BRIDGES 2 THE FUTURE

DIGITAL ASSETS — THE NEED TO UNDERSTAND COMPETITIVE DYNAMICS IN COMPLEX ENVIRONMENTS TO MAXIMIZE COMMERCIAL OUTCOME

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You don't need a history to have a future.
Emil Harting, Bloodshot

1. A LOGIC AND LANGUAGE TO CONNECT TO THE FUTURE

This paper sets out a map for rapid business growth and value creation in uncontested and often undefined competitive space in which many of the pillars of our normal business thinking require definitional clarity. The target for examination is the fast moving but superficially familiar market for DIGITAL [FINANCIAL] ASSETS [DFA]. That environment, of course, may be unfamiliar to new contestants although some of the business strategies, concepts and language used to think about and compete in more traditional asset markets have enjoyed a long shelf life. However, the logic and context for their existence and application have shifted irreversibly.

In the context of DMI and DFA, this implies an initial urgency to solve the COLD START problem which will determine how we think of critically important early paths to the future plus the resources to commence the journey successfully. A major contributor is the use of common terminology to describe and define DFA at a sufficient level of specificity to achieve ASSET TRANSPARENCY and thus lay the foundation of ASSET INTEROPERABILITY. For example, the often-used target of “first to market” in chronological terms may be less important than “first to client lock-in”, creating high “join the existing crowd” standards in the economic not necessarily technical sense.

Traditional ideas about being “First or Time To” certain milestones are examined later below. Being able to establish an initial, powerful exponential revenue generating business model [not just the typical additive one i.e., more revenue implies more sales proportionately] may provide an early escape from the classic COLD Start problem by generating early quality revenue flows which provide both momentum and peace of mind.

Furthermore, clear LANGUAGE and terminology provides an opportunity to evolve and clarify our thinking about commonly used terms but deployed in a new context. For example, there is a subtle but important distinction between “DLT” [common understood to mean Distributed Ledger Technology as in a predominantly technical form] vs “DLT” [Decentralized Ledger Technology]. The meaning and interpretation of establishing a decentralized vs a democratized system has far reaching consequences for the design and governance of that specific DFA ecosystem. Nevertheless, most of the underlying DFA product/ solution components are well defined and tend to be enduring.

However, novel forms of combining and using these components on new rails may significantly alter and enable an alternative evolution [and concept] of the product or service concept and does take a different migration path into the future, supported by different enabling technologies [DLT vs DLT].

Therefore, we can sense and imagine forms of disruptive change even when things around us appear to be reasonably familiar. "Hindsight in Advance" can be a very beneficial executive trait.

1 For a more detailed discussion, see for example: Connecting the Dots “Digital Financial Market Infrastructure: Considerations 4 The Future”, Peter Golder, November 2021.
3 For a more detailed discussion, see “Interoperability Considerations for Digital Financial Assets”, Peter T Golder, June 2021.
Product titles and definitions can also be subject to reexamination – i.e., dealing with the same product concept, but with a different functionality. And so, it is with an "asset", often thought to be one of the clearest product concepts in global financial services in terms of what it means, how it should be stored, priced, measured, exchanged. Is it the concept of an asset which requires a fundamental rethink in the financial environment we are entering and examining in this paper, or do we need sharper thinking on the precise meaning and impact of becoming "DIGITAL"?

Is that just about having an adjacent block of technology impacting what an asset can or can’t do? In which case: how should we "fit" the technology on to the product? The impact of digital on other industries such as recorded music should not provide great comfort that this is an easy puzzle to solve. "BECOMING DIGITAL" has been one of the most debated business topics over the last few years although there remains a lack of clarity about what that means and to what effect going digital is desirable.

Connecting the present to a digital future implies that we know – or at least have an informed idea – what the future might look like, and therefore hold for the future of Digital Financial Assets.

However, has recent history been kind to classic forecasting techniques, and scenarios in terms of displaying "hindsight in advance"? What is the track record of predictive technologies and futurologists, especially in markets characterized by dynamic and disruptive changes, and with unforeseeable shifts in market complexity causing new patterns of evolution and interactivity between market participants, which can move markets in unpredicted but significant ways?

Perhaps an alternative agenda based on shaping the evolution, features and structure of a market rather than predicting it even in the midst of high levels of VUCA might be a different option for management decisions and commitments. How about setting a course for wanting to Shape the Future rather than Predict the Future? What would be a practical agenda for doing that rather than wishful thinking that all market changes will be beneficial?

As an example, complex systems tend to thrive on connectivity between agents in the system far from traditional economic assumptions about the independence of individual needs and behavior. Connectivity often ushers in new forms of convergence, which can blur the boundaries between different traditional categories and even create new categories of many phenomena.

Traditional ways of thinking about the impact of changes on market evolution often assume the source of market changes [with big impact] are exogenous, requiring market participants to quickly understand what is going on outside their control and respond accordingly. However, market shapers are often insiders in the system and can engineer without permission changes in market boundaries, market structure, key workings of key elements of the value chain, the definition of market segments, etc. These are some of the working tools of game-changing value creation.

1.1. THE FUTURE AND A DEFINITION OF WHAT WE ARE SOLVING 4

Where does value creation conventionally originate within and across the capital markets value chain? Value can accrue in various places over time - the use of products and services contain the embedded representation of value and client benefit being created, both physical and psychological. The organizational unit that captures that value or more precisely a fraction of the value being generated can be a single business area or, as in most cases, is a function of disbursement across part of the value chain. In fact, a lot of the value being generated is attributable to the existence of an ECO system spanning multiple sectors and institutions rather than just an ENTERPRISE system.

Global Capital Market Value Chains [CMVC] are a perfect example of an ecosystem and hence DFA need to adhere to the rules and behavior of ecosystems rather than just standalone organizations - maybe less so over times as industry boundaries continue to morph and change to create yet unnamed organisms
and systems of value creation. Accordingly, the bulk of value is created through the existence of an ECO system not just an ENTERPRISE system which is not to be confused with the ability of a single organization to capture and or affect a disproportionate chunk of that value creation [i.e., the difference between market share vs market influence and power].

The idiosyncrasies of DIGITAL in the context of an ECO system mean that "50 65 74 65 72 20 54 20 47 6f 6c 64 65 72" is a different form and interchangeable on networks and has different characteristics from analog - how long did it take us to realize that music had become data - at least in terms of how music could become created, stored, distributed, listened to? The DIGITAL form is the foundation for transparency, interoperability, automation and allows for value added functionality such as DFA due diligence to be performed in an effective and cost-efficient manner. Furthermore, these DIGITAL characteristics provide additional opportunities and positive externalities up or downstream i.e., through radically different forms of distribution and customer access NOT previously available in an analog world.

It is no surprise that some of the most impactful forms of disruption have occurred in traditional global distribution channels. In fact, the whole concept and architecture of "distribution" is a very "enterprise centric" perspective of the dialogue and exchange process between buyers and sellers, pushing products "out". Indeed, substituting the phrase "customer access" for the word "distribution" more clearly creates a "customer centric" reality and suggests a change in the asymmetry of power in markets.

Over time, industries sharply affected by digitization have seen how so much of the physical matter in their system is converted to data and information. This was a very hard learning lesson for executives in the global recorded music industry and is captured in the quote below.

[Why] software is eating the world.

Marc Andreessen, 2011

Software is also eating much of the value chain of industries that are widely viewed as primarily existing in the physical world; this implies that digital dynamics are transforming organizations into information providers.
1.2. DIGITAL ASSETS — THE THREE TS

DFA exhibits three important characteristics that are largely unmet and unarticulated - concerted effort and focus on them could provide an accelerated path to address the Cold Start problem and provide the impetus to drive the adoption of DFA and ultimately resulting in more capital efficient ways of doing business. We surmise that the three major areas of benefit stem from the following THREE Ts:

1. TRANSPARENCY: asset transparency - the fact that all the information pertinent to the asset is attached/ embedded in the smart contract - is precursor to opening a digital financial asset to new investors through more effective and efficient due diligence and ultimately to asset interoperability which provides the basis for the deeper liquidity pools and an opportunity for the introduction of secondary markets. It takes transparency to a higher and more insightful level.

2. TRUST: open access to the inner workings of permissioned and permissionless public/private DLT systems and smart contracts i.e., via open source based on GPL agreements and the ability to verify data and the availability of third-party opinions [i.e., ratings] enhance the trust instilled in a SMART CONTRACT based DFA. Furthermore, the provider of the smart contract can further enhance the validity and standing of the DFA relative to other products and services in the market. TRUST in this context will also be a major contributor towards creating more DEMOCRATIC MARKET STRUCTURES. Trust has both ethical components - reflecting honesty and integrity - as well as efficiency features, meeting your obligations as you said you would. Dependability has transactional as well as ethical features.

3. TIME: the ability to reduce the moment of uncertainty that exists between the start and stop of a financial transaction will shorten as technology advances - with the goal of performing transactions in real time - and thus help reduce risks that are inherent and embedded in global capital markets and help in boosting embedded trust in the system because of the expectation that people will behave honorably and efficiently. Most markets contain information and transaction costs which clients/investors have to "put up with" to get business done. These always involve opportunity costs for consumers but are rarely factored into transactions.

The way 2 get started is 2 quit talking and begin doing.

Walt Disney

1.3. START POINT — DESIGN OR ACCIDENT

The Cold Start problem in engineering terms refers to the deficiency of temperature in traditional car mechanics which can cause cars to fail to start when the ignition key is turned. The analogy, however, with the Digital Value Creation challenge may fail to acknowledge there could be several areas of "capability deficiency" rather than just one as in the car starting problem.

Furthermore, these may not all lie within the boundaries of the traditional firm with its linear end-to-end value chain. Moreover, we are seeing the growth of ecosystems which magnify the capability bandwidth constraints of "go it alone" enterprises.

1.3.1. CRYPTO VS DIGITAL ASSETS: A SMALL WORLD OF BIG DIFFERENCES

The genesis of CRYPTO originated from a retail client base in 2008 and has surpassed the USD3 trillion "value" threshold by November 2021. We surmise that in large part due to assets and products [foremost coins such as BTC, ETH] that are relatively well defined and standardized though regulation varies considerably across jurisdictions. However, the CRYPTO market structure remains fairly fragmented across major exchanges4 which may operate in various jurisdictions via a network of interlinked arrangements.

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4 For a more detailed discussion, see for example Connecting the Dots: "Crypto Alpha - Impact of Market Infrastructure on Alpha Generation", Peter T Golder, Joël L. Glässer and Usman Khan, December 2021.
On the assumption that the CRYPTO space will become more regulated, broader adoption is facing relatively low hurdles and it is largely expected that there is a wall of institutional money that is making its way into CRYPTO [high volatility, market structure inefficiencies, and low correlation to other assets amongst other characteristics have shown to be significant sources of alpha generation and thus an important factor driving broader adoption independent of individual beliefs and sentiments attached to CRYPTO].

**DFA = BIG CHANGE/ BIG BENEFIT**

Conversely, DFA is projected to become a pervasive asset class [USD24TN of financial assets expected to be tokenized] with an anticipated value of approximately 10% of global GDP being stored or transacted on blockchain by 2027. However, today DFA occupy only a fraction of the 2027 projected value and it appears that the adoption hurdle is higher than what can be observed in CRYPTO markets. In part due to the major infrastructure transition required to move from "ANALOG" to DIGITAL - a journey that will be very painful, time and resource consuming to allow us collectively to harvest the benefits that DIGITAL will yield.

Henceforth, whilst the potential benefits are high, the hurdles to get to the end of the rainbow are significant. Our capacity to significantly diminish costs and non-benefits will play a key role in the transformation process. The ability to drive change and hence accelerate the DIGITAL adoption is partially a function and reflection of our collective appetite for change over time and the relative gain/ loss individual actors in the ecosystem will be exposed to. Any migration always involves organizational friction on the journey from the past to the future and in the process new knowledge often threatens old knowledge.

For several years experts have touted the value of creating "learning organizations." Significant transformations, however, often require the capacity to build "forgetting organizations." Managing both the learning and forgetting curve simultaneously is critical.
1.4. ENDPOINT — A VISION ABOUT THE FUTURE AKA A DEFINITION OF THE FUTURE

Getting from "HERE" to "THERE" also requires a picture and definition of a future end, or at least intermediate, state we aspire to reach. That end state of course does not necessarily imply a final and fixed point. It is best seen as a test of how to manage the initial migration path to get there and the issues to be confronted in Navigating to the Future.

One "picture", very popular in executive discussions, envisages the shift from here to there as closing some performance gap or achieving some performance target which all functions in the organization need to meet. Consequently, the End Point will often be described as some quantitative target which illustrates the improvement in terms like sales, profits, market share, efficiency etc. though the relativity of this target will seem somewhat lacking in realism if the organization has no previous history in the market described. In many organizations a vague, philosophical and generic mission statement "on the wall" is followed by several clear and precise numerical performance targets to be met, and which provide the call to action.

1.5. COMPETITION — ENTERPRISE VS ECOSYSTEM

The concept of the firm - usually a simple, single product entity - has a long history in microeconomic analysis, propped up by several major assumptions about its role in markets and competition. It is only recently that we have had insightful glimpses of the internal activities of what constitutes the firm and how the aggregate of these activities produces a performance scorecard, such as Value Chain analysis.

However, the emergence of clusters called ecosystems are now bringing together multiple capabilities and competitive roles across different firms and industries. They must reconcile paradoxes of dealing with an organization which at one time could simultaneously be a supplier, competitor, and client. These considerably enlarge the capability portfolio of any single firm, but also extend the range of tensions and power dynamics in the internal governance system which have to be managed in navigating to the future.

This trend also raises a different question about resource ownership and resource deployment in markets characterized by ecosystems. The operational unit of competition which answers the question "how to compete" in a world was simply answered by looking at the performance of the entire firm as an integrated bundle of activities and resources.

But if we now pose the question "what is the organizational unit of competition"? the enlarged scope of an enterprise in terms of an ECOSYSTEM becomes a more accurate focus of attention. This has raised important questions of resource ownership and control especially when we track ecosystems which may span national frontiers and regulatory systems.

EVC vs EVC ... ENTERPRISE vs ECOSYSTEM VALUE CREATION

The range of value creating capabilities which will need to be brought to market in any dynamic complex system will typically put stress on whether they can be found in one single enterprise. The capacity to maximize value within the ecosystem, and indeed to help the ecosystem leverage value from its parts and become a desirable business partner for other firms in the network becomes a major organizational challenge. So does the pressure to manage complex joint ventures for mutual commercial success.

A key question is therefore: what is the optimal intra- and interorganizational setup to meet an objective such as long-term value maximization?
The markets which we have been describing are typically noted as experiencing high dynamic shifts in market variables. “The size and pace of change” challenge has elevated speed of change high on the agenda in firms for thinking about how this dynamism will affect the journey to the future. Concepts like agility, and fast response times, have become some of the standard items on enterprise corporate agendas.

However, the simultaneous addition to dynamic market shifts is the phenomenon of complex changes, especially when they become connected – i.e., dynamic feedback loops occur. This has caused much definitional debate to clarify exactly what we are talking about. In scientific terms, the concepts of complex and complexity are often confused with phenomena which are complicated – meaning hard to understand, as in “this is a complex problem”.

But the genuine scientific definition of complexity refers to some phenomenon where there is much interconnection and interdependence between the units in the [ECO] system. In this sense the opposite of complexity is not "simplicity". The properties of complex adaptive systems are seen in a range of interdependencies in the aggregate which can cause a whole system to go off in a new and unanticipated direction. Who would have guessed that for many consumers the least used function in a mobile phone is the telephonic feature?

In complex systems tomorrow’s behavior can be shaped and determined by today’s behavior, and how individuals and firms have reacted to what someone else has done. This redefines the starting point for the next phase of competitive moves. Some of the world’s most valuable companies are based on the interaction between people in the system, in fact they provide the system’s fundamental rationale. The kind of market behaviors and changes we have been describing fall into the category of "dynamic complexity", combining speed of multiple changes with interdependencies between agents in the market. These features are a long way from the properties of markets described in classic microeconomic textbooks which stress the assumption of independent needs and behavior of market agents.

March was one of the original pioneers of developing a “Behavioral Theory of the Firm”, examining several psychological motives and decision areas of executives beyond a single focus on profit maximization. In his many works he casts doubt on the assumptions in traditional theories of the firm of rationality, perfect information, and minimal uncertainty.

There are usually some decision areas, even using relevant analogies, where executives have faced the nature of a problem before and therefore have some memory and stored experience … “if we do A then B will typically be the impact or consequence”, even in general terms. We can usually scope the broad boundaries and outcomes of our decisions in advance even though many specific details will depend on the situation. These can be defined as having a degree of "knowable impact in advance" although areas of important uncertainty will still have to be resolved.

However, even with some prior structure and previous knowledge there still may be other decision areas where there is much less knowledge of "outcome consequences", either because our mental analogies don’t fit or the decision arena is wrapped in much higher levels of uncertainty, ambiguity, and an effort to obtain "Hindsight in Advance". Many game-changing

1.6. LINKS BETWEEN COMPLEXITY, SPEED AND CERTAINTY

1.6.1. COMPLEX VS COMPLICATED

Intelligence normally entails two interrelated but somewhat different components. The first involves effective adaptation to an environment … the second component of intelligence involves the elegance of interpretations of the experiences of life.

James G. March,
The ambiguities of experience
moves fall into this category, which implies applying not a simple rational decision system but embarking on a process of discovery - controlled experimentation to learn as you go along with important reversal options if things don’t work out quickly as expected.

Below, we outline an approach we term "Bridges to the Future" with important features and criteria for these "Discovery Move" to create an unknown future like a strategic jigsaw puzzle - creating the future by connecting small but symbolically important bridges to bring the bigger picture to life.

1.7. COMPETITIVE INNOVATION = EXPLORATION + EXPLOITATION

The journey described above, through the Cold Start and beyond, calls for a macro and managed approach to “Competitive Innovation” throughout the whole enterprise plus the extended ecosystem, rather than a narrow-focused agenda of a small but specialized group of technical experts focused on limited innovation areas.

Normally when we think of or describe innovation within an organization our mental process focuses on a discrete area of activity such as new products and services, or new features within existing products and services. It may also extend to new distribution systems or customer relationship processes.

However, the wider Competitive Innovation agenda encompasses the total corporate value creation logic and approach, preparing the enterprise with the knowledge, skills and ambition to unlock "value blockers" on the journey from Cold Start to "Nodal Player", i.e., high influence power in the emerging competitive contest for leadership in DMI.

In sporting parlance, competitive innovation is about establishing the overall game and rules, not just incremental improvements in playing ability. It establishes how all parts of the enterprise connect to set the frontier of innovation policy in terms of how value is both discovered and delivered. It is about setting "next practice" not "best practice". There are two supporting organizational agendas and capabilities to do this.
1.7.1. COMPETITIVE EXPLOITATION

The first is to relocate, redeploy and exploit key value-creating capabilities from their existing "home in the enterprise/ ecosystem" to access opportunities or find new value creating homes elsewhere. The technical aspect of the capability may be less important than the solution it can provide to more general problems. "Grounded Abstraction" is required. This targets the value of underleveraged opportunity in the portfolio. These capabilities, sometimes referred to as core competences, will typically be more than excellence in single disciplines and found in only a few parts of the enterprise. "Exploitation" of core competencies typically suggests stretching to the limit and being innovative in combining several hard and soft assets across organizational boundaries.

The ownership, management, funding of core competences can raise new issues for corporate executives. It is typically easier to know who is responsible for "product ownership" than "core competence ownership and deployment."

1.7.2. EXPLORATION

Competitive Exploration is the second strand of Competitive Innovation. It is based on identifying categories of client benefit previously ignored, especially those which have been hitherto unmet, and/or unarticulated [not signaled via traditional market research].

To ensure this is directed at the relevant target, exploration should work on the innovation frontier of critically important client functionalities which are underprovided for. This involves more than just generating innovative products and features which clients have never had, but ones which clients could not imagine having and which are "life changing" or "business altering".

The key to the exploration agenda is to consider giving clients new freedoms and unlock existing chains which constrain their choices and options - benefits which clients could not imagine having [except with hindsight].

Market leaders or more precisely Nodal Players in the literal sense may emerge based on several sources of influence and power:

1. Intellectual Influence - setting the agenda and key issues for the whole industry, and for others to follow and emulate

2. Access Influence - enabling firms who have value-rich and relevant capabilities to gain fast access to key players in the ecosystem to keep pushing the boundaries of collaborative ventures

3. Network Influence - ensure newcomers can quickly transfer established players to transfer new knowledge and skill into the ecosystem

4. Trust Influence - boosting the collective credibility and reputation of the ecosystem as a trusted entity

5. Individual Power and Standing - difficult to replicate - to shape and affect change based on historical and or other factors that benefit the individual’s organization to achieve superior outcome
INFLUENCE – MARKET VOICE vs MARKET SHARE: ANTITRUST IMPLICATIONS

The role of influence – direct or indirect – and power as defined above put into question much of the premise of traditional ANTITRUST law which is predominately based on the notion of market share. Whilst measuring "market share" is far from straightforward [in fact and for a start what is the definition of the market], the ability to affect the boundaries and shape of markets purely based on the notion and threat to enter a market can significantly affect the behavior and shape of existing markets and actors in that market. Accordingly, 21st century antitrust considerations need to account for, amongst other things, ill-defined boundaries and permeable structures that can consider the implication of converting physical matters to digital data and information and any downstream implications [i.e., storage of physical vinyl records vs digital "1001101000" for digital records]. Additionally, market share per se is rarely the metric for regulatory action compared to alleged monopolistic practices and behavior which stem from market share positions.

Furthermore, there is an issue of whether competition in dynamic complex market is about products/services, or platforms/standards. If high concentration ratios reflect not classic monopolies of size and scale but increasing returns demonstrating the power of standards setters, and if only a few of these can exist simultaneously, then market share statistics may give a misleading impression of market power.
2. BUILDING BRIDGES 2 THE FUTURE — A FRAMEWORK

The key attributes of an ecosystem describe the form, shape and fluidity of a system of interdependent players and products required to foster and promote the exchange of value in an economically efficient and effective manner.

Of course, there are Multiple Paths to get to the Future; though they can be very different in several different ways – i.e., quality vs quantity of interactions and players required to create value and their respective market share or influence.

For example, speed, the use of capital, as well as organizational momentum and energy, can significantly affect success. History is littered with the bodies of clever but tired enterprises, running out of intellectual stamina and energy. They become prisoners of their own Dominant Logic, trapped in their self-constructed assumption structures.

However, using all our analysis above we can start by defining two different value creation approaches across three different product and ecosystem development phases that generally lead to commercial outcomes.

2.1. BRIDGES TO THE FUTURE — AN INTERDEPENDENT FRAMEWORK

Enterprise and Ecosystem Value Creation – searching for net new sources of income – can stem from finding incremental opportunities from exploiting what we already do - i.e., through "FBC" methods that for example lower unit costs and thus add incremental revenue and profit. Conversely, we can apply our capabilities to adjacent areas to explore additional revenue sources that leverage the existing set of capabilities in novel ways that lead to incremental revenue and profit. Both methods are valid and should largely be considered complementary or additive.

However, each journey to new net value can and should be different depending on the starting point – from idea to product and markets – and sequencing of activities [commercialization via exploitation and or exploration followed by scaling up to gain economic market share] to identify and create new commercial opportunities.

The concept and value added of a "Bridge" is to create a complete future picture of the enterprise, but only applied within a specific area of the enterprise not the whole [eco]system. Connecting various piecemeal parts of the intended organization makes it easier to build the overall value creating architecture.
3. GETTING FROM 1 TO 3 ... MULTIPLE PATHS TO THE FUTURE

A PRIORI NO "1" PATH is necessarily the right path. However, common to any journey to net new value creation should be an interest to optimize commercial outcome under risk/return tradeoffs and risk appetite constraints. Whilst it is generally acknowledged that the idea > product > market scale up sequence follows common logic, the starting point for ideation can both originate from a desire to exploit an existing set of capabilities or alternatively apply existing skills to a new opportunity to explore the potential for net new value creation. It is as important to aim for future "Opportunity Share" to enlarge the scope for critical value creation, as it is to go for relatively short-term market share defined in traditional terms.

In situations of high uncertainty one of the key objectives must be to achieve "FORWARD COMPATIBILITY" with market and client requirements. This implies future proofing systems, products and solutions whilst minimizing T2M [Time to Market - Chronology] and T2R [Time to Revenue - Impact]. Accordingly, attempts to solve for accepted unknowns i.e., which DLT system will prevail in the future not only stipulates that there may only be one but that it is worth betting on a singular outcome or waiting for the dust to settle before any decisions can be made which will negatively affect T2M and T2R.

Betting on the "wrong color" can not only be expensive, but it can also be lethal: an approach based on real options analysis provides a cost-efficient way to hedge against a single undesirable or unforeseen outcome through an investment portfolio approach to achieve forward compatibility and optionality. Real options methods can provide the brakes and reverse gear when a reconsideration of progress becomes desirable.

The use of real options can also provide an effective way to reduce financial resources in the process and thus yield an outcome that minimizes financial exposure and simultaneously maximizes forward compatibility.
4. REAL OPTIONS — EFFECTIVE AND OBJECTIVE DECISION MAKING

Not knowing what the definite futures look like, the capacity to peek around the corner and see/interpret in advance emerging value creating patterns can already provide value and lay an effective foundation for future EVC unencumbered by organizational politics, societal norms, bounded rationality. In fact, being able to peek at the stereotype CONTRARIAN financial investors come to mind [who either has gained insights based on detailed Level 2\(^5\) analysis and insights or gut instincts] who is able to cut out noise and avoid becoming a lemming.

However, in absence of that insight and the willingness to make a significant bet, REAL OPTIONS can be an effective method to build future or forward compatibility into products, solutions and ecosystems/platforms that materially reduce the risk of missing the “42\(^{st}\)” bus.

In this sense risk is not just avoiding the size and probability of a downside impact, but the opportunity cost of being constrained to join the new game contest as the fog clears. Playing perpetual catch up eventually raises questions of strategic credibility.

An approach based on the use of real options allows a second chance or a dynamic reformulation towards exploration in the light of new information and feedback from past assumptions and hypothesis and thus an opportunity to de-risk the future incompatibility or betting on the wrong color.

4. REAL OPTIONS — EFFECTIVE AND OBJECTIVE DECISION MAKING

Real Options and an associated portfolio approach can be part of a strategy to migrate to the future and how to navigate that journey especially if the future industry definition may have different but legitimate meanings to different people - understanding what criteria one should consider that enable a smooth transition to the future can be summarized by considering the following key points, namely:

- a real option ought to be directionally correct: more specifically the intrinsic value of a real option increases the more aligned the option is with the future - does this move provide us with deep insight into the nature and dimensions of new value creation?
- the essence of a "New Game" model, but in miniaturized form: can we get a holistic view of the overall competitive innovation challenge to be faced, even in one part of the enterprise?
- the symbolic value of signaling: does this move resonate and create credibility with key stakeholders both inside and outside the traditional enterprise, and who can become key players in the emerging ecosystem?
- the requirement for business model/market space innovation: does this move suggest an innovative initiative to create value in a new way?
- a real option ought to imply a challenge to major elements of “dominant logic”: does this encourage a way to avoid a corporate or industry orthodoxy preventing us from developing an agenda for [net] new value creation?

\(^{5}\) For a more detailed discussion of Level 2 Analysis in the context of investment management and opportunity due diligence, see for example, Howard Marks “The Most Valuable Thing - Uncommon Sense for the Thoughtful Investor”, 2011, Columbia Business School Publishing.

\(^{6}\) Ordinarily, 42 is the natural number that follows 41 and precedes 43. 42 is a pronic number and an abundant number; its prime factorization \([2 \times 3 \times 7]\) makes it the second sphenic number and the second of the form \([2 \cdot 3 \cdot r]\). However, in the Hitchhiker’s Guide to the Galaxy [aka HG2G or HHGTTG], Douglas Adam attaches yet another special meaning to 42: the number 42 is the "Answer to the Ultimate Question of Life, the Universe, and Everything\(^\), calculated by an enormous supercomputer named Deep Thought over a period of 7.5 million years. Unfortunately, no one knows what the question is. Thus, to calculate the Ultimate Question, a special computer the size of a small planet was built from organic components and named "Earth". The Ultimate Question "What do you get when you multiply six by nine" was found by Arthur Dent and Ford Prefect in the second book of the series, "The Restaurant at the End of the Universe".
• a desire to build new skills, capabilities, and knowledge: does this help equip the enterprise with the new "Know-What" and "Know-How" relevant to tackling future value challenges?

• short time to initial impact [i.e., product market fit and revenue]: what is our "Right to Win" does this move enable us to become a Nodal Player with minimal organizational friction? what is our new influence source?

• an opportunity to leverageable real options or skills, capabilities, and Know-What and Know-How elsewhere in the organization: can we create exponential value from this current move or real option?

These stages of bringing the future to life in phased forms alter traditional views of strategy execution as a big corporate wide [ad]venture and turn strategy into a gradual process of discovery.

5. CONSIDERATIONS — A BRIDGE BUILDER’S MANUAL

Why build Bridges to the Future? Not being a predictor but rather shaper of the future, the challenge is to achieve forward capability of today's enterprise/ecosystem capabilities with future requirements and to allow us to achieve our BIG Ambition.

This is a potentially exciting area requiring intellectual innovation which challenges some long standing corporate beliefs and practices about the nature of "strategy execution", especially as a linear, standalone exercise flowing from "the end of strategy formulation". We surmise that taking into account the following three considerations should be part of any builder's manual that encourages us to develop and apply "A New World View" about the evolution of Digital Assets and sets out the migration path to a brave new digital world.

1. Adapting to a New World View of Competition and Value Creation: Thinking differently about the origin and creation of meaningful value in dynamic complex markets in which competition takes on different contestants in different ways. Attaining that new maxim can be achieved by getting the balance right between exploitation and exploration - not treating them as binary options but complementary agendas for new value creation.

2. A New World View of Strategic Portfolio Management - thinking beyond simple models of long-range planning, and binary stages of formulation and execution with mainly cash flow implications. This is about building organizational capability muscle as well as financial muscle. The use of real options - exposure at low risk, with good timing to know when to apply the brakes to an existing course of action as in "The Right to Reverse or Adjust the Direction of Travel" in a cost-effective way and without damaging organizational friction. Ideally each Bridge should be owned by a core team of individuals and "owned" by a member of the executive leadership team with frequent "exchange" progress meetings with other Bridge teams to provide the emerging connectivity displaying the emerging overall picture.

3. A New World View of Organizations and Cognitive Systems - thinking beyond centers of administrative clarity to connected pools of innovative value creation resulting in a deep understanding of and thinking deeply into the assumptions, origins and impact of Dominant Logic, and its potential of deeply ingrained corporate/industry orthodoxies to block access to value creating new game opportunities. Mastering these New Game skills [i.e., the know-what and know-how] is essential to have clarity around Our Right 2 Win and develop the necessary capabilities to write the next set of rules as part of getting the industry to play OUR DEFINED GAME.

Taking small but insightful STEPS towards that ambition via BRIDGES - often through the use of a Real Option Portfolio - provides an effective and NO REGRET move to keep optionality whilst being in the flow of what the future could ideally look like.
Dr Peter T. Golder joined SIX Digital Exchange [SDX] in June 2020 and serves as its Chief Commercial Officer with a mandate to define and execute innovative and commercially viable business models to establish SDX as a leader in global institutional Digital Assets and Crypto markets. In addition, Peter is a Board member of the Global Blockchain Business Council and the Ethereum Enterprise Alliance and serves on the InterWork Alliance Leadership Council. He regularly publishes on industry matters and is a frequent speaker at [Digital Asset and Crypto] industry events.

Peter is a passionate financial services entrepreneur, executive and investor with over 25 years of international capital markets and investment banking experience. Peter is an advocate of the power of data and technology to enable the creation of innovative/disruptive business models to build a more trusted, sustainable and effective financial services ecosystem.

Prior to SDX, Peter was the Founder and CEO of Euroclear Information Solutions, where he was responsible for establishing the Group’s data and analytics business across a global post trade platform with over €30 trillion of Assets under Administration. Peter also served as a senior executive adviser to venture capital/private equity firms and numerous award-winning FinTech, distributed ledger and Crypto firms.

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