SUDDEN STUDIOS—AI-POWERED BRANDING
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Author's Declaration

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SUDDEN STUDIOS—AI-POWERED BRANDING
Master of Digital Media 2019
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Abstract

Many businesses face the issue of retaining customers. There are many reasons why customers leave but an inconsistent brand experience is one of the biggest faults. Sudden Studios is a concept for an AI-powered web application aimed at helping brand owners identify their reputation's potholes. With such insight, brand owners can fill in their gaps faster to develop greater customer loyalty, sooner.

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Chapter 1 - Introduction

All great change comes from seizing opportunities that are presented by the day's emerging technologies. For instance, before Jeff Bezos founded Amazon, he came across a startling statistic that web usage was growing at an astounding 2,300 per cent per year by the early 90s (Mejia, 2018). Pressed to take advantage of such news, he worked feverishly to flesh out a business plan for any business idea (Bezos & Rogoff, p. xv-xvii). After numerous iterations, he settled on founding an online bookstore with the ambitions of being the world's largest seller of books; Amazon would go on to champion long-time book giant of the time Barnes & Noble (Thiel, p. 111). The internet also offered the opportunity to sell more than just books, which Bezos aggressively capitalized upon by expanding his e-commerce services to sell CDs, DVDs, clothing and much more (Thiel, p. 124). As his business grew, so did the times, and Bezos invented new products such as the Kindle, Amazon Web Services and Amazon's Alexa to keep up with innovation. Each product addition was an attempt at seizing the opportunities that came with the day's emerging technologies. Today he enjoys the title of the world's richest man in modern history with a net worth of $111 billion at the time of this writing (Bloomberg Reporting, 2019). This is all due to his strategic thinking and hunger to innovate. The future of innovation exists on the grounds of emerging technology and building on what we currently have with these new tools.

Many entrepreneurs are hungry to affect change in the world yet, a common business issue is creating customer loyalty. There are a lot of reasons why customers leave; faulty branding is one of them. There is the opportunity to serve entrepreneurs by enhancing how they create their brand identities. Artificial intelligence (AI) is today's chief emerging technology. Digitizing the branding process and integrating AI into it are what will serve entrepreneurs differently than existing branding alternatives. This paper examines the mechanics and best practices associated with creative-technical businesses, branding and AI to identify avenues for innovation. Later on, the insights are synthesized into a miniature business plan and visualized as a conceptual web application prototype. The business plan will outline how the business aims to operate; the prototype will demonstrate how users can research, strategize, test and manage their brand identities using AI. The research, insights and concepts will act as the grounds for future business and technical development under the brand name "Sudden Studios."

Chapter 2 - Literature Review

This MRP explores the creation of a business that specializes in branding and artificial intelligence. As a result, the research was structured in accordance to three major areas of research, those being business, creative and technical research. Each of these topics have been assigned a literature review. All of the sub-literature reviews outline relative definitions, mechanics and industry best-practices. These separate contexts are then intertwined throughout the paper and further synthesized when defining the best branding practices for creative-technical businesses. These insights will also inform the miniature business plan and prototype discussed later.

Section 1 - Business Literature

Knowing how businesses work helps when aiming to serve entrepreneurs with innovative design technology. The business literature review covers topics such as the definition of a business, how creative-tech businesses operate and the priorities companies must have as they start, run and grow their ventures. Crucial factors for new companies are also explored—for instance, discovering a need, assembling an adequate team and developing the first version of an offer are all topics that are discussed to examine the best way to pursue an emerging business idea. This information was used to guide the process when developing a business model for this MRP.

2.1.1. What a Business is

Helping entrepreneurs build customer loyalty is a large task. It will require an effective solution, a talented team and deep knowledge of how businesses work. Understanding the definitions and inner-workings of a business will streamline the attempt to create an AI-powered branding tool. More specifically, knowing the best practices related to creative-tech businesses can yield foresight that will encourage efficiency and persistence when producing the value proposition. These insights informed how to structure the Sudden Studios business model and can guide how to structure the value

proposition for maximum efficiency in the future.

A business is essentially a system that produces and delivers value to paying customers; all businesses consist of five major gears, those being value creation, marketing, sales, value delivery and finance (Kaufman, p. 38). Entrepreneur and business expert Josh Kaufman states if a business fails to create value for people, there is no trade. If no one knows of the value created, the offer does not exist, theoretically speaking, in the consumer's mind. If sales are not made, the business cannot sustain itself. If the value is not delivered, the business is unreliable or illegitimate. If the business poorly prices their value, mismanages its finances or has uncontrollably high costs, it will fail to continue operating (Kaufman, p. 38-39). Creative-tech businesses focus their efforts on producing and providing value that involves a great deal of artistic creativity coupled with technical ingenuity. For example, Adobe is a well-known producer of digital tools such as Adobe Photoshop, Illustrator and InDesign. These resources are used by creative professionals to enhance photos, create graphics or build layouts on top of other things (Adobe, 2019). Adobe markets its products to creators and sells access to these tools in the form of a license. The value is immediately delivered to the customer in the form of a download once a subscription has been purchased. The company retains the money and reinvests it back into their business for continued operation.

Sometimes, creative-tech businesses don't sell the technology they invent but the products their technology creates instead. Such is the case with Disney's Pixar; they are a leading animation studio in the arena of computer-generated imagery. Rather than develop software for others to use, Pixar invents software and other technology for their teams to use when creating films (ColdFusion, 2019). Pixar instead sells licenses or the rights to their films to distribution studios, such as Netflix or Canada's Cineplex. The distributors deliver the value to movie-goers on Pixar's behalf (Kline, 2015). Depending on the structure of the distribution deal, Pixar can collect payments based on how well their films do at the box office or straight away after negotiation. The company can then redistribute their earnings back into the business for continued activity.

2.1.2. Seven Stages of a Business

All businesses exist within a life cycle. There are seven distinct stages associated with any business' life cycle [see Table 1] (Zahorsky, 2019). Each stage has key steps of focus and hosts unique challenges. Typically, businesses proceed through each stage linearly but, the possibility of skipping stages exists. For example, Instagram went from start-up to exit in the matter of 11 months when Facebook acquired it in 2012 (Godlewski, 2018). To optimize the chances of creating an AI-powering branding tool, it is best to prepare for the challenges that will arise by understanding the different stages; knowing the seven business stages will inform future company strategies for this MRP for focused and effective results.

Stage #	Stage	Key Challenges, Focuses and Funding Sources
1	Seed	• Finding a need • Creating a team • Creating a minimum viable offer • Picking a business structure • Prime funding sources include personal cash, friend and/or family
2	Start-Up	• Avoiding depletion of resources (ex. time or money) • Building a substantial customer base • Prime funding sources include personal cash, friend and/or family, suppliers, grants, pitch competitions
3	Growth	• Building management systems to handle rate of complexity that comes with growth • Instilling strong accounting systems to manage increasing financial information appropriately • Hiring new talent to keep up with business demands • Prime funding sources include banks, partnerships, grants, leasing options, profits
4	Establishment	• Enacting innovation • Increasing productivity through outsourcing and automation • Prime funding sources include banks, investors, government investments, profits
5	Expansion	• Exploring new markets and distribution channels • Adding new value to existing markets or discovering new markets to serve • Prime funding sources include joint ventures, banks, licensing deals, investors, partners
6	Maturity	• Increasing sales and profits • Deciding whether to continue innovating or to sell the business • Prime funding sources include joint ventures, banks, licensing deals, investors, partners, revenue
7	Decline, Innovation or Exit	Decline • Navigating negative cash flow • Finding ways to sustain cash flow • Selling the business • Cutting costs Innovation • Researching new markets and customers • Developing new value propositions Exit • Finding a business valuation partner • Getting professional financial advice for best tax strategies • Prime funding sources include revenue, investors, partners, banks, licensing deals, sale of business

Table 1

Table 1—The seven stages of a business' life-cycle; each of these stages are important to understand what tasks the business should be focusing on and what challenges they must prepare for (Zahorsky, 2019).

The seed and start-up stages are most relevant to this MRP; Sudden Studios is an emerging business idea that requires market and product validation, placing it in the seed stage (discussed later). The start-up stage outlines key aspects of the problem that this MRP aims to solve, which is helping start-up entrepreneurs build a substantial customer base. With these points outlined, effort can be redirected appropriately to ensure future execution is on strategy.

2.1.3. Starting a Creative-Technical Business

All businesses need to serve a substantial market with an inelastic need in order to sustain operations. Once a market and need have been found, well-built teams will also account will determine if the company can adequately serve them. This section defines concepts such as market validation and optimal team-building for new ventures to clarify the best practices for both activities. This knowledge will help Sudden Studios to find a market, a need and a team later on.

Founders have to study their customers' needs to know what value to create. This process is called market validation, which is to confirm if the business is actually needed by a market. This is not to be confused with product validation, which is only validating the need for a specific value proposition (discussed later). Market validation is best conducted with customer discovery interviews. Interviewing a minimum of 20 people one-on-one can yield sufficient results, especially when the same message is repeated in each interview. It is best to do interviews one-on-one; interviewees in a group can be influenced to agree with others based on the most popular opinion (Wise, "100 Steps—Step 13," 2019). The best interviews feature five to ten open-ended questions aimed at understanding the customer and their needs and can lead to more insights through conversation. Sometimes, entrepreneurs will discover their perspective about the customer is off; in this case, they must pivot their business model to appropriately serve the market. It is best not to impose one's conclusions about what the customer wants because of a bias towards an idea. Creating value that no one needs is the number one reason why businesses fail so it is best to avoid it from the

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start by being objective (CB Insights, 2018).

When creating AI-powered branding tools, the market need in question is an entrepreneur's desire to build a large and loyal customer base. The seven stages of business validates that entrepreneurs have this need during the start-up stage (Zahorsky, 2019). Customer discovery interviews are pending and will be conducted following this research paper.

Once a need is found, a team will have to form to address the demands of the market. The initial team should be composed of at least two founders, both of whom are deeply skilled at different things. The skills they possess must also be relevant to the business venture they seek to pursue, for instance such as programming and branding when creating AI-powered branding tools (Feld & Wise, p. 64-67). In any business, the best starting team should be composed of three founders; one founder with strong business acumen, a second founder with efficient experience creating and delivering value and a third founder with deep domain knowledge about their industry and the customer (Feld & Wise, p. 64).

When building an AI-branding business, It is advantageous to compose a team of three founders; one of the founders should be businessperson with management, finance and/or sales experience within a start-up context. The second founder should be a programmer who is deeply skilled in the development and delivery of AI and web applications. The third founder should be a designer specializing in branding and who understands the customer at depth. Covering each of these angles will ensure the business has the best working chance at building AI-powered branding tools. In the worst case scenario, two founders is the minimum requirement to pursue this idea; a technical founder is a must in all cases while a designer with business experience can suffice.

2.1.4. Creating a Minimum Viable Offer

Iterative testing is the best way to create value propositions as ambitious as AI-powered branding tools. This section defines what product validation is and the differences between mock-ups, prototypes and minimum viable offers (MVO). These insights informed the prototype development process and can be used for future product development.

Testing allows businesses to gauge whether a customer needs the proposed solution or if the offer works as intended (Kaufman, p. 68-71). This process is called product validation. If the customer does not express a need for the offer, it is better to pivot quickly and radically until a real need is addressed [see Figure 1] (Dorsey, 2019). This way, development is efficient and the offer can potentially meet the customer's needs, faster.

When starting a business, it is best to focus initial efforts on creating a minimum viable offer (MVO). An MVO is the first functioning version of a value proposition that a customer is willing to pay for (Kaufman, p. 81-82); it must feature the essential aspects of the value proposition and nothing more. This is to minimize over-expenditure of time or resources while maximizing speed-to-market. Using mock-ups or prototypes are the best way to test market interest and functionality before investing time, money or effort into the development of an MVO; mock-ups and prototypes demonstrate a concept without the need for extensive functionality (Banerjee, 2014).

An AI-powered branding tool can be prototyped as a web application using Adobe XD, which was done for the purposes of this MRP (discussed later). Adobe XD is a visual prototyping software that allows users to design how a website or mobile application would appear and work with click-able content (discussed later). An AI-MVO will require datasets and algorithms, which are tables of information and mathematical equations coded into the web app. Prototyping will provide the user-feedback needed to blueprint how the web application should look and how its AI features should function. Technical expertise will be needed to develop a MVO while prototyping can be done by any other founder.
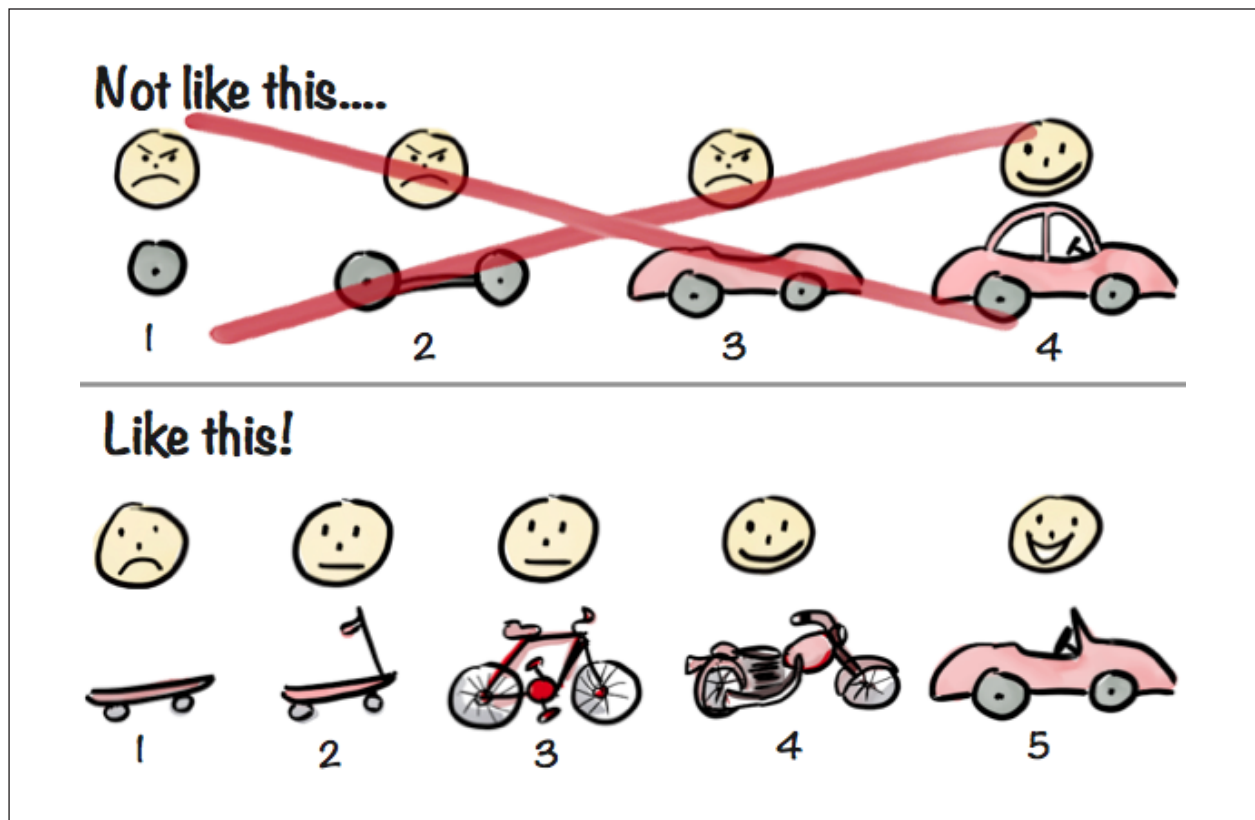
Figure 1—An example of what it means to achieve a radical difference between mock-up, prototype or MVO iterations (Kniberg, 2016). Radical iteration ensures the time spent on iterations is constructive and not repetitive, which is wasteful of time, effort or resources.

Section 2 - Creative Literature

Defining the several parts of a brand is crucial when building a brand to increase social capital. A reputation is a company's psychological asset that fuel customer loyalty. To help entrepreneurs build customer bases, it is important to unravel the many parts associated with the branding process so that better reputations can be made. The creative literature review discusses what a brand is, what the branding process involves and how reputations are used in today's digital age. Colour theory, typography and brand functionality are also discussed to discover how best to solve design issues with AI. This information was used when branding the Sudden Studios prototype and informed what features to include. This knowledge can also be used for future product development and marketing purposes as well (discussed later).

2.2.1. Brief Brand Definitions & Mechanics

Brand identity is a marketing tool used to build social capital and should be invested upon during the start-up stage of business (Lorenstani, Mazidi & Shirazi, 2013). At this stage, businesses are increasingly interacting with people outside of the business with hopes of solidifying a consistent customer base (Zahorsky, 2019). Building a reputable name requires as much work as it does to create a product or develop a business; every business needs a set of communication guidelines that direct behaviours internally and externally. There are a few branding concepts that need to be understood in order to help others build social capital and integrate AI into future Sudden Studios MVO.

The activity of strategizing, creating or managing a reputation is called "branding" (Wheeler, p. 6). A reputation is the opinion an audience has about a specific person, group of people or entity, such as a company, product or service, etc (Review Point, 2019). A reputation is typically referred to as a "brand" in commercial contexts (Ettenson & Knowles, 2008). A brand owner is someone or something that a reputation is attributed to and who communicates an intentional identity to an audience (Pihl, 2013). Brand owners can be anyone (e.g.. an individual or an enterprise) (Wheeler, p. 3). The audience that interacts and impacts the brand are called stakeholders (Eccles, Newquist & Schatz, 2007). Stakeholders do not need to be consumers of

the brand to affect the reputation. For example, stakeholders can be both customers and employees of the brand owner. Without these basic branding definitions, it will be difficult to communicate amongst teammates about how to create the AI-powered branding tools. The same is true when helping entrepreneurs build social capital; defining brand mechanics clarify the branding process.

Amassing a customer base is best done by creating consistently positive experiences associated with the business (Hyken, 2018). To create a positive reputation, one must know how reputations work. Reputations are made up of two halves, those being a communicated identity (CI) and a perceived identity (PI) (Blumrodt & Huang-Horowitz, 2017). CI is an intention set by the brand owner and is promoted to an outer audience; PI is how CI is received by an audience and is only formed by stakeholders (Blumrodt & Huang-Horowitz, 2017). For example, Nike believes it is the global authority on being an athlete. Whether people believe that or not is the perceived identity.

Grasping the branding process is the first step to digitizing it and integrating AI into it. To adequately create a brand identity, brand owners must go through five stages of branding; the five stages are brand research, brand strategy, brand identity creation, brand touch-point extension and brand management (Wheeler, p. 7). The five stages ensures that brand identities resonate with desired audiences strategically (Black & Veloutsou, 2016). The five stages are also central to the Sudden Studios web app structure; all of the stages are summarized on the web app under three sections, those being Strategize, Create and Manage (discussed later).

Today's branding is often done in multiple ways such as on paper, white-boards and on a computer. The amount of touch-points grow as a business expands, adding complexity to marketing communications. Digitizing the branding process will make it easier for customers to align teams and develop brands in one place. AI can act as the autonomous third-party that provides fast design feedback based on expert data. Such feedback can include insights on improving visual accessibility, recommending ways to communicate with stakeholders or how to position a brand for maximum engagement based on macroeconomic trends.

Knowing how each stage of branding works will inform how to create relevant AI features. Brand research involves auditing all existing touch-points, discovering stakeholder opinions and assessing the markets the brand owner aims to communicate its identity within (Wheeler, p. 120). Brand strategy uses the brand research information

as a means of dictating how to shape the brand identity (Wheeler, p. 136). Strategic decisions can include what colours to choose, what message to convey and how to position the brand relative to competitors (Lake, 2019). Brand identity creation involves formulating a visual identity coupled with any other identity systems that brand owner deems fit (Butler, n.d.). Alternative identity systems can address any human senses such as sight, sound, smell, taste or physical touch (Wheeler, p. 4). Brand touch-point development is about applying the brand identity to new or existing channels (Wheeler, p. 166). Channels are where the brand lives, which can be in the form of logos, websites, business cards, t-shirts and more. Brand management is the process of synthesizing CI and PI (Blumrodt & Huang-Horowitz, 2017). Similar to the brand research stage, managing a brand requires a clear perspective of all touch-points and collecting opinions on the brand from various stakeholders. The information collected can then lead to new brand strategies for changing times, repeating the branding cycle.

2.2.2. Reputation in Today's Age

It is important to understand how reputations are used in digital contexts so that brands are made to connect with today's consumers. Google's "Zero Moment of Truth" (ZMOT) is consumer behaviour model that demonstrates how today's consumers make purchasing decisions (Google, 2011). This model can be used for future marketing efforts related to this MRP and will inform customers about the importance of a reputation.

   According to the ZMOT model, there are four key stages in the consumer experience, those being Stimulus (e.g. experiencing a brand via. advertising and promotion), the Zero Moment of Truth (e.g. researching the brand owner and their reputation), the First Moment of Truth (e.g. deciding to purchase the brand's offers in-store or online based on prior research) and the Second Moment of Truth (e.g. having a good or bad experience with the offer they purchased) (Google, 2011).

   Each aspect of the ZMOT requires branding; Stimulus, such as advertising and promotions, are brand touch-points that the brand owner directly controls by communicating an identity. The Zero Moment of Truth is much less in the hands of the brand owner as it relies on PI. New or returning customers conduct research by looking to other customers for their experiences and opinions about the brand owner

or the offer (Google, 2011). Creating a positive Zero Moment of Truth relies on strong Second Moments of Truth (Blumrodt & Huang-Horowitz, 2017). Sometimes, to attract customers, business will give their offers out for free to build their Second Moments of Truth and generate a pool of positive reception.

The First Moment of Truth is a mixture of CI and PI; this is when customers are interacting with the offer at the point of sale. CI is influenced by the visual and functional design of their offer, such as the packaging of a product or the design of a website ; the brand owner can optimize things to create an appealing offer (Blumrodt & Huang-Horowitz, 2017). The customer's research will help them form an opinion about the brand owner or the offer. Their opinion will provoke an emotion within the customer at the point of sale that will influence them to purchase or not (Sinek, 2009). If they purchase the offer, the customer is then led to the Second Moment of Truth. This stage can be heavily influenced by the brand owner (Blumrodt & Huang-Horowitz, 2017). Ensuring that the product has been rigorously user-tested and excels the users' service expectations will increase the likelihood of creating favourable PI (Chandrashekaran, Grewal, Rotte & Tax, 2007). That PI can manifest as good word-of-mouth or positive online reviews, adding to the company's ZMOT model.

Branding with AI improves the development of constructive PI. This is because the design process requires a lot of feedback to create something that is pleasant to experience. For example, a traditional branding studio may employ a group of designers to recreate and critique colour contrasts used in a client's packaging materials. The design process may be stifled with group-think or competing opinions, leading to potentially longer work projects or inaccurate results in accordance to industry best practices. It is also expensive for a client to hire a branding studio or for the studio to hire multiple designers. With AI, the same group of designers may be asked once to critique a colour contrasts of varying quality. Such data can be aggregated and averaged out for an AI to be trained upon (discussed later). The AI can then synthesize the opinions about the best contrasts without clients or studios having to continually employ third-parties to intervene. This can help businesses shrink the time between designing the product and testing functionality, enabling create better product experiences, sooner, and ultimately, adding to the PI.

2.2.3. Colour Theory

When designing an AI-powered branding tool, It is important to ask what aspects of branding can be enhanced with technology. One brand aspect are colours; colour mixes, harmonies and contrasts are relatively easy to train AI upon. For example, AI programs can be fed datasets outlining what are appropriate colour combinations; the AI can use the colour-based data to create its own conclusions and build upon them.

Technology is not built automatically; it requires the effort of skilled programmers to manually construct AI at the start. An understanding of colour theory will help programmers train AI accurately in the case that colour-based datasets require troubleshooting. That way, AI can be accurately developed to recognize theoretical colour concepts such as appropriate combinations or contrasts. With that said, this information will mainly inform how to create an MVO for this MRP in the future.

Colour theory is the study and practice of mixing colours to create new ones as well as arranging colours into harmonious groups called colour harmonies. When creating a visual brand identity, it is important to understand how to mix colours, how to pair them together and how they will be perceived in different cultural contexts amongst other things. Different colours, when mixed together, produce other colours; for example, blue and yellow create green (McArthur, p. 81-89). Complexity increases when grouping colours together. There are simple colour harmonies, such as analogous colour schemes (when two or more colours adjacent to one another on the colour wheel are grouped together) and complementary groups (two colours that are on the opposite end of the colour wheel from one another) [see Figure 2] (McArthur, p. 81-89). Complex colour harmonies, such as the triadic or split-complementary groups, require a deeper understanding of colour attributes for strong results (McArthur, p. 105). Complexity continues to rise with cultural connotations. Culture influences how a colour is psychologically perceived to a great degree. For instance, in China, black is referred as a mournful colour, often associated with death and illness while in the United States, black is a symbol of power and is used in luxury branding (Wheeler, p. 20).

Another challenge includes understanding colour contrasts. Colour only exists in the presence of light (McArthur, p. 45). This is to say that colour will be affected in different ways based on the media its showcased upon; for example, digital media is supported by small lights placed behind the screen (Free, 2018). This results in

colours that appear brighter than they would be if printed. Printed material is affected by the lighting of the room the reader is in (Cho, Seo & Yang, 2015). Colours must have adequate levels of contrast to account for visual accessibility. Colours too close together in brightness, saturation or other colour attributes will impair the viewing experience and ultimately, the reputation (McArthur, p. 45).

  Colour mixes, harmonies, connotations and contrasts are only a handful of the subsets involved in colour theory. Each subset offers dataset creators the freedom and range to create more robust branding-based AI. Each subset will require a separate AI as well; understanding each subset ensures the AI developed on strategy and does not address a topic that is not relevant to the customer branding goals.
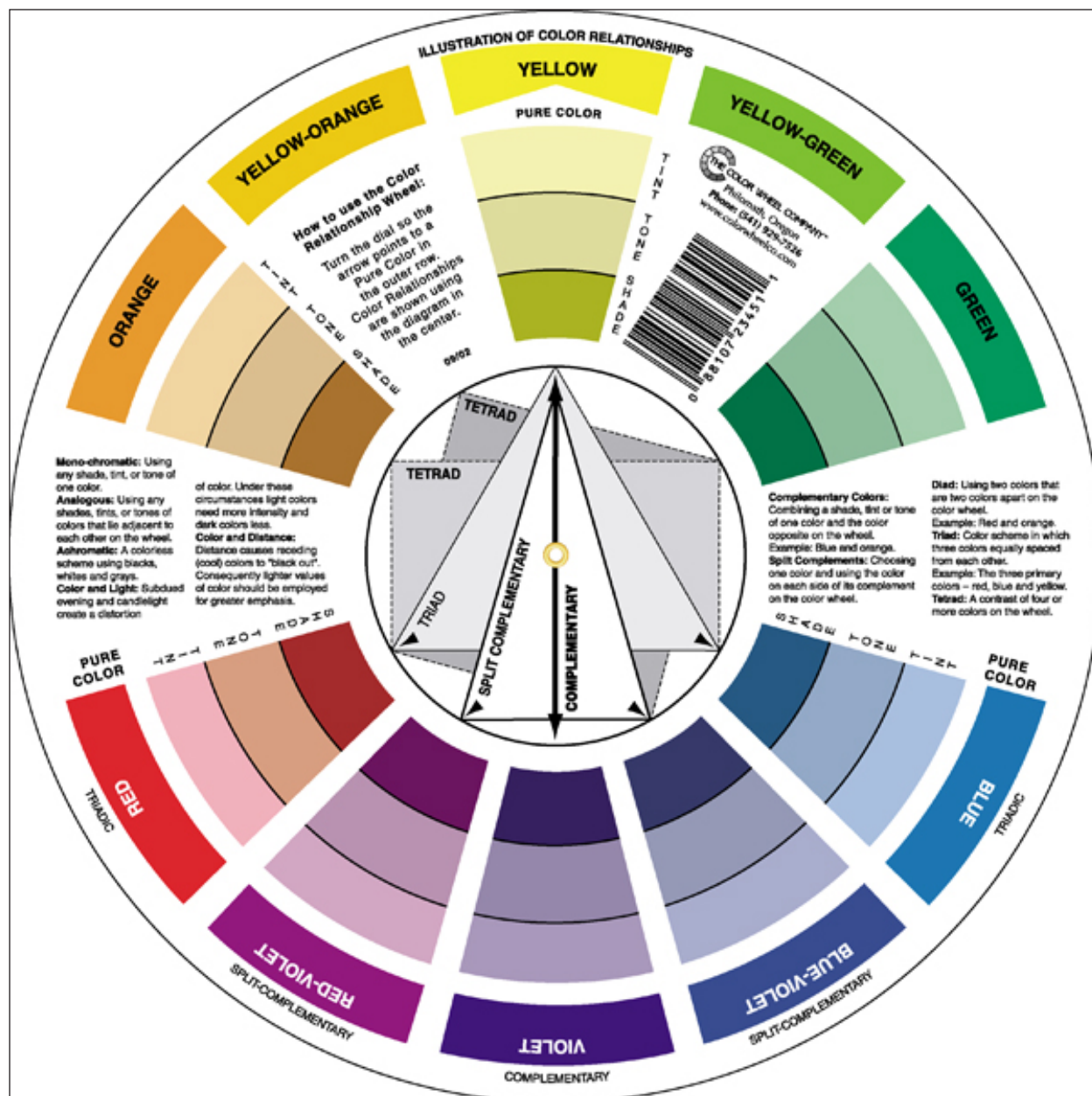
Figure 2—A colour wheel outlining key colour theory concepts such as complementary or split-complementary colours (The Color Wheel Company, 2018). Using a colour wheel is essential to creating appropriate colour combinations and mixes. It can also be used as a quick guide when developing colour-based datasets.

2.2.4. Typography

Typography is another aspect of brand identity; it is central to logo creation and written communication material such as signs, posters or books. Like colours, type can be easily integrated into AI. Typography-based datasets can be developed relatively quickly, offering a chance at creating accurate branding-AI, sooner. A basic understanding of what typography is and how it works can guide dataset creators on how to identify type-based errors for AI training. These insights will guide the MVO process for this MRP in the future as well.

       Typography is the study and practice of lettering, their arrangements with one another and how the visual anatomy of a letter composes readable material. All typography is composed of typefaces, which is the design of a particular type (Brownlee, 2014). There are four main classifications of type, those being serifs, sans-serifs, script and decorative [see Table 2] [see Figure 3] (Haley, n.d.). There are a variety of typefaces that exist however, the rule of thumb is to use a maximum of three when branding (Lupton, p. 54). Using more than three typefaces can create confusion on context or appear aesthetically displeasing.

Serif Type Styles	Sans-Serif Type Styles	Script Type Styles	Decorative Type Styles
• Old Style • Transitional • Neoclassical & Didone • Slab • Clarendon • Glyphics	• Grotesque • Square • Humanistic • Geometric	• Formal • Casual • Calligraphic • Blackletter & Lombaric	• Grunge • Psychedelic • Graffiti

Table 2—A brief set of type styles categorized in the four type classifications (Haley, n.d.). Identifying the different fonts can help with creating a variety of type-based datasets.

Figure 3—Samples of the four typeface classifications (Haley, n.d.). Knowing how each type style looks like help with creating accurate type-based datasets. Old Style is an example of a serif typeface; grotesque is a sans-serif style. Formal demonstrates a script-based type. Decorative is exemplified by exaggerated characteristics.

Serif typefaces work better for printed material while sans-serifs are stronger on digital media. This is because almost all digital screens are made of tiny rectangular or square-shaped modules through which little lights turn on or off to display a greater image [see Figure 4] (Free, 2018). The curvatures of a serif do not display well through these small rectangles or squares. This impacts how the word or sentence is seen or read, which ultimately slows the speeding of a reading experience and can hinder the reputation. On printed material, serifs ease reading because the letters are imprinted on the paper; the hooks of a serif increase the speed of recognizing words faster than sans-serif typefaces (Hoffmeister, p. 15-21). Understanding this difference can add to the visual experience and positively affect the reputation (Pires & Trez, p. 48).

Kerning, tracking and leading are typographical practices used to increase legibility and readability (Lupton, p. 90-111). Kerning is the spacing between individual characters in words; this is not the same as tracking, which is the spacing between all the characters in a word, sentence or paragraph (Lupton, p. 102-105). Leading is the vertical spacing between lines of text (Lupton, p. 108-111). If any of these spaces are too tight or loose, it depletes from the reader's speed of comprehension and negatively affect the brand (Griffin, McQuarrie & Phillips, 2014).

With these insights, AI can be developed to identify kerning, tracking and leading issues. Datasets can label the spaces between words, sentences and paragraphs. On top of that, AI can identify what media context the customer is designing for to inform them on what type style would best suit their project. Again, these are only a handful of the potential ways AI can trained upon when working with typography.
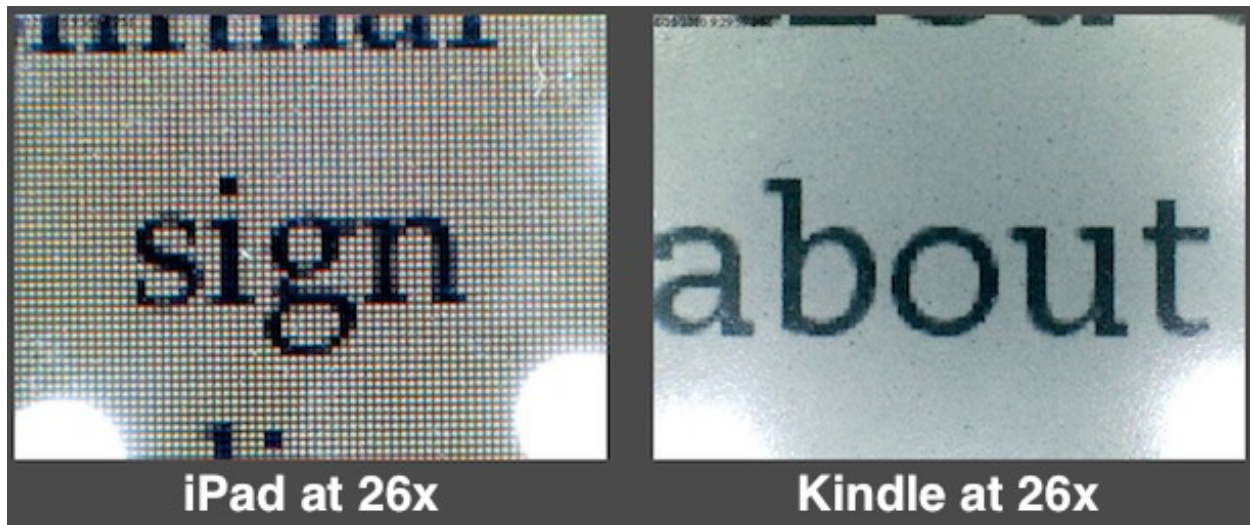
Figure 4—An example of a serif font displayed computer screen zoomed in (OSXDaily, 2010). This example compares serifs fonts on two digital screens—an iPad and Kindle, both from 2010. The serif curvatures are hard to visualize as they appear as square-like edges. As a result, it is better to use sans-serif fonts for digital platforms.

2.2.5. Brand Functionality

Once a brand has been designed, it needs to be tested. Brand functionality is a broad challenge but can focus upon a brand's scalability and sustainability with different contexts. Some of those contexts can be the cultural landscape of a market that brand owner aims to serve(Wheeler, 20).; other contexts can include how the logo looks when it is three times smaller than the original design (May, 2017). Testing with constraints is also effective; for example, placing an object over-top a logo or removing elements of the logo can be done to test for recognizability (Fast Company, 2017). Knowing how to apply AI to these kind of problems will make this MRP's MVO even better; the insights found here will inform how to train AI to recognize brand functionality issues.

AI can be trained on these challenges by using datasets that specialize in big data (discussed later) and partial element recognition (Sentance, 2019). Macroeconomic trends can be fed to AI to identify what cultural connotations influence a brand's functionality. Examples of clear small logos can be used to help AI identify the aspects that make a miniature brand-mark successful. Images of unobstructed

logos compared with pictures of altered brand-marks can help AI identify what elements are crucial to a brand's performance. All of these points can then be sent to the customer to help them enhance the elements that are prominent and focus less on the things that aren't. This helps the customer inch closer to creating a brand experience that customer love, sooner.

Section 3 - Technical Literature

Understanding the fundamentals of AI will help when solving brand-related issues with technology. The technical literature defines what AI is, the different kinds of AI that exist or in development and what AI is currently capable of. This section also examines how AI is used in marketing contexts today and later, describes how machines learn. These topics aim to unravel the processes involved with AI creation as a means of understanding how to apply AI to a future MVO and actualize the business idea.

2.3.1. What Artificial Intelligence is

Building AI-powered branding tools will require an understanding of what artificial intelligence is, how it is used and how it is built. This knowledge can also streamline communications between talent spanning across business, technology and creative expertise. Additionally, understanding where the AI industry is headed can yield foresight for future value propositions and how to market offers. This knowledge was used to decide what features to include in the prototype and identify what would be feasible in an MVO. The information will also guide future MVO activities.

Data science is a branch of computer science that is focused on the extraction insights from data (Kennedy, 2018). Artificial intelligence is a branch within data science (Kennedy, 2018). AI explores the creation of machines capable of learning, working and reacting like humans (Kennedy, 2018). Within artificial intelligence are fields and practices such as machine learning and deep learning [see Figure 5] (Kennedy, 2018). Machine learning is when computers are specifically taught to analyze, learn and make decisions concerning large amounts of data (Nicholson, n.d.). Deep learning is a subfield of machine learning that focuses on higher-level complexity learning and developing "artificial neural networks" that mimics the anatomy of the human mind (Nicholson, n.d.). Machine learning is the most relevant AI practice when initially developing AI-powered branding tools.
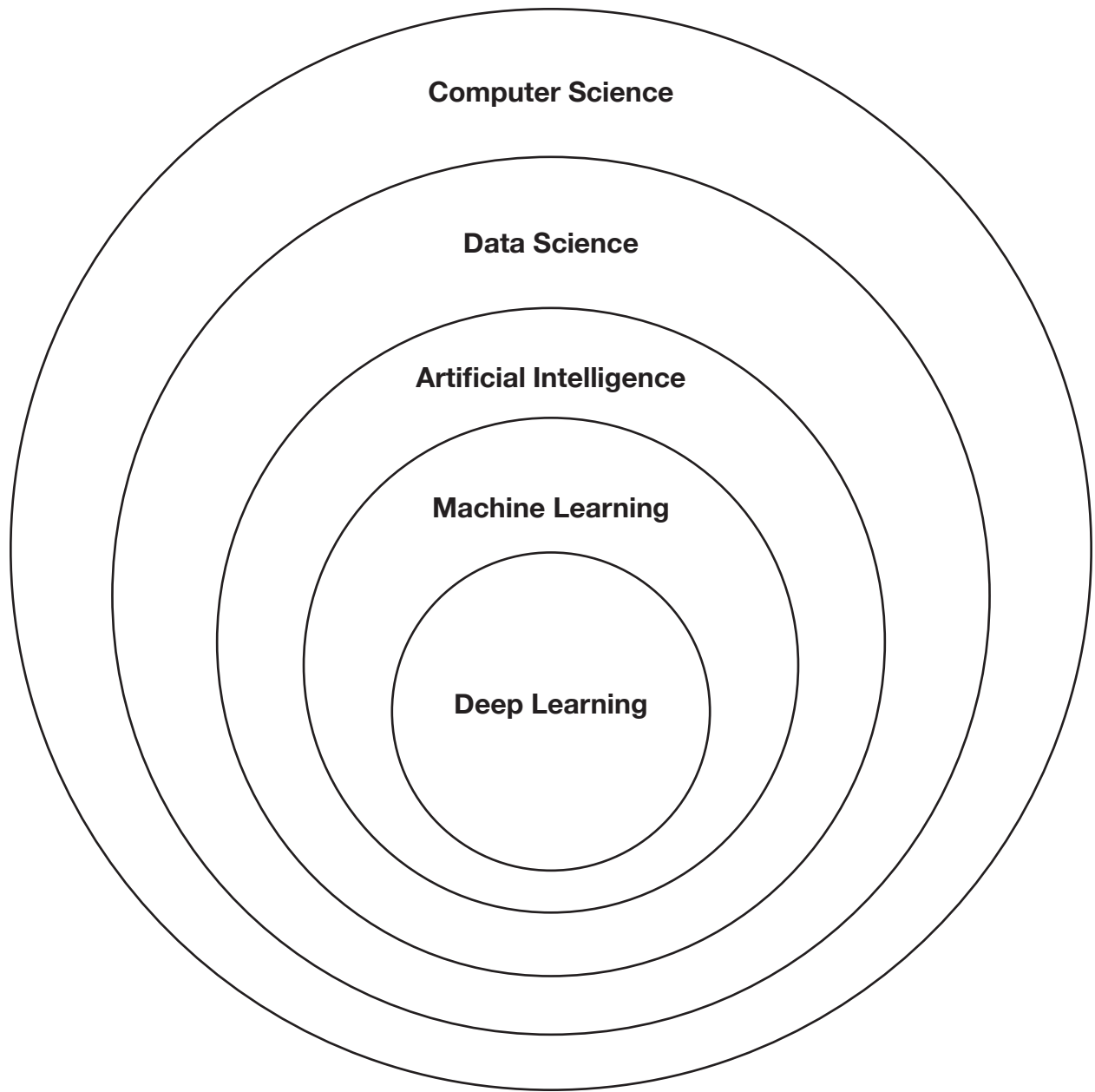
Figure 5—A diagram depicting how each field of technology relates to each other. Understanding this will make it easier to look for the best practices related to a specific field.

2.3.2. Seven Types of Artificial Intelligence

Identifying the different kinds of AI that exist can help us understand the capacities of artificial intelligence and how to use it when developing new smart-branding tools. There are seven different types of artificial intelligence at varying stages of technical development [see Table 3] (Joshi, 2019). All seven types of artificial intelligence can be categorized between two groups, those being narrow or general intelligence [see Table 4] (Hackernoon, 2018).

Narrow AI is what today's society has grown accustomed to. (Hackernoon, 2018). Narrow AI are trained to complete one or few specific tasks, such as spam filtering emails or recommending a restaurant on one's phone (Hackernoon, 2018). Siri, Alexa and Google are examples of how narrow AI is being used in an everyday context. To many's surprise, powerful AI applications such as self-driving cars or video-gaming AI are still considered narrow AI. This is because these applications perform a few tasks very well but cannot do much else outside of their programmed contexts (Hackernoon, 2018).

General AI is the direction the artificial intelligence industry is headed. (Hackernoon, 2018). General AI refers to the kind of technology capable of adapting to any broad task just as a human would. This includes robots that will be able to think critically, determine individual objectives and eventually, reach sentience. General AI is also the topic of discussion amongst AI enthusiasts or what people refer to when proclaiming their fear and resistance against AI (Hackernoon, 2018). There is little consensus on when general AI will reach widespread adoption. Experts range their guesses between the years of 2029 and 2200. The average estimate suggests that general AI will reach a 50% chance of being built by the year 2099 (Vincent, 2018).

Knowing the basic definitions of AI can focus team effort on tasks that are within reach and sustainable for business operations. Investing too much time, effort or resources in projects that are beyond reach will be detrimental for the business. It is best to pursue attainable technology projects that yield revenue to build up a better chance at pursuing more challenging ideas in the future. Defining AI, it's current capabilities and challenges can also help creative-tech businesses market appropriately and prepare for a safer future with technology.

Type of Artificial Intelligence	Stage of Development	Description
Reactive Machines	In existence	Have no memory, only responds to different stimuli
Limited Memory	In existence	Uses memory to learn and improve its responses
Theory of Mind	In theory and development	Understands the needs of other intelligent entities
Self-Aware	In theory and development	Has human-like intelligence and consciousness
Artificial Narrow Intelligence (ANI)	In existence	Represents all existing forms of AI trained to do one or a few specific tasks but cannot expand beyond set programming
Artificial General Intelligence (AGI)	In theory and development	Encompasses AI that is capable of learning, perceiving, understanding and functioning like a human; capable of building on multiple competencies (existing or not)
Artificial Super-intelligence (ASI)	In theory	AI that has amassed abilities that outperform human abilities and outwork AGI by an order of magnitude greater; development of AGI and ASI will most likely lead to "singularity;" commonly feared that ASI will threaten the quality of life or existence of humankind

Table 3—*The seven types of AI, their varying descriptions and stages of technical development (Joshi, 2019). Understanding what each AI means helps identify the capabilities that be used for branding-based AI.*

(Weak) Narrow Artificial Intelligence	(Strong) General Artificial Intelligence
• Reactive Machines • Limited Memory • Artificial Narrow Intelligence	• Theory of Mind • Self-Aware • Artificial General Intelligence • Artificial Super-intelligence

Table 4—The seven different types of artificial categorized between narrow or general intelligence (Joshi, 2019). Knowing the difference between the two categories helps with understanding the type of AI we are currently able to build and the kinds we are anticipating in the future (Hackernoon, 2018).

2.3.3. How Machines Learn

Knowing how machines learn will inform how to create the Sudden Studios value proposition. Without this knowledge, it is easy to dream up offers or features that cannot yet be built or would require a great time commitment to actualize. For the success of the Sudden Studios concept, it is crucial to understand how machines learn. The following information was used to understand how AI can be built when developing an MVO in the future.

In a general sense, machines learn using complex algorithms and a lot of computing power (Gershgorn, 2019). Algorithms are mathematical formulas used to solve a problem and are written using a programming language, such as Python (Wolf, 2017). An understanding of Algebra, Linear Algebra, Calculus, Probability and Statistics aid in the development of advanced algorithms (Parbhakar, 2018). The algorithm will be used to analyze datasets, which are tables of information that a machine will use to derive and build upon patterns (Hughes, 2018).

Beyond the general concepts, the process of developing artificial intelligence varies depending on the task it is made for [see Figure 6]. For instance, image classification is an AI ability that can be leveraged to enhance brand identities. A person can create a dataset of "good and bad logos;" when the dataset is imported into the program and run, the machine can analyze the dataset and determine the patterns that make logos good or bad. Repeated learning can then increase the machine's rate of accuracy when recognizing good or bad logos, given that the dataset is effectively thorough and substantial (Wiggers, 2018).
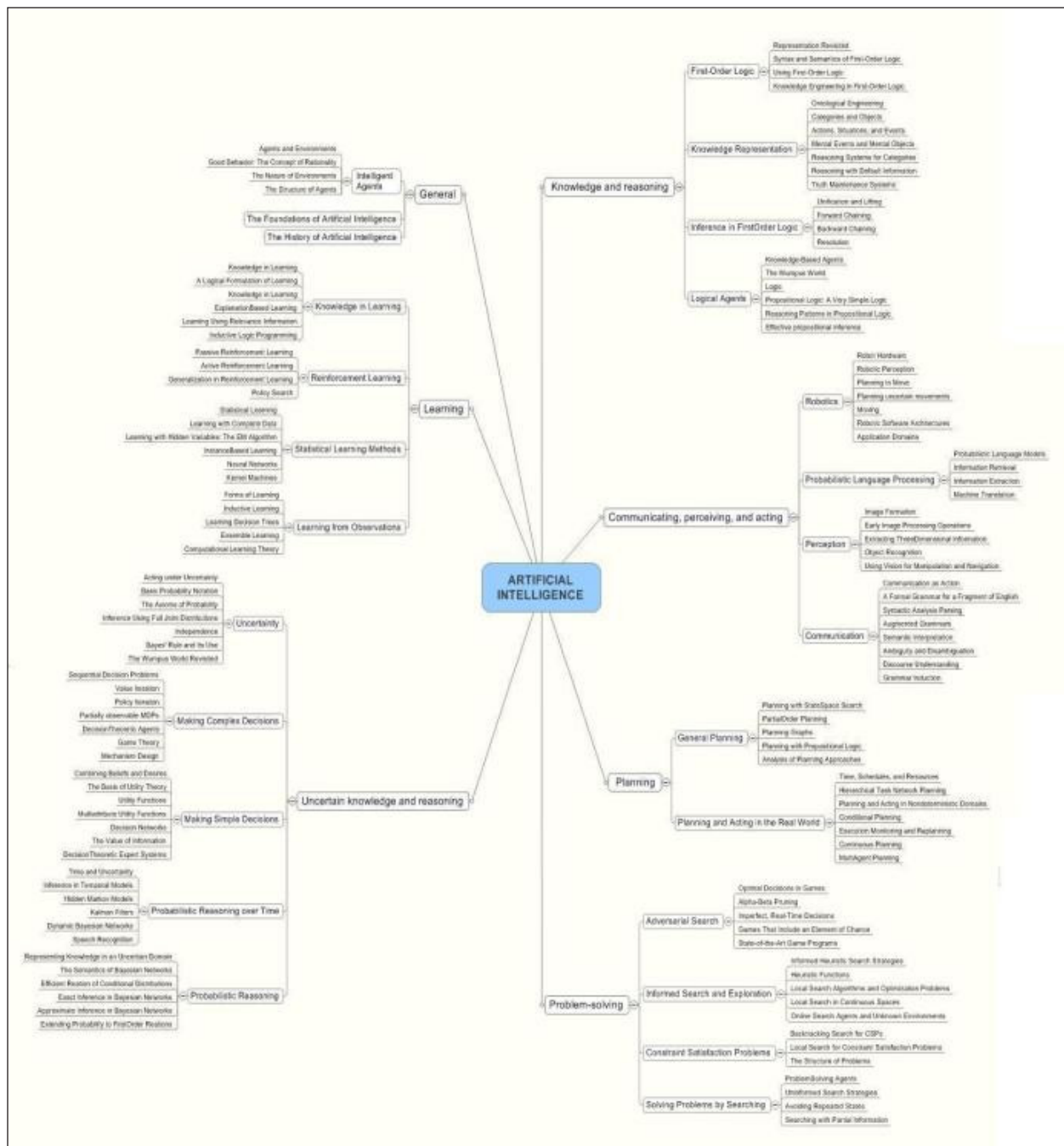
Figure 6—A diagram displaying some of the established and developing artificially intelligent abilities a machine is capable of (Bolotnikova, Gavrilova & Gorovoy, 2012). AI is built in multiple ways depending on the ability it is meant to exercise. Gaining scope on various AI abilities will inform what course of action to take when developing the technology.

The issue with creating accurate artificial intelligence lies in dataset creation (Sundblad, 2018). Datasets are created manually and require a high degree of observation and articulation (Wolf, 2017). Anyone can create a dataset; for the Sudden Studios concept, brand specialists would be the best dataset creators to help train AI on branding potholes.

Google's AutoML is a machine-learning tool used to create labeled datasets. (Google ML, 2019). It is a strong dataset creation tool that be used to identify objects, patterns or other things in an image. The tool uses a drag-and-drop feature that creates a box over-top an image's attributes. The user can then label the box based on what they want the machine to identify. For instance, a designer can drag-and-drop a box over top a logo with kerning that is too tight; they may then label the box "tight" in a table called "kerning." Likewise, they may recognize an area within the same image that has well-spaced kerning, to which they may label "well-spaced." Labels can be named whatever the user decides. When all images have been appropriately labeled, the user can export the dataset in as a CSV file. The CSV file can then be imported into an AI program and a machine can use the data to analyze and build upon the information (Google Cloud Platform, 2018).

2.3.4. How Artificial Intelligence is Used in Marketing

Understanding how AI is used in today's marketing activities can provide insight about what kind of features to create and what competition exists. On top of that, it can point out how to innovate upon existing technology or practices at an order of magnitude greater than previous examples. This is to ensure that the value created is relevant to an entrepreneur's marketing needs and desire to build a large customer base. This information will be used to develop future offers by Sudden Studios and will perhaps be integrated in upcoming marketing efforts.

AI is used in today's marketing practices primarily as big data analytics, recommendation systems and real-time conversations with consumers (Sentance, 2019). Big data analytics is the collection of large amounts of information for the purposes of providing a macro-perspective on human behaviour (Columbus, 2016). In a marketing context, big data analytics can be used to yield insights about consumer behaviour and the economic relationships between everyday activities and people's

spending habits (Columbus, 2016).

Recommendation systems vary in definition based on the context they're made for. For instance, Amazon uses shopping-based recommendation systems; this is a form of AI that analyzes a user's shopping activity and suggests similar products as a means to up-sell and provide additional value (Underwood, 2019). Another example of recommendation systems can be found in the music platform Spotify. The technology behind the software includes AI identifies and generates play-lists for users as a means of introducing new songs to users; this occurs when Spotify's AI uses meta-data attached to each song to cross-compare other songs likely to interest the same user (Pasick, 2015).

Real-time conversations are another way artificial intelligence is used for marketing purposes. This technology can come in the form of "chat-bots" whereby AI is trained to respond to the needs of a user the same as Apple's Siri or Amazon's Alexa respond through vocal recognition (Sentance, 2019). Chat-bots are used a means of automating tasks such as answering frequently asked questions or providing quick insight to common issues; they may also be used as a means to prime a human-responder on the context of a customer service issue before the human-responder is connected to the customer (Savage, 2019). For instance, a sample set of questions can be asked by an AI-responder to qualify whereby the customer needs a human-responder or if they can have their issue solved independently.

Each of these marketing-based AI points can be applied to this MRP; big data analytics can be incorporated to improve how brand owners manage their reputations. Recommendation systems can be imported to suggest common design trends or ways to improve a customer's logo. Real-time conversations can be installed into the web application and can buy time until a human responder is ready to cater to the customer's needs on the spot. All of these features can potentially help entrepreneurs reach clarity about their brands faster and build sustainable social capital.

Section 4 -
Best Branding Practices For Creative-Technical Businesses

Combining the knowledge of how businesses work, how brands are built and how machines learn is essential to actualizing the Sudden Studios concept. This section synthesizes the main points of the business, creative and technical literature respectively. Connections are made to examine the best ways to brand a creative-technical business. Optimal branding practices include instilling brand guidelines, personalizing the experience to each customer and humanizing the company. These insights are applied to the Sudden Studios prototype and can also be used in future branding activities.

Brand guidelines can be structured upon five key elements, those being a set of brand values, a company vision, a mission connected to said vision, a key message the company wants to communicate and a brand voice that will shape the personality of the company's behaviours (Wheeler, p. 33-53). Brand values are best described as single-words that explain a concept, such as "power, energy or persistence." (Wheeler, p. 33-53). Having between five to ten brands values can help when brainstorming how to express the brand identity to others. For example, Apple values diversity, which is exemplified with their workforce and was once exercised with their iconic "Think Different" advertising campaign (Apple, "Inclusion & Diversity", 2019). A vision is used to give a greater direction for the company's initiatives (Fernandes, 2019). Compelling visions are grandiose in nature (Kolowich, n.d.).; for example, the Creative Commons organization envisions creating a world that realizes the potential of the internet and drives a new era of development, growth and productivity (Creative Commons, n.d.). Missions are based on the company's vision (Kolowich, n.d.).; a large vision opens a sea of opportunities for evolving missions. For instance, InVision—a popular prototyping web app—is on a mission to customers "make every digital experience magically better" (InVision, n.d.). A message is an intention that the brand owner seeks to communicate (Wheeler, p. 33-53); for example, Pentagram is a design studio that to position itself as the world's largest independently-owned agency (Pentagram, 2019). The brand voice dictates how the message will be delivered (Wheeler, p. 33-53). Nike is a strong example. The company aims to embody action (Nike, 2019). It connects to this message with their offers and their marketing. Nike has invented creative-technical solutions such as fly-knit technology to innovate the performance-based fashion

industry; fly-knit makes it easier for athletes to gain a split second difference in their performance without the weight of their clothes or shoes slowing them down (Nike Stadiums, 2012). Their message is also honoured with their signature slogan "just do it." The tag-line captures the energy they aim to convey through the use of tone, speed and choice of words.

Personalization is another branding tactic that creative-tech companies use. Customers want to feel that they are being served a tailored experience specific to their needs individually. For example, Sticker Mule is an online sticker and label retailer that allows customers to upload their designs at any size, colour or style that suits their needs (Sticker Mule, 2019). Instilling open communication through phone, email or chat-messaging offers the opportunity to serve customers more personally (Sentance, 2019). For instance, Sketch is a company that specializes in creating prototyping software and offers customers the chance to email them when troubleshooting technical issues (Sketch, n.d.). Instilling recommendation systems also help customers to experience a unique journey (Underwood, 2019). For example, Netflix uses recommendations to suggest content that would interest one customer over another. This is why the option to create multiple Netflix accounts exists; each account aggregates information about the person's viewing habits to suggest similar content (Netflix, n.d.).

Humanization is prevalent in the creative-tech industry; building technology is complex but the way creative-tech companies market themselves as entities is the opposite. Many creative-tech businesses assume the role as approachable organization by using endearing graphics, bright colours and geometric typography when branding [see Figure 7] (Wilson, 2018). This may be part of a strategy to reach a wide audience and encourage internal teams to achieve operational simplicity when dealing with complex tasks such as building AI Another way businesses humanize themselves is through copy. It is easy to use jargon when mastering topics such as business, creativity and technology. Successful businesses focus on speaking at the customer's level of understanding using everyday language and concepts to convey a message (Spicer, 2018). Speaking concisely also helps with getting a message across to customers in a clear way. By enacting these branding standards, creative-tech businesses stand a greater chance at creating a delightful reputation [see Figure 8].
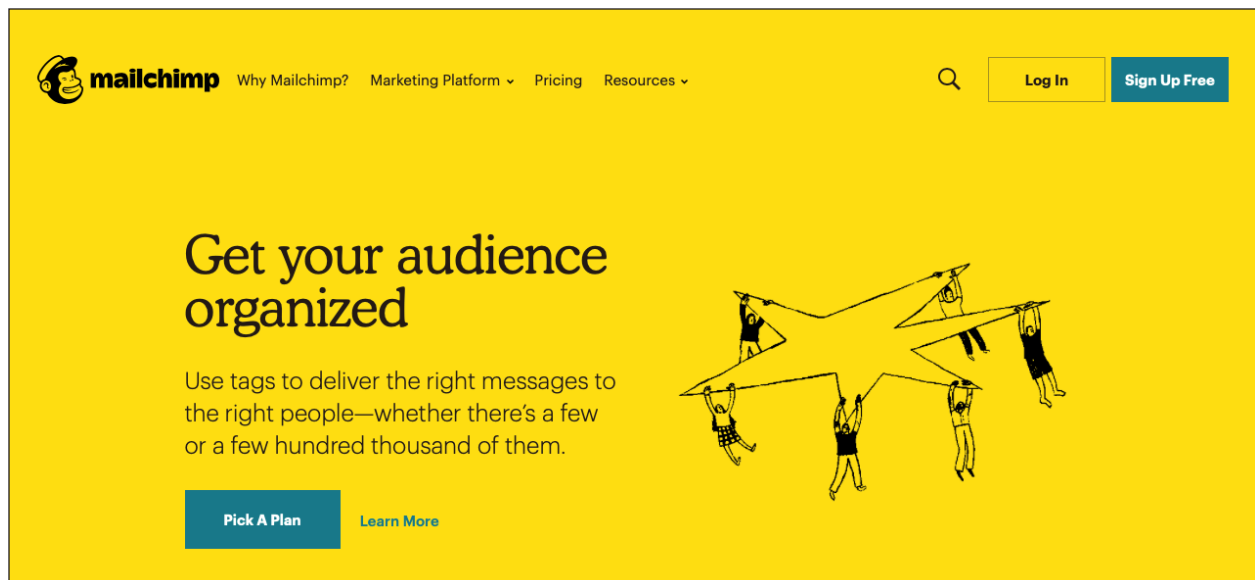
Figure 7—A screen-shot of Mailchimp.com's landing page at first glance (Mailchimp.com, 2019). Mailchimp.com is a creative-technical business that offers custom email-marketing optimization tools. Their visual communication is playful, with a monkey character that resembles the characters from childhood stories such as Curious George. The bold yellow and other illustrations add a sense of lightheartedness as well; this is a smart move for a company aiming to simplify the process of complex email marketing.
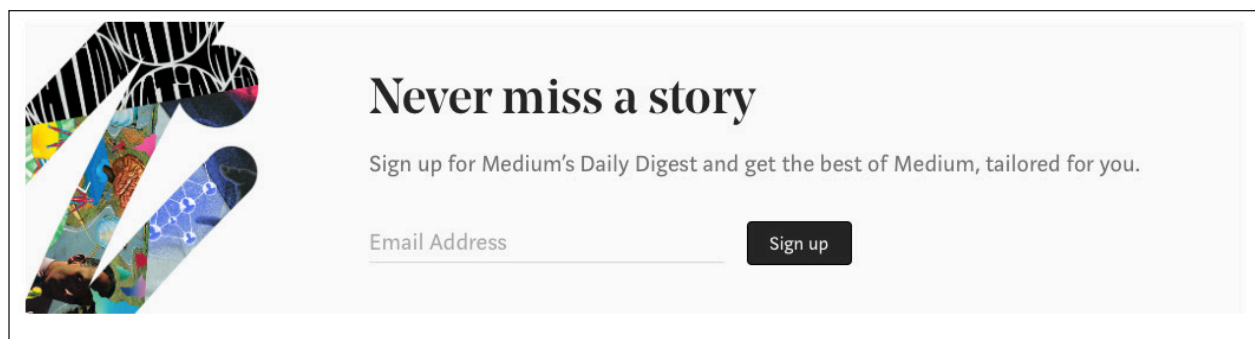
Figure 8—A sample of Medium.com's copy-writing for new sign-ups (Medium.com, 2019). Medium.com is a writing platform that enables writers and bloggers to discuss topics at depth. Their marketing material features copy that is written in a simple fashion and is easy to understand; this makes Medium.com more relatable than competing platforms.

Chapter 3 - Methodologies

Pursuing a AI-branding business will require a strong business model and a working prototype to demonstrate the idea. This section explains what the various tools are that were used to develop the business model and prototype. The business model was made using four tools, those being the Lean Canvas, the Value Proposition Canvas, the SWOT Matrix and STEEPLE analysis. The prototype was developed using Adobe XD. Each of these methods clarifies how the Sudden Studios concepts will work in economic, creative and technical contexts. Before explaining the details of the business model and prototype, each tool is described to provide context as to how they help clarify the business idea.

Section 1 - Brief Explanations of Business Methodologies

This section will give a overview of the four business methods used to develop the business plan including the Lean Canvas, the Value Proposition Canvas, the SWOT Matrix and STEEPLE Analysis tools.

3.1.1. Lean Canvas

Building a AI-branding business requires a strong and cohesive business model. The Lean Canvas is a powerful tool to build and test early-stage business models (Maurya, 2019). It is an adaption of a business-modeling tool called the Business Model Canvas (BMC). The BMC is best used for businesses that have at least reached the start-up stage, as many seed stage businesses do not have adequate answers for the questions posed by the BMC. (Maurya, 2019). In either case, both canvases are a strong alternative to writing out a business plan the traditional way. Business plans require a great deal of time and effort to develop; they are often discarded when the business needs to pivot. Business plans are also rigid in nature while the canvases offer flexibility when changing the idea. Canvases encourage entrepreneurs to attain feedback to test the hypotheses written down (Wise, "100 Steps—Step 4," 2019). The miniature business plan (discussed later) is based on a completed Lean

Canvas that outlines all the parts of the Sudden Studios business model and how they work together (See Appendix A for a comparison between the Lean Canvas and the Business Model Canvas; also see Appendix B for a Lean Canvas applied to the Sudden Studios concept).

3.1.2. Value Proposition Canvas

Creating an AI-powered branding tool demands an understanding of entrepreneurs seeking to build a customer base and how the value proposition suffices their needs. The Value Proposition Canvas (VPC) is a tool used to identify who the customer is and how a proposed solution will fulfill their needs (Strategyzer, 2017). It is best used when developing new value as 72% of value innovations fail to deliver on customer expectations (Strategyzer, 2017). One half of the VPC is composed of a customer profile with sections called "pains, gains and jobs." Pains are the inconveniences, frustrations and risks that the customer faces when seeking a solution to their problem. Gains describe the success of a job well done. Jobs are the tasks the customer is trying to fulfill by seeking a solution (Strategyzer, 2017). The other half of the canvas is the Value Map; this side is comprised of sections called "pain relievers, gain creators and products/services." Pain relievers are the attributes of the value the company seeks to develop that will address the customer's pains identified on the customer profile side. Gain creators are the attributes of the value that will address the desires identified on the customer profile. Products and services are the value proposition(s) the company aims to offer (Strategyzer, 2017). Like the Lean Canvas, the VPC is integrated into the miniature business plan that is discussed in detail later in this paper (see Appendix C and Appendix D to see the two parts of Value Proposition Canvas filled based on the Sudden Studios concept).

3.1.3. SWOT Matrix Analysis

Building a AI-branding business will come with its share of challenges. It is best to enter this venture with a clear perspective of how the company is at an advantage or disadvantage next to its competitors. SWOT Matrix analysis is used as a means of understanding the advantages and disadvantages of existing players in one's

industry in comparison to one's business. SWOT stands for Strengths, Weaknesses, Opportunities and Threats (University of Notre Dame, 2019). Unlike a traditional SWOT tool, the SWOT Matrix asks deeper questions that help connect the strengths, weaknesses, opportunities and threats in different contexts (Lukman, Prajapati & Setiadi, 2019). With this insight, and repeated use of the SWOT Matrix, Sudden Studios can strategically navigate the competitive landscape and ensure that the value created fulfills the customer's needs better than competing offers. The SWOT Matrix was used to identify key competitive challenges and opportunities; these attributes have been included in the miniature business plan (see Appendix E for a copy of the SWOT Matrix completed for the Sudden Studios concept).

3.1.4. STEEPLE Analysis

Knowing about world trends and how they influence consumer behaviour will yield many advantages when taking on the task of enhancing customer loyalty. It also may help attune messaging to wider audience and inform the Sudden Studios team on how to create a web application in a way that is positively received. STEEPLE analysis is a research framework used to help guide efforts when seeking to understand the macroeconomic climate that a company will enter (More, Phaal & Probert, 2015). STEEPLE stands for Social, Technology, Economic, Environmental, Political, Legal and Ethical (Walden, 2011). Without this understanding, founders enter into business ventures blindly and value propositions as well as marketing campaigns may not align with the goals, perspectives or habits of the greater economy. STEEPLE analysis has also been integrated into the miniature business plan (see Appendix F for a copy of the STEEPLE analysis completed).

Section 2 - Miniature Business Plan

The insights drawn from using the various business tools have been summarized as a miniature business plan. This section describes the mechanics of the Sudden Studios business model and value proposition, its competitive advantages and disadvantages as well as the macroeconomic climate the business is entering.

3.2.1. Business Model Mechanics

Sudden Studios is best described as an AI-powered web application that helps businesses develop cohesive and effective brand identities. It can be considered the Grammarly of Branding. The company is set on the mission to serve start-up stage entrepreneurs who have a burning desire to build customer loyalty. Their problem is that they have a hard time building such social capital because their branding is poorly researched, created or managed. What they're doing in the meanwhile is completing their branding independently or hiring individual designers to design and manage their expansive branding needs. The solution is to integrate AI into the branding process to shrink the feedback loop when researching, strategizing, creating or managing a brand. The AI will be trained on design-based datasets to identify branding issues such as poor colour contrasts or tight kerning. The trained AI can then be integrated into the code of the web app to help users assess their design assets and enhance their branding process.

Sudden Studios aims to use social media channels such as Facebook, Instagram, YouTube as key communication channels; Google, Angelist and LinkedIn are also great platforms for lead generation. All of these channels will redirect people to the online web application's URL; users can then sign up, develop and manage their brands on the platform over time. Key performance metrics include the amount of paying customers, monitoring the amount of social media followers, namely Instagram followers, and analyzing the amount of conversions that occur on the web application. The main costs associated with this business model are human resources; full-stack web developers and machine learning engineers will account for the most expensive salaries associated with this business model. Toronto's tech jobs averaged at $100,000

in 2019 (O'Neil, 2019). An additional expense include powerful computer equipment, such as graphics cards, which are needed to train the AI. Premium business management software such as Asana project management software, G Suite emailing services and Wave accounting software are lower-cost expenses that will help the business operate as well. Sudden Studios aims to attain its revenue through with a freemium payment structure; access to the web app and its starter features are free of charge though premium features will require a subscription membership starting at $10 a month per user. Paying users will gain access to a cluster tools that cover the entire branding process such as strategy and management tools. The company's unfair advantages are that it will be led by a founder on over 10 years of design experience and the web application itself has great potential for network effects; as more people use the platform, the AI will increase in accuracy, making it more valuable to the users.

3.2.2. Value Proposition Mechanics

Sudden Studios largely depends on serving entrepreneurs who are trying to acquire customers, retain them and create customer loyalty. Entrepreneurs have pain points that include not knowing the best way to create a multi-channel brand identity, needing professional feedback on how to improve their brand and minimizing their costs in the process. These entrepreneurs would favour a solution that helps them create a cohesive brand identity experience, attain actionable feedback based on what they've created and build large amounts of social capital at a manageable cost. With that in mind, the web application aims to relieve the customer's pains by offering clear guidance based on expert design data; Sudden Studios seeks to offer innovative features such as a Brand Tester tool—a resource that allows users to upload their brand assets and have it assessed by the AI for faster feedback. Offering access to these kinds of tools can ensure that entrepreneurs have the best chance at creating brands that work without paying for pricey design consultation.

3.2.3. Competitive Advantages and Disadvantages

Sudden Studios hosts a series of strengths and opportunities that can be leveraged when addressing its weaknesses and threats. This section explains such advantages and disadvantages used the SWOT Matrix framework. The company is strong in domain knowledge; it will be founded upon over 10 years of design experience and branding expertise. Sudden Studios has the opportunity to use this experience to inform the dataset creation process and truly addressing design issues. This strength can also be leveraged when persuading talent to join the forces, communicating that Sudden Studios has the best chance to get to market first before the competition. The major weakness associated with Sudden Studios is the lack of technical expertise currently on the team. While this weakness is being addressed, there is the opportunity to operate secretly, not to create competition. This means avoiding aggressive marketing tactics initially and focusing on recruiting technical talent to create the AI-powered web application. This way, Sudden Studios can get to market first with a high impact, having developed a strong value proposition that converts customers quickly.

3.2.4. Current Macroeconomic Climate

There are a handful of world trends worth noting that can influence the direction of Sudden Studios. This section examines the trends under the STEEPLE framework. The world is advancing towards more open and inclusive social environments. This is exemplified by social trends such as "third gender" identification in Germany (Graham, 2019). Emerging social platform Tik Tok also is extending to new demographics as well as instilling online safety measures. (Glenday, 2019). AI, data security and privacy are of the top concerns when talking about technological trends, including workers fear of job loss (Anderson, Luchsinger & Raine, 2018). Tech giant Apple works to enact more private alternatives to the digital experience (Apple, "Sign In With Apple", 2019). Economists hint at the arrival of a recession influenced by increasing tensions between America and China's trade-war (Farrer & Wearden, 2019). American president Donald Trump anticipates running for a second term in 2020 that he is likely to win (Jones, 2019). British Prime Minister Boris Johnson advances the Brexit agenda with much resistance on the opposing end (Colchester, 2019). The environment is under great

stress with the Brazillian Amazon rain-forest burning for days without help; Brazillian president Jair Bolsonaro refuses $22 million in support from G7 due to disputes between Brazil and France (Chappell, 2019). Social activism extends its reach into the digital sphere with people challenging police on their right to monitor mobile phones (Bowcott, 2019). Cultural activities are questioned as India contemplates banning disc jockeys due to noise pollution arguments (New Indian Express, 2019). America's Supreme Court struggles to address the ethical demand for stricter gun control despite New Zealand's speedy leadership example when faced with the Christchurch mosque shooting in March 2019 (Douglas, 2019) (see Appendix F for completed STEEPLE analysis covering recent news points).

These world trends and more point to a world that is seeking representation, justice and safety in every measure. Being mindful of these things will help Sudden Studios communicate to audiences in a way that is favourable, respectful and honest. It is also important to incorporate these findings into the value proposition; for example, instilling strong cyber-security measures will ensure the web app is an attractive and reliable resource in the consumer's eyes. Without this knowledge, Sudden Studios would have a hard time creating value that has the potential of expanding beyond local markets.

Section 3 - Prototype

Demonstrating an idea is as important as knowing how the system will work. Prototyping is a method that was used to visualize and examine how the Sudden Studios idea could work. This section explains how the prototype was made, what the prototype features and how it will be used in future business development. For instance, the Sudden Studios web application was prototyped used Adobe XD (see Appendices G, H and I for screenshots of the prototype). The prototype depicts a landing page, how a user would interact with the web app and its various features. With user-testing feedback, the prototype can be used to develop a MVO later on. The web app's site is structured into three categories, those being Strategize, Create and Manage. Each of these sections hosts tools relevant to the five stages of branding; for example, in Strategize, there is a tool that helps user run brand research that can be later integrated into a brand strategy. The Create section features the Brand Tester tool relevant to brand identity and touch-point creation. Manage can use big data analytics to manage the brand's statistics on online channels such as Facebook and Instagram. There are a total of ten starting features in the prototype that can be tested and used in an MVO. Users would be able to register an account with the web app and create brand profiles. The brand profiles act as the site's folder system, organizing and specifying activities that would take place on the site. Activities can include running brand research, developing a brand strategy, testing brand assets for design issues or managing a brand.

Chapter 4 - Analysis & Future Opportunities

Summarizing findings help to effectively grasp the best way to pursue starting an AI-branding business. This section confirms the best way to pursue building a AI-branding business. It does so by pulling the insights from all of the literature reviewed across business, creative and technical contexts and adds to the findings with additional best practices. It also considers the business model and the prototype to identify next possible steps. The end of this section examines the future opportunities that this MRP has. It will outline the key focuses that must be exercised to actualize the business idea.

Maximizing the creation an AI-powered branding web application relies on a number of factors. Actionable leadership, accountability and deadlines will enact execution that streamlines business operations (Bregman, 2016). Focusing on the challenges and needs relevant to the business' current stage (be it seed, startup, etc.) will increase productivity, efficiency and concentration (Keller, p. 277-297). Focusing on the creation of one value proposition at a time will encourage the possibility of creating something that customers want and love (Zak, 2017).

Educating customers on the process of branding, how brands are used in today's age and how to enhance their brand identity will increase the persuasiveness of the value proposition. Structuring the web application based on the five branding stages will maximize the user's chances of creating a thorough brand identity that works (Wheeler, p. 7). Focusing on a handful of common design issues will make it easier to discover the best ways to create branding-focused AI. Brand functionality, visual accessibility and typography are three wide enough brand areas that AI can be trained upon for maximum output.

The quality of the datasets will determine how efficient the use of technical expertise will be and the program's accuracy (Gonfalonieri, 2019). Creating high-quality datasets relies upon being having a quantity of data that are both detailed and concise (Gonfalonieri, 2019). Regular communication between the company's disciplines will increase the likelihood of creating accurate AI capable of identifying brand-related design issues with such data (Cecil, 2018). Assembling a team of three founders with a maximum of eight total teammates, each diversely skilled, will maximize communication clarity and speed (Kaufman, p. 311-313). The company can then be structured under each of the eight teammates as separate departments.

The future of the Sudden Studios concept will rely on a series of actions. Gaining market validation will be crucial to the continuation of this idea. Market validation will largely depend on hosting customer discovery interviews and conducting market research to validate each segment of the business model, as outlined in the Lean Canvas. Following market validation will be the need for product testing and a MVO. With a small and testable customer base, mock-ups and prototypes can be used to further validate how the MVO should be developed, what features to include and how else to improve the value proposition. Actualizing the MVO will require technical talent. Conducting 20 customer discovery interviews and product tests will uncover patterns that hint at what direction to take the business and it's value next. (Wise, "100 Steps—Step 13," 2019). Hiring technical founders with a specialty in artificial intelligence will also be crucial to the progress of this business idea. Preparing datasets will ease the induction of technical talent into the company. The insights gathered from the customer discovery interviews and market research can be used to create datasets and ultimately, a MVO.

Chapter 5 - Conclusion

Emerging technologies make affecting change possible. Many of today's entrepreneurs are hungry to create an impact with the businesses they build. Pursuing this vision is often stifled by the obstacle of poor customer loyalty. Faulty branding is one of the biggest issues when amassing a customer base. Integrating artificial intelligence into a digitized branding process will make it possible for entrepreneurs to attain design feedback without the need of groups of creators present. Faster feedback can lead to better brand identities which in turn improves the odds of forming strong customer loyalty. This MRP examined how a creative business could be made within the AI industry. Understanding how businesses work can systematize the creation of this value. Knowledge about branding will ensure that the value created is industry-standard and that customers have the best chance at creating a brand that works. The quality of the AI will largely depend on the datasets its fed and accuracy of the algorithms made by programmers. The business model aimed to synthesize the research and apply the methodologies to a creative-technical idea. A prototype was made to actualize the business idea as a web application and showcase the site's features. With that said, market validation is needed to test if there is a large enough market to sustain this business idea. Product validation is also needed to gauge customer interest and how the web app works with customers. Finally, hiring technical talent will speed the process towards creating AI-powered branding tools. Addressing each of these steps offers the best possible chance at creating an offer that helps others businesses build loyal social capital.

Appendices

Appendix A—A comparison between Lean Canvas (top) (Leanstack.com, 2019) And Business Model Canvas (bottom) (Strategyzer.com, 2019). Understanding the difference between the two canvases is vital to forming a new business idea. By using a Lean Canvas, entrepreneurs can answer questions that are directly influence to their emerging concepts. A Business Model Canvas is best used for companies that have passed the seed business stage.

PROBLEM	SOLUTION	UNIQUE VALUE PROPOSITION	UNFAIR ADVANTAGE	CUSTOMER SEGMENTS
List your top 1-3 problems.	Outline a possible solution for each problem.	Single, clear, compelling message that states why you are different and worth paying attention.	Something that cannot easily be bought or copied.	List your target customers and users.
	KEY METRICS List the key numbers that tell you how your business is doing.		**CHANNELS** List your path to customers (inbound or outbound).	
EXISTING ALTERNATIVES List how these problems are solved today.		**HIGH-LEVEL CONCEPT** List your X for Y analogy e.g. YouTube = Flickr for videos.		**EARLY ADOPTERS** List the characteristics of your ideal customers.

COST STRUCTURE	REVENUE STREAMS
List your fixed and variable costs.	List your sources of revenue.

Key Partners 🔗
Who are our Key Partners?
Who are our key suppliers?
Which Key Resources are we acquiring from partners?
Which Key Activities do partners perform?
MOTIVATIONS FOR PARTNERSHIPS
Optimisation and economy
Reduction of risk and uncertainty
Acquisition of particular resources and activities

Key Activities ✅
What Key Activities do our Value Propositions require?
Our Distribution Channels?
Customer Relationships?
Revenue Streams?
CATEGORIES
Production
Problem Solving
Platform/Network

Key Resources 🏭
What Key Resources do our Value Propositions require?
Our Distribution Channels? Customer Relationships?
Revenue Streams?
TYPES OF RESOURCES
Physical
Intellectual (brand patents, copyrights, data)
Human
Financial

Value Propositions 🎁
What value do we deliver to the customer?
Which one of our customer's problems are we helping to solve?
What bundles of products and services are we offering to each Customer Segment?
Which customer needs are we satisfying?
CHARACTERISTICS
Newness
Performance
Customisation
"Getting the Job Done"
Design
Brand/Status
Price
Cost Reduction
Risk Reduction
Accessibility
Convenience/Usability

Customer Relationships ❤️
What type of relationship does each of our Customer Segments expect us to establish and maintain with them?
Which ones have we established?
How are they integrated with the rest of our business model?
How costly are they?
EXAMPLES
Personal assistance
Dedicated Personal Assistance
Self-Service
Automated Services
Communities
Co-creation

Channels 🚚
Through which Channels do our Customer Segments want to be reached?
How are we reaching them now?
How are our Channels integrated?
Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?
CHANNEL PHASES
1. Awareness
How do we raise awareness about our company's products and services?
2. Evaluation
How do we help customers evaluate our organization's Value Proposition?
3. Purchase
How do we allow customers to purchase specific products and services?
4. Delivery
How do we deliver a Value Proposition to customers?
5. After sales
How do we provide post-purchase customer support?

Customer Segments 👥
For whom are we creating value?
Who are our most important customers?
Mass Market
Niche Market
Segmented
Diversified
Multi-sided Platform

Cost Structure 🏷️
What are the most important costs inherent in our business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?
IS YOUR BUSINESS MORE
Cost Driven (leanest cost structure, low price value proposition, maximum automation, extensive outsourcing)
Value Driven (focused on value creation, premium value proposition)
SAMPLE CHARACTERISTICS
Fixed Costs (salaries, rents, utilities)
Variable costs
Economies of scale
Economies of scope

Revenue Streams 💰
For what value are our customers really willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?
TYPES *FIXED PRICING* *DYNAMIC PRICING*
Asset sale *List Price* *Negotiation (bargaining)*
Usage fee *Product feature dependent* *Yield Management*
Subscription Fees *Customer segment* *Real-time-Market*
Lending/Renting/Leasing *dependent*
Licensing *Volume dependent*
Brokerage fees
Advertising

Appendix B—A Lean Canvas applied to the Sudden Studios concept. The Lean Canvas provides a snapshot view of the entire business model. It is also flexible for iterative testing, making it a strong business tool for new ideas.

Problem	Solution	Unique Value Proposition	Unfair Advantage	Customer Segments
Early-stage businesses have a hard time developing customer loyalty due to poor branding	Use AI to help businesses identify their branding potholes, faster	An AI-powered web app that helps businesses research, strategize, create and manage brand identities	Founder has over 10 years design experience Potential for network effects	Tech Entrepreneurs **Early Adopters** Start-up stage tech entrepreneurs with strong desire to build a customer base
Existing Alternatives Entrepreneurs develop their brands independently or they rely on an individual designer to create their visual brand identity	**Key Metrics** Amount of paying customers Amount of social media followers, namely Instagram Amount of conversions	**High-Level Concept** The Grammarly of Branding	**Channels** Facebook Instagram YouTube Angelist.com LinkedIn Online Web App	

Cost Structure	Revenue Streams
Accountants Dataset Creators Full Stack Web Developers Machine Learning Engineers Computers	Subscriptions to the platform

Appendix C—A VPC Customer Profile; part one of Value Proposition Canvas applied to the Sudden Studios concept. Identifying who the customer is, what they want and what their obstacles are when seeking a solution are crucial to the development of a lovable offer. It is easier to gain sight of these factors by filling out the Customer Profile of a VPC.

VPC Customer Profile (1/2 of VPC)	
Gains 1. Build a large and engaged customer base that provides recurring income 2. Create an empowering brand identity that can be exercised on all channels 3. Attain thorough and actionable feedback on how to improve brand	**Jobs** 1. Acquiring customers 2. Retaining customers 3. Building customer loyalty
Pains 1. Not sure how to create a cohesive brand identity that can be exercised across all channels 2. Need a way to thorough attain feedback without increasing expenses greatly 3. Lack of funds to afford traditional brand expertise	

Appendix D—A VPC Value Map; part two of Value Proposition Canvas applied to the Sudden Studios concept. A VPC's Value Map helps outline the key aspects of an offer that can fulfill the customers needs, address their obstacles and get their jobs done. This is important is a company aims to make an offer that deeply serves their customer.

VPC Value Map (2/2 of VPC)	
Value An AI-powered web application with the following starting features: Strategize 1. SWOT Matrix 2. Competitive SWOT Matrix 3. STEEPLE Analysis 4. Stakeholder Analysis and User Personas 5. Creative Brief Generator 6. Brand Name Generator Create 7. Brand Tester 8. Touch-point Brainstormer Manage 9. Brand Stats Tracker 10. Brand Reputation Manager (Reputation Analysis)	**Gain Creators** 1. Design and manage a powerful brand identity and brand assets all in one place 2. Attain feedback faster than hiring groups of design professionals 3. Minimize expenses and work with the entrepreneurs' needs as their companies grows with time **Pain Relievers** 1. Guidance on how to appropriately create a brand identity through the structure of the web app and it's features 2. AI-powered Brand Tester can identify potholes to improve upon 3. Offer an affordable subscription starting at $10/monthly/user for premium features

Appendix E—A SWOT Matrix analysis applied to the Sudden Studios Concept. Understanding the advantages and disadvantages of this MRP will help prepare for incoming hurdles using strengths.

Plan of Action Validate the market's need for AI branding solution. Build a team of technical and business talent to compliment design expertise. Build an MVO customers will pay for.	**(S) Strengths** Strong background in design with over 10 years experience and formal education.	**(W) Weaknesses** Currently no team developed to cover technical or business aspects adequately.
(O) Opportunities Building a team comprised of technical and business expertise relevant to creative-tech ventures would be advantageous.	**(S + O) Strengths + Opportunities** Extensive design background can be used to inform if products truly address design issues or not.	**(W + O) Weaknesses + Opportunities** Operate in secret; do not market value proposition just yet. Focus on building a team with technical and business talent.
(T) Threats Teams with extensive technical and business expertise have a chance at getting to market first.	**(S + T) Strengths + Threats** Extensive design experience can be used to persuade technical and business talent to join forces and get to market first before competition.	**(W + T) Weaknesses + Threats** Minimize lack of talent by seeking partners; partner up with technical and business talent to get to market first.

Appendix F—A STEEPLE analysis completed to identify key macroeconomic trends. Gauging what is happening the world will help determine what steps a business should take when operating—activities such as hiring staff, marketing and seeking investments are all influenced by world events. For example, investors may be reluctant to take bigger risks In times of great uncertainty caused by world issues; this insight can point the business in another direction, such as honing on a business' sales operations to increase capital.

STEEPLE Analysis of 2018/2019

Social
- Social media platform TikTok grows and promotes online safety (Glenday, 2019).
- Toronto is the best place to live according to The Economist's Intelligence Unit (City of Toronto, 2019).
- Germany creates a third gender category for those who do not identify as male or female (Graham, 2019).

Technological
- Workers, particularly in manual labour industries, fear of job loss as AI technology advances (Anderson et al, 2018).
- Apple announces "sign in with Apple"—a feature aimed at combating the many data security and privacy issues inspired by Facebook's Cambridge Analytica scandal in early 2018 (Apple, "Sign In With Apple", 2019).
- Elon Musk relieves plans for Neuralink—a company aimed at implanting chips into brains for advanced human competition with AI; singularity becoming a reality (CNET, 2019).

Economical
- Major talks about an impending market crash influenced by trade-war between China and America (Farrer & Wearden, 2019).
- Streaming services are largely popularized; streaming will increase in existence as major entertainment companies such as Disney, Apple, HBO, NBC and Warner Bros. aim to compete with Netflix (CNBC, 2019).
- Aerospace company Boeing's faulty 737 planes have created a ripple effect of problems in the aerospace industry; the aerospace arena has lost $4 billion per

quarter since recent incidents (The Economist, 2019).

Environmental

- The Amazon rain-forest, source of 20% of the world's oxygen, has been burning for days with little help. Brazil officials have rejected over $22 million dollars from G7 seeking to help fight the fires due to political disputes between Brazil and France (Chappell, 2019).
- New study published that states spending time in nature is linked to good health (O'Hare, 2019).
- Progress has been made in sustaining the lives of elephants—global trade of elephants for zoos has been banned (BBC, 2019).

Political

- British Prime Minister Boris Johnson pushes forward with attempts to advance Brexit agenda (Colchester, 2019).
- Donald Trump seeks to run for a second term with a 2020 political campaign; likelihood of his re-election is high as competition wanes to amass similar popularity (Jones, 2019).
- G7 forgos efforts to unify with Trump; deems such efforts as "pointless" (Shear & Tankersley, 2019).

Legal

- Rights groups activists challenge police on monitoring mobile phones (Bowcott, 2019).
- China lawmakers pass new law allowing local governments to tax resources such as farmed goods (Aizhu & Stanway, 2019).
- India attributes disc jockey performances as contributors to noise pollution, urging the Uttar Pradesh government not to permit them (New Indian Express, 2019).

Ethical

- Saudi Arabia pivots away from employing foreign workers (World Politics Review, 2019).
- Trump says he would accept insider information on 2020 political campaign competitors from foreign governments—"I'd want to hear it" (Choi, 2019).

- Measures to improve gun control continue to fail as Supreme Court "pro-gun radicalism" persists (Douglas, 2019).

Appendix G—Screenshots of the Sudden Studios prototype showing first steps and features. The first column shows the prototype landing page. The second column shows the Brand Tester feature being selected under the Create section of the site. The third column shows the brand tester figuratively testing AI in the background and showing an overview of test results to choose from afterwards. For a full view of the prototype, visit this link: https://tinyurl.com/y2zscmc7 or contact mohamed_abdelfattah@live.com.
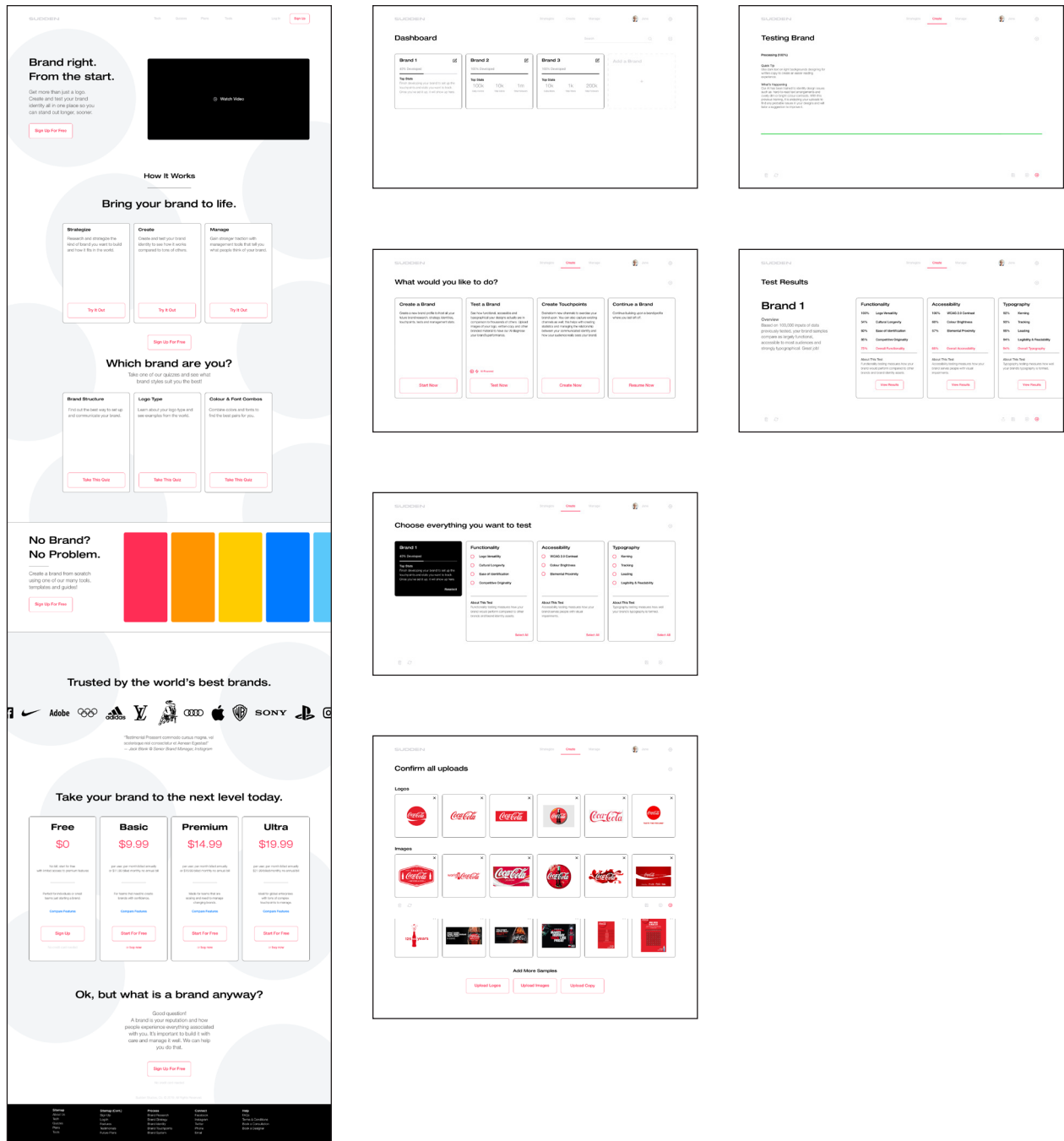
Appendix H—Screenshots of the Sudden Studios prototype showing test results after a user would upload their brand assets. The first column displays brand functionality test results; the second column shows accessibility test results. The third column shows typography test results after the AI has analyzed the assets. For a full view of the prototype, visit this link: https://tinyurl.com/y2zscmc7 or contact mohamed_abdelfattah@live.com.
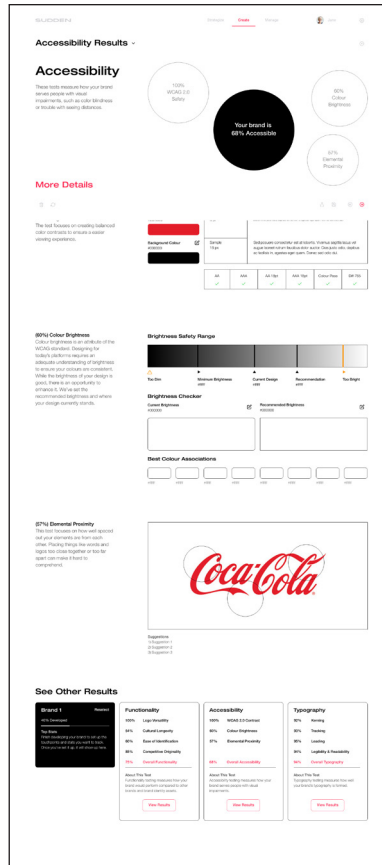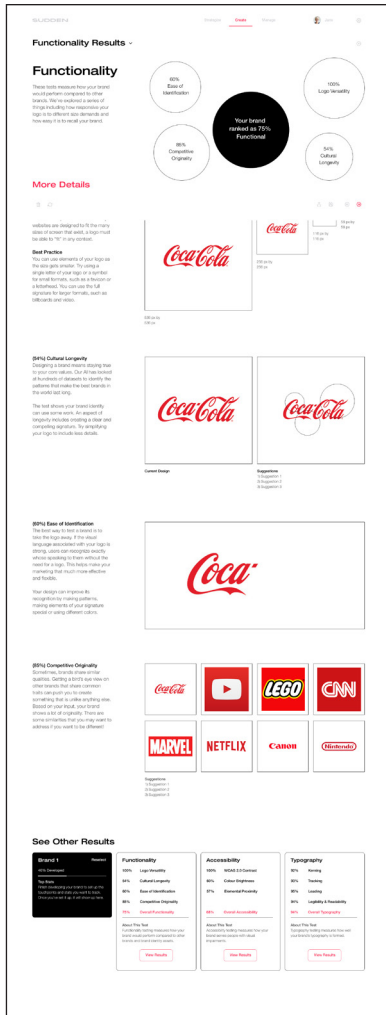
Appendix I—Screenshots of the Sudden Studios prototype displaying information and Strategize and Manage features. The first column show what a help window would look like if clicked. The second column shows a completed user persona profile on the site. The third column shows an analytics feature that would show users their social media statistics in real-time. For a full view of the prototype, visit this link: https://tinyurl.com/y2zscmc7 or contact mohamed_abdelfattah@live.com.
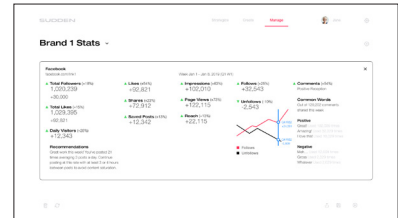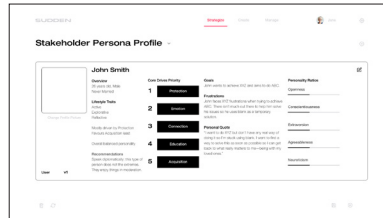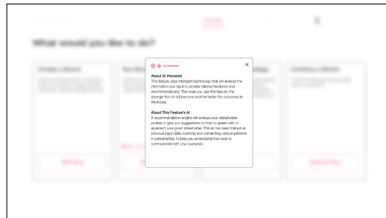
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