

Key Takeaways

- Applying a “sustainable lens” to investing in Aristotle Atlantic’s secular themes can reveal positive sustainability attributes that can enhance the long-term potential of an investment.
- Secular themes represent significant long-term shifts in spending patterns across industries and geographies, with many presenting unique opportunities that we believe can be aligned with the UN SDGs.
- Cloud computing is a revolutionary technology that can provide cost reduction, efficiency improvement, cybersecurity enhancement and environmental sustainability.
- Personalized health utilizes genetic data to optimize therapeutic outcomes, reduce waste and improve access to healthcare.
- Secular themes that we identify as having positive sustainable attributes can enhance an investment view while aligning investment strategies with positive societal and environmental impacts.

Introduction

At Aristotle Atlantic Partners, LLC (Aristotle Atlantic), a pillar of our investment process is identifying secular themes, which we define as long-term trends characterized by significant shifts in spending patterns driven by consumers, governments or corporations, with an expected multi-year horizon. These spending shifts involve what we see as large, addressable market opportunities with substantial growth potential, typically fueled by technological enhancements often underestimated by early-stage investors. We seek to identify these secular themes and the companies positioned to benefit from the associated spending shifts through their innovative products or services.

We believe it is essential to recognize that not all secular themes are created equal, as each presents a unique market opportunity with long-term potential. Moreover, many secular themes have inherent sustainability attributes that can further support our investment thesis. By examining these themes through a “sustainable lens,” which we define as viewing the secular theme from a sustainable perspective, we can uncover attributes that may go unnoticed or are underappreciated by investors. We consider a secular theme to possess positive sustainability attributes if it addresses societal or environmental challenges through various means:

- Generating revenue from sustainable products or services
- Benefiting from long-term sustainable trends
- Actively working to solve sustainability challenges

Additionally, every secular theme we identify as sustainable, in our opinion, can be aligned with one or more of the United Nations (UN) Sustainable Development Goals (SDGs). The UN SDGs were created in 2015 as a universal call to action for countries, governments and companies to eradicate poverty, safeguard the planet and enhance the well-being and prospects of all individuals, regardless of location. While not explicitly designed as investment goals, the SDGs can serve as relevant proxies for identifying sustainable secular themes for investment purposes. By applying our sustainable lens, we can identify attractive sustainability traits and map them to the SDGs for many of our secular themes, which, therefore, have the potential to create positive societal and/or environmental impacts. We will examine two secular themes, cloud computing and personalized health, to illustrate why we find them attractive as investment opportunities and explain how applying our sustainable lens can reveal their sustainability attributes and alignment with the SDGs.

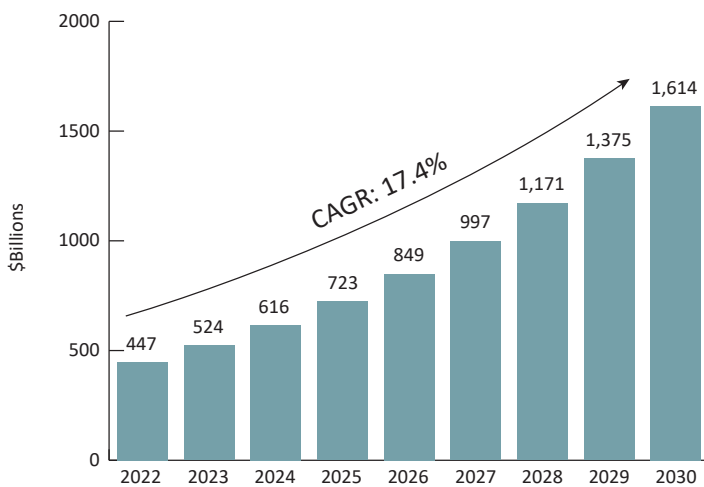
Cloud Computing

We define the secular theme of cloud computing as a revolutionary technology enabling efficient access via the Internet to a shared pool of computing capabilities, including services, storage and applications. It allows organizations to optimize their computing capabilities without the need for substantial upfront investment in infrastructure, ongoing maintenance costs or the complexities of managing intricate information technology (IT) systems. This technology has transformed the business landscape by allowing the ability to quickly scale resources, facilitating collaboration, improving data storage and enabling remote accessibility, thus fostering innovation and productivity across broad geographic areas.

From a secular theme perspective, cloud computing presents a compelling investment opportunity. Enterprises worldwide are actively transitioning to cloud-based infrastructure and solutions, and the COVID-19 pandemic expedited this trend. During the pandemic, many organizations were forced to quickly adopt cloud resources to support remote work and learning, expand video conferencing capacities, bolster e-commerce infrastructure, etc. Approximately 50% of enterprise workloads are conducted in the cloud¹, indicating that the shift to cloud-based infrastructure still has room to grow and, given the events of the past few years, we believe it is poised for further acceleration. The compelling benefits of cost reduction, improved efficiency and enhanced cybersecurity, as well as the environmental and/or social sustainability benefits, should continue to drive this momentum.

Consequently, we see considerable potential for increased investment in cloud computing in the coming years and beyond. This investment surge could benefit companies facilitating the transition to cloud-based infrastructure through offerings of servers, software, data storage solutions, cybersecurity and data centers, among others. According to Precedence Research, global cloud spending reached \$447 billion last year and could exceed \$1.6 trillion by 2030, representing a compound annual growth rate (CAGR) exceeding 17%.²

Global Cloud Computing Market Size (\$billion, estimated)



Source: Precedence Research

As a secular theme, cloud computing possesses a number of sustainability characteristics that can enhance its investment potential. Its potential to have a positive environmental impact is particularly noteworthy, as the consolidation of computing infrastructure into large, efficient data centers can

help reduce energy consumption and waste. Additionally, many leading cloud providers proactively invest in energy-efficient infrastructure that incorporates advanced power management systems, cooling technologies and efficient service designs. Moreover, many providers commit to using renewable energy sources to power their data centers, which can substantially reduce their carbon footprints.

Outsourcing cloud capabilities can enable organizations to operate more efficiently, leading to cost reductions, improved profitability and reduced environmental impact. Utilizing shared computing resources can extend associated hardware lifecycles, decrease maintenance requirements and minimize electronic waste.

There are numerous societal benefits cloud computing has the potential to provide. It may foster accessibility to computing resources, helping bridge the digital divide and empowering individuals and organizations with limited IT capabilities and resources. Furthermore, it can facilitate resource sharing and enable global collaboration, thereby enhancing knowledge exchange and diminishing the need for expensive travel and physical infrastructure. During the COVID-19 pandemic, cloud computing enabled the successful implementation of remote work arrangements and virtual learning, both of which have endured in the post-pandemic world. It can also allow improved access to education and healthcare services, significantly benefiting people in remote areas and developing countries. Additionally, cloud computing can enhance healthcare quality, affordability and accessibility through digital medical records, telemedicine and the development of groundbreaking medical advancements.

Cloud computing potentially aligns with several SDGs, including:



SDG 3 – Good Health and Well-Being

- Enables telemedicine, remote patient monitoring and access to healthcare resources
- Supports drug discovery and the development of medical technologies and therapies
- Expands access to healthcare for rural areas and developing countries



SDG 4 – Quality Education

- Expands access to online educational resources to improve learning outcomes
- Facilitates virtual learning environments to overcome geographical and economic barriers



SDG 7 – Affordable and Clean Energy

- Enhances energy efficiency through centralized computing resources
- Reduces energy consumption and promotes the use of renewable energy by optimizing resource utilization



SDG 9 – Industry, Innovation and Infrastructure

- Fosters innovation and economic growth with scalable IT infrastructure
- Enhances cost-effective operation of computing resources, software and data storage



SDG 12 – Responsible Consumption and Production

- Reduces waste via optimized resources and improved efficiency
- Reduces business travel and associated carbon emissions through remote work and virtual meetings



SDG 13 – Climate Action

- Promotes the use of renewable energy as cloud infrastructure is consolidated into larger, more efficient data centers

Personalized Health

We define the secular theme of personalized health as an innovative approach to healthcare that aims to customize medical treatments based on an individual patient's unique genetic characteristics and personalized data. By leveraging this information, the goal is to optimize therapeutic outcomes, while minimizing adverse side effects. The implications of personalized health extend far beyond individual patients, potentially transforming the healthcare and pharmaceutical industries globally.

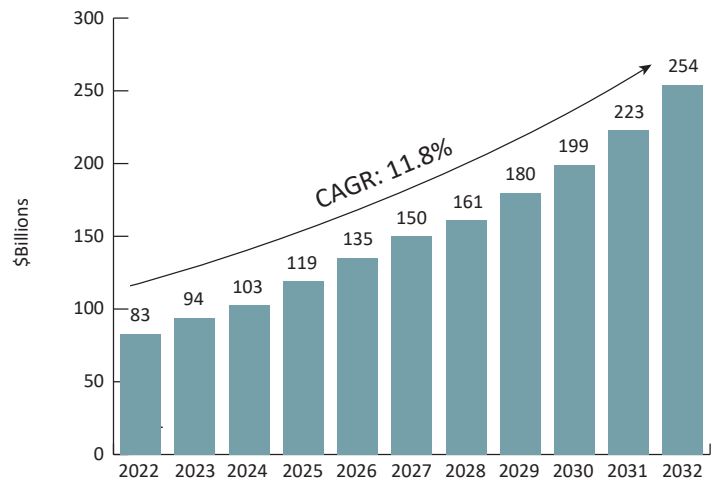
Tailoring healthcare to individuals based on their genetic makeup offers several advantages for patients and the healthcare system. It reduces the need for trial and error in treatment selection, minimizing resource waste and unnecessary expenses. With fewer side effects and targeted treatments, patient outcomes and quality of life can significantly improve while avoiding unnecessary medical interventions.

Personalized health can potentially have a broad impact on several medical-related fields. Genomic medicine, for instance, has made significant advancements, particularly in oncology where targeted therapies aimed at specific gene mutations have shown promising early results.

Pharmacogenomics, which studies how genetic variations influence drug responses, is expected to play a crucial role in developing personalized health treatments and pharmaceuticals. Additionally, emerging technologies such as artificial intelligence have the potential to revolutionize treatment selection, prediction of drug responses, disease management and drug discovery.

Recent technological advances have accelerated the development of personalized health therapies, which we believe make the theme an attractive long-term investment opportunity across a wide range of healthcare-related fields. According to market.us, the total addressable market for personalized health surpassed \$83 billion in 2022 and is projected to reach \$254 billion within the next decade³, representing a CAGR of almost 12%. The increasing prevalence of chronic diseases, rising cost of healthcare and growing demand for personalized treatments will likely drive this growth.

Global Personalized Health Spending (\$billion, estimated)



Source: market.us

Globally, the rise in the prevalence of chronic disease significantly contributes to the growing demand for personalized treatments. The World Health Organization (WHO) estimates chronic diseases account for over 70% of deaths worldwide.⁴ To address this challenge, personalized treatments that are more effective and cost-efficient than traditional approaches can lead to shorter hospital stays and fewer side effects, thereby helping to mitigate the escalating costs of healthcare. Introducing successful therapies based on a patient's genetic makeup, lifestyle and medical history will likely accelerate global demand for personalized treatments.

In addition to its investment potential, personalized medicine also possesses various sustainability characteristics. It can positively impact society by improving patient outcomes and satisfaction, while also expanding access to healthcare. Tailoring treatments to individual patients can reduce hospital readmissions, minimize inefficient trial-and-error approaches and improve long-term patient outcomes. Lower-cost, higher-efficacy treatment strategies can also benefit marginalized communities, developing countries and individuals facing barriers to healthcare services, which can promote a more equitable distribution of healthcare resources globally. From an environmental standpoint, personalized health also has the potential to reduce greenhouse gas (GHG) emissions associated with energy consumption in healthcare delivery, while also minimizing medical waste.

Personalized health potentially aligns with several SDGs, including:



SDG 3 – Good Health and Well-being

- Provides more effective and targeted treatments for disease, improving health outcomes
- Enhances disease prevention, diagnosis and treatment strategies, leading to better health outcomes and reduced healthcare costs
- Minimizes adverse drug reactions and optimizes therapeutic efficacy, promoting overall patient well-being



SDG 9 – Industry, Innovation and Infrastructure

- Drives innovation and create opportunities, through research and technical advances, for the development of new diagnostic tools, pharmaceuticals, therapies and medical devices



SDG 10 – Reduced Inequalities

- Offers more effective treatment options to patients with limited access to healthcare
- Helps ensure the equitable allocation of healthcare resources, reducing inequalities in healthcare outcomes



SDG 12 – Responsible Consumption and Production

- Minimizes the use of unnecessary medications and reduce medical waste via targeted therapies and optimized treatment regimens
- Contributes to the efficient use of healthcare resources by reducing trial-and-error therapy approaches



SDG 13 – Climate Action

- Mitigates the environmental impact of healthcare by reducing waste associated with medication usage and diagnostic tests
- Lowers greenhouse gas emissions related to the energy requirements of delivering healthcare

Conclusion

Applying a sustainable lens when investing in secular themes may help uncover attractive sustainability attributes that can enhance our view of a theme. By considering how each theme addresses global sustainability challenges and aligns with the UN SDGs, we seek to identify investment opportunities with positive social and environmental impacts. We believe recognizing these sustainable attributes enables us to better capitalize on long-term trends and aligns our investment goals with those contributing to a more sustainable future.

Aristotle Atlantic's Sustainable Secular Themes*	Sustainable Attributes	Addressable UN SDGs
Cloud Computing	<ul style="list-style-type: none"> Reduces energy consumption and promotes renewable energy Expands access to online educational resources and improves learning outcomes Fosters innovation by enhancing cost-effective operation of computing resources 	
Data Analysis/ Data Monetization	<ul style="list-style-type: none"> Identifies opportunities to invest in sustainable infrastructure projects Incentivizes sustainable business practices through analysis of consumption and production practices Monitors climate change factors and assesses impact of mitigation efforts 	
Digital Connectivity	<ul style="list-style-type: none"> Fosters quality education by increasing access to online educational resources Promotes inclusive prosperity and reduces inequalities by expanding job opportunities Bridges the digital divide by providing information, services and economic opportunities to underserved areas 	
Expanding Health Care Consumption	<ul style="list-style-type: none"> Strengthens healthcare delivery systems to help attain access for all Addresses healthcare service disparities to help promote global equality in care 	
Fintech	<ul style="list-style-type: none"> Promotes financial inclusion by facilitating capital access, enhanced payment systems and streamlined financial processes Fosters equality in financial opportunities and participation across communities and geographies Promotes transparent, accountable and efficient financial transactions to help fight illicit activities 	
Healthy Living	<ul style="list-style-type: none"> Encourages comprehensive approaches to diverse health concerns Aims to eliminate hunger, ensure food security, enhance nutrition and support sustainable agriculture Promotes water accessibility, sustainable management and quality 	
Infrastructure Upgrade	<ul style="list-style-type: none"> Emphasizes sustainable development through enhanced infrastructure, including transportation, energy, water and communications Promotes sustainable and inclusive cities through accessible transport, affordable housing and better waste management Highlights need for improved infrastructure for water supply and wastewater treatment systems 	

*Secular themes are internally defined and identified by Aristotle Atlantic.
Source: United Nations Sustainable Development Goals with mapping analysis by Aristotle Atlantic Partners.

Aristotle Atlantic's Sustainable Secular Themes*	Sustainable Attributes	Addressable UN SDGs
Intelligent Environments/ Artificial Intelligence	<ul style="list-style-type: none"> • Fosters quality education through personalized learning, intelligent tutoring and enhanced educational tools • Aids sustainable infrastructure development to optimize resources, improve energy efficiency and enhance decision-making • Facilitates climate change mitigation and adaptation by optimizing energy resources and providing early warning systems for natural disasters 	
Personalized Health	<ul style="list-style-type: none"> • Promotes better health outcomes and patient well-being through improved treatments and enhanced diagnosis • Reduces inequalities in healthcare outcomes through better accessibility and equity resource allocation • Minimizes unnecessary treatments, reduces medical waste and contributes to more efficient healthcare resource utilization 	
Product, Food and Health Safety	<ul style="list-style-type: none"> • Reduces child mortality, combats disease and improves access to healthcare • Helps eradicate hunger by ensuring access to healthy, safe food • Promotes sustainability through waste reduction, eco-friendly technology and product safety 	
Renewable Energy/ Energy Efficiency	<ul style="list-style-type: none"> • Promotes affordable, reliable and sustainable energy for all • Encourages use of renewable energy and promotion of sustainable practices to reduce greenhouse gas emissions • Highlights need to invest in clean technology to combat climate change 	
Security	<ul style="list-style-type: none"> • Develops cybersecurity infrastructure to protect digital networks and systems from cyber threats • Safeguards privacy, freedom of expression and digital rights • Encourages international collaboration to address cyber threats globally 	

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Source: United Nations Sustainable Development Goals with mapping analysis by Aristotle Atlantic Partners.

¹Statista: "Share of enterprises using workloads and data in public cloud in 2023" Global enterprise workload/data public cloud 2023 | Statista [May 23, 2023]

²Precedence Research: "Cloud Computing Market" Cloud Computing Market Size to Surpass USD 1,614.10 BN by 2030 (precedenceresearch.com) [May 2022]

³market.us: "Precision Medicine Market" Precision Medicine Market Size, Trends | Global Demand [June 2023]

⁴World Health Organization (WHO): "Noncommunicable diseases: Mortality" Noncommunicable diseases: Mortality (who.int) [September 15, 2022]

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