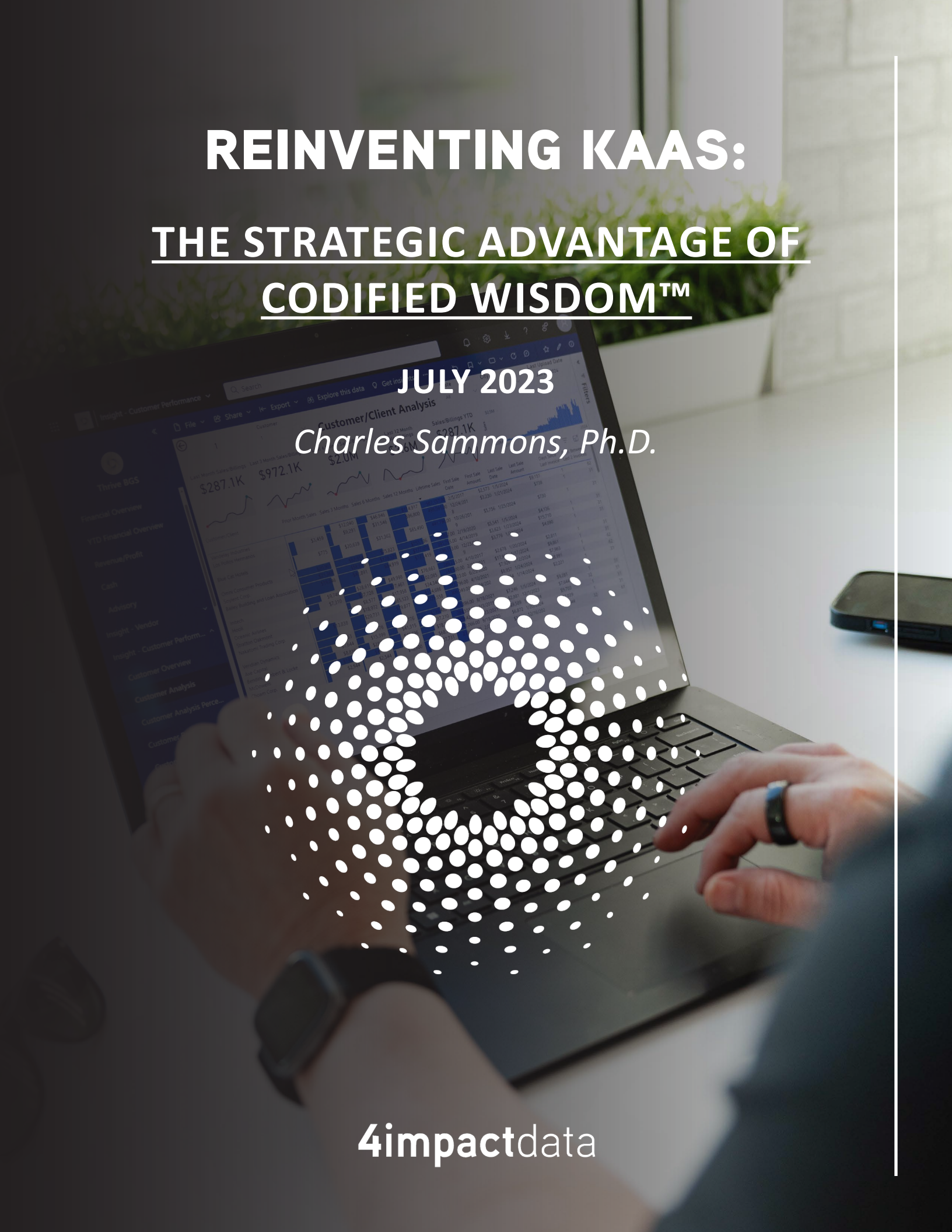
REINVENTING KAAS:

THE STRATEGIC ADVANTAGE OF CODIFIED WISDOM™

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4impactdata

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EXECUTIVE SUMMARY

Codified Wisdom™ is a proprietary concept by 4ImpactData that presents a remarkable paradigm shift in how knowledge can be harnessed and leveraged. By encapsulating the wisdom and applicability of industry experts in various fields and vertical markets, Codified Wisdom™ will form the backbone of Knowledge as a Service (KaaS) products now and in the future. This white paper explores how Codified Wisdom™ will provide the foundation for a new class of KaaS products.

INTRODUCTION

Knowledge as a Service (KaaS) represents a powerful conduit for professional services companies to leverage and democratize knowledge sharing. It enables these companies to tap into a wealth of insights and expertise, often in real-time, that would otherwise remain untapped or siloed. Through the intelligent application of this shared knowledge, these providers can help their customers outpace competition by making swift, informed decisions and crafting innovative and effective strategies. KaaS can drive revenue growth by revealing hidden opportunities, optimizing processes, and improving client service through expert-backed solutions. Furthermore, it aligns all decision-making processes and strategies with the overall business goals, ensuring every action taken is a step towards achieving these objectives. Ultimately, KaaS gives professional services companies a competitive edge in an increasingly digital and knowledge-driven landscape.

However, while KaaS certainly offers significant benefits, it has its challenges. Foremost among these is the task of ensuring quality and relevance. The efficacy of the knowledge being shared is highly dependent upon, not only the source, but the ability of the KaaS provider to distill the relevant parts of that information to ensure its applicability to the subject. Often, the level of usability is directly proportionate to the amount of cost and effort required to extract real value from the data. According to Anthony Algmin, CEO of Algmin Data Leadership,

"The easy money has already been made in this space—and even our venerable, large organizations that have substantial proprietary databases will find that most market opportunities will not justify the investment to make it client-ready." ***(Algmin, 2018)***

Enter Codified Wisdom™, a concept developed by 4impactdata that will revolutionize the way that knowledge based products are developed. Rather than requiring the costly task of interrogating existing data to glean insight that may or may not exist, customer data will be combined with expert codified products, allowing organizations to quickly leverage their knowledge assets to produce valuable insights that drive decision-making and provide real-time value.

UNVEILING THE CONSTRAINTS ON BUSINESS INTELLIGENCE

The observation of trends in business practices over the last three decades provides an interesting view of what

companies believe to have the most impact on their ability to successfully compete in a global marketplace. The trends appear to alternate between innovations from the tech industry and higher-level business practices from thought leaders. In either case, integration and implementation of these innovations mostly follow what Geoffrey Moore defined as the Technology Adoption Lifecycle Curve. Adoption of new technology is very low at first, (just 2.5% from early adopters) and only increases as more and more information about user experience and realized value is disseminated to the rest of the marketplace. This use to mean that most small businesses, who would most likely be unable to weather the setback caused by a technical misstep, would wait until the technology was well established before they would adopt it. As a result, they were often late to the game and had to settle for little to no competitive advantages.

However, since the early 2000s, decision makers for small to large businesses alike have become increasingly aware of the valuable business intelligence that exists within their own day-to-day operational data. This realization was facilitated by a group of industry experts who, in the late 90s, developed the Cross Industry Standard Process for Data Mining (CRISP-DM) Framework. The CRISP-DM framework defined a straight-forward process for mining insights from data and quickly became the basis for nearly all data science projects. To this day, according to the Data Science Process Alliance (datascience-pm.com), CRISP-DM remains the overwhelmingly used standard for data mining projects.

As illustrated in Diagram 1, the process begins with the Business Understanding phase, which focuses on understanding the needs of the business. Next, the Data Understanding phase deals with digging into the existing data to find out what data is available to aid in accomplishing the business goals. After that, the data preparation phase involves cleaning up the data to make it usable for modeling. Experience shows that this phase will comprise 80% of an average data project. Then comes the modeling, evaluation, and, if you're lucky, deployment stages. Once these newly revealed insights have been implemented, they will inform Business Understanding, which leads to more fruitful data mining projects, which leads to higher value insights, and the cycle should continue.

Unfortunately, history has shown that the likely outcome is far less desirable. According to experts, like Gartner Group, research consistently shows that only about 13% of data projects will ever make it to the deployment stage, making the chances of realizing any sort of financially beneficial

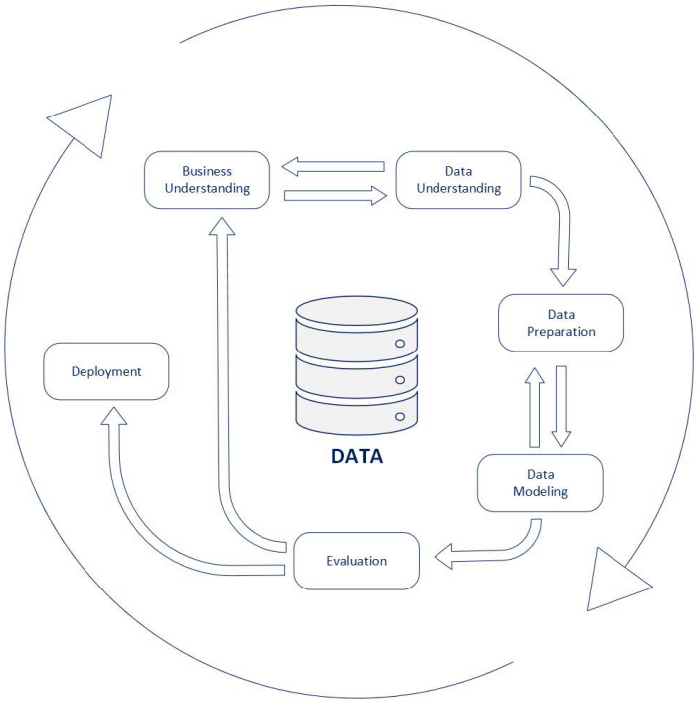


Diagram 1 - Cross Industry Standard Process for Data Mining (CRISP-DM)

outcome slim. Consequently, according to industry analysts like Forbes and Harvard Business Review, the percentage of firms identifying themselves as being data-driven has steadily declined, from just 37% in 2017 to an alarming 24% in 2022. Yet, according to these same analysts, businesses continue to bank on the value of realizing actionable intelligence from their data. It is projected that investments in data-oriented projects will reach an estimated $56 Billion in 2023.

In light of these insights, the question becomes why the gap between the potential of data-driven decision-making and the reality of unsuccessful data projects exists. Experience has shown that several factors can be pinpointed as potential reasons for this discrepancy. First, most business owners embark on a data project because they don't know what they don't know, and the hope of obtaining new competitive insight causes thousands of projects to begin every day. However, most of them will fail because starting with a fuzzy idea of the goal or having a project with a clearly defined goal that is not realistic or that does not add any meaningful value, ultimately leads to trying to solve the wrong problem. Furthermore, organizations often underestimate the complexity and time-consuming nature of the data preparation phase and a lack of skilled personnel capable of handling the intricate tasks associated with data science projects, such as data cleansing and modeling, also becomes a significant barrier.

Even with these challenges, companies continue to invest heavily in data science projects, reflecting the enduring belief in data's potential for generating actionable insights and fostering competitive advantage. It is crucial, then, to develop new solutions that bridge the gap between promise and reality.

HARNESSING EXPERT KNOWLEDGE

The future of data-driven decision making lies in the ability to engage information with a multi-phased approach that is well thought out, thoroughly defined, and seamlessly executed. The answer lies in an innovative process called Codified Wisdom™, a technique that allows an infinitely faster time-to production experience for business owners. Through the use of predefined Insight Modules developed with the exact KPI's and metrics prescribed and vetted by top industry experts and refined with machine learning and AI, Codified Wisdom™ allows business owners and decision makers almost immediate access to actionable, proven business intelligence at a fraction of the cost of traditional data projects.

Unlike costly and time intensive solutions that are based on Extract-Transform-Load (ETL) principles, Codified Wisdom™ employs a faster Extract-Load-Transform model that immediately encapsulates imported data with a relevant set of codified standards that can be accessed right away for analysis and decision making. This expert knowledge combined with company data provides relevant business intelligence for a range of vital best practices, from operational to financial, and is instrumental in helping business owners understand the key growth indicators for their industry.

THE NEW STANDARD FOR KAAS

In an era defined by information and technology, the emergent trend of Knowledge as a Service (KaaS) is gaining significant traction. At its core, KaaS is about leveraging vast data pools and using advanced analytics to create actionable knowledge, which is then supplied as a service to clients across various industries. However, many of these large data providers are finding it difficult to justify the cost of continuously updating and preparing their data for consumption, instead choosing to allow their raw data to be consumed by those with a pre-existing contextual need.

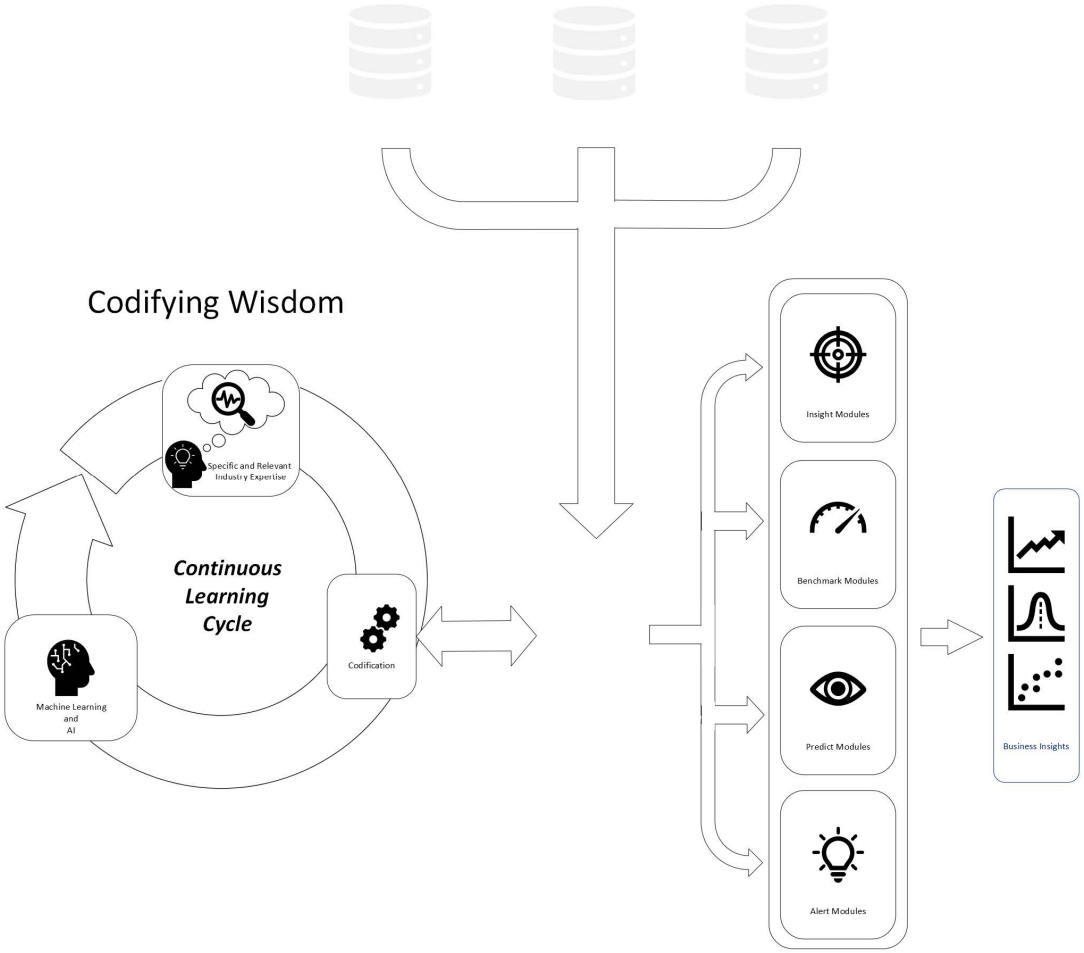


Diagram 2 - The Codified Wisdom™ Process

For example, a consumer who is willing to pay for access to a vast database of contact information. With privacy laws dictating much of how data can be shared, many companies are using whatever expense they are willing to invest to anonymize the data. While this maintains the general availability of the information, it adds another layer of abstraction for the consumer, further widening the gap between the current value of data and the potential value of the data. Forbes Council Member, Soumendra Mohanty calls this "trapped value" and it's costing the industry billions. Says Mohanty,

"Unable to close the gap, companies miss out on the massive opportunities of data-led growth supported by operational efficiency, smarter strategic decisions or product/service innovation."

He goes on to lament that companies are further widening the gap by attempting to solve the problem by simply doing the same thing with their own data,

"Data on hand leads us to the false complacence of owning a powerful asset. Consequently, we start tasking our data analysts, data scientists and business SMEs to find ways to extract value from this data. We get carried away by preferences, pre-existing beliefs and tribal knowledge bias, in our rush to prove ROIs based on narrow data-led solutions."

Instead, he suggests that businesses must take the suggestion of researchers Bart de Langhe and Stefano Puntoni who suggest that,

"...instead of finding a purpose for data, we should find data for a purpose. This approach is called insight-driven thinking and is the cornerstone of insight-driven organizations."

It is with this intent that the process of Codified Wisdom™ was developed. As Eric Eager of 4Impactdata puts it,

"Instead of looking at the data first and building metrics, we decided to take the opposite approach."

According to Eager, that approach is to,

"Start with the most impactful questions we have, and then find the metrics and data to support the answers."

In other words, finding data for a purpose, the cornerstone of insight-driven companies. To be an insight-driven company requires insight-driven thinking. Codified Wisdom™ ensures that a company of any size is able to take this approach, because every organization should have access to impactful data.

THE FUTURE OF KAAS WITH CODIFIED WISDOM™

Along with decades of insight provided by industry experts, Machine Learning (ML) and Artificial Intelligence (AI) are integral components of the Codified Wisdom™ model. As customer data proliferates, these technologies offer sophisticated means of digesting and interpreting vast amounts of information and translating it into insightful, actionable intelligence. AI and ML have the unique ability to learn and improve over time, dynamically adjusting their analytical models based on incoming data. This feature proves especially invaluable in continuously enhancing the quality of Codified Wisdom™ and passing the value of that insight on to the business owner, where it's needed. In other words, as the products become smarter, so do the business owners who use them.

The continuous improvement process begins with the import of data from various business applications, such as Enterprise Resource Planning (ERP) systems. These systems include transactional data for such critical day-to-day functions as operational, financial and customer-centric information, offering a comprehensive snapshot of an organization's activities. As more data is ingested, the metrics and algorithms that comprise the Codified Wisdom™ system are continuously updated with fresh information about customer behaviors, operational efficiencies, financial performance, and more. This wealth of data becomes the learning ground for ML and AI algorithms, where they can identify patterns, trends, and correlations that are often elusive in manual data exploration. The result is a perpetually evolving system that offers ever-improving accuracy in its analytics and insights, thereby maximizing its relevance and value to decision-makers.

Yet, data alone cannot drive the continuous improvement process. As industries evolve, expert knowledge must evolve in tandem. Recognizing this, 4ImpactData places a high emphasis on obtaining the latest inputs from industry experts and integrating these insights into its codified products. These experts are chosen through the founders' active participation in various focus groups comprised of successful executives and business leaders. The focus group that comprises our panel of advisors is hand picked for their knowledge and industry wide recognition of success and thought leadership. It is the practices and insights of these Industry experts' that form the foundational 'wisdom' that guides the system's analytic interpretations, creating a bridge between raw data and meaningful business intelligence, essentially closing the gap and releasing the "trapped value" mentioned earlier. This process is

key to ensuring that the provided analytics stay at the forefront of industry trends and knowledge, delivering the most accurate and relevant insights for businesses. The intertwining of ML, AI, operational data, and expert insights creates a powerful and responsive system. With each new data input and expert insight, Codified Wisdom™ refines its understanding and analysis, leading to an insightful, dynamic, and timely knowledge service. As such, the Codified Wisdom™ system serves as a prime example of how knowledge can be harnessed, refined, and leveraged in the data-driven age, epitomizing the transformative potential of Knowledge as a Service (KaaS) products.

CONCLUSION

The proliferation of Knowledge as a Service (KaaS) has presented new opportunities and challenges for businesses seeking to leverage and democratize knowledge sharing. In this era of information and technology, it's essential to find innovative ways to utilize our vast data resources, and Codified Wisdom™ presents a compelling solution.

Codified Wisdom™, a groundbreaking concept from 4ImpactData, is designed to be at the forefront of this evolution, offering a significant paradigm shift in how we approach knowledge-based product development. By encapsulating the wisdom of industry experts in various fields into codified products, combining it with customer data, and then making it readily available through a cloud platform that leads the industry in privacy and data security, Codified Wisdom™ allows for the rapid production of valuable insights.Moreover, it promises a faster, more cost-effective approach to generating actionable business intelligence than traditional data projects, thereby empowering businesses of all sizes to become insight-driven organizations. The approach aligns with the core principle of "finding data for a purpose," a mindset that enables businesses to derive maximum value from their data, guiding strategic decision-making processes, and driving growth.

As we step into the future, the path may be filled with challenges, but with innovative concepts such as Codified Wisdom™, we can look forward to a new era of data utilization where insights drive growth and businesses are empowered to make swift, informed decisions. This signifies a promising leap forward for businesses ready to leverage the power of data, and Codified Wisdom™ stands as a potential game-changer in the realization of the full potential of Knowledge as a Service.



4impactdata Business Guidance System

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