

FEBRUARY 28, 2023

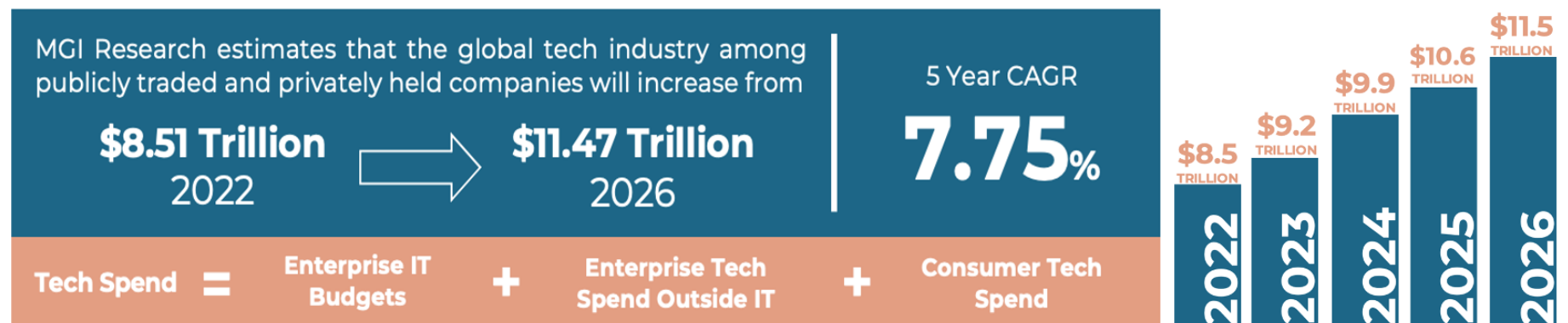
## How Large is the Global Tech Economy? – Bigger Than You Think

### INTRODUCTION

There is no doubt that technology is a large and growing economic sector. However, questions persist as to its actual size, definition, and growth trajectory. Historically, many global tech spending estimates have focused on adding corporate IT budgets with consumer spend on tech. While these are useful, to an extent, they miss corporate technology spend outside of IT budgets – the so called “grey-market IT.” After all, corporate IT budgets have shown only modest gains of 2-3% per year, while most technology areas are growing much faster. This prompts the question, “where is all this money coming from?”.

The MGI Research forecasting team recently assembled a bottom-up estimate of global technology spend that includes spending by corporate IT and grey-market IT as well as the consumer. The results of this study indicate that global technology spend is significantly larger than previously estimated and its growth trajectory is still the envy of every other economic vertical, reflecting how enmeshed technology is in everyday consumer and business life. Further, the pandemic exposed just how little is digitized and how significant the IT industry long-term upside is. Looking at the tech industry through the lens of actual numbers corrects the subjective distortions caused by series of extreme hype and anti-hype cycles in the press and capital markets.

MGI Research estimates that global tech spending (this includes consumers, publicly traded organizations, privately held companies, non-for-profit organizations, and government spend) will grow from **\$8.51 trillion in 2022** to **\$11.47 trillion in 2026**, representing a 5-Year CAGR of **7.75%** (see figure below for annual breakdown). While it would not be unreasonable to expect tech growth to moderate over time, the underlying growth drivers are undeniably strong, and the tailwinds are both stronger and more numerous than the headwinds.



## WHAT ARE THE TAILWINDS FOR THE TECH INDUSTRY? WHAT FACTORS DRIVE CONTINUING EXPANSION?

Growing at nearly 8%, the tech sector represents a major growth opportunity across most of its components. There are several key tailwinds that continue to push the expansion in the tech space.

**Digital Gaps:** The pandemic delivered a stark reminder that the omnipresent drive to digitize and automate key business processes has never been more salient. It also exposed gaps and vulnerabilities that persist in technology infrastructure – from supply chain planning and e-commerce to contract management to cyber security to media & entertainment and electronic health records. Generational/demographic shifts also play a role as younger generations have come to expect fully digital and mobile interfaces for most day-to-day activities.

**Accelerating Innovation and Commoditization:** Innovation brings opportunities to create new business models and offerings. Modernization typically starts with the aggressive adopters of technology (Type A) and eventually reaches both the mainstream technology adopters (Type B) as well as those that are conservative in their tech adoption (Type C). At every step of the transition, technology acquisition costs drop, with eventual commoditization where an item can become affordable for most businesses and individuals. The duration of the technology commoditization cycle continues to shrink, with the timing of the transitions shortening and the costs dropping from introduction to A to B to C. In the 1990's, the half-life of an enterprise technology product was approximately 12-14 years, whereas in today's world, the half-life is only 4 years. Cloud-based, consumption-based, and subscription-based offerings contribute significantly to the acceleration of the commoditization cycle. Innovation brings solutions to market that are easier, faster, and cheaper to adopt for both individuals as well as businesses ranging in size and across geographies. There has been a pronounced secular move towards technology democratization where technologies that were previously available only to very large organizations in developed economies are now accessible to small and mid-sized companies globally. Innovation drives broad adoption and grows market reach. Adoption to new technology also puts a spotlight on rapidly aging legacy products and services that are complex and costly to maintain, carrying exponentially growing technical debt. By contrast, newer technologies generally have fewer defects and are more agile and aligned with today's business and consumer needs.

**Growing Tech Share in Everyday Products and Services:** The share of technological content in both consumer and business sectors is expanding. Cars and trucks now have more computers than any other part types and have more CPUs than most data centers had 20 years ago. Products and services in everyday life – in transportation, logistics, insurance, healthcare, education, government, food, and entertainment - are growing, driving an increased dependency on technology. The pronounced shift to services in the global economy also carries with it an increased adoption of technologies that enable such offerings. The growing tech footprint in society leads to one very important outcome – nearly exponential growth in data that is tracked and collected. This explosion in data also carries with it significant societal risks.

Most of the key drivers of growth in the tech industry are perennial and self-regenerating, i.e., while there may be periodic deviations up and down from the average trajectory as well as adjustments to the growth trajectory, the overall trend of growth continues to point higher.

## WHAT ARE THE HEADWINDS FOR THE TECH INDUSTRY? WHAT POSES THE GREATEST RISK TO TECH GROWTH?

By contrast, the factors that could endanger the success of the technology industry are mostly seasonal or transient in nature. These broadly include economic recession, higher cost of capital, disruptions in capital markets, geopolitical unrest, health crises, shortage of competent labor, and supply chain disruptions. Especially during uncertain economic periods, there are widespread concerns regarding the slowing economy, high inflation, performance of IPOs, and the rising cost of capital. However, the operating performance of the tech sector is not 100% correlated with general economic conditions or GDP growth. Growth in data is a key driver for tech and is uncorrelated to GDP growth or the interest rates. The financial crisis in 2008 is a key example of data experiencing exponential growth in the midst of a severe economic downturn. Moreover, technology continues to be the key engine of productivity gains and as such, an investment into technology is largely anti-inflationary. Tech companies may see an uneven performance during an economic slowdown, but a recession shouldn't be considered an explicit hinderance to technology's growth.

A recent cluster of massive layoffs, declining share prices, and drops in company valuations have left many believing that their suspicions of an overheated tech market have been confirmed and the technology industry has finally been relegated to the dustbin of cyclicalilty. Looking at the tech sector through a near-term economic reality lens is important, but it is also key to remember that periods of both positive and negative technology hype can generate a distorted view of what will happen in the tech sector. The economic cycles do play a role and will eventually play a cleansing role by separating winners and losers in the tech industry, as well as creating new challengers and disruptors.

Government regulation has the potential to impede growth in technology as the media and regulators have placed immense and growing scrutiny on the tech sector regarding antitrust laws, privacy concerns, and the spreading of misinformation. Most legislatures and regulators have a somewhat limited understanding of tech markets and competitive dynamics, but with public pressure (real or stimulated) they are likely to act to constrain and/or fine and regulate tech businesses – and here lies tremendous potential for mistakes. Tech companies see themselves as creators of innovation, jobs, and wealth. Regulators tend to focus on their rich balance sheets, perceived market share, and an opportunity to gain visibility on a hotly-contested topic of public interest or to defend a national champion. When tech companies get started, legislatures rarely offer meaningful support. When tech companies succeed, they often become a punching bag for public discontent. Tech companies themselves are notoriously poor in articulating their societal value or having an effective communication channel with elected officials and regulators. While there are many real issues governments should be paying attention to within the tech industry, tech is hardly the poster child for rampant anti-competitive behavior – a spot that rightfully belongs to many mature traditional economic sectors. Of all the risks facing the tech industry, overzealous regulation is one that is likely to remain constant.

## WHY SHOULD BUSINESS LEADERS CARE ABOUT THE SIZE OF THE TECH INDUSTRY? WHAT SHOULD EXECUTIVES DO WITH THIS KNOWLEDGE?

If the technology industry were a country, it would represent the third-largest economy in the world in terms of absolute GDP, and its growth would be one of the highest amongst larger economies. The immense size and growth of the tech sector is a clear indicator of just how vital and ingrained technology has become in society and business. Many organizations spend billions of dollars per year on technology – both within the formal IT budget as well as on grey-market IT. Consumer spending on technology often presages important economic and societal trends.

In this context, alignment becomes very important. Is your organization spending too much or too little on technology? Is the tech spend correctly allocated across several functional areas? Are the investments in tech generating both efficiency and efficacy outcomes needed by the business to retain and expand its market position? Does your company have the right tools to sustain both day-to-day operations as well as access to disruptive technologies that can create non-linear changes in growth? Companies need to align their technology adoption profile to their core business objectives – is your firm Type A, B, or C? Do your core technology suppliers align with your style and approach? Are they growing faster or slower than the tech industry overall, and how does that fit in with your approach and strategy?

With the specter of a potential recession looming on the horizon, companies will find it increasingly difficult to ignore the significance and urgency of expanding technology's role within the organization. Investing in technology is the most effective way to deliver productivity, automate outdated processes, compensate for the diminished ability to hire new staff, and increase customer satisfaction on a tight budget and in a short time frame. It is also an inflation-proof competitive tool to gain market share and increase revenue. Small companies can use software products to out-compete adversaries with larger marketing budgets and bigger workforces. A robust technology stack provides numerous cost-saving solutions that can help organizations navigate economic turbulence with minimal damage while positioning themselves for high growth when the storm settles. Organizations that have acquired several companies may also have a set of overlapping products in one area that are bleeding capital and resources – a downturn is also the time to consolidate and trim unnecessary supplies.

## THE BOTTOM LINE

The technology sector is continuing to expand from an estimated \$8.5 trillion in calendar 2022 to nearly \$11.5 trillion in 2026 with a projected CAGR of 7.75%. Tech spending globally is seen as comprised of three major components: corporate IT spend, grey-market corporate technology spend, and consumer tech spend. Growth factors such as continuing digital transformation, massive growth in data, and innovation are just some of the secular and perennial tailwinds. Economic, geopolitical, and healthcare uncertainty are the seasonal headwinds that force periodic trajectory adjustments, with eventual mean reversion and a clear separation of winners and losers. Government regulation is likely to be a significant and relatively durable headwind to the tech sector, especially among large and highly visible companies. While a near-term economic slowdown has forced many organizations to place more scrutiny on tech spending, the highest priorities must be (1) an in-depth assessment of how tech spend is allocated and aligned to overall corporate objectives, and (2) how it supports the goals of not only efficiency, but also efficacy. Technology overall remains a high-growth industry; it is not a tide that lifts all ships, but will rather produce definitive winners and losers. In this context, it is important for technology buyers to align with technology suppliers that have above-average long-term potential.

---

### How was this estimate created?

This forecast was built using the MGI Forecasts bottom-up methodology that starts with data on individual companies and models their spend based on a broad range of factors including, but not limited to, sector, industry, geography, size, growth, profitability, as well as impact from technological megatrends such as digital transformation, shift to as-a-service business models, and many others. MGI Forecasts model includes data on all operating publicly trading companies globally with revenues above \$1Million per year. The forecasting model uses analytical approaches to estimate global technology spend by privately held companies as well as government and not-for-profit organizations. The detailed forecast is contained within an interactive model that allows highly granular data analysis. The tech spend data includes information on spend within IT budgets, grey-market tech investments as well as spend by consumers. MGI Research regularly publishes **MGI Forecasts** market sizing reports and interactive models across a broad range of disciplines including but not limited to Billing, CPQ, Contract Lifecycle Management (CLM), Financials Software (ERP), Financial Planning & Analysis, Collections/AR Automation, Project Management, Expense Management, Automated Revenue Management, Order Management, E-Commerce Platforms, Customer Success, Customer Service, Workforce Time Management, Resource Management, and Skills Management, among others. Access to these reports and models is available via a subscription. For more information contact **MGI Research** at [insights@mgiresearch.com](mailto:insights@mgiresearch.com) or +1.888.801.3644.