

## INTRODUCTION

“Imagination is more important than knowledge. For knowledge is limited, whereas imagination embraces the entire world, stimulating progress, giving birth to evolution.”  
—Albert Einstein

**I**nventions, creative products, new processes, and models all emerge from imagination—the ability to think beyond the obvious, to see the unknown, and to embrace risks rather than do nothing.

Marketplaces for virtual assets and finding monetary values for hitherto undervalued knowledge are nothing but results of the imagination of the wise. It’s better to visualize and be optimistic about the opportunities to exploit them even if there may be a possibility of proving them to be unrealistic ideas. The motivation to write about Knowledge Intensive Assets (KIAs) and their monetization is inspired by our passion for technology and the great potential we see in the way it influences everyone’s lives and businesses.

**Knowledge Intensive Assets (KIAs)**

KIAs refers to a wide range of virtual assets, such as data, models, digital twins, software, apps, APIs, advertisement templates, courseware, photographs, media products, and similar entities. These sets of assets are named KIAs because either they emerge from domain knowledge or information, or they are used to create new

knowledge products. It requires either creative or domain-specific skills to generate and manage such entities. As computing and communication technologies became mainstream in today's world, the type, size, and value of such assets have increased many times.

The power and value of KIAs have become significant. Minerals, metals, and oil were the indicators of wealth in the industrial age. They are being gradually displaced by the volume and value of KIAs. KIA commodities have a combined value much higher than oil, gas, and precious metals like gold and silver. The ownership, exchange, sharing, and monetization of KIA products have assumed a new prominence in today's world. The KIA products exist mostly in digital format. Their exchange and trading are also naturally on digital marketplaces. KIAs have their own peculiar means of storage, transportation, and transfer of ownership.

Marketplaces that trade and monetize KIA products have sprung up all over the world since 2020. These include data marketplaces, AI model repositories, online exchanges for APIs and software, as well as marketplaces for photos, digital twins, cartoons, and courseware. In addition, many services have emerged on digital platforms that more effectively connect the providers and consumers. All of these are contributing factors to the emergence of KIA marketplaces. A detailed discussion on different types of KIA products, their owners, and trading platforms is covered in chapter 4.

### **What Is a Marketplace?**

A marketplace is a forum for sellers and buyers to meet to transact the exchange of goods and services. It can be a permanent location, a physically moving one, or a digital platform. John McMillan in his book *Reinventing the Bazaar*<sup>1</sup>, defines market as “a meeting together of people of trade by private purchase and sale” and “a public place where a market is held.” He further emphasizes a key characteristic of a market as providing “decision-making autonomy” because the participation is voluntary, and supply and demand dictate the value and transaction decisions.

The difference between a modern digital marketplace and an e-commerce portal is that in a marketplace there is more than one supplier or source of products. In other words, often the goods and services are provided by multiple third parties. It's noteworthy to make the distinction between a hub or showroom (where items are displayed but no transaction may happen) and a true marketplace (where trading—buying and selling—is nearly always happening). Marketplaces can be of two types: specialty markets, such as those dealing only with such goods as auto parts or

1 [Reinventing the Bazaar | John McMillan | W. W. Norton & Company \(wwnorton.com\)](#)

collectibles, or vertical markets that deal in a diversified set of products and services (for example, Amazon, Alibaba, eBay, and TaskRabbit).

## **Marketplace Economy**

The worldwide digital commerce market was estimated to be worth around \$5 trillion in 2022 and is expected to grow to \$6 trillion by 2024<sup>2</sup>. The top online marketplaces in the world sold \$3.23 trillion in goods in 2021. Sales via platforms like those operated by Alibaba, Amazon, eBay, and others accounted for two-thirds of global e-commerce sales in 2022, according to Digital Commerce 360's analysis<sup>3</sup>. The pandemic accelerated the growth of online sales, short-circuiting the previously projected growth of three to five years. It's noteworthy that not just the volume of business increased but the modes of operation also transformed with the help of technology, especially mobile communications.

Many traditional businesses—including hospitals and medical clinics—went digital during this period because of pandemic-forced circumstances. The noteworthy point has been the emergence of the services sector as a major commodity offered on digital marketplaces. The Compound Average Growth Rate (CAGR) of online marketplaces has run to double digits across the global economy, affecting goods and services of all kinds. Global spread of online marketplaces has provided unprecedented opportunities for both sellers and buyers to transact business across continents while continuing to use local currency and local delivery services. While these growth rates have mostly been for traditional physical goods and associated services, the market for KIA products is still to be fully accounted for and is growing fast. The Accenture Report<sup>4</sup> projects the market value only for data, and its derivatives alone could hit more than \$4 trillion by 2030, surpassing any other single traded commodity. Combining the markets for courseware, ads, generative AI, and software, the value of transactions of KIA products through online marketplaces can be astounding.

## **About This Book**

This book is intended to give readers a good perspective of the promises and challenges of online marketplaces for “virtual products.” In the near future, these are going to provide more worth via both monetization and usage than traditionally traded physical

2 <https://www.insiderintelligence.com/insights/ecommerce-industry-statistics/>

3 <https://www.digitalcommerce360.com/article/infographic-top-online-marketplaces/>

4 <https://www.accenture.com/us-en/insights/high-tech/dawn-of-data-marketplace>

commodities. The list of KIAs is growing, triggered by advances in technology and the discovery of novel use cases and applications.

To begin, the book narrates the history of trading and explains how technology fueled the launch of online marketplaces. Chapter 3 covers a representative set of marketplace players and chronicles the means by which they became dominant, their particular roles, their influence, and their economic impact. The KIAs are described in detail in chapter 4, which also covers their characteristics, the relevance of each of them, and the ways they are exchanged and monetized today. The functions that are essential for marketplace operations, along with tools and technologies currently supporting them, are explained in chapter 5.

The scaling and growth of marketplaces of all types need automation at every step of their operations. Chapter 7 touches on the types of automation and corresponding tooling available. Chapters 8 and 9 are about the social and cultural impacts of digital marketplaces on our society and human behaviors. The pros and cons of online shopping can be interesting to note. In conclusion, the book covers some emerging trends and future pathways for digital marketplaces, especially for KIA products.