"Business" as an Art Form

By

Angith Mohanarajan

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Abstract

The continuous advancement of technology and its uses have paved the path for what we call today the 'digital economy'. The success of any business in today's environment requires plasticity to its most precious available material: data. 'Plasticity' has been associated to visual artists who through the use of different materials have created beautiful products that satisfy human tendency of emotion, beauty and pleasure. The creation of these products requires the appropriate balance of elements and principles and is synonymous to what is needed by today's businesses: the balance between three specializations - Art, Science and Technology. While Science observes and Technology builds, Art and its fields of action is what creates, and the objects of this creation is what customers consume.

Businesses exist to produce and distribute visual cultural references, either through a product and/or service. To remain relevant businesses need to come up with new ways to deliver to the vast amount of diverse experiences that humans seek. If done successfully, with the 'plasticity' of data, this will result in sustainable profitable success.

The findings from this paper have implications for future leaders, strategic conversations and the reshaping of future businesses.

Keywords: *Digital Economy, Plasticity, Emotion, Beauty, Pleasure, Art, Science, Technology, Visual Cultural References, Experiences*

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Context

Not so long ago, I experienced a tremendous setback due to a personal health incident. It came at a time when my life was filled with positive life experiences varying from great relationships with family and friends, educational accomplishments and fantastic life experiences in the arts. Unfortunately, with it being least expected, it ate away at my self-confidence and my self-belief in fulfilling my ambition and vision for greatness leaving me to question my identity, strength and relevance in today's world.

When it came to my identity I was inquiring as to 'What does 'Art' provide to other domains and 'non-art contexts' that help with delivering human lived experiences?'

When it came to understanding my strengths and looking to see how it could be best used, I pondered ' What would the outcome be to a company's bottom line if it were to capitalize on human tendencies such as emotion, beauty and pleasure when deciding on strategic initiatives?'

When it came to exploring how I could remain relevant in today's employment workforce given my artistic experiences and skill set, I began wondering ' Given the continuous change in the economy is it possible for businesses, in addressing customer needs and wants, to overlook non-related contextual experiences and knowledge, and to solely rely on experiences and knowledge that share similarities to the problem at

hand?'.

In pondering over this moment of confusion it made me realize the similarities that companies in today's digital environment share. With the confusion that arises with a lot of moving parts such as creating a company that remains true to its identity in a continuously changing environment, satisfying changing user needs by capitalizing on existing strengths and remaining relevant by using new resources such as the influx of data, it led me to thinking what it would take for businesses to compete and succeed in the digital economy, irrespective to the industry one operates within, and the product and/or service offerings one provides.

Thus, the following research question came about and is being considered throughout this Major Research Paper:

How might businesses in delivering products and/or services use data to satisfy changing human needs and desires, and how could **Art** *contribute to this fulfillment?*

Introduction

The continuous advancement of technology and its uses have paved the path for what we call today the 'digital economy'. Businesses in today's economy still exist to produce and distribute visual cultural references either through a product and/or service. However, some businesses, in particular data driven organizations, approach this differently. The tremendous value and power of data cannot be denied, but can be best capitalized by businesses that understand how data can serve their purpose. How data serves a particular business makes this current reality a challenging but an opportunistic one. This has forever-changed the operating landscape for all businesses.

This paper looks at the digital economy and how the success of any business in today's digital environment requires plasticity, the capacity of being molded or altered, of its most precious available material: data, making the argument that '*Business is an Art*'. *Art* in this argument is concerned with transforming materials for experiential purposes for the human individual, using beauty to entice emotion, and in turn, creating pleasurable experiences.

Art has been long associated to design and designers have and continue to use Art in creating products. Arts' principles and elements, various techniques and the finite limitations of each material, as discussed later in the paper, inform and guide a designer. A designer is capable of strategically picking and choosing different methods and means to achieve a

particular product given established and validated actions and behaviours in using the different materials. This minimizes the risk for designers, as they are capable of creating within the confines of what is known. In this context, the way in which a designer uses Art have been established and it may be a repurpose and/or extension of what currently is. However, given the complexity of the digital economy, *Art* in terms of its understanding and function, and the way in which it is applied needs to revised so that it is better suited to provide value in today's data filled world.

Chapter 1 looks at '***Business in the Digital Economy'*** and the operating circumstance for businesses. This section will explore how data is easily accessible and how that translates to business success.

Chapter 2 looks at '***Three Seductions***' and how emotion, beauty and pleasure influence individual decision-making.

Chapter 3 looks at the balance between '***Three Specializations***' –Science, Technology and Art – and the use of these specializations by businesses in order to satisfy the human tendency for emotion, beauty and pleasure. Though Science observes and Technology builds, Art and its fields of action is what creates, and the objects of this creation is what customers consume.

Chapter 4 looks at '***Transferability: Uses of Arts Reimagined'***. 'Plasticity' is a term that has been associated to art, in particular to visual artists. Visual arts, irrelevant to the choice of material, abide to 2D-3D principles that result in visual displays that is admired and appreciated by observers. This practice has been successfully integrated to other domains and can be seen promising in the digital environment.

Chapter 5 looks at '***The Digital Material: Data'*** and identifies as to why 'data' is the material of most plasticity and what that means for businesses.

Chapter 6 looks at '***Buying the View'*** and how businesses, just like visual artists, with the plasticity of material, in this case data, can create new forms of visual displays that transform the lived experience of customers.

Next Steps looks at the application of this Major Research Paper to other domains and the contribution to other inquiries and possibilities.

Conclusion looks at the '***Foreseeable Future'*** of businesses operating within the digital economy.

Chapter 1 – Business in the Digital Economy

The business world has experienced dramatic changes as a result of three industrial revolutions: steam engines, mass production and Internet Technology (Bosch Software Innovations GmbH. (2014)). The continuous advancements in technology and its uses have paved the path for what we call today the 'digital economy'. Thus, "We are in the midst of what could be referred to as the fourth industrial revolution – the convergence of physical things with the world of the Internet: The Internet of Things (IoT)" (Bosch Software Innovations GmbH. (2014)). This paper will illustrate and discuss the result of such phenomenon and what that means for businesses, however, specific details pertaining to The Internet of Things (IoT) will be left for other research papers and authors who specialize in the domain.

Digital Economy Phenomenon

The digital economy has transcended traditional industry boundaries and has introduced different operating circumstance for all businesses in all industries. According to Cisco's Visual Networking Index, "the omnipresent mobile revolution will continue to have its presence in 2017 with more than 3 billion smartphones and tablets being used" (Bosch Software Innovations GmbH. (2014)). Along with the increasing number of IP-enabled devices being made (such as cars, health monitoring systems, heating systems etc.), it

is said that there would be "approximately 14 billion connected devices by 2022" (Bosch Software Innovations GmbH. (2014)). Given the tremendous amount of activity and the merging of the virtual and physical world, this allows for business, irrespective to the industry one operates in, to capitalize on new business opportunities. In turn, bringing about an endless amount of possibilities of creating value for individuals.

These opportunities are the result of data that has been created intentionally and unintentionally and have been collected through the billions of connected devices. This is made possible because of "business processes and a suite of technologies that allow a company, user and/or society as a whole to track and count, observe and identify, evaluate and act in circumstances that were once invisible and beyond reach" (Raynor, M. E., & Cotteleer, M. J. (2015)). The creation of data has resulted in the implicit expectation by individuals for transforming lived experiences that range from addressing personal needs to pure enjoyment.

Businesses in today's economy, just as businesses were previously, exist to produce and distribute products and/or services. Though the business intent has not changed, the ability in doing so has drastically changed. This is result of the vast amount of accessible data readily available and the plasticity, the capacity of being molded or altered, of data, making the argument that '*Business is an Art*'. With 'Art' in this argument being concerned with transforming materials for experiential purposes for the

human individual, all businesses need to revisit two questions pertaining to strategy: **how to create value, and how to capture it** (Raynor, M. E., & Cotteleer, M. J. (2015)).

Creating Value

The way in which a business creates value has changed profoundly, along with what is of value to individuals (Raynor, M. E., & Cotteleer, M. J. (2015)). Features pertaining to a product and/or service no longer serve as the sole differentiated value and reason that individuals choose to buy a product, and/or support and use a service (Raynor, M. E., & Cotteleer, M. J. (2015)). Thus, the *information* that is being communicated when using the product and/or service is the newly added differentiating value that individuals appreciate and is what businesses could capitalize on, and use to achieve financial success. Being aware of this is a basic requirement for any business today, in order to meet individual needs and desires. However, businesses that understand that information creates value only when it is used to modify future action in beneficial ways (Raynor, M. E., & Cotteleer, M. J. (2015)), increase their chances for market success.
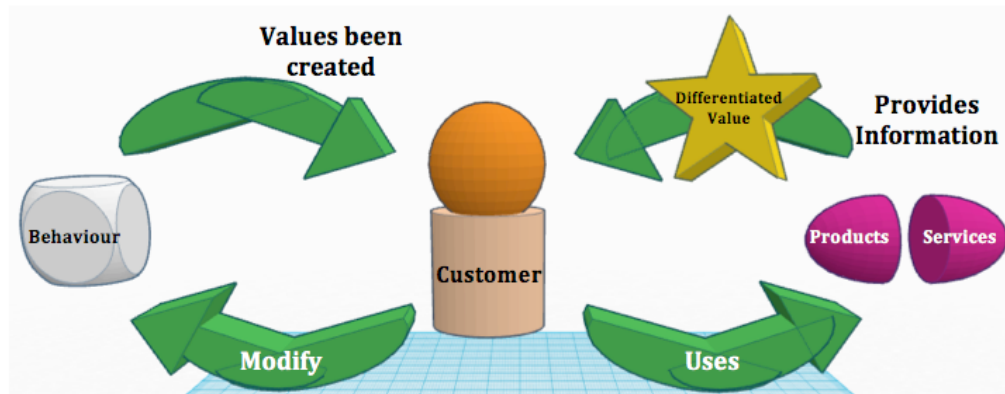
Figure 1. Customer Value Creation

Capturing Value

The way in which a business captures value from data is a function of both competitive position (knowing where to play), and competitive advantage (knowing how to win)(Raynor, M. E., & Cotteleer, M. J. (2015)). Businesses that *control* the flow of information during the value creation process enjoy a competitive position that is likely to result in better opportunities for the business to capture value from other members within the ecosystem (Raynor, M. E., & Cotteleer, M. J. (2015)). Businesses that *differentiate* the way in which they control the flow of information from other businesses with similar positions enjoy a competitive advantage (Raynor, M. E., & Cotteleer, M. J. (2015)).

How Businesses Capture Value		
	Option A *Competitive Position*	**Option B** *Competitive Advantage*
Competencies	*Knowing Where to Play*	*Knowing How to Win*
Activity	Control the flow of the information	Differentiate the way in which to control the flow of information
Examples of Companies	Google, Tesla, Uber, IBM, Coca Cola	Amazon Prime, Ciroc Ultra-Premium Vodka, Apple, Procter & Gamble, Samsung

Table 1. How Businesses Capture Value

Advantages that once helped businesses remain competitive may not be enough. Data and the appropriate interpretation and use of it by a business, for its operations and product and/or service offering, have tremendous value and power, which cannot be denied. Inaction by any business in using data to better serve its customers can find itself jeopardizing its existence in the digital economy. Therefore, business success can be ascribed to what businesses do with the continuous influx of data being created and captured. However, without taking into consideration the

deciding variable to business success – the individual decision – this ascribed

understanding is incomplete.

Chapter 2 – Three Seductions

The amount of knowledge creation and information exchange has increased over centuries, as a result of the growth in human population, and the accessibility and use of different mediums to perform such actions. There has been no other time in evolution and business, than in the current digital economy, where this phenomenon is highly evident and the impacting result is exponential.

The influx of data readily created and able to be captured provides businesses with the opportunity to achieve financial success, but provides a challenging environment for individual decision-making. Though there are certain outcomes that are unique to this environment, such as prolonged decision-making and inaction due to information overload, what has remained consistent is the influence of emotion, beauty and pleasure at the point of individual decision-making.

Influences on Individual Decision Making
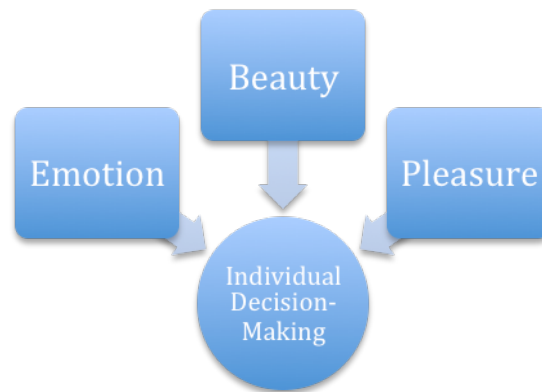
Figure 2. Influences on Individual Decision Making

Emotion

Decision-making was once solely associated with being a cognitive process in which the individual assessed alternative actions, evaluated potential consequences of their decisions and then made a decision that yielded the most positive outcome and that had maximum utility (Loewenstein, G., & Lerner, J. S. (n.d.)). Rationality, as having the ability to think about things clearly using the basis of fact (Merriam-Webster, Inc. (n.d.), was said to be used by individuals during this process, however, over time this perspective expanded to include emotions. A new sense of appreciation for the function of emotions was established, which introduced two ways in which emotions influenced the decision-making process:

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through expected emotions and immediate emotions (Loewenstein, G., & Lerner, J. S. (n.d.)).

An expected emotion is a situation where the individual predicts the emotional consequence of alternative courses of action and then selects actions that maximizes positive emotions and minimizes negative emotions (Loewenstein, G., & Lerner, J. S. (n.d.)). Though the expected emotion is not actually experienced by the individual when making the decision, the possibility of experiencing that emotion in the future is enough to dictate one's decision (Loewenstein, G., & Lerner, J. S. (n.d.)). As an example, consider an investor's decision to move a portion of one's savings into a high-tech fund. In contemplating this decision, the investor might attempt to predict the possibilities of different outcomes, such as losing or gaining different amounts of money and how one would feel in these scenarios. For example, the individual might consider a scenario where one invests in a high-tech fund and the fund takes a dive. Given the situation, the individual would likely experience the feeling of regret for having moved the money from the savings account to the investment. Therefore, this regretful negative emotion and a desire to avoid such a situation would dissuade the individual from investing in that fund (Loewenstein, G., & Lerner, J. S. (n.d.)).

An immediate emotion is a situation where the individual experiences the emotion when making the decision and it influences the decision making by a direct impact or an indirect impact (Loewenstein, G., & Lerner, J. S.

(n.d.)). Either way it alters the individual's expectations of the probability or desirability of future consequences or by changing the way that these consequences (objective and emotional) are processed (Loewenstein, G., & Lerner, J. S. (n.d.)). Taking the example of the investor, in a scenario where there is a direct impact to decision making, the investor might experience immediate anxiety at the prospect of transferring funds from the savings account to the high-tech fund. Thus, this immediate anxiety might deter one from investing into that particular fund. In the scenario where there is an indirect impact to decision making, the investor's pre-existing mood when making the decision to transfer funds from the savings account to the high-tech fund may make one feel more optimistic about the fund. In addition, the pre-existing mood would make one feel comfortable in shrugging off regret if the fund was to take a dive, and also for one to consider the gratifying options that profits could be put towards. Thus, all of these influences may help the individual to discount caution and continue with transferring the funds and investing (Loewenstein, G., & Lerner, J. S. (n.d.)).

Emotion is often assumed to be a subjective feeling, such as feeling happy, sad, etc., however, professor Antonio Damasio (Wikipedia. (2016)) defined emotion more precisely in that "each emotion corresponds to a specific cluster of changes in the body and brain" (Moss, S. (2011)). "Each emotion is evoked by the perception of some object or event that is partly biased by thoughts or memories of similar events in the past" (Moss, S.

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(2011)). "The changes in body, also known as somatic or body states, includes facial expression, heart rate, muscle contractions etc., where as, changes in the brain refers to the release of neurotransmitters such as dopamine, serotonin, etc. "(Moss, S. (2011)). The resulting and experienced changes in the body and in the brain are by-products of individual experiences, of different emotional states that are evoked by primary inducers and secondary inducers. Primary inducers are either pleasant experiences (like the smile of a parent) or an unpleasant experience (like the observation of a snake), which create specific brain activity and bodily changes, which result to specific actions. Secondary inducers are thoughts and/or memories of a primary inducer. The mere thought and/or memory bring about the same bodily changes and brain activity experienced if was evoked by the actual primary inducer (Moss, S. (2011)). This working memory helps the individual to optimize one's behaviour in a similar situation, which helps with making a decision.

The level of maturity and understanding of one's emotion positively impacts and strengthen one's decision-making capability. The importance of emotion cannot be overstated as it directly impacts one's present decision to act or not act. An individual's action or inaction is vital to a business and its longevity in today's competitive environment. To forgo the importance of emotion would be a hindrance to not only personal growth, which comes from making informed decisions and that make up life experiences, but also

to businesses that are competing for individual decision making in favour of a business that could result to potential financial success.

<u>Beauty</u>

Beauty is said to be in the eye of the beholder, implying that beauty is something of a subjective nature. Though it's subjective in terms of appreciation, beauty is objective in terms of its existence and it also has an influence on individual decision-making.

Art critic Fredrick Turner wrote, "Beauty is the highest integrative level of understanding and the most comprehensive capacity for effective action. It enables us to go with, rather than against, the deepest tendency or theme of the universe" (Brooks, D. (2016)). "Arousing one's senses using beauty, it evokes thought and spirit that conquers the deadening aspect of routine" (Brooks, D. (2016)). These thoughts and refined spirit introduces new experiences and perspectives that get fused with the existing individual to form a more, but continuously reforming, informed person. For example, "a person who has appreciated physical grace may have a finer sense of how to move with graciousness through the tribulations of life" (Brooks, D. (2016)).

Beauty is a fluctuating phenomenon that has imprinted many things – industries, objects, and experiences. "Aesthetics, the philosophical study of beauty and taste" (Scruton, R. (n.d.).), has played a vital role in business. With

businesses using aesthetics to create individual experiences, authors Claudia

Townsend and Suzanne B. Shu were motivated to understand "when and

how aesthetic design influences decision making in a domain where

aesthetics are claimed to be of low importance: for example in financial

decisions" (Townsend, C., & Shu, S. B. (2010)). The results of the study, which

is an accumulation of three separate studies, revealed how robust the role of

aesthetics was in terms of influencing financial evaluation and decision-

making, regardless of the different participants (students, general

population, and experienced investors) that were used in each of the

separate studies. In addition, the study revealed that better looking

documents produced increased pride of ownership for the company and this

pride of ownership increased valuation.

"Financial decision-making is an area where use of cognition over

emotion is particularly encouraged and aesthetics is believed to have little

effect on decision-making" (Townsend, C., & Shu, S. B. (2010)). Given the

results of the study, it would not be farfetched to consider the use of beauty

in other industries, objects, and experiences in hopes of possibly being able

to influence individual decisions.

With change being constant and individuals inundated with large

amounts of moment-to-moment experiences, there is clear indication as to

why beauty, in the different shapes and forms it is expressed, is highly being

sought out for and utilized by businesses. Individual decision and action has

never been more informed, than it is today, with the amount of knowledge

creation and information exchange. What has remained constant, as Vincent

Van Gogh once wrote is "I am seeking. I am striving. I am in it with all my

heart" (Brooks, D. (2016)), implying individual longing for self-improvement.

Thus, as businesses continuously serve individual needs and desires through

a product and/or service, using beauty would be imperative. Using beauty

allows businesses to actively participate in creating the experiences that

better inform and provide growth to individuals that may result in individual

decisions and actions in favour of the business.

Pleasure

Numerous life moments compete for the attention of individuals. The

decision to engage in a particular experience is solely based on the individual.

Businesses that are capable of enticing the engagement can probably expect

individual decision-making in favour of the business. The act of decision-

making in a particular engagement comes down to the potential value it will

provide in doing so. Author E. Tory Higgins, Professor of Psychology at

Columbia University and Professor of Management at Columbia Business

School, proposes "value is, indeed a hedonic experience, but it's also an

experience of motivational force which is intensified by the strength of

engagement. Therefore, the experience of something that has positive value

corresponds to experiencing attraction towards it (i.e., trying to move in the

direction toward it), and the experience of something that has negative value corresponds to experiencing repulsion from it (i.e., trying to move in the direction away from it)"(Higgins, E. (2006)).

Underlining this perspective is the *pleasure principle* coined by Sigmund Freud. Sigmund Freud, a neurologist and founder of psychoanalysis, found through his research and his psychoanalytic theory of personality that "The pleasure principle is said to be the driving force of 'the Id', which seeks immediate gratification of all needs, wants, urges and pleasures". Id is the most basic part of the human personality that Sigmund Freud believed was present from birth, and what motivated children to act, without considering if the behaviour and action is acceptable. However, as children mature the ego is developed and helps control the urges of the Id. With the ego closely associated to reality, Sigmund Freud also proposed the concept of the *reality principle*. "The reality principle is what guides the individual's ego to seek avenues of fulfilling the Id, in a manner that is realistically and socially appropriate" (Cherry, K. (2016)). The use of the pleasure principle also referred to as the hedonic principle, helps illustrate the individual instinctual nature of seeking pleasure, and avoiding pain, in order to satisfy psychological and biological needs. "It is important also to recognize that hedonic pleasure/pain experience derives not only from the properties of something, but also from the assigned meaning or significance to an object's

property as a function of an individual's current need or goal state" (Higgins, E. (2006)).

Therefore, using pleasure is a great way to entice individual decision, especially in situations where multiple items demand one's attention. Strategically capitalizing on innate human behaviour is a great way for businesses to attain success. However, at the minimum, pleasure should be used in conjunction with emotion and beauty.

What Does This Mean?

In today's digital economy, continuous data creation and capturing is inevitable. Given the influx of data, businesses are able to address individual needs and desires that have come about with the change of pace in the economy. Purposefully satisfying the human tendency for emotion, beauty and pleasure, as illustrated in this chapter, strategically positions any business in creating the condition for individual decision-making in favour of the business, in turn, resulting in potential market and financial success. This is possible, as demonstrated in the next chapter, with the strategically and proportionally balanced use of three specializations - Science, Technology and Art.

Chapter 3 –Three Specializations

Anthropologists claim that "we increasingly live in an 'information society', in which the creation, movement and analysis of ideas is the center of our cultural and economic life" (Wilson, S. (2002)). This is quite possible given the interconnectedness between devices and individuals, and the resulting influx of data that is created. There is no shortfall of ideas that can be possible with a continuous stream of data, but determining how the data can be packaged to be something of value to paying individuals is the real challenge.

Proportionally Balanced Use of Three Specializations

Deep understanding and advancements on three fronts, Science, Technology and Art, offer the conditions and arena for business opportunity. However, given today's operating climate and environment, businesses that create thoroughly thought-out product and/or service offerings with the proportionally balanced use of the three specializations, can better position itself for longevity and success.

Science

Science	
Speciality	Observation
Focus	Attempt to understand phenomena in the natural world
Process	Acquiring knowledge based on scientific method Organizing the body of knowledge gained through research
Results	Principles and Laws
Outcome	*Societal Improvement*

Table 2. Characteristics of Science

"In the West, the Renaissance period initiated an era of specialization, in which Science became codified as a segregated set of processes and worldviews (Wilson, S. (2002)). Science has since been referred to as the system for acquiring knowledge based on the scientific method, as well as, the system for organizing the body of knowledge gained through research" (Diffen LLC. (2016)). "Science is focused on the natural world with the attempt to understand how, and why, phenomena occur, in turn, creating principles and laws" (Wilson, S. (2002)) for unified understanding, and to be

used for further research. This is possible due to *observation*. Along with continuously creating new hypothesis and improving previous ones, through testing and refinement, scientists are able to analyze and interpret the data, and test out how it informs their hypotheses and theories (Understanding Science. (n.d.)). The "building of robust, cross-substantiating theoretical structures in predicting and controlling the material and organic world" (Wilson, S. (2002)), act as evidence that supports the validity and acceptance of Science as a means for societal improvement.

In today's digital economy where data is continuously being created, businesses highly benefit from using Science, in particular, the use of observation. "Applied Science, which is the application of scientific research to specific human needs" (Diffen LLC. (2016)), illustrates that businesses, in using a similar procedure of hypothesis-creation, are able to observe and assess humans and their interactions with each other, and their environments, to better understand human behaviour. Fortunately, with the availability of data, further refined understanding of human behaviour in particular situations and circumstances can be observed, analyzed and understood. Along with scientific research insights, businesses are able to initiate a plan of action that capitalize on the data, and address with accuracy a potential customer segment need. However, the realization of the plan of action is best achieved through the use of Technology.

Technology

Technology	
Speciality	Building
Focus	Attempts in shaping the surrounding physical world
Process	Creation of technologies (objects and tools) focused on addressing specific utilitarian goals
Results	Improving human life by solving problems
Outcome	***Societal Improvement***

Table 3. Characteristics of Technology

"During the Industrial Revolution, Science inspired technology and with the refinement of Science through the 18th century, technology had begun to draw more on scientific understanding to solve its problems" (Wilson, S. (2002)). By the 20th century, scientific research had become a major source for the development of new technologies. "Technologies are human attempts in shaping the surrounding physical world" (Wilson, S. (2002)) through *building*. "The creation of technologies is focused on addressing specific utilitarian goals" (Wilson, S. (2002)) that "solve problems and improve human life" (Diffen LLC. (2016)). The mere observation of nature and of a particular situation without actually acting on the

information received, can only provide limited value and insight. Thus, technology has been the bridge between thought and action, through the physical development of objects and tools, in addressing inquiries and concerns that have come about through observation.

"Scientists are interested in observing nature and discovering all they can about it, either through directly available human experience, or through active interaction" (Frey, R. E. (n.d.)). However, technologists understand that "nature as a "thing for us" is not neutral, because of the value that is attached to it depending on the circumstance of use" (Frey, R. E. (n.d.)). This has informed and encouraged the building of various technological solutions and products that serve specific individual needs and circumstances. With Technology being the "practical application of Science" (Diffen LLC. (2016)), and the numerous technological achievements that have come about, technology has validated itself as a means for societal improvement.

Businesses that rely on the building of technologies as means of differentiation, face the unfortunate reality of overlap in similarities to competitors given the unified laws, principles and formulas that are used to build the technologies. No matter how the technology is built, the advancements and achievements of a technology are universal, in that once it has been actualized, others could replicate it. Thus, this introduces the importance of the use of Art, that when combined with Science (observation)

and Technology (building), businesses would be able to create a

differentiated product and/or service that could be better monetized.

Art

Art	
Speciality	Creation
Focus	Interpretation of a moment of experience and the physical manifestation of that interpretation
Process	Continuous active process of combining tried-and-learned experiences Thoughtful and imaginative application of tools and techniques to various mediums
Results	A release for the artist, society, movement, time period, etc. Exponential amount of possibilities to experience and to learn from
Outcome	*Societal Improvement*

Table 4. Characteristics of Art

"Art originates back to the start of humanity. Art is produced in historically validated media, presented in limited set of contexts for a circumscribed set of purposes, such as the search for beauty, religious glorifications or the representation of persons and places" (Wilson, S. (2002)). "Art is intentionally made or assembled by humans" (Wilson, S. (2002)) through a continuous active process of combining tried-and learned

experiences, processes and techniques to produce an output that depicts the artist's particular vision. The Getty Museum Program in Art Education defines Art-making as the "process of responding to observations, ideas, feelings, and other experiences by creating work of art through the skilful, thoughtful and imaginative application of tools and techniques to various media. The artistic objects that result are the products of encounters between artists and their intentions, their concepts and attitudes, their cultural and social circumstances, and the materials or media in which they choose to work" (Wilson, S. (2002)). With such abstract qualities and characteristics, it is no wonder as to why in the Renaissance period and the initiation of the specialization era, Art moved in it's own direction, ignoring the agenda of Science (Wilson, S. (2002)). This paved the way for a new sense of appreciation for the Arts.

"A work of art is in some sense a liberation of the personality" (Read, H. (1931)). An artist's interpretation of a moment of experience and the physical manifestation of that interpretation is unique to the artist, given the personal elements that have been entrenched into the piece of art. Given the purposeful separation of Art, which allowed for this level of individualization, it informally created the expectation of artists to reveal something that is original – a unique and private vision of the world (Read, H. (1931)). Art, through its distinguished means of manifestation, is a form of release (Read, H. (1931)). Art depiction can be seen as a release for the artist or a particular

individual, a sense of release for a society or time period, a sense of release for a movement etc. but however intended, the art, when exposed to interpretation, results into newly-created meaning and feelings. This is the value of Art in that its intended purpose of creation is able to take on new meaning and purpose, without further effort, resulting in greater impact, and an exponential amount of possibilities for individuals to experience and to learn from. For this reason, Art through the process of *creation* is validated as a means for societal improvement.

In today's digital environment the amount of data that is exchanged and created exceeds the number of devices and individuals responsible for the effect. The result is chaotic and continuously remains to be overwhelming. In order to better manage the situation, independently accepted worldviews of Science, Technology and Art must be sacrificed, so that a proportionally balanced perspective of the three specializations could be utilized. Businesses that wish to operate and compete in this new environment must acknowledge this new reality.

The Infused Impact

As illustrated in the previous chapter, there is tremendous value in businesses purposefully satisfying the human tendency of emotion, beauty and pleasure. The way in which this is achieved differs amongst business to business. However, a common theme, despite the type of business and industry, is that Art communicates emotion, beauty and pleasure.

Given the digital economy and data as a material with no finite limit, Art cannot be relied upon as a tool for guiding one's actions. Data is a new and foreign type of material and in this context Art needs to take on a new circumstantial-appropriate function. In today's context, art's new function is of being a *mindset* demonstrating its value through attributes such as 'The People's Person, 'Letting Go', 'Abstract Reasoning' and 'Metaphors' which is ever so important in today's changing economy.

'The People's Person' refers to the intuitive ability of grasping the different desires and motivations of different people and deciphering how to best use them to predict behaviour and behaviour in favour of a particular action. This nonintrusive ability allows for a collegial environment and morale that is needed in order to create products and/or services that satisfy continuously changing user needs.

'Letting Go' refers to the confident ability of being objective in all situations, continuously assessing ideas and suggestions presented and ruthlessly eliminating those that do not help with coming up with a solution and do not serve the larger purpose. This is the ideal way to earn people's respect with utilizing one's time efficiently. This helps with coming up with products and/ or services that are actually appropriate for the user and not based on a perceived appropriateness.

'Abstract Reasoning' refers to the comfort of risk taking based on minimal available information while objectively exploring future-orientated possibilities and different scenarios so to better prepare with changing circumstances. Being able to manage and mitigate the changes that arise while continuously progressing is key for businesses, especially when competing to remain relevant to users and the economy.

'Metaphors' refers to the ability of generating new perspectives and conversations through finding relationships between unrelated actions, events and ideas. It requires an appetite for failure and the push for creating an environment of acceptance for failure so that new possibilities between unlikely variables may emerge and become an inspiration for the possibility of what may be.

In combining the new function of Art, along with the already existing role of Art and other variables such as Science, Technology, businesses can benefit from the proportional infusion of Art with Science to create emotion,

the proportional infusion of Art with Technology to create beauty, and the proportional infusion of Art, Science and Technology to create pleasure. Thus, creating the conditions that are worth exploring, understanding and capitalizing on for the benefit of organizations and society as a whole.

Art + Science
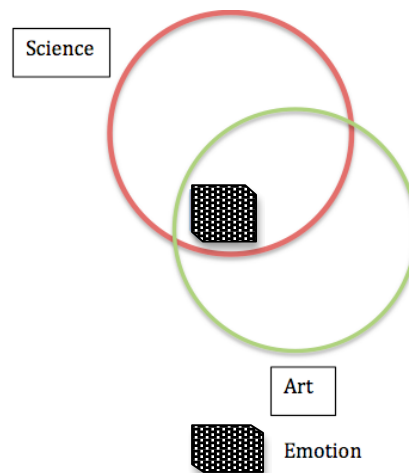
Figure 3. Emotion = Art + Science

"The Arts and Sciences are two great engines of culture: sources of creativity, places of aspiration and makers of aggregate identity" (Wilson, S. (2002)). Though Art and Science have individually played a significant role in societal improvement, combining both specializations will introduce new opportunities.

Since "Science uses observation to establish methodological, logical and rational scientific research findings" (Dambrot, S. (2011)), this is beneficial for businesses, so they can better understand human behaviour

and individual decision-making. Given "Science is focused on the natural world with the attempt to understand how, and why, phenomena occur, in turn, creating principles and laws" (Wilson, S. (2002)) for unified understanding, this results in all businesses having similar access to knowledge. Therefore, it is ever so important to "use Art, what is seen as creative, intuitive and expressive "(Dambrot, S. (2011)), for interpreting the data, extrapolating relevant information and creating experiences that are in line with business objectives but confidently entices one's emotions. As a result, psychological values, which are values that arise out of our common human sympathies, interests and subconscious life (Read, H. (1931)), are experienced and may influence one's decision.

Edward O Wilson stated "Science explains feeling, while art transmits it" (Dambrot, S. (2011)). Given the results of "studies of brain activity using fMRI (functional Magnetic Resonance Imagining) scans, which show that the same areas are active when subjects engage in a wide range of activities – ex: listening to music, constructing a mathematical proof, viewing a painting, discovering a scientific principle etc., Art and Science are said to meet in sentiment, which occurs in well-defined areas of the brain" (Dambrot, S. (2011)). This brings about the emotional experience and associated emotional energy that entices an individual action, which is very important to business success. Therefore, Art and Science, though different in individual function, can be purposefully and strategically combined.

__Alinea Restaurant__

*Figure 4. Image of dishes served at Alinea Restaurant. Image from Alinea Restaurant. Image
downloaded from http://alinearestaurant.com/site/cuisine/*

A great example is the works of Chef Grant Achatz at the restaurant

Alinea in Chicago Illinois (Wikimedia Foundation, Inc. (2016)). 'Alinea' which

means the beginning of a new train of thought, is a minimalistic modern

vision that focuses on the cuisine and dining experience (Alinea Restaurant.

(2016)) in a way that resembles magic. Early on, Chef Grant Achatz came to

the realization that other disciplines, in particular the Arts, can be drawn

upon for inspiration to the way in which food was cooked, served and

consumed by the restaurants' patrons. In living by its core identity of

embracing innovation and change, Chef Grant Achatz decided to breakdown

every element of the cuisine and dining experience so to better understand if

the existing way is the best way it can exist. Thus, in doing so revolutionizing the customer's emotional experience as a whole. For example, in understanding the essence and structure of a tomato, Chef Grant Achatz maintained the vegetable's integrity and taste but recreated it in the form of a strawberry and vice versa, having the strawberry look like a tomato. Another example is a dish that has a pillow that continuously releases the aroma of flowers every time the patron cuts into the food. This not only capitalizes on the scientific understanding of the impact of smell on individuals, it demonstrates the strategic and intentional use of smell as a means to enhance the cuisine and dining experience. What may be seen as another dinner outing, at Alinea, it's a cuisine and dining experience like no other.

<u>Art + Technology</u>
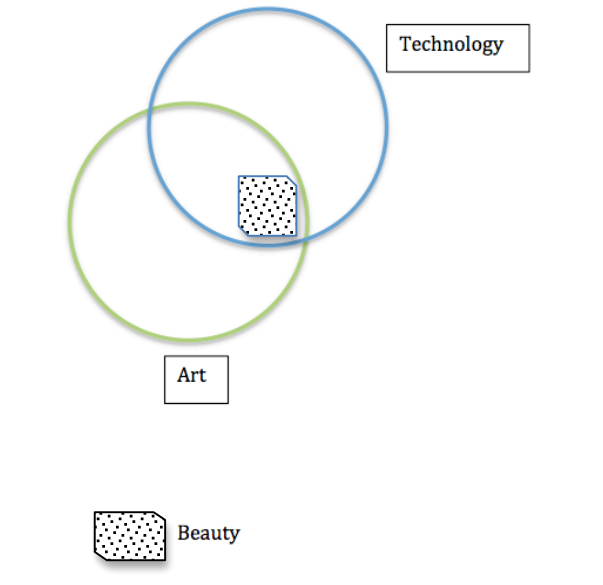
Figure 5. Beauty = Art + Technology

"The building of technologies has been associated to addressing utilitarian goals" (Wilson, S. (2002)) that improve human life (Diffen LLC. (2016)). However, technology in of itself is lifeless. In today's environment, it takes an act of artistic vision and bravery to decide to work with techniques, tools and concepts from a raw area of technology, not yet accepted as valid (Wilson, S. (2002)). Thus, infusing Arts with Technology, in the manner of aesthetics, produces beauty, which arouses one's senses and influences individual decision-making.

Art is capable of providing meaning to created technologies. This is extremely important given that competitors can replicate technologies once

it has been actualized. In creating a unique meaning, businesses are able to use a commonly available technological achievement, but still be able to offer a differentiated product and/or service offering. Unfortunately, just as with everything else, technologies are ever changing given continuous research insights.

Constant change, if not thoroughly thought through, acknowledged and acted on, can bring about disabilities in the technology itself and debilitate a business, impacting the ability to compete. In order to remain relevant, businesses need to infuse Art with Technology when establishing product and/or service offerings. "In using Art, the very act of exploiting the qualities of the material out of which the product is constructed, transcends the disabilities of that material" (Read, H. (1931)). This is possible because of what Art stands for: "Art is not the expression in plastic form of any one particular ideal. It is the expression of an ideal, which the artist can realize in plastic form" (Read, H. (1931)). Therefore, in combining Art with Technology, businesses are able to come up with new purposes to existing technologies, while, beautifying product and/or service offerings, which help differentiate a business to its competitors.

A great example illustrating the value and benefit of infusing Art with Technology is 'Square'. Square is a mobile payment company that has revolutionized the retail experience for both the merchant and customer. Technologies are human attempts to shaping the physical world to address a

specific utilitarian goal and Square has become a solution to many small and medium sized businesses.

Square
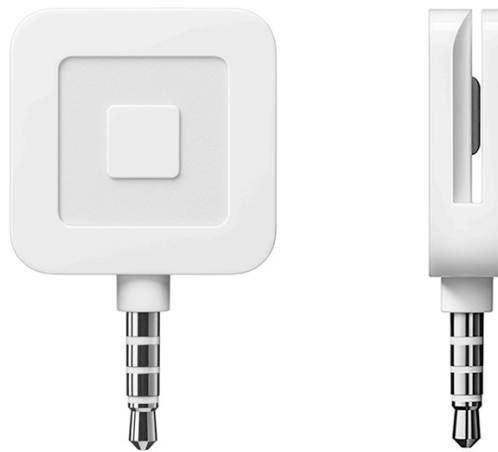
Figure 6. Square's magstripe dongle reader. Image from Square, Inc. Image downloaded from https://squareup.com/help/us/en/article/5067-get-a-free-square-magstripe-reader.

Though Square relies on certain existing technologies in the payment processing ecosystem, it uses art in both product and service design to create meaning for the end user. With its beautifully designed minimalistic plastic 'square' dongle, it emits a feeling of ease and simplicity in conducting and processing transactions (see figure 9). In addition, in using art, Square has changed the experience of merchants when it comes to the payment structure of using 3rd party hardware to process transactions. Square, like a credit card company charges a 2.75% per swipe or 3.75% plus 15 cents for

manually typed transactions, transaction fee for every time a merchant uses Square to process a transaction (Shontell, A. (2015)). This creates a beautiful, simple and worry-free experience for the merchant as it eliminates ongoing 3rd party hardware rental fees and the comfort in knowing that the merchant would only need to pay for the payment processing service when a transaction of a sale takes place. Thus, allowing for the possibility of passing on the savings to customers and creating a desired and enjoyable service experience for all.

Art + Science + Technology
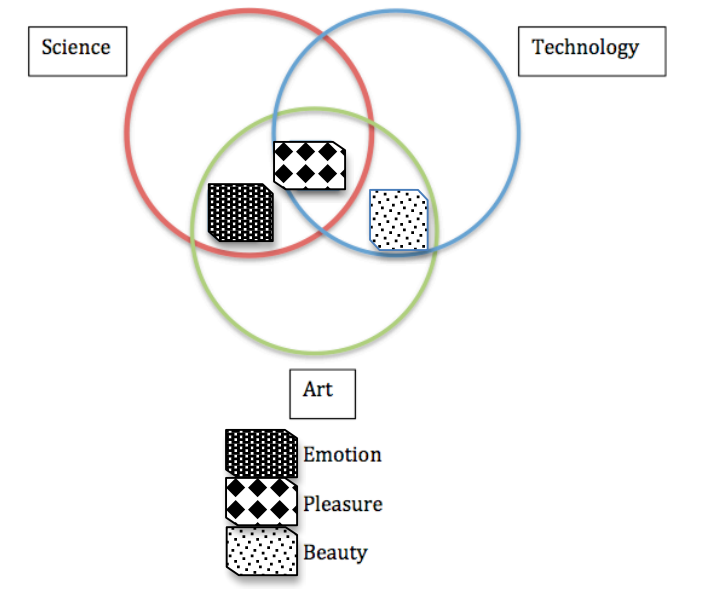
Figure 7. Pleasure = Art + Science + Technology

The benefits of uniting Art with Science irrespective of uniting Art with Technology is undeniable, however, it is incomplete as there is tremendous value in fusing Art with Science *and* with Technology. "The appeal of Art is not to conscious perception at all, but to intuitive apprehension" (Read, H. (1931)). "A work of art is not present in thought, but in feeling; it is a symbol rather than a direct statement of truth" (Read, H. (1931)). In combining the use of 'Art with Science' through *observation* in order to understand human behaviour and human emotions, along with, using 'Art with Technology' and the notion of *building* objects that address human needs but are aesthetically competent, it allows businesses to *create* the conditions for combining 'Art with Science and with Technology', which

results to individuals to feel and experience pleasure. Herbert Read noted that, " A work of art always surprises us; it has worked its effect before we have become conscious of its presence" (Read, H. (1931)). Thus, this tremendous ability is evidence of Art's influence on society and other domains. As a result, the combined strategic use of Art, Science and Technology for the purposes of satisfying emotion, beauty and pleasure, not only entices individual behaviour, but can also direct behaviour in favour of a business and its product and/or service offerings.

Solar City

An example of this is Solar City. Solar City is America's #1 full-service solar provider (see Figure 11) who makes clean energy available to the general public at a lower cost than one would pay for energy generated by burning fossil fuels like coal, oil and natural gas (Solar City . (n.d.)).

Figure 8. SolarCity employees installing solar panels on top of building. Image from Indeed, Inc. Image downloaded from http://www.indeed.com/cmp/Solarcity

A passionate attempt to mitigate future rising pollution and CO2 levels,

SolarCity has successfully and strategically used Science and its attribute of

observation, combined with Art and its attribute of *creation*, to provide the

condition to thoroughly understand and provoke an _emotional_ interest in

addressing climate concerns. Through the use of Technology and its attribute

of *building*, SolarCity in combining Art has built three _beautifully_ designed

products (Solar Panels, Power Wall (backup electricity generator), Solar

Roof) and unique service models that mask the complexity of solar

technology and encourage customers to actively participate in energy

independence. In successfully combining and using Science + Technology +

Art, SolarCity has created the conditions for a holistic _pleasurable_ experience

(saving money and helping the environment) that welcomes societal

participation in transforming how energy is being used and contributing to

SolarCity's mission of delivering 'Better Energy' (Solar City . (n.d.)).

What Does This Mean?

The pressure for businesses to succeed is steadily increasing.

Continuous change and chaos requires businesses to strategically balance the

use of Art, Science and Technology, in particular the new function of Art. "It

is best for scientific and technological research to be viewed more broadly

than in the past: not as a specialized technical inquiry, but as cultural

creativity and commentary, much like art" (Wilson, S. (2002)). In doing so, like art, it can be profitably analyzed for its subtexts, its association to more general cultural forces, and its implications (Wilson, S. (2002)).

The interconnectedness of devices and individuals, and the resulting influx of data falsely imply that success is possible for all incumbents of today's digital economy. Success, however defined, is probable but not possible without acknowledging and accepting the influence of Art.

Chapter 4 – Transferability: Uses of Arts Reimagined

Art, and its influences have been long associated to societal change. Changes to individual interest, changes to societal perspectives, to name a few, are examples of Art's impact. Tolstoy famously defined the process of art as " To evoke in oneself a feeling one has experienced, and having evoked it in oneself, then by means of movement, lines, colours, sounds, or forms expressed in words so to transmit that feeling that others experience the same feeling – this is the activity of art (Read, H. (1931)). However, Herbert Reed amended this definition in saying that "The real function of art is to express feeling and transmit understanding" (Read, H. (1931)). With this updated definition, it is quite comfortable to interpret the value of Art in an art context such as visual arts; however, the definition also allows for the value of Art to be relevant in other contexts.

Art in its created form, and in using Art and its attributes and qualities in new environments, such as technology encased in designed products with aesthetic intent, has been influential in establishing objects and instruments that convey feeling but also meaning. A work of art moulds outer things into sympathy with inner values, in which perpetuates its own function and produces a better experience (Dover Publications, Inc. (1982)). The value of Art is not only delivered at the moment of experience, but also continues to be impactful beyond its original perceived purpose. "Wherever there is Art, there is a possibility of training" (Dover Publications, Inc. (1982)).

Art may be perceived as physical manifestations, but can also be attributed to the non-physical experiences it delivers. "Art is action which transcending the body makes the world a more congenial stimulus to the soul" (Dover Publications, Inc. (1982)). In assisting to make it easier for people to accept and appreciate the world, the possibilities for experiences and opportunities for inquiry and by learning through art, makes all art useful and practical.

Visual Arts

"Art is capable of communicating ideas in ways that is not fully possible with language" (Zaidel, D. W. (2011)). Visual Arts are art forms, which derive from multiple artistic disciplines, created primarily for visual appeal and often exist in permanent form. Visual arts can be sculptures, paintings, performance arts, decorative arts etc. Nevertheless, irrespective of the domain in which the visual art form is conceived, it is recognized that " Visual artists are able to create something new on canvas, something that did not exist previously and does not actually exist in reality, even when, at times, it closely resembles reality…What the creation expresses is what is on the artist's mind, which includes conscious and unconscious experiences, political and cultural events, beliefs, fears, desires, emotions, and much more. The list is endless. Above all, the composition communicates a message from

artist to viewer" (Zaidel, D. W. (2011)). Thus, through this tremendous capability of the artist is how visual art contributes to society.

Visual Arts, in its many distinct forms makes dialogue (both verbal and non-verbal) possible, human emotions to be felt and perspectives and opinions to be formed. Though it's done effortlessly, the resulting effect on the individual is permanent. It adds to the existing composition of the individual, which allows for growth, but forever changes the person. "Work of art arouses in us certain physical reactions: we are conscious of (rhythm, harmony, unity) and these physical properties work upon our nerves. But, they do not agitate them so much as soothe them, and if we must, psychologically speaking, call the resultant state of mind an emotion, it is an emotion totally different in kind from the emotion experienced and expressed by the artist in the act of creating the work of art. It is better described as a state of wonder or admiration, or more coldly, but more exactly as a state of recognition" (Read, H. (1931)). In applying universal 2D/3D elements and principles, visual artists through the visual art are able to create the lived experiences that capitalize on the "hallmark of the human mind, which is symbolic cognition" (Zaidel, D. W. (2011)), which in turn, allows for a lasting effect and impact.

2D/3D Elements and Principles

Visual artists use 2D/3D elements and principles, which are fundamental ideas about the practice of good visual design, when creating visual arts. Not only do the 2D/3D elements and principles guide an artist's actions, it's universal acceptance, provides a baseline for those in receipt of the visual art to evaluate one's experience and the work of art. The way, in which the 2D/3D elements and principles are used and not used, is what differentiates one piece of art to another. Contingent on the proportional choice and use of particular elements and principles, when applied to a particular material, it can produce infinite amount of possibilities for creation, lived experiences and intended and unintended impact.

Visual Arts Techniques	
2D / 3D Elements	**2D / 3D Principles**
Line	Rhythm
Shape	Proportion
Form	Scale
Colour	
Texture	

Table 5. 2D/3D Visual Arts Techniques

Common 2D/3D elements used in creating visual arts

(Cox, J. (n.d.)),(Mueller, E. (2015))

Line

An element of art used to define shape, contours, and outlines; also to suggest

mass and volume. It may be a continuous mark made on a surface with a

pointed tool or implied by the edges of shapes and forms or the direction

followed by anything in motion.

Shape

When a line crosses itself or intersects with other lines to enclose a space, it

creates a shape. Shape is two-dimensional and has height and width, but no

depth.

Form

Form is the three-dimensionality of an object.

Colour

Color comes from light - if it weren't for light, we would have no color. Light

rays move in a straight path from a light source. Within this light rays include

all of the colors in the spectrum or rainbow. When the light rays hit an object,

our eyes respond to the rays that are reflected back and we see only the

reflected color(s). Color creates emphasis, harmony, emotions, unity, and movement.

Texture

Texture is the surface quality of an object. Texture also refers to the illusion of roughness or smoothness in a picture. It can create emphasis, movement, pattern, and emotion.

Common 2D/3D principles used in creating visual arts

(Cox, J. (n.d.)),(Mueller, E. (2015))

Rhythm

It is a repeating visual element (line, shape, pattern, texture, movement) in an artwork or design.

Proportion

The relative size of different elements of an artwork and the relationship of these elements to the whole and to each other.

Scale

The overall size of an object.

In applying these elements and principles, depending on the material of choice, the artist may face material-specific limitations. These limitations, in of itself, provides the conditions that allow for the creation of a unique, material-allowed work of art. Although, a work of art may be permanent in structure; however, it does not necessarily imply that the material used to create the work of art is permanent in composition. "Art needs to find a material relatively formless, which its business is to shape; and this initial formlessness in matter is essential to art's existence" (Dover Publications, Inc. (1982)). Therefore, in capitalizing on the *plasticity* of a material, it permits new possibilities for creating works of art.

Plasticity

"Man exists amid a universal ferment of being, and not only needs plasticity in his habits and pursuits but finds plasticity also in the surrounding world" (Dover Publications, Inc. (1982)). Continuous change is inevitable and along with these changes comes new discoveries, new needs and desires, and new experiences. This may be the response for achieving a personal endeavor, but it can also mean, a response for societal improvements. A sense of improvement, for better or worse, is a characteristic of all humans. As George Santayana noted, "Man depends on things for his experience, yet by automatic action he changes these very things so that it becomes possible that by his action he should promote his

welfare" (Dover Publications, Inc. (1982)). Therefore, improvement, whether using Art, Science, Technology or the combination of the three, will be accepted and valued, so long as it serves a current and/or a possible future need or situation. How this achieved is dependent on rethinking possible uses of materials and resources. It is looking at new ways to satisfy an existing need or situation, but also being able to entice new behavior and thinking that is a slight extension to current reality. The ability in doing so comes down to available materials and in understanding and exploring what can be done with them.

All materials have distinct qualities and characteristics that dictate what can be done with them. Depending on the material, there are thresholds in which a material can be explored and repurposed. This refers to what is called *plasticity*. "Plasticity is the propensy of a material to undergo enduring deformation under load when compressed. It is the quality or state of being plastic; especially the capacity for being molded or altered. The plasticity of a material is directly proportional to the ductility and malleability of the material" (Corrosionpedia Inc. (n.d.)). All materials share this characteristic, some more and some less. In understanding the plastic nature of a material, it allows for new possibilities for the material itself and the option for combining with other materials. "It is impossible, however, to imagine beforehand what these elements should be or how to combine them. The problem must exist before its solution can be found" (Dover Publications,

Inc. (1982)). Therefore, once the problem has been decided on, the way in

which the problem is to be solved gives room for exploration, testing and

refining and in taking bold risks. "Conception and imagination are themselves

automatic and run in grooves, so that only certain forms in certain

combinations will ever suggest themselves to a given designer" (Dover

Publications, Inc. (1982)). The result of this iterative process leads to

physical manifestations that address the problem and/or provides the

condition for knowledge creation that allows for further improvements.

Despite the way, in which the physical manifestation occurs, either as a

product, service, building, sculptures etc., these are all examples of visual

cultural references.

Producing and Distributing Visual Cultural References

Businesses exist to produce and distribute visual cultural references.
Businesses use plasticity in materials to serve customer segment needs and
desires. Depending on the industry and profession, the ideal material of
choice varies; for example: paint, wood, marble, iron, bronze, plastic, glass,
etc. Individually these materials serve a particular purpose, which is guided
by what is allowed given the material. However, when these materials have
been repurposed through plasticity, and then combined with other materials,
the results are different. Thus, new meaning and purpose is created. For
some businesses, these results have led to tremendous financial success as
seen with Audi and its Audi TT.

Audi TT

Figure 9. Audi TT parked on the side of the road. Image from criader.com. Image downloaded from http://criader.com/1999-audi-tt/

The radical look of Audi TT, gained a lot of recognition and interest when it first appeared in 1998 (Burn, J. (2014)). It's design features embraced design elements and principles that also drew inspiration from Bauhaus, a German design school from the early 20th century that prioritized a simplistic, geometric, clean industrial look (George, P. (2013))(see figure 12). Thus, being recognized as a car with dynamic potential (Burn, J. (2014)).

The Audi TT had many new design features that pushed for innovative manufacturing techniques. For example, the welding laser system that helped create the seamless design features that is now associated to the Audi TT. Its stunning looks were a breath of fresh air compared to other cars at the time (Roshon, N. (2016)). Strategically, the eye-catching design carried over into the interior and the Audi TT was praised for its successful combination of

leather, aluminum and stainless steel inside the car, earning its reputation as "no other car in the world has an interior like the TT's"(George, P. (2013)). This is a great example of the importance of understanding the plasticity of materials so that it can be successfully combined for aesthetic confidence and use.

In 2004, Audi announced its next generation of the Audi TT that evidently and cleverly used the plasticity of aluminum and steel and combined them together to create front body panels and rear panels, respectively (Roshon, N. (2016)). Given its success, it has been carried forward into the present model of the car. As it was seen in the first model and as it is seen in the present model, the Audi TT uses lines on the flanks, sharp rear hunches, prominent creases and tension in the body to create a legitimate sports car (Burn, J. (2014)), demonstrating how to successfully use design elements and principles. In applying strong styling techniques and architectural clarity (Burn, J. (2014)), Audi TT has and continuously achieves success. Being inspired and influenced by the original design, Audi TT remains to peak customers' interest and has been accredited to being "historically significant" (Roshon, N. (2016)).

Apple iPhone

Another great example is Apple's iPhone, which transformed the cellular phone market. According to Fortune, Apple is on verge of selling it's 1 billionth iPhone (Shen, L. (2016)). This is a fantastic number given that Apple's first iPhone was released in 2007.

Figure 10. Display of Apple iPhones (iPhone 3 – iPhone 6plus). Image from YouTube. Image downloaded from https://www.google.ca/search?q=nest&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjRqYS_j8jQAh VI2IMKHSq-A7EQ_AUICSgC&biw=1440&bih=794#tbs=imgo:1%2Citp:photo%2Cisz:l&tbm=isch&q=iphone+3+to +6&imgrc=0rz9v05tLxdPeM%3A

Apple has steadily made efforts in material efficiency over the years with materials such as Aluminum, Stainless Steel, Glass, Plastic, etc. (Apple Inc. (2015)). In examining the plasticity of materials and coming up with creative new ways in using the materials, Apple has successfully improved

their phones to respond to current market needs and demands (see figure 13). Apple has been celebrated for its ability to successfully combine Design and Technology and for creating wonderful products. The products address current and possible future human needs, while satisfying the human emotion, beauty and pleasure. As a result, Apple remains as one of the most innovative and profitable companies today.

The above examples illustrate the capability of taking different materials such as metals, plastic, glass etc, and the plasticity of each and the combination of them to create wonderful products.

The plasticity of a material provides new options and possibilities for materials currently being used. However, the idea of plasticity also ignites curiosity in understanding the extent of plasticity in things that may not seem like a material and/or seem as a viable option to be a material for use. A great example of this came about in the attempt to address the emission of Carbon Dioxide (CO_2) into the atmosphere, and analyzing how to reverse the negative impact that humans have on the planet. In contemplating " How do you turn Carbon Dioxide (CO_2) into a product?", it led to the challenge and curiosity of creating a shoe with no footprint (see figure 14)(Mosbergen, D. (2016)).

The Shoe Without A Footprint

Figure 11. 'The Shoe Without a Footprint' in a clear package. Image from 10XBETA. Image downloaded from http://www.huffingtonpost.com/entry/shoes-without-a-footprint-zero-carbon_us_57ff5687e4b05eff5581a3ed.

As per Peter Shepard, Executive Vice President,Polymers,Novomer "Carbon Dioxide is a terrific raw material" (Mosbergen, D. (2016)) and by understanding the characteristics of Carbon Dioxide (CO2) and the plasticity of such a material, it allowed for a process that captured Carbon Dioxide that would normally be emitted into the atmosphere, and be added to a catalyst. Within a couple of hours a special type of polymer is created and then used to make up 75% of the shoe. The success of such a process demonstrates the value in using Art and its new function of being a mindset in coming up with an unconventional way of reengineering the material science of shoe fabrication. In turn, introducing a more sustainable and efficient

manufacturing process. This evidently demonstrates how Carbon Dioxide (CO2) could be repurposed to not only help humanity prepare for environmental challenges ahead (Mosbergen, D. (2016)), but in using this new form of material, the plasticity of it and in utilizing 2D/3D elements and principles, to come up with products that fulfill existing societal needs and wants.

What Does This Mean?

Humans seek experiences. Experiences that inform, provide learning opportunities and deliver enjoyment. In attempting to achieve this, humans seek plasticity of materials to transform their lived experiences. Businesses in an attempt to provide these experiences have used Science to observe and understand, and Technology to build solutions. However, Art, and the use of it in its new function, old function and the combination of both, in whichever way that best suits the business, provides the needed differentiation for businesses to compete with competitors. As Art differentiates and monetizes Science and Technology, successfully executing this is what provides the conditions for businesses to achieve financial success, and the reputation of having *good taste.* Consequently, this is not only essential for companies like Audi and Apple, but for all businesses operating in the digital economy.

Chapter 5 – The Digital Material: Data

The economy has experienced a necessary adjustment to pace, given recent advancements and the continuous ambition to strive and understand more. Some businesses have benefited and some have not since this has brought tremendous change. Changes in people's behaviour and changes in people's expectations and in how businesses can address these individual needs and desires and societal concerns, have made this situation challenging but an opportunistic one.

As seen in the previous chapter, businesses have used various materials and the plasticity of materials when creating products to address peoples needs and desires. Depending on the type of material and where it can be found, it provides an advantage for those in primary receipt of the material, creating inequality in operating conditions. Given natural limitations to materials in terms of its properties and the amount that is available for use, businesses need to continuously come up with new ways to satisfy customers while financially being stable. This has been difficult in the past as it is today.

As noted by Herbert Read, " The ultimate values of art transcend the individual and his time and circumstance. They express an ideal proportion or harmony which the artist can grasp only in virtue of his intuitive powers. In expressing his intuition the artist will use materials placed in his hands by

the circumstance of his time: at one period he will scratch on the walls of his cave, at another he will build or decorate a temple or a cathedral, at another he will paint on canvas for a limited circle of connoisseurs. The true artist is indifferent to the materials and conditions imposed upon him. He accepts any conditions, so long as they can be used to express his will-to-form" (Read, H. (1931)). Like an artist who creates works of art for others to experience, businesses exist to produce and distribute product and/or service offerings for its customers and society as a whole.

Given the rise in technology, technological advancements and the resulting digital economy, businesses wanting to and currently operating within this economy is privileged with a new type of material: Data. As a by-product of using technology, an influx of data has been created and is continuously being created. Individual data points may seem unimportant, however, businesses that are capable of aggregating individual data points together, as deemed appropriate for the business, are able to provide new product and/or service offerings that have global impact and scale. This is the new profitable reality.

Material of Choice
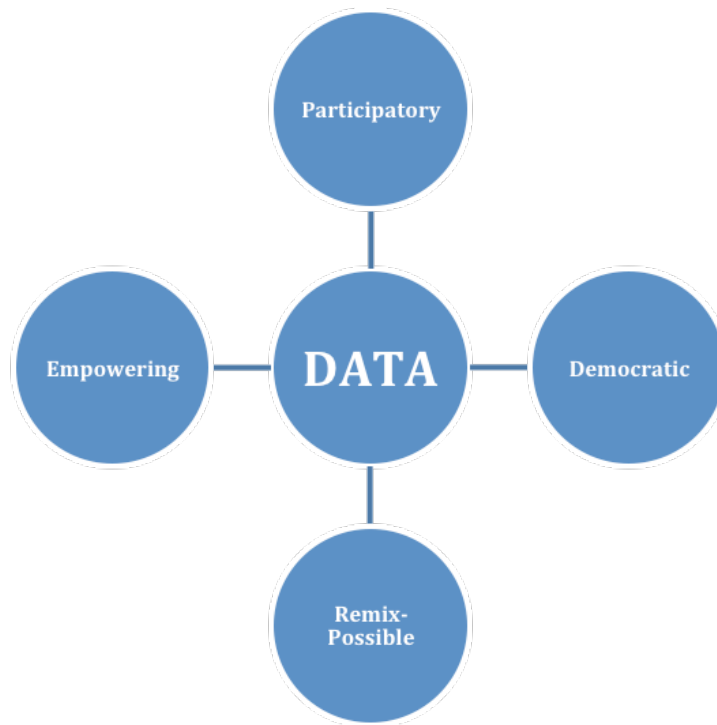
Figure 12: "Data"- Material of Choice in the Digital Economy

Data is a lucrative and luxurious material of the digital economy and the proper use of it could be the answer to addressing a growing number of niche-segmented markets and for addressing societal concerns and global improvements. Therefore, in the digital economy, it is all about the plasticity of the most precious available material *Data*, which makes 'Business an Art'. With Art being concerned with transforming materials for experiential purposes for the human individual, businesses in today's economy are fortunate. Unlike other materials, Data is **Participatory**, **Democratic**,

Remix-Possible and **Empowering**. In having these four distinct qualities,

Data has earned its reputation as being the *material with most plasticity*,

suggesting the endless amount of opportunities that are possible when used.

The amount of possibilities and differences amongst them is the result of

using Art and its new function of being a *mindset.* Along with it's attributes of

'The People's Person, 'Letting Go', 'Abstract Reasoning' and 'Metaphors' , Art

allows businesses to create new products and/or services that address

changing user needs.

Participatory

By individuals participating in an action through the use of

technology, either consciously through a particular manner, or

unconsciously, this results in data being created. What makes this material

unique and unlike any other material in that the amount of material available

for use is continuously being created. Other materials such as plastic, metals,

glass etc., are highly dependent on other elements. Only when the different

elements are combined, through a specialized process, is when the material

is created. Any changes to the availability of elements can disrupt the

production of the material. Whereas, when it comes to data, it does not

require a specialized process or for individuals to go out of their way to

create the data. It is the by-product of action in its purest form. In its purest

form the data is valuable, as it is, when it's aggregated together, under

particular conditions and algorithms, to produce additional purpose.

Therefore, the participatory nature of data makes this material self-reliant,

sustainable and robust, irrespective of the conditions of the economy.

<u>Democratic</u>

Given data is the by-product of action it is insignificant as to who

creates it. Other materials such as plastic, metals, glass etc., given the

dependency on other elements and resources, consequently provides

advantages to those in control of the distribution of the element and those

that have the resources to combine the elements to produce the material.

When it comes to materials, such as stone, it is highly dependent on the

location and some instances the environmental conditions for it to be

created. Whereas, data, not being a physical matter and not needing other

conditions to exist, becomes a material that is equally available for anyone

who wishes to collect and use it. Factors such as location, available elements,

and available resources, once benefited a selective few, however, the

democratic nature of data, provides the initial conditions for a fair and equal

playing field. Competition in this environment is different and what is done

with the material, as its equally available to all, is what dictates business

success.

<u>Remix-Possible</u>

The cost of creating data is minuscule. Given data is a non-physical material, it is the ideal material that allows for trial-and-error for discovering new ways and purposes that better serve customers. In using plastic, metals, glass etc., there are restrictions as a result of the composition of the material. It makes it impossible for certain materials to mix with one another and unfortunately limiting the possible use of the materials to current conditions. This can be recognized as a finite limit that needs to be accepted or a limit that is in need of re-evaluation, however, either way this is costly to a business.

Change in the pace of the economy has brought about an increase in needs and desires. Focused specialization has never been as important as it is today, given the growing segmented-niche markets. However, being confined to the mercy of the characteristics of materials is unfortunate. Fortunately, when it comes to data and it being a non-physical material, such limitations do not exist. In using data, businesses are able to explore new engagements with industries and businesses that previously were not possible, at a negligible cost. It allows businesses to explore alternative ways to best serve its existing customers, and with this new-guided insight expand its reach and societal impact.

Empowering

Data, as a material, is empowering in both its original collected form and its repurposed manner. Materials, such as plastic, metals, glass etc., broken down to its individual elements, may not be empowering. However, when the elements are combined, the resulting material is what becomes valuable and empowers behaviour. In establishing a particular use for the materials, all empowering behaviour stops and additional uses of the materials are not possible because the material has forever changed. Resulting to a limited amount of impact. In comparison, data reigns as a material of optimal value. Data is created in moments of action and inaction. It not only informs the individual who is creating the data, but it informs the businesses that are in receipt of it. In using algorithms to collect and interpret the data, businesses provide feedback to the individual. The individual, who then reacts to this new information, creates new data that gets reinterpreted. The cyclical value creation allows for continuous empowerment. Along with the possibility for revisiting originally created data even if it has been used and being able to extrapolate different purposes from the same data points, the degree and range of impact of data is immeasurable but fairly promising.

What Does This Mean?

Businesses are pressed with the challenge of addressing changing customer needs and desires. The expectations may seem excessive, in comparison to previous customer requests, however, given the new possibilities that data allows for, this is just the start. Humans seek plasticity of materials to transform lived experiences and in today's digital environment 'data' is the material of choice. Data with its' *participatory*, *democratic*, *remix-possible* and *empowering* nature, is the material with most plasticity. Creating products and/or service offerings using the plasticity of data, makes 'Business an Art'. Thus, it can be said that businesses in successfully using data, can offer an endless amount of experiences that can be monetized.

Chapter 6 – Buying the View

It is said that an average person has about 50,000 thoughts a day (Davis, B. (2013)) and with this circumstance it is no easy feat for any business to capture one's attention and action in favour of the business. The way in which this is done has shifted from product approach, to product and/or data-driven approach given the influx of data. Data has become the material of choice for its low-cost, non-physical composition, and its endless potential of malleability for new purposes. Given these conditions, there is no disagreement in that creating experiences in the digital economy is all about the plasticity of data.

Transforming Human Lived Experiences

Experiences are unique to human beings. Moments of experiences, however intended when created, have new meaning when received and perceived by an individual. The endless possibilities of meaning, impact and entertainment, could explain why humans seek plasticity of materials in order to transform lived experiences. Consequently, in needing to satisfy the desire for transformed lived experiences, businesses produce and distribute products and/or services, also known as visual displays. These displays are possible given the digital condition of today's economy and the use of Art, its new function and associated attributes. New imagined approaches to old

problems, the introduction of new ways to enrich everyday life, are some ways in which the availability of data and the algorithmically repurposed version of it, provides endless amount of experiences.

The continuous development of data and the different ways it which it can repurposed remains to be challenging yet provides an opportunity for all businesses in different industries. There is tremendous value in businesses understanding and using data to create value for their customers and there is no better way than strategically satisfying the human tendency of emotion, beauty and pleasure. This is possible given the strategically proportional infusion of Art with Science, infusion of Art with Technology, infusion of Art, Science and Technology, which communicates emotion, beauty and pleasure, respectively. This makes Art the necessary and differentiating element and variable for any business operating and competing in today's environment. Illustrated below are examples of businesses that have embraced the use of data and the influence of Art and successfully positioned itself in today's economy with its differentiated product and/or service offerings.

New Forms of Visual Displays

Facebook

Figure 13. Logo of Facebook. Image from Facebook, Inc. Image downloaded from http://t1.gstatic.com/images?q=tbn:ANd9GcTUHFAdTFQF_-vEhZgtGE7EtXWbvXMPWbIWTY-f0uwg4jXep6Is

Influences	Tendencies	Experiences
Art + Science	Emotion	* Part of something greater * Relationships transcends boundaries
Art + Technology	Beauty	* Dynamic and Linear * New ways to enrich existing relationship: chat, watch videos, comment, make posts, creating group(s)
Art + Science + Technology	Pleasure	* Access to a larger ecosystem * Opportunity for those who may have been previously been excluded to participate in groups and discussions * Find and connect with long-lost relationships
Theme	Community	

Table 6. Facebook Approach and Users' Experiences

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In the case of Facebook, individual data that has been uploaded onto the company's server through participatory action has been repurposed in a visual manner that has forever changed the meaning of 'being connected'. In comparison to traditional means of communication such as the telephone and in-person communication, the timeline-based design layout of Facebook allows members to share pictures, videos and comments on one's own profile page, as well as, onto others, with relatively minimal effort (Facebook, Inc. (n.d.)).
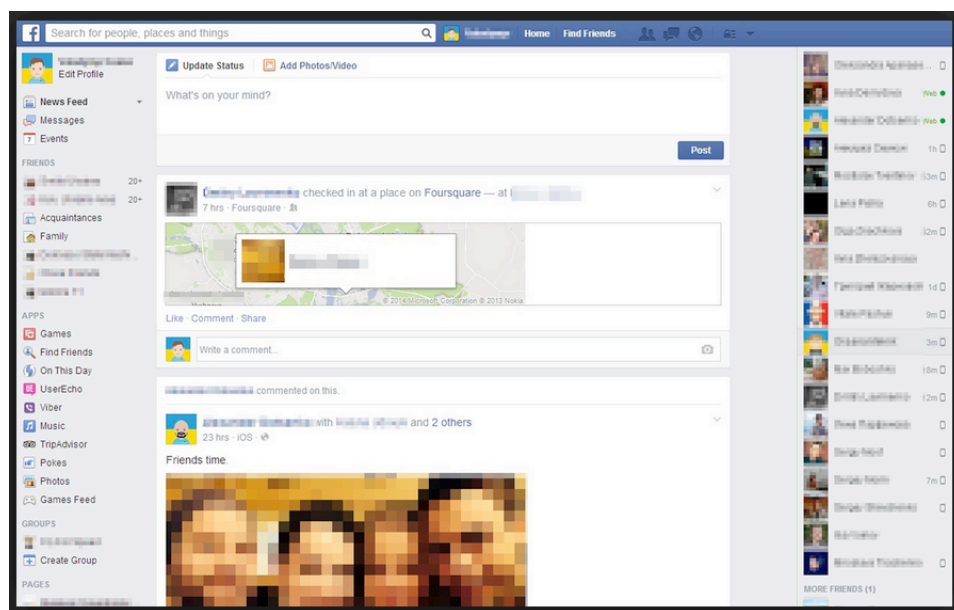

Figure 14. Screenshot of Facebook's newsfeed. Image from Crx4Chrome. Image downloaded from http://www.crx4chrome.com/screenshot/10186/.

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Some may argue that the quality of the connection between individuals is subpar to the ones that are established through traditional means. However, irrespective of one's perspective of Facebook, there is no denying in that the way in which people communicate and the interaction experience has been forever changed. This new reality has been coined as social media. Facebook is undeniably one of the most accepted and used services of the digital economy and is here to stay. It allows individuals to find and connect with old relationships, which was not possible through traditional means given the strenuous amount of effort needed. It provides a dynamic layer to new and existing relationships given how fast individual posts can be done and how fast they can be viewed (see figure 17). In addition, how one comments and responds to posts have been evolved with the use of emoticons, which produce a different sense of emotion and understanding. At the minimum, Facebook has provided a platform that allows individuals to establish and maintain relationships that transcend traditional boundaries (such as countries) and to be able to share experiences with individuals, as well as, with groups of people. Nevertheless, the ease in doing so, on both a small and large scale, makes Facebook an ideal choice for communication. Facebook's strategic use of data has allowed it to be the "worlds most popular media owner that creates no content" (Goodwin, T. (2015)). This demonstrates that in the digital economy, data is key and is the ideal material of choice for creating value and financial success.

Google

Figure 15. Google search engine homepage. Image from Word Stream. Image downloaded https://www.wordstream.com/articles/internet-search-engines-history.

Influences	Tendencies	Experiences
Art + Science	Emotion	* Inquiry is an easy and natural process * The anticipation of knowing that relevant information is always presented
Art + Technology	Beauty	* Search engine is aesthetically simple and clutter-free * Relevant and live emoticons that educate and entice inquiry and usage
Art + Science + Technology	Pleasure	* Access to the world's information in a convenient and free manner * Knowing that competition is more equally leveled given Google's attempt to bring the Internet to the entire world
Theme	Continuous Growth	

Table 7. Google Approach and Users' Experiences

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In the case of Google, in adhering to its mission statement, Google organizes the world's information, which exists in the form of data but in the shape of a website, blogs, pictures etc., and make it universally acceptable and useful (Google Inc. (n.d.)). Algorithmically managing the continuous development of data, Google has successfully delivered a visually appealing, aesthetically simple and beautiful search engine that is used by billions around the world (see figure 18). In discovering the best way to always present the most relevant information as per the search, Google has made it easy for individuals to search and find results that satisfy one's inquiries. Hence, demonstrating the democratic nature of data. Information and knowledge has always been vital to individual and business success and Google has forever changed the competitive landscape by levelling the playing field so that more people have access to the same information. In interpreting the data that is created when individuals use the search engine, Google has found a way to monetize the information with using its newly invented advertising services. This has allowed for the free and convenient access to the Internet for billions around the world. Yet again, it is clear that the plasticity of data provides the condition for financial success and delivering value to individuals in new, previously unimagined, ways.

Fitbit

Figure 16. Display of different Fitbits. Image from FitBit. Image downloaded from
https://www.fitbit.com/ca/findanewfit.

Influences	Tendencies	Experiences
Art + Science	Emotion	* Accessibility to many fitness communities * Judge-free experience of getting into shape
Art + Technology	Beauty	* Beautifully designed fashion accessory * Easy to understand data and to act on it
Art + Science + Technology	Pleasure	*Staying healthy and fit in a fun and entertaining manner appropriate to you
Theme		Sense of Belonging

Table 8. Fitbit Approach and Users' Experiences

In the case of Fitbit, it is a product-based company that strategically uses the data created by its customers to help inspire a healthy and active lifestyle in a fun and entertaining manner. Focusing on technological improvements, algorithms and user-centered mobile and desktop application, along with developing a device that is beautifully designed and is a fashion accessory (see figure 19) has allowed Fitbit to successfully create an active and collaborative fitness community and customer base (Fitbit, Inc. (n.d.)). Customers' daily movement create data, which allows Fitbit to aggregate and provide feedback to its customers in a simple and visually appealing manner. This seamless process between the device and the individual provides the judge-free environment that encourages an individual to stay healthy and fit. Given the data created is participatory, the communicated feedback is empowering to its incumbents. Thus, resulting in a cyclical process of self-improvement. The resulting output and the use of a Fitbit is an outward positive statement of the individual to the society at large. Data, as a material, allows businesses that have been traditionally product-based, to flirt with the possibility of incorporating data into their businesses, without disruption to business operations. This makes data the ideal choice of material for exploration and reinvention to better serve customer needs and wants.

Uber

Figure 17. A customer using Uber on an Apple iPhone to obtain a car. Image from Huffington Post. Image downloaded from http://www.huffingtonpost.com/news/uber/

Influences	Tendencies	Experiences
Art + Science	Emotion	* Acknowledges existing individual behavior but introduces a new and more appropriate process * Hyper-personalization
Art + Technology	Beauty	*Simple to use mobile application *Elegant User Interface
Art + Science + Technology	Pleasure	* Relationship opportunity between the driver and rider * The experience is so simple that it is not even an experience relationships
Theme	Freedom	

Table 9. Uber Approach and Users' Experiences

In the case of Uber, it has reinvented an established industry with the use of data and a slightly, more-appropriate process to an existing behaviour. In understanding that technology could be used to give people what they want, "Uber has become the world's largest taxi company, that owns no vehicles" (Goodwin, T. (2015)). This is highly possible, not only because of technology, but also because of the data that has been created as the result of using technology. Uber, as an intermediary between the rider and driver and given the use of its simple mobile application, is able to capture the data of its riders and drivers whereabouts (see figure 20). In aggregating this data, it connects the rider and driver efficiently and in a less costly manner (Uber. (n.d.)). Traditional taxi-services could be mundane in terms of its experience depending on the driver and inconsistent in terms of service offering as there is no way of recording and voicing a riders' experience. However, Uber has tackled both of these important variables, which has resulted in great transportation experiences. In presenting the drivers' picture, car information and previous customer ratings through the mobile application, Uber has made it possible for a more personalized experience between the rider and driver. Thus, with the plasticity of data and the innovative approach of delivering a new customer experience to an existing service, Uber has provided the conditions for riders to feel comfortable in using the service and for individuals to consider Uber as an employment option. It

comes with no surprise that Uber has forever changed the transportation

industry.

Nest Thermostat

Figure 18. Nest Thermostat 2nd Generation. Image from Amazon. Image downloaded from
https://www.amazon.ca/Nest-Learning-Thermostat-Generation-T200477/dp/B00A7JSLMS

Influences	Tendencies	Experiences
Art + Science	Emotion	* Makes you feel responsible * Educates and motivates positive individual and family behavior
Art + Technology	Beauty	* Beautiful and engaging design * Ambient Light * Intuitive (knows the user) * Easy to understand data and to act on it
Art + Science + Technology	Pleasure	* Saving money without drastically changing lifestyle * Active participation in conserving and improving global energy usage
Theme	**Contributing to a Greater Cause**	

Table 10. Nest Thermostat Approach and Users' Experiences

In the case of Nest Thermostat, it is a product-based company that successfully utilizes data to provide a unique and empowering service offering. It's a modern-day thermostat that has been beautifully designed (see figure 21). Unlike a traditional thermostat, which is a one-way communicative device that responds to individual action and helps individuals set and monitor room temperature, Nest Thermostat is a two-way communicative device that responds to individual action but also provides relevant information to its users. Nest Thermostat is capable of seamlessly tracking and recording individual action such as when the room temperature increases and decreases. In aggregating these individual data points, Nest Thermostat is then able to adjust the thermostat by itself without any human involvement to set room temperatures at specific times. In being able to extract relevant information from individual action and data points, Nest Thermostat then visually communicates the information to its customers through easy-to-understand daily and monthly energy usage summary reports (Nest Labs. (n.d.)). The resulting data and information empowers Nest Thermostat customers to new behaviours that promote active participation in conserving and improving energy usage while saving money and living comfortably in one's home. In addition to improving individual energy usage, Nest Thermostat becomes an active product and service offering that contributes to a greater societal-energy cause. Thus,

demonstrating the tremendous value of data and the plasticity of it, and what it can provide if correctly used.

What Does This Mean?

As illustrated in the above examples, these new forms of visual displays are here to stay and have been only possible given the use of technology and resulting data creation. Given the plasticity and characteristics of data as a material, businesses are now able to provide new value to its customers that go well beyond what was previously possible. Data can be used solely for its own purpose and/or strategically alongside a product. However, indifferent to how the data is being created, captured and used, there is no shortage of experiences that can be produced and as a result be monetized, thus, making the current view of this new reality, priceless.

Next Steps

This paper has looked at the application of Art and the infusion of it with other domains so to better position businesses to compete, remain relevant and to be financially sustainable in an ever changing economy. This paper has illustrated the benefits of the proportionally balanced use of the domains Science, Technology and the Arts in creating product and/or service offerings. However, Art in this context is seen as an additional variable added to the mix of existing tools and practices.

The 'Artist'

A possible next step is to consider what would happen to business strategy, product and/or service offerings and financial results if the 'artist', along with art processes and practices, were to be utilized.

An artist is constantly challenged with ambiguity, reinventing and creating relevant pieces of work and expressing one's own unique capability, which is synonymous to businesses operating in today's digital economy. There is no doubt that context specific knowledge is needed in order to be effective in manoeuvring in this challenging environment, however, an artist's persistence and ability to adapt and learn, could possibly make artists the ideal strategic leaders and visionaries in this turbulent and ever changing economy.

A way to further explore the merits of this possibility is to interview professionals that identify themselves as being artists, and observe the career progression of the individual. It would require networking with existing friends and colleagues and connecting with those in their workplaces. Another option would be to use the platform 'meetup' to create an event and/or piggyback off an existing event to talk to working professionals that identify themselves as artists and discuss their work experiences.

Comparing Leadership

Another possible next step would be to compare the financial performance of companies that are led by artists, to companies that are led by non-artists, within the same industry and of similar size. The resulting insights may shed light onto if art-related experiences, education and knowledge have any influence on individual decision-making, strategic planning and execution, and if it could be recognized as a competitive advantage.

A way to further explore the merits of this possibility is to schedule interviews with Toronto CEOs of start-up companies that have been operating for 3-5 years and discuss the financial performance of the company, as well as, the decision making process one took during the years.

Augmented Reality

Another possible next step would be to apply this Major Research Paper to the field of augmented reality. Augmented reality uses existing environments and integrates and overlays digital information to the user's environment in real time. This process is highly dependent on data and the creation, interpretation, repurposing and delivering of relevant new information. However, businesses that operate within this industry face the challenge of successfully and seamlessly providing relevant data to the user based on a continuous changing environment.

In this environment, businesses can no longer exist to produce and distribute visual cultural references in static transactions (particular type of data points being analyzed and used for a particular purpose). Businesses in this environment exist to produce and distribute visual cultural references in dynamic transactions (different types of data points being analyzed and used simultaneously for various purposes). A great example of this is BMW's concept motorcycle Motorrad that comes with augmented glasses. The rider is presented with various types of information, moment after moment, which take shape in different forms of art - video, sound, navigation experience etc. Collectively, these different forms of art enhance the driving experience and create the conditions for customer value, customer appreciation and for potential sales.

Just as BMW is interested in exploring what the future of driving could look like and what that means for BMW operating in this environment, other businesses and/or industries that wish to understand the future of their existence, can do the same, especially with augmented reality. Thus, this paper could be used to understand how to best bridge the gap between current business capability and in creating the 'humanistic' capability that is now required for success.

A way to further explore the merits of this possibility is to compare existing Augmented Reality experiences and devices, and assess the adoption rate of users. In addition, pair-up with companies offering these devices and Augmented Reality experiences and offer the service of conducting in-person interviews with users to understand one's experience so to improve the user experience and gain greater market share.

2-Day Workshop

Another possible next step is to use this Major Research Paper and create a 2-day education workshop. Detailed breakdown of the workshop can be found in the Appendices (Appendix A).

A way to further explore the merits of this possibility is to network with colleagues and friends and obtain contact information of those responsible for the continuing education division of OCAD University, York University, Ryerson University and University of Toronto. Then, set-up an in-

person meeting to demonstrate the importance of the teachings of this Major

Research Paper in this complex and continuously changing economy. An

initial weekend session for each of the institutions and their students will be

provided on a pro-bono basis. In reviewing attendance numbers and the

feedback of attendees, further negotiation will be conducted to secure

monthly weekend workshop sessions, on a fee-basis, for students, the greater

population and neighbouring businesses of these institutions.

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Conclusion – Foreseeable Future

Understanding what can, and will be, requires acknowledging what is. The digital economy is the result of continuous advancement of technology and its proposed uses. Improvement is the cornerstone of human nature and the availability of data provides the conditions for this to occur at increasingly fast speeds and with large impact. Today's economy could arguably be the most challenging and competitive of economies, however, it is also the most opportunistic one.

Businesses have long existed to produce and distribute visual cultural references either through product and/or service offerings. This is in response to existing and potential customer needs and desires that are a reflection of the time period. Humans, irrespective of the time period, have always sought out the plasticity of different materials in order to transform lived experiences. Just as a visual artist who uses available materials to create visual displays, businesses face a similar challenge in continuously providing satisfying visual displays to customers, users and society as a whole. Thus, the abundance of available data that is continuously being created offers both businesses and individuals endless amounts of possibilities for created experiences and lived experiences, respectively.

Each time period had its ideal choice of material given reasons such as accessibility, suitability for use, and because of a particular preference.

However, in today's economy, data, in being participatory, democratic, remix-possible, and empowering, is easily the material of choice. The plasticity of data and its non-physical composition has given individuals the freedom to imagine new ways for improving and enhancing one's life. It has also given businesses the opportunity to explore new ways to serve customers and users while remaining competitive in the global economy. Consequently given these two possibilities, it has ignited a new social class of entrepreneurs, who through distinct businesses, products and/or services, contribute to societal improvement.

The tremendous value and power of data cannot be denied, especially, in today's digital economy. It has allowed for cross-industry relationships and business operations, new forms of wealth and money, and relatedness with the current economy and its incumbents. The creation and accessibility of data has paved the way for what is now accepted as growing, but segmented niche markets, providing businesses with more opportunities on which to embark. Businesses benefit from using Science, Technology and the Arts. However, in using Art, it's new function of being a mindset and associated attributes, it allows for the proportionally balanced use of all three disciplines in new and different ways that is appropriate today's digital economy, given the characteristics of data and what can be achieved and experienced if properly used.

As seen with the example of Facebook, the strategic use of data has rejuvenated the interaction experience and the way in which people communicate, forever changing the meaning of 'being connected'. In using data that has been and continuously being created by its members, "Facebook has become the world's most popular media owner that creates no content" (Goodwin, T. (2015)), demonstrating that data is key in creating value and financial success.

As seen with the example of Fitbit, the strategic use of data has allowed Fitbit to establish an active and collaborative fitness community and customer base that aspires towards a healthy and active lifestyle (Fitbit, Inc. (n.d.)). The seamless process between the device and the individual provides the judge-free environment that encourages individual behaviour. Given the data created is participatory, the communicated feedback is empowering to its incumbents, resulting in a cyclical process of self-improvement. Thus, demonstrating data as the ideal choice of material for exploration and reinvention to better serve customer needs and wants.

As seen with the example of Nest Thermostat, the strategic use of data has allowed Nest Labs to reinvent the traditional thermostat in making it a two-way communicative device. Nest Thermostat is capable of seamlessly tracking and recording individual action and aggregating these individual data points to adjust the thermostat by itself for its users, as well as, communicating information regarding daily and monthly energy usage (Nest

Labs. (n.d.)). The resulting data and information empowers Nest Thermostat customers to new behaviours of active participation in conserving and improving energy usage while saving money and contributing to a greater societal-energy cause. Thus, demonstrating the tremendous value that data and the plasticity of it can provide, if correctly used.

The success of any business, in any industry, is dependent on how customers and users are served. Within the digital economy, it is all about the plasticity of data, which makes 'Business an Art'. With Art being concerned with transforming materials for experiential purposes, businesses, irrespective to how the experience is created, would benefit from taking an active interest in understanding and attending to the human tendency for emotion, beauty and pleasure. Plasticity, as seen with visual artists, not only guides action but also informs possibilities. Given today's increasing human needs and desires, in using the plasticity of data along with Art's new function of being a mindset and in using it's associated attributes, businesses are better able to satisfy customers and users while financially capitalizing this reality.

It is essential that businesses, industries and the economy acknowledge the role that data has and will continuously play. *Business is an Art* is an enlightened perspective that's appropriate given today's economic conditions and environment. It positively informs of strategic actions and discussions that are much needed amidst continuous societal change and the

resulting chaos, and it serves as an understanding for future leaders and

future businesses. Whatever the future may hold is uncertain, however, with

data and the infinite amount of possibilities it allows, it will be nothing short

of forever-transformed lived experiences.

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Conclusion

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Appendices

Appendix A

Workshop Title	**Business is an *Art***
Workshop Description	The continuous advancement of technology and its uses have paved the path for what we call today the 'digital economy'. Businesses exist to produce and distribute visual cultural references, either through a product and/or service and in today's environment one can take advantage of the plasticity in the most precious available material: data. The creation of these products and/or services requires the appropriate balance of three specializations - Art, Science and Technology. While Science observes and Technology builds, Art and its fields of action is what creates, and the objects of this creation is what customers consume. Thus, to remain relevant, businesses need to come up with new ways to deliver to the vast amount of diverse experiences that humans seek.
Workshop Attendees	This workshop is recommended for • Executives/Directors/Managers • Strategists • Future leaders • User Experience Designers • Customer Experience Designers • Start-up enthusiasts • Curious minds

| *Workshop Outcome* | During this 2-day workshop, attendees will come to understand how today's economy is competitive, however, the most opportunistic.

Businesses are faced with the challenge of continuously providing satisfying products and/or services and yet the abundance of available data that is continuously being created offers both businesses and individuals endless amount of possibilities for created experiences and lived experiences, respectively.

It is essential that businesses, industries and the economy acknowledge the role that data has and will continue to play and that *Business is an Art* is an enlightened perspective that's appropriate given today's economic conditions and environment. |

Workshop Breakdown

	Topic	Description
Day 1	*Digital Disruption*	Learn how data is easily accessible and what that means for your business today. What does value mean to you? • How do you create value? • How do you capture value?
	Decision Making	Understand the three influences that impact individual decision-making and the impact it has on your business. • Emotion • Beauty • Pleasure
	What's your perspective?	Explore three different specializations and understand what they individually and collectively offer to your business. • Science • Technology • Art

Day 2	'Art' Reimagined	Learn how Art could be applied in other domains and how it's promising in the digital environment. • 2D/3D Elements & Principles • Plasticity
	Data = endless amount of opportunities and experiences	Discover four characteristics that make Data the ideal choice of material for your business. • Participatory • Democratic • Remix-Possible • Empowering
	How can you not love Data?	Discussions about businesses that have successfully positioned itself in today's digital economy.
	Group Exercise	Breakout session to explore challenges within your business and to develop new solutions