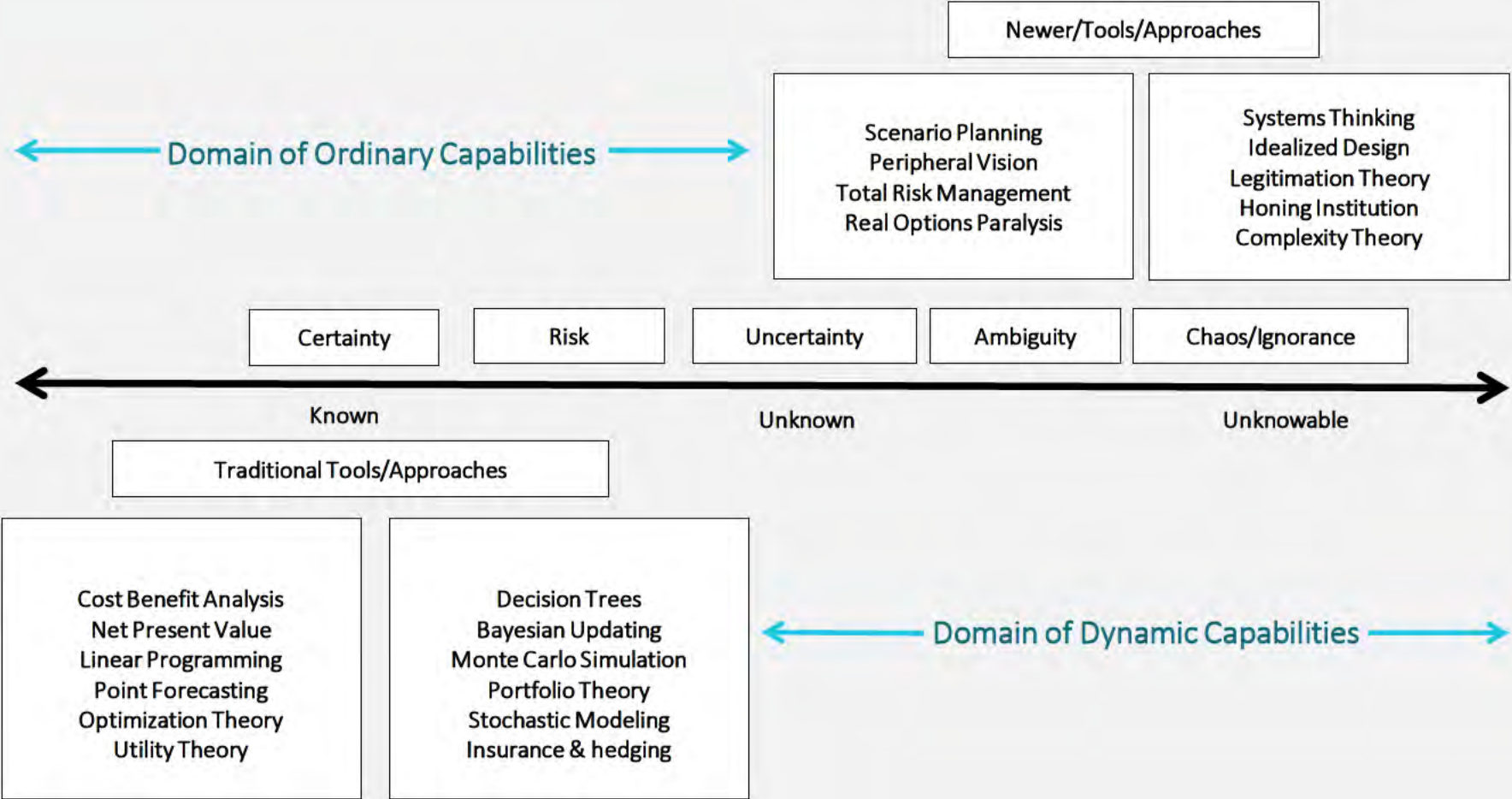
V – Volatile (oil prices)
U – Uncertain
C – Complex
A – Ambiguous Policies (ex., auto's, retail, financial services)
What's not VUCA?



Unknown Probabilities and Undefined Futures

F 1-4 are possible futures
F? are undefined futures

Capabilities and tools required for stable & uncertain environments are different



“Ordinary” (or normal) Capabilities: necessary, but may not be sufficient

- Ordinary capabilities reflect technical efficiency in Operations, administration and governance
 - Routines/standard operating procedures are key to ordinary capabilities
 - “Best practices” logic connected to strong ordinary capabilities
 - Admittedly, not everyone gets the simple stuff right
- Adoption of ordinary capabilities by rivals is enabled by:
 - More information in the public domain
 - Better business school training
 - Management consultants and footloose employees

Getting ordinary capabilities right is a necessary but not sufficient condition for success in a VUCA world where best practices are rapidly disseminated and emulated.



The prioritization of ordinary capabilities can weaken dynamic capabilities & vice-versa

Benner and Tushman (2003) stated the tradeoff/risk as follows:

“Activities focused on measurable efficiency and variance reduction drive out variance-increasing activities and, thus, affect an organization's ability to innovate and adapt outside of existing trajectories ... Core capabilities may become core rigidities” (Benner and Tushman, 2003: 242)



Dynamic Capabilities vs Efficiency Choices at Pepsi

“I had a choice. I could have gone pedal to the metal, **stripped out costs**, delivered strong profit for a few years, and then said adios. But that **wouldn't** have yielded long term success. So I articulated a strategy to the board focusing on the portfolio we needed to build, the muscles we needed to **strengthen, the capabilities to develop**...we started to implement that strategy, and we have achieved great shareholder value while strengthening the company for the long term.”*



**Indra Nooyi and Adi Ignatius, "How Indra Nooyi Turned Design Thinking Into Strategy: An Interview with PepsiCo's CEO," Harvard Business Review (September 2015).*

W. Edwards Deming, the father of quality and metrics, was aware of this from the outset:

*“He who would run his business with visible figures alone will soon have neither a business nor visible figures to work with.”**



William Edwards Deming

*See "Out of The Crisis," by W. Edwards Deming

The problem:

“The Red Queen has to run faster and faster in order to keep still where she is.”



Lewis Carroll, “Through the Looking Glass”

- Firms learn and sometimes advance, but others copy/imitate/emulate and take advantage that way
- Learning does not lead to a competitive advantage...imitation is the reason advantage (based on ordinary capabilities) is repeatedly lost.



Famous strategists agree that ordinary capabilities matter less

“Numbers alone confer no advantage.”

– Sun Tzu, 5th Century B.C. Chinese strategist

“It does not matter who is stronger....”

– Miyamoto Musashi, 17th Century Samurai warrior-philosopher

HAVING LARGER FORCES HELPS BUT IT IS NOT DECISIVE.
STRATEGY AND CULTURE (MORALE) MATTERS.



From Ordinary to Dynamic Capabilities in the US Army



“We had a culture in our forces, of excellence. It was how good can I be at my task?” ... “But that’s not as important as how well those pieces mesh together.”

“**THE REAL ART** is [in] cooperating with civilian agencies, it’s cooperating with conventional forces, **IT’S TYING THE PIECES TOGETHER.** That’s the art of war, and **THAT’S THE HARD PART.**”

-Quotes from General Stanley McChrystal, Foreign Affairs (March/April 2013)

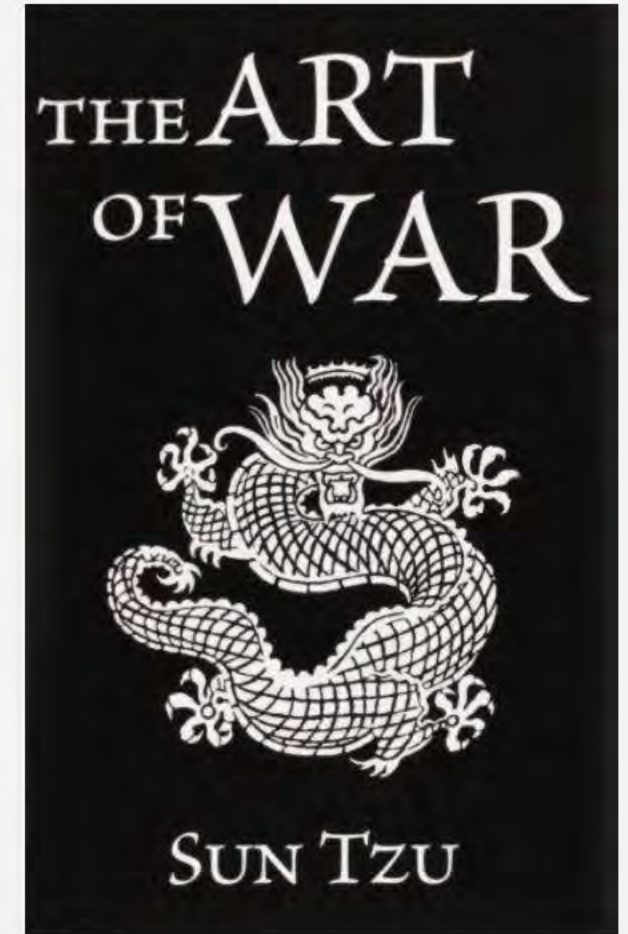
Sun Tzu emphasized the interplay between cheng and ch'i

Cheng – Ordinary (orthodox) maneuvers

- Forces lined up for battle with chariots on the wings (in full view of the enemy)
- No surprises
- The enemy can assess/measure strength

Ch'i – Dynamic (unorthodox) maneuvers

- Favors unanticipated surprise elements
- Supports “a charge out of nowhere to strike the rear”
- Lawrence of Arabia was a master at ch'i – he articulated 15 (VUCA-based) principles of guerrilla warfare (#15: make a virtue of the individuality, irregularity, and unpredictability of guerrillas.)



Developing dynamic capabilities – through a sense of ch’i

Musashi and Swordmanship (The Book of Five Rings)

Ordinary Capabilities: Do basic exercises until the weapons become an extension of one’s own arm – technical excellence (learning to do the expected well) – but this will only allow you to win 50% of the time against an equally proficient opponent.

Dynamic Capabilities: Requires a different type of training to generate ch’i and use it with cheng instinctively.

Exploiting the magical element in ch’i is what gives focus and direction and competitive advantage.



In business, engage with cheng (ordinary) but win with ch'i (dynamic)

Japanese entry and eventual success in the
US car market in the 70s and 80s

- Oil shock of the 73/74 allowed fuel efficient Japanese cars to get a toe hold in the US market.
- But when the prices settled down, the Japanese imports did not fade away. They had unsurpassed quality, reliability, fit and finish, and exciting design. (e.g., Datsun [Nissan] 280z)



Dynamic Capabilities in a business context can be thought of as falling into three categories:



Sensing and Sensemaking

The ability to foresee future opportunities and threats...what Jack Welch (former CEO of GE) once referred to as the ability to “see around corners.”



Jack Welch



“Sensing activities are the firm’s antennae, amplifying weak signals into data streams that are collated for diagnosing, interpreting and creating a variety of scenarios – notably including the exploration of how a restructured eco-system could increase a competitive advantage.”*

*Developing Organizational Resilience: A Dynamic Model to Sustain Competitive Advantage,” Teece, Raspin, and Cox. 2018

Seizing/Asset Orchestration is key:



Source: Krupp, Steven and Paul J.H. Schoemaker, *Winning the Long Game: How Strategic Leaders Shape the Future*, Public Affairs/Perseus, 2014.

Leadership is very different from Managing – it usually requires making bold investments and coordinating activity inside and outside the enterprise.

Tom Watson at IBM committed the financial capital and technical resources to develop and deploy the IBM 360 system while competitors acted cautiously.



Asset orchestration is central to Apple's Dynamic Capabilities



“Apple still has strong growth opportunities because of its ability to work simultaneously on hardware, software and services... Apple has the ability to innovate in all three of these spheres and create magic... **This isn't something you can just write a check for. This is something you build over decades.**”

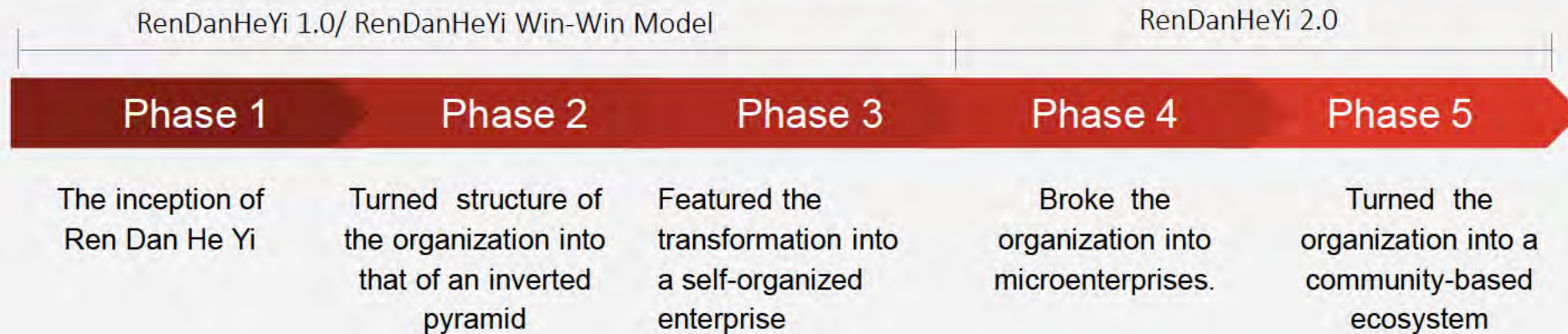
-Tim Cook, Apple CEO (Taipei Times, February 2013)



Transformation must occur too

E.g. Haier:

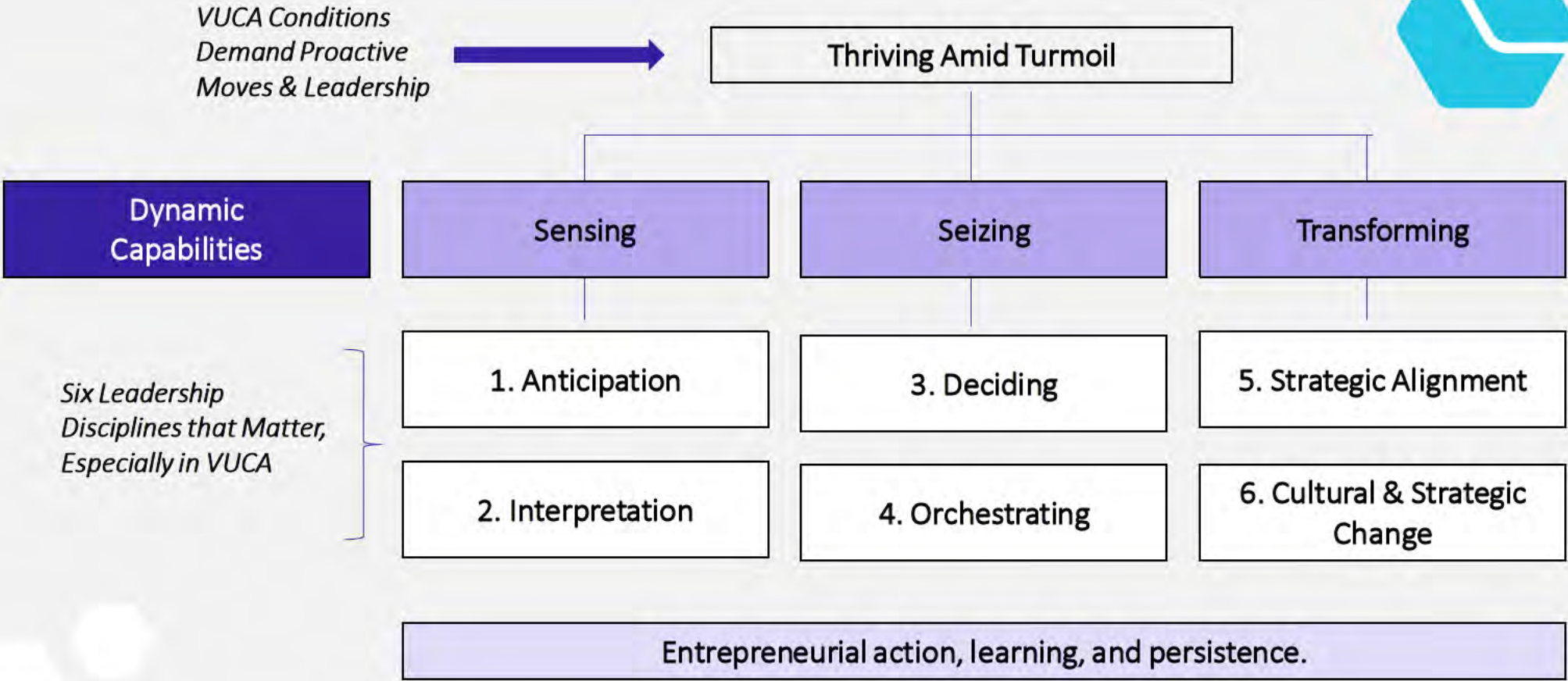
- Haier has gone through **multiple transformations**
- At its core, Haier has transformed from “an executive culture to an **entrepreneurial culture.**”



Strategy, urgency and learning

Interview with Zhang Ruimin, June 19, 2017, MIT Sloan Management Review with Paul Michelman

... six key leadership disciplines in a VUCA world undergird excellence in sensing, seizing and transforming



Innovation, Dynamic Capabilities, and Leadership, Schoemaker, Heaton and Teece, California Management Review, 2018



Strategy & Urgency

In corporate Japan, urgency/time has been recognized as fundamental to strategy

Yamaha-Honda motorcycle “war” of the 70s

- Honda introduced 113 new models to replace the what it had
- Honda shaped the market by experimenting with new models
- Yamaha could only introduce 37, which were drab in comparison

Fast decision cycle time is an important dynamic capability



See G. Stalk, "Time – the next source of competitive advantage," Harvard Business Review, 1988

... General de Gaulle recognized urgency/agility

The blitzkrieg, and British withdrawal at Dunkirk (1940)

*"French counter-movements were repeatedly thrown out of gear because their **timing was too slow to catch up with the changing situation** ... The French, trained in the slow-motion methods of World War I, were mentally unfit to cope with the new tempo, and it caused a spreading paralysis among them."* *

**Captain B.H. Liddell Hart, Strategy (2016), Tannenber Publishing*



... General de Gaulle recognized urgency/agility



“You have to be fast on your feet and adaptive or else a strategy is useless.”

Charles de Gaulle, French general and statesman



Dynamic capabilities is about fundamental agility – the ability to redeploy assets smoothly, (strategically), and quickly

- Agility is NOT the ability to do commonplace things faster and cheaper
- It is NOT the reduction in the time required to reach best practices (which are rooted in efficiency initiatives like Six Sigma or Value Engineering)
- It's the ability to do things fast but also SMART (i.e., strategically)

Entrepreneurial agility is management's ability to redeploy physical, financial and human assets into new and better commercial avenues.



Failures in sensing can be disastrous

The Battle of Sedan (1940): The French & British Should Have Won But Didn't

- French tanks were state of the art
- French had great advantage in artillery
- The allies knew that an attack was coming
- Germany had only a limited number of modern tanks (Treaty of Versailles limitations had been binding)

German
boats
crossing
Meuse River



Reasons for defeat:

- Allied failure in sensing – didn't know what, when and where on the battlefield
- Panic and confusion followed
- French retreat (55th Infantry Division) from the West Bank of the Meuse River became a rout
- Germans didn't stop and consolidate – they kept pressing forward – each hour ahead is an advantage
- However, the British did pull off a successful withdrawal from the beaches of Dunkirk

Failures in strategy can be disastrous, too...

Crimean War, Charge of the Light Brigade – 1857

600 British cavalry charged the mass guns of the Russians and continued the attack despite tremendous losses only 150 made it back to their own side. Alfred Lord Tennyson's line, "Someone had blundered. There's not to reason why, theirs but to do and die into the Valley of Death rode the six hundred."

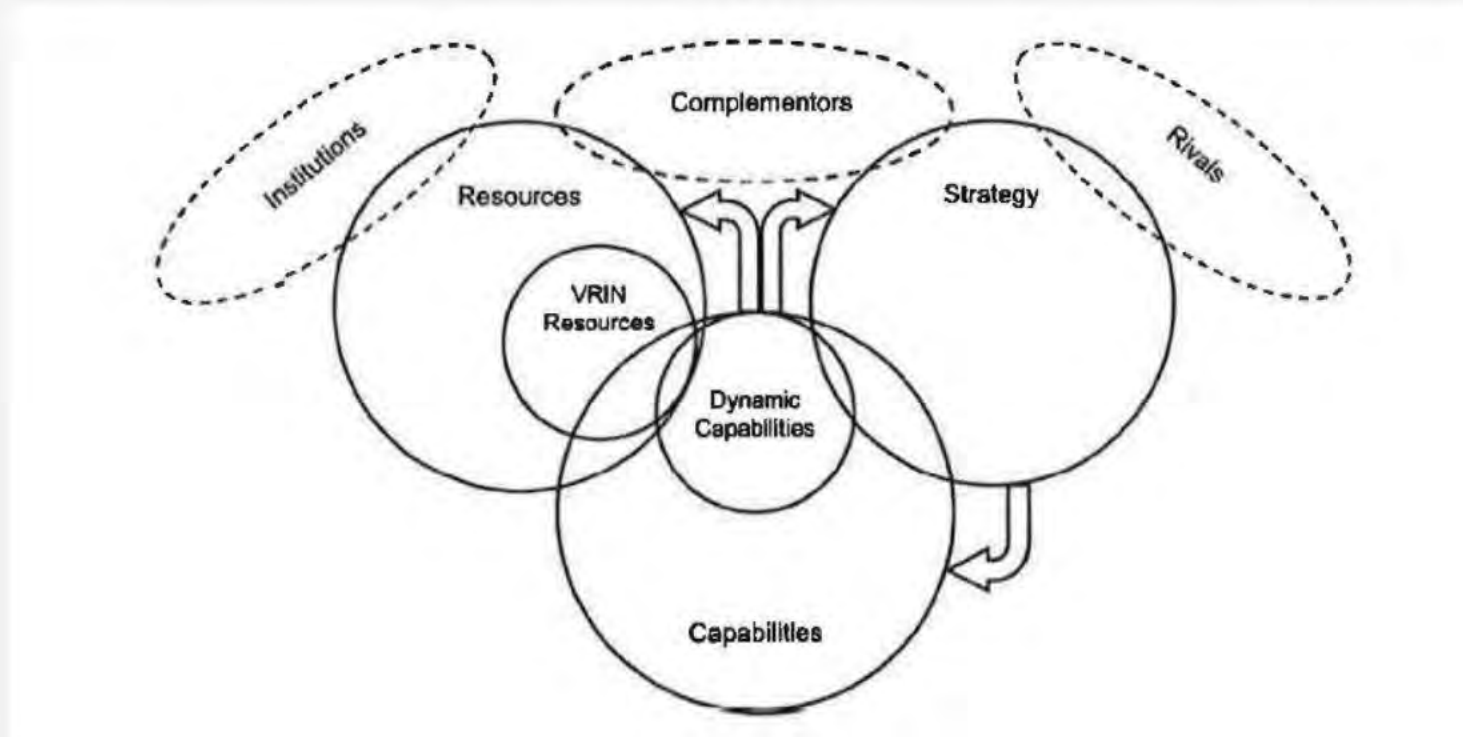
US Civil War, Battle of Gettysburg – July 3, 1863

Confederate commander Robert E. Lee ordered final attack into the center of the Union lines. 75% of the men were lost.



Painting of The Battle of Balaclava

Dynamic Capabilities as a Workable Systems Theory*



Note: A dashed border indicates elements that are external to the firm. Arrows represent major influence. VRIN = Value, Rare, Imperfectly Imitable, and Non-Substitutable.

*"Dynamic Capabilities as (Workable) Management Systems Theory," *Journal of Management and Organization* (2017)



**Dynamic
Capabilities in
Action –**

**The Automotive
Industry today**

From Ordinary to Dynamic Capabilities in Autos

- **ORDINARY:** The operations portion of the automobile business has been **thoroughly optimized** over many decades, doesn't vary much from one automobile company to another, and can be managed with a focus on repetitive process. It requires little in the way of creativity, vision or imagination. Almost all car companies do this very well, and **there is little or no competitive advantage to be gained by “trying even harder”** in procurement, manufacturing or wholesale
- **DYNAMIC:** Where the real work of making a car company successful suddenly turns complex, and **where the winners are separated from the losers, is in the long-cycle product development process**, where short-term day-to-day metrics and the tabulation of results are meaningless.

-Bob Lutz, former vice chairman at General Motors, Wall Street Journal, June 11, 2011



The auto industry core is transforming from hardware to software and services...

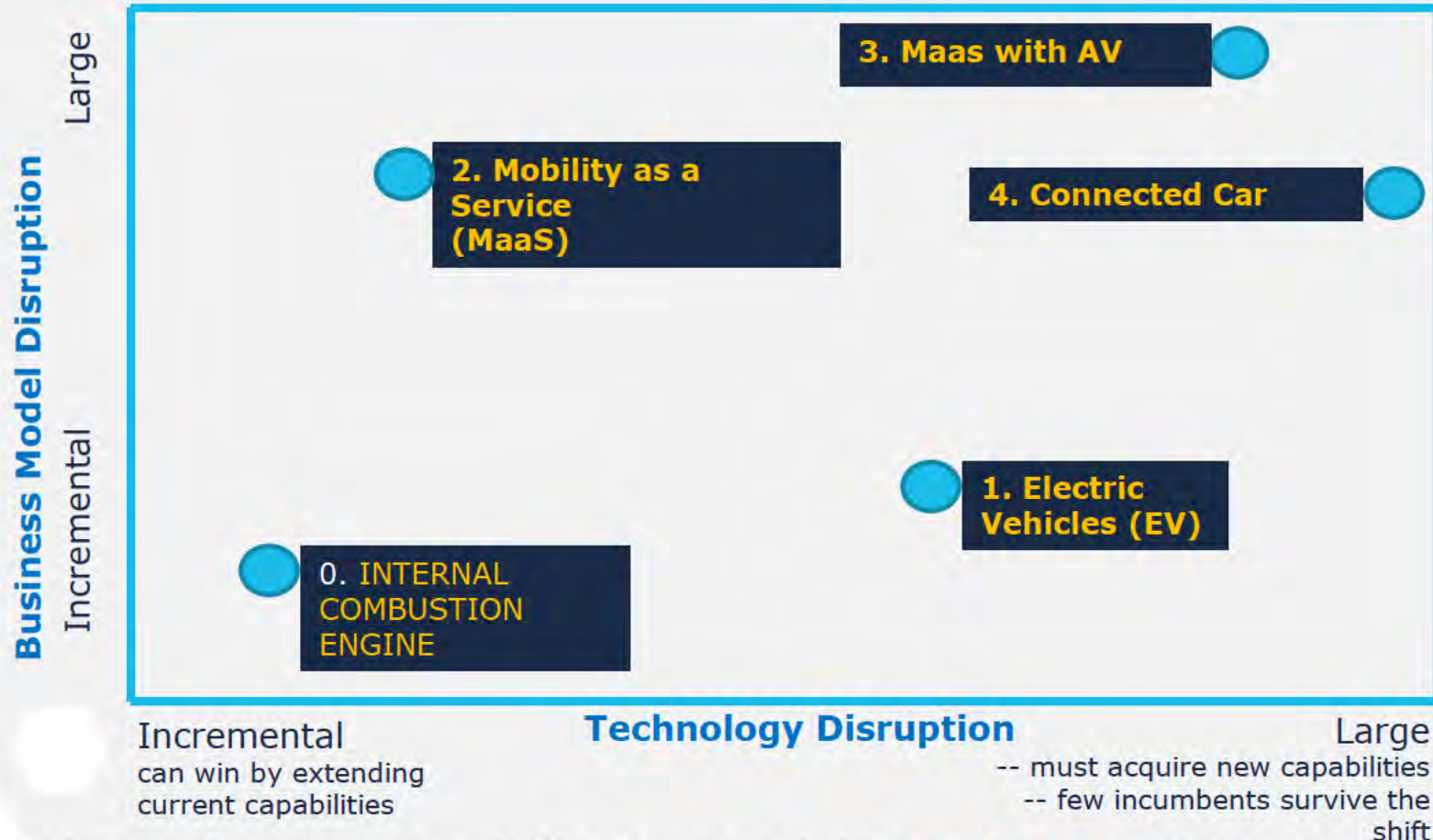
“The global auto industry thinks it sees its future, and it will require a transformation without precedent in business history.”

The auto industry “has to turn itself into a nimble provider of software and services.”

- M. Colias, T. Higgins, and W. Boston, *“Will Tech Leave Detroit in the Dust?”*
[The Wall Street Journal, October 20, 2018](#)



... but the potential impact of paradigm shifts in technology AND business models may not be fully appreciated.



... most incumbents have difficulty surviving **only one** of these two paradigm shifts (e.g. Kodak, Blackberry, Nokia)



Incumbent Auto Industry -- Capabilities inventory for the coming disruption

INCUMBENT ADVANTAGES:

- Hardware providers and system *integrators* with unparalleled expertise
- Regulatory *management* strength
- Ability to build custom, connected cars at *scale* – can be the backbone of MaaS offering

INCUMBENT CHALLENGES:

- Shaping software ecosystems
- Partnerships & Ecosystem Management
- Calibrated investment culture. Limited budgets for breakout initiatives
- ‘Not built here’ syndrome.
- Capital-draining business of “creating million of cars each year,” “constraints,” “not faced by tech rivals” (WSJ, October 20, 2018)



Critical Capability

Partnerships & Ecosystem management -- should be a core Dynamic Capability

“Obviously, every company would like to do everything by themselves... except that we can’t,”

-- Carlos Ghosn, chief of the Renault-Nissan-Mitsubishi Alliance, WSJ, October 20, 2018

Mobility as a Service

Volkswagen & Gett: In 2016, Volkswagen invested \$300M in the Tel-Aviv-based ride-hailing start-up.

General Motors & Lyft: In 2016, GM invested \$500M in Lyft.

Honda & Grab: In 2016, Honda made an undisclosed investment in the Southeast Asian ride-hailing firm.

Toyota & Grab: In June 2018, Toyota said it will invest \$1B in the firm.

Autonomous Driving

Fiat Chrysler & Waymo: In 2016, Fiat Chrysler partnered with Alphabet’s driverless car unit; the car maker is providing custom minivans for tests of Waymo’s autonomous ride-hailing service.

Volvo & Uber: in 2017, Uber agreed to buy self-driving Volvos for its ride-hailing network when the technology is product-ready.

Toyota & Uber: In August 2018, Toyota said it would invest \$500M in Uber as part of an agreement to co-develop autonomous cars.

Renault-Nissan-Mitsubishi Alliance – creating (and managing) an innovative alliance ecosystem of complementary assets



1999



2016

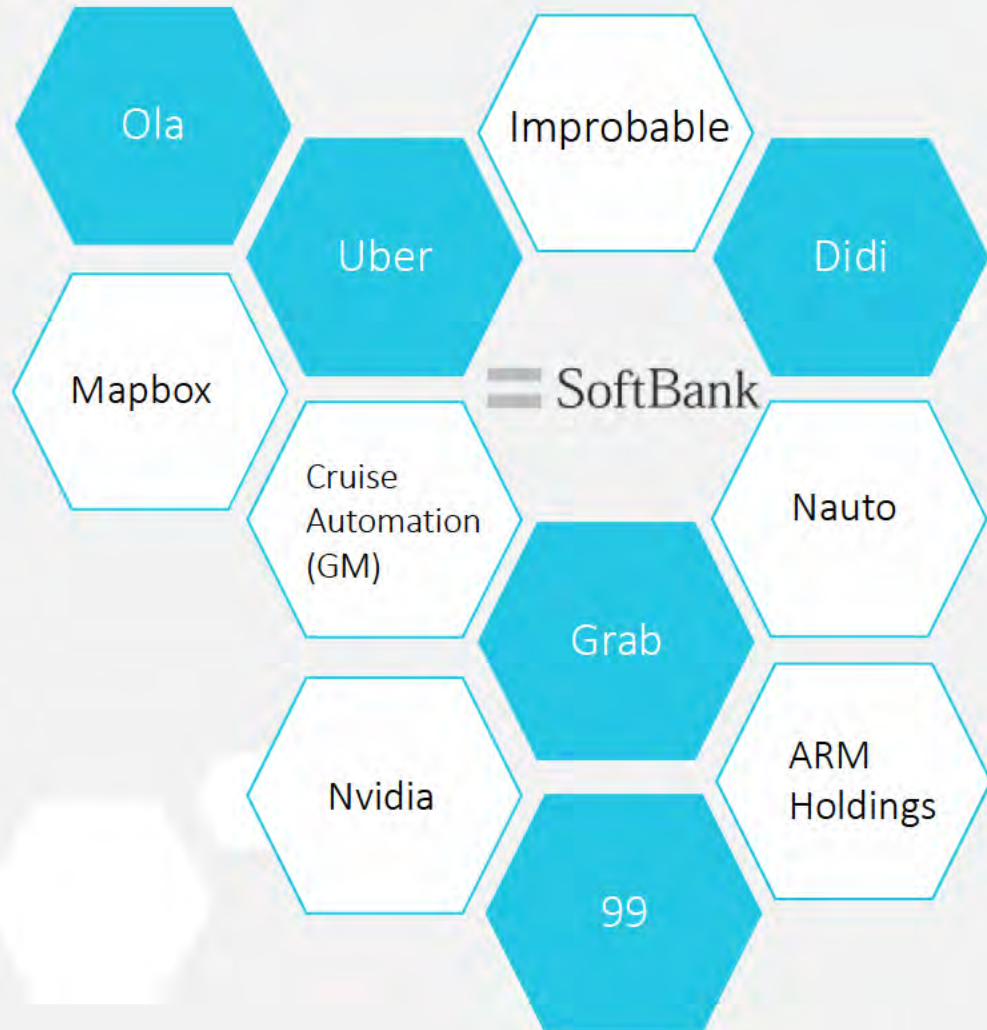


RENAULT NISSAN MITSUBISHI



“I recommended abandoning the joint-venture approach. If you want people to work together, the last thing you need is a legal structure that gets in the way. My solution was to introduce informal cross-company teams (CCTs)” – Carlos Ghosn, Alliance Chairman, explaining the Alliance design in HBR 2002

Capital Providers like Softbank now playing a unique role in shaping the emerging transportation / automotive ecosystem



Softbank has changed the playbook through these strategic stakes built methodically over the past 3-4 years.

The secret sauce of ecosystem orchestrators like Softbank is in making prescient connections between affiliated disruptors (e.g. ARM and Cybereason)

GM's bold moves with Cruise Automation has the potential to transform the future of GM – and is welcomed by the capital markets

GM's recent strategic moves



1. Seeding and Nurturing a Disruptive Entity – Cruise Automation

2. Multi-stakeholder Mentality

3. Asset Orchestration & Capital Allocation

4. Changing Corporate Culture

THE FUNDAMENTAL TRANSFORMATION CONUNDRUM: How do you change the Organizational DNA to respond to multiple paradigm shifts in the automotive industry?

Do You Change the Organization from Within?

-- e.g. Implement principles of a **Lean Startup Organization** (through systematic change in leadership, culture and operating rhythm)


Do You Change the Organization from Without?


-- e.g. Acquire and **Build a Skunkworks** (and let this entity transform the core over time)


Is there a viable hybrid model of doing both? If so, simultaneously or sequentially?




Thank You

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Panel Discussion – potential questions to explore



- Do you see VUCA increasing across industries?
- How is it VUCA-shaping companies' business practices and strategic human resource management?
- Can you share some **examples of entrepreneurial leadership** in your business and how it led to developing dynamic capabilities for your organizations?
- **Partnership and ecosystem management:** what are the opportunities and challenges for large organizations?
- **Talent:** How do you attract, develop and incentivize talent that can turn industry challenges into growth opportunities? **Does your approach differ geographically** (e.g. in China vs Silicon Valley)
- What are your views on the fundamental transformation conundrum? Change the organization from inside, or from the outside? If both, simultaneously or sequentially?