A NEW INTELLECTUAL FRAMEWORK … CONNECTING THE INVISIBLE DOTS

CONSIDERATIONS 2 EVOLVE GLOBAL CAPITAL MARKETS

The greatest danger in times of turbulence is not the turbulence. It is to act with yesterday’s logic.

Managing in Turbulent Times [Peter Drucker, 1980]

1. INTRODUCTION

This paper aims to set out some relevant ideas for the creation and establishment of a successful Financial DIGITAL MARKET INFRASTRUCTURE [DMI] provider. The ideas are in two broad intersecting categories. The first set of ideas starts with a credible point of view of the desired initial shape and operation of a new market and industry with all that entails for identifying and clarifying new product and competitor concepts and categories, a "NEW GAME" description of DMI and the foundations of its associated competitive topography and terrain, the links between DMI as a new industry and other potentially connected markets, plus of course the creation and delivery of new client value.

This paper and others in the “connecting the dots…” series will often refer to "New Game" forms of competition, and "Game Changing" aspects of competitive activity. The phrase has become part of current management vocabulary, but often references to a "Game Changer" have become void of specific meaning and criteria. It can be diluted and overused to refer to a significant change in an industry, but many “big changes" in a complex system may have relatively small impact, and vice-versa.

Here is a way of thinking about definitional clarity using sporting analogies since the word "game” is central to the meaning. There are three dimensions of competition in markets, all of which are based on some principle of future value creation and competitive advantage:

- The "first dimension" is competition to change the nature and definition of the game itself, which means taking some action to alter the boundaries of the market, or the structure of the market in terms of relative strength and influence of competitors, or even the fundamental concept of the industry in terms of the type of consumer value it generates. We call this the "first dimension" and this is the purest form of game changing competition.

- The "second dimension" is competition to change the dominant model of value creation and delivery within the existing game. This is more about "rules changing” and forms the second dimension.

- The "third dimension" is to play the existing game by the existing competitive rules, but with a significantly enhanced level of operational performance and efficiency on aspects of cost, quality and productivity. This will be called “playing the game better”.

"New Game" or "Game Changing" activity is best captured and explained within the first and second dimensions above. Altering the nature and definition of the game is an extremely challenging task since it demands that executives really understand the nature
of "inflection points" which carry the seeds of game changing activity and convert that understanding into an altered view of the key consumer benefits, which the industry is trying to solve for and deliver. Often, these may not be clear from standard market research activities. New Game value may have hitherto been both unmet and unarticulated.

There will be much "pre-market" competition for a redefined industry space based on "oblique dots" and sometimes invisible dots, visualizing what the future will look like from intuition rather than from in-depth analysis. What do we see and hear? What are we missing? An analogy will be like trying to do a jigsaw puzzle with no single agreed picture on the box to help tired brains think about how the pieces of the puzzle are connected. Even worse, there is no guarantee that you have all the pieces needed to complete the whole picture.

The "join the dots" challenge known to generations of children at least starts with all the dots being present and visible. The challenge outlined in this paper is that connecting dots in our business world, which are barely visible and comprehensible, does not begin with full knowledge and understanding of the relevant dots. Often, visibility in a game changing world takes the form of sensing initially quiet or invisible signals, which need to be amplified in terms of meaning and consequences by senior executives. The theory of markets as signals requires a very different talent to address compare to markets as verified data.

The "Cold Start" dilemma referred to in previous papers on this topic refers not just to cold physical attributes such as liquidity, but cold intellectual attributes which do not provide warm comfort zones as launching pads for a New Game agenda. The second set of ideas behind the New Game industry model reflects the thinking system and experience which executives need to bring to addressing the challenges highlighted above.

The renowned management author Peter Drucker made enormous contributions to corporate thinking especially in the second half of the 20th Century, and his quote at the beginning of this paper illustrates
Developing the Relevant Intellectual Ammunition

Here are some of the important questions for a strategic agenda, derived from the realities of a New Game approach to DMI. Due to several disruptive economic changes happening worldwide, senior executives in many industries are now being challenged to articulate different questions about what is required to become not just a competent player, but also a true winner in markets characterized by game changing and New Game features. This will raise important questions about the source, size and sustainability of competitive advantage, and the relevance of legacy ideas from several decades ago when the world was a simpler and more predictable place. What is becoming clear is that the task of strategy is a constantly evolving executive thinking system, not just a set of static planning processes and procedures.

This thinking system begins with a realization that we need to ask different questions about the nature and economics of competition, the key criteria of a business/corporate strategy, how to manage the journey from "here to there", how to build organizational momentum and energy, not just administrative efficiency to confront significant organizational inertia rather than applying simple and traditional models of change management. Often, "new knowledge/paradigm" may threaten "old knowledge" and face formidable obstacles of adoption within an organization.

All of these become important in a world moving in dynamic and non-linear ways. They affect our traditional views that strategy is a two-stage linear job of "formulation" followed by "execution", and how we communicate progress externally and internally with conviction and credibility. The nature and methods of competition in many global industries in the second half of the 20th century were focused on creating value by extracting inefficiencies in a linear value chain. For many experienced senior executives that has been their experience of and approach to strategy. For DMI to become an operational reality executives must face new competitive realities. The concept of a strategy as a generic mission statement plus an extended operating plan will not equip businesses to shape discontinuous market futures, rather than forecast them.
Given these contextual factors, we suggest there are five foundational premises which should underpin our thinking and approach towards DMI. They are required to address the challenges outlined above and in the following sections:

1. Handling the "Absurdity of Certainty"¹

This first premise, so often the starting point for a strategic discussion, deals with how we think about and articulate our view about the future and shape of the market we are competing for. What would we like to know and be confident about? What is knowable? And by when? Understandably, executives place a high value on what they believe to be certain, or reasonably so. And the certainty usually comes from data sources or experts with high credibility. Forecasting and predicting become the methods of "clearing future fog" in our pictures of future markets.

It may be a truism to assert that futures are always uncertain. The sources and nature of uncertainty and the speed with which they "morph", are however posing new types of "future unknowns" for executives who must make decisions, place bets, and allocate resources based on future market pictures and assumptions. For example, the phenomenon of uncertainty may be very different to the nature of ambiguity. Dealing with uncertainty often means you know the nature and meaning of a future variable, but not its probability.

Ambiguity, however, casts doubt on our knowledge and understanding of the variable itself. Often this is driven and shaped by unexpected patterns of convergence in markets which alters the definition of major variables as they lose their "independence" and become part of a new category. Convergence occurs between and across products, features, technologies, traditionally defined client segments, markets concepts and industries. The massive overlap and integration of traditional computing and communications has altered how we access and distribute information, and the role of clients in markets. Convergence opportunities will

³ Jena Axelrod directs and produces the upcoming documentary Absurdity of Certainty on the rise of certainty in the Western worldview, based on the life and ideas of Dr. F. David Peat. Jena has served on the Board of The Pari Center since 2016.
shape how executives think about future patterns of connectivity between existing market variables and forms of client needs, or in other words, what they are trying to get the enterprise to solve for in the future. The task of convergence is a practical application of connecting the dots thinking.

As a dynamic force, however, convergence is a latent phenomenon. It rarely happens as an act of stargazing by executives, wondering how the future world might look. It opens the possibilities for executives to shape market dynamics, forging convergence rather than purely forecasting it. This is one dimension which illustrates the difference between being predictors of the future rather than shapers of its pace and type of evolution. It requires robust "points of view" to overcome the "Absurdity of Certainty" and an ammunition kit to steer an industry in a chosen and desired direction. James March, one of the pioneers of game theory in economics and the critical importance of understanding behavioral factors in firms and markets, phrased the challenge succinctly:

The world in which we must act is often beyond our understanding. Therefore, decisions are partly a function of "knowable impact" and partly a "journey of discovery".

In this paper, it will be argued that today's competitive landscapes are shifting the balance towards discovery. If so, what is the implication for strategy, risk, execution, senior executive experience, credibility, etc.?

2. Seeing Markets as Complex Adaptive Systems

I think that complexity will become the science of the 21st century.

[Stephen Hawking]

The second major premise is highlighted in the quote above from the late Professor Stephen Hawking. In recent decades, the word "complex" has been used increasingly to describe some business situations or types of change. In strict English vocabulary terms, the more accurate term would be "complicated", meaning difficult to understand and decode. However, through its increasing application in many fields of science such as molecular biology, it became standard to attribute to the word "complex" a phenomenon with a high degree of interdependence and interconnection between parts of a system. This interdependence would influence the adaptive path of the system over time. The capacity to see markets as complex adaptive systems has been a breakthrough in understanding what at first seemed to be major "exceptions" to classic laws of microeconomics.

For example, under what circumstances would a market display and be driven by "increasing returns" rather than the usual "laws of diminishing returns"? Were these to be analyzed and treated as "exceptions" to normal market behavior, or as a sign of future normality? What could cause early competitive advantage to be augmented and multiplied over time, causing a "Winner Takes All" outcome? This has been noticeable in the dramatic growth of information-based industries which had significant interconnections and interdependences between individuals in a market [in early courses in economics students were often taught to observe the assumption that individuals' needs, and behavior were independent].

The global market for mobile phones is dominated by two players, Apple and Samsung, although the increasing competitive entry from Chinese companies such as Huawei could dilute that existing "duopoly". Neither Apple nor Samsung had experience of telephonic technology, compared to Nokia and Motorola. But that did not prove to be a "barrier to entry" as mobile phones became used as much for information access as voice transmission, and market dynamics were fueled by style, image, connected consumer ecosystems, and the power of global brands. Without any doubt, Nokia and Motorola could argue that their telephonic technology was "better", but rarely do we see global adverts for mobile phones claiming superiority of sound clarity and excellent connection rates. The GAME has changed.

The growth of "markets as complex adaptive systems" also raised the question of the "organizational unit of competition" in modern markets as joint ventures and strategic alliances expanded the boundaries of the firm.
and stretched the boundaries of existing industries [a dynamic now causing questions for competition regulators in several countries who continue to take a narrow view of market boundary lines]. The issue of “what competes” becomes as important as “how to compete”. Under certain conditions, market share may not be a relevant or accurate measure of “market influence” as the ecosystem becomes the organizational unit of competition. Managing an ecosystem contains many more complex issues than running a joint venture with a single partner. What is the experience of executives in ecosystem management rather than value chain control?

Rather than believing that market complexity can be managed [the traditional concern for “control”] two distinguished theorists from the University of Michigan - Michael Cohen and Robert Axelrod – in their book “Harnessing Complexity” offer the view that influencing the forces of complexity rather than trying to control them was a more sensible option for executives. This advice, of course, stresses the important of having robust points of view about the future not just dependable forecasts. Also, understanding the nature of market influencers rather than controllers becomes part of the executive ammunition toolkit. The difference between market control and influence addresses the previously mentioned competitive paradox of circumstances in which market share may not be a relevant metric of market influence.

3. Starting Point/Implied Roadmap Choice

If you don’t know where you are going, how do you expect to get there?

[Dr Peter T. Golder]

A comment frequently heard in corporate discussions about the challenge of strategy is that strategy formulation is the easy part, but the difficult part is execution – translating ideas into action and then from action into performance and results. These become strategic metrics, sending “signals of credibility” that progress to a future business logic is on course.

Essentially the job of strategy is to steer the organization from “Here” [some precise concept of value creating logic] to “There” [a future desired state], navigating that journey to the future with minimum time, cost, risk, and organizational friction. Because the concept and practice of strategy was developed in a very different business world to todays, [playing the existing competitive game more efficiently] it’s not surprising that many legacy features of the strategy process have not changed dramatically in many global firms.

When patterns of industrial change were slower and more understandable in terms of causes and likely future evolution, senior executive belief systems defined the key elements of the strategy challenge based on the following assumptions:

1. Strategy has two distinct and separate stages – formulation and execution;
2. These stages are linear and sequential;
3. Formulation ends with a Roadmap Playbook specifying key tasks to be executed throughout the organization;
4. Key tasks would be complemented with key metrics of success;
5. The whole organization moves in unison in pursuit of the "Grand Ambition" – getting to “There”;
6. The whole Roadmap and key steps can be articulated at the beginning of the execution agenda;
7. Numerical targets are often the proof of progress, like the achievement of total quality targets established initially by many Japanese manufacturers.

However, if these features are applied to the market dynamics described earlier in this paper, the concept and practice of "strategic planning" looks less convincing. Strategy is now being seen as a "process of discovery" with the creation of smaller connected "bridges to the future", each miniaturizing the Grand Ambition of "There" for smaller but symbolic parts of the enterprise, bringing the total enterprise picture to future life in bite-size chunks.
4. Mindset – Avoiding the Prison of Dominant Logic

Few topics have received as much attention as "change management" in organizations. Historically, much of the analysis has focused on critical aspects of executive behavior and what needs to change to help the organization respond to some challenge. Given the fact that the roots of so much leadership analysis lie in behavioral psychology, it is no surprise that behavioral traits are so often the focus of attention. Leadership as "style and behaviour" still forms the core of much analysis of executive effectiveness.

But a paradox has always cast a shadow over the debate. If we know so much about the change challenge, why is our track record of handling important change issues generally so questionable with "failure stories and case studies" outnumbering the successful ones?

Perhaps, one hypothesis is that behaviour, though important, is not the key factor. Instead, it could be the "Invisible Enemy" which we now describe as "Mindset". Our studies on exactly what that is, how to analyze it and its causes, and how to alter it are now growing significantly although it still lags the default connection to behavioral causes.

A few years ago, Professors CK Prahalad and Gordon Hewitt adapted a concept called "Dominant Logic" to this issue. It started by recognizing that the executive brain performed the role of a storage system for invisible assumptions about the market, the business model, and the organizational system which provided the overall context within which they worked.

Although assumptions contained in Dominant Logic were often non-transparent [even to the holders], their transparency were often contained within key business beliefs and business practices which were the anchors and outcomes of Dominant Logic. These anchors can cause inertia in systems, unable to adapt to altered circumstances.

It is often useful to conduct a Dominant Logic reality test through some probing initial questions which will be addressed in the next section.
5. Talent – Creating Leaders for the New Competitive Landscape

All the arguments and evidence in this paper point to one fundamental conclusion – because of the new context of market dynamics in 21st Century industries, strategy is now being seen as primarily a cognitive system in the minds of executives more than a set of planning processes and procedures. That may be why executives sometimes express concerns that what they are doing often involves more planning than strategy. Underlying features of 21st Century industries are those which are likely to experience some of the following which increase the probability of being exposed to New Game dynamics and thus some form of competitive disruption:

- Multiple dimensions of convergence [see previous section]

- Emergence of competitive ecosystems rather than linear value chains;

- Highly flexible and malleable industry and or ecosystem boundaries;

- Significant reduction or irrelevance of traditional barriers to entry;

- High information content in the delivered product or service;

- Potential for consumers to co-create value rather than just receive delivered value.

- Significant customer needs and “pain points” ignored by existing competitors.

That thinking system should be directed at building “Superior Value Creating Capabilities” within an organization. The origins of that thinking will reflect, amongst other things, the stock and quality of “Talent” within the organization. Growing and deploying that talent to thrive in disruptive markets is a genuine core competence. So how are we doing in creating executive leaders for the new global competitive landscape, or more importantly to enable and support them co-create their own development paths?

Three organizational processes will impact the talent pipeline – development, appraisal, and reward.

1. Development – This process refers to the general experiences and knowledge executives are given the chance to acquire as they move up or across executive ladders. So, over a recent period of time how much opportunity have they been given for “Agenda Setting” using New Game thinking within their area of responsibility? Given that markets do not know or care about our organizational charts, how much have they learned about “horizontal collaboration” across organizational boundaries in pursuit of complex and convergence opportunities? Do organizations still confuse occasional ad hoc cooperation with managed innovative collaboration? What mentoring and advice do they receive to be comfortable and effective in a world of influence rather than control?

2. Appraisal – What is the performance scorecard for executives in the strategic domain? Again, what criteria do we use to judge and mentor them? If they have had a series of direct reports who only really value the achievement of short-term numerical targets, what would we expect to happen? Plus, so many of the books and reports on “strategic leadership” still focus on behavioral dimensions as mentioned above. The mind set and competences required for “agenda setting in a complex market” and “value creation capability building” often receive less attention.

3. Reward/Incentives – What is the basis of “strategic remuneration and feedback” both in tangible and intangible terms? What are the components of our strategic leadership model against which we judge people? Do we have the appropriate incentives in place to promote desired outcomes? Are we the kind of organization in which people do what is inspected not expected?
The five categories of premises described above all depend on a high form of cognitive intelligence, which we know as **ACUMEN**. It is a mental skill and discipline which sees and interprets issues in an unusually insightful way, seeing broad and deep and sensing more than initial impact of "first round" actions, especially having an early grasp of "unintended consequences". The five premises outlined in this paper all form part of this intelligence. To extract some final and specific "Arenas of Acumen Application" from this paper, here are four takeaways which together make up a New Game Mindset:

Each of the four "Application Arenas" provide the opportunity for using some aspects of New Game thinking described throughout this paper.

1. **New Competitive Acumen**

Seeing "early" new sources and patterns of competition and value creation, especially those which involve non-traditional market entrants or skills. Picking up early signals about new patterns of convergence inside or outside the market. Referring to the mobile phone example above, the shift [driven by consumers] from "voice to data" provides a clear example of three dimensions of competitive acumen involved in New Game thinking highlighted above:

- A redrawing of industry **boundaries**, encompassing non-voice contestants in a data-dominated world, which alters views about non-traditional competitors.

- A rethinking of industry **structure**, as competitive power and influence migrate from traditional sources of competitive advantage and competitors.

- A renewed sense of consumer **functionality**, seeing markets as bundles of benefit deliverables not just similar product features.
2. New Strategic Acumen

Understanding the difference, conceptual and practical, between planning and strategy especially in plotting a roadmap from "present corporate concept" to future desired corporate concept. This involves:

- Starting with a much more sophisticated view of existing resources and competitive position than provided by a conventional SWOT analysis.

- Understanding that managing corporate migration from “Here” to “There” involves much more than conventional target achievement and a linear path to the future.

- It requires a capacity to deal with tensions in the internal governance system within the organization.

- It needs a rethink of existing core competences [which are far more than activities performed at a high level]. These are the sources of genuine competitive advantage.

- What are the next X core competences we need to acquire? From what source? Managed by whom? How integrated into the enterprise?

3. New Organizational Acumen

Organizations are there not just to draw clear boundary lines of responsibility, but also to create novel forms of client value which often cross those lines. These dilemmas often produce “resource ownership” contests rather than converged value management. Therefore;

- How do we encourage horizontal cross divisional collaboration which goes beyond occasional sharing of ideas or data?

- What are the implications for dual scorecards within previously standalone organizational units - the silo problem?

- Why do matrix organizational responses typically not provide adequate solutions to the problem? What are the limits to structural solutions for complex organizational challenges?

4. New Cognitive Acumen

A critical application arena for new cognitive insights involves understanding the elements and sources of Dominant Logic, and which aspects could block or radically delay us from creating market leading New Game benefits. How do we migrate our dominant logic to a more relevant zone, and avoid it becoming a major source of organizational inertia? This involves tacking three connected issues:

- What are the core assumptions and orthodoxies in our current dominant logic, and where do they come from? What is their “compelling logic”?

- Which of these assumptions/ orthodoxies will make it difficult for us to see and adapt to game-changing shifts in our competitive landscape? Where and why do we suffer from “competitive glaucoma”?

- What is the role of executives to help alter our dominant logic to be relevant to a new competitive landscape? How do we change mind sets rather than just behavioral norms?

CONCLUSION

Peter Drucker’s quote at the beginning of this paper comes from his life-long belief that many organizations suffer from a bigger “strategic deficiency” than “operational deficiency”. This gets exposed and highlighted in disruptive competitive landscapes where there is often a significant need for "NEW MIND SETS FOR NEW GAMES", not just "more efficient processes for existing games".
Gordon Hewitt is internationally recognised for his work on strategy in highly dynamic and complex markets. For many years he was Visiting Distinguished Professor at the Ross School of Business, University of Michigan. His ideas, often developed in conjunction with the late CK Prahalad, have been at the leading edge of global thinking about corporate value-creation, corporate strategy, and competitive disruption in a “game changing” world.

Gordon’s many academic awards include his appointment as the Honorary Professor of Strategy in the recently formed Adam Smith Business School at the University of Glasgow. He has recently been invited to provide strategy programmes for the Said Business School at the University of Oxford.

In his private consulting capacity, he has extensive experience of working at CEO and Board level with major global corporations. He has run strategic leadership programmes for Pfizer, Philips, Sony, Honeywell, PwC, Credit Suisse, Verizon, Ericsson, Telstra, HSBC, Deutsche Post/DHL, Investcorp, Time Warner, Humana, Biocon, and PepsiCo.

Still resident in Scotland, Gordon works extensively on a global basis. He has been a member of the International Advisory Board to Scottish Enterprise, and was appointed Chairman of Court, the Governing Board, at the University of Abertay Dundee from 2003 to 2010.

Amongst his civic and public honours, Gordon Hewitt was awarded the title of CBE [Commander of the British Empire] for his work in the field of international management in the Queen’s 2007 Honors List. He is also a peer-elected Fellow of the Royal Society of Edinburgh [FRSE], Scotland’s national academy of science and letters.
About SIX and SIX Digital Exchange

SIX is a major Financial Market Infrastructure [FMI] provider that operates exchanges and Centralized Securities Depositories [CSD] in Switzerland and, via the acquisition of the BME in 2020, also in Spain. SIX runs the payments system in Switzerland and operates payment infrastructure on behalf of the Swiss National Bank. SIX also manages a financial information business focused on providing data products and services to financial institutions globally.

SIX is building new digital market infrastructure in its fully owned subsidiary SIX Digital Exchange [SDX]. SDX has obtained FINMA licenses for its Exchange and Central Securities Depository [CSD] and plans to offer issuance, listing, trading, settlement, servicing, and custody of digital assets. SDX is also a global leader in the development of Central Bank Digital Currency [CBDC] via its partnership with the Swiss National Bank and the Bank for International Settlements. SDX has partnered with SBI Digital Asset Holdings from Japan to set up a similar digital market infrastructure offering in Singapore.

SDX Vision

- a trusted global integrated institutional liquidity network and ecosystem
- for the issuance, trading & settlement, transfer, custody of digital assets
- in both public and private markets as well as regulated digital securities and crypto assets
- underpinned by a data collection and distribution layer advanced analytics capabilities
Disclaimer

Nothing in this document constitutes investment advice or endorses any investment and exposure to DEFI, AMMs and/or Crypto Currencies. The content of this document is for informational purposes only, you should not construe any such information or other material as legal, tax, investment, financial, or other advice.

Nothing contained in this document constitutes a solicitation, recommendation, endorsement, or offer by the authors or any third party service provider to buy or sell any securities or other financial instruments in this or in any other jurisdiction in which such solicitation or offer would be unlawful under the securities laws of such jurisdiction.

All content, data, illustrations and information in this document is information of a general nature and does not address the circumstances of any particular individual or entity. Nothing in this document constitutes professional and/or financial advice, nor does any information in this document constitute a comprehensive or complete statement of the matters discussed or the law relating thereto.

The authors are not a fiduciary by virtue of any person’s use of or access to this document and/or any of its content. You alone assume the sole responsibility of evaluating the merits and risks associated with the use of any information or other content in this document before making any decisions based on such information or other content.

In exchange for using this document, you agree not to hold the authors or any of their affiliates or any third party service provider liable for any possible claim for damages arising from any decision you make based on information or other content made available to you through this document.

© 2021. SIX Digital Exchange. All rights reserved.