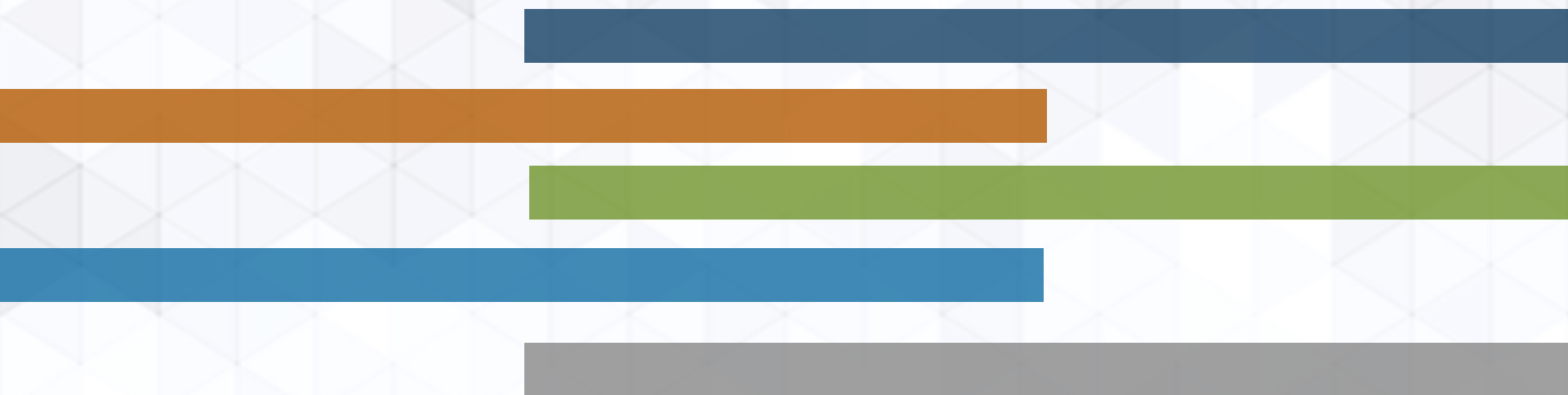


# FROM **VISION** TO **VALUE**

*OUR LONG-TERM INVESTMENT THEMES*



STIFEL

# THE FIVE THEMES

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Our major investment themes are **five interrelated megatrends that are likely to influence the direction of the economy and markets longer term.**

These themes impact all aspects of our world, including shaping the way we live, interact with each other, and consume goods and services.

## THE FOURTH INDUSTRIAL REVOLUTION

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### SECURING STRATEGIC RESOURCES

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### SHIFTING DEMOGRAPHICS

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### THE NEW CONSUMER

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### PRODUCTIVE COMPETITION

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## FOURTH INDUSTRIAL REVOLUTION

Technological innovation has broken down the boundaries between the physical, digital, and biological worlds.

*Data as a Commodity*  
|  
*Enhanced Computing*  
|  
*Workforce Optimization*  
|  
*Future of Transportation*



## SECURING STRATEGIC RESOURCES

Companies and governments are prioritizing the development and protection of critical industries, resources, and services.

*Food and Water Security*  
|  
*Net Zero Movement*  
|  
*Renewable Energy*  
|  
*Circular Economy*



## SHIFTING DEMOGRAPHICS

Changes in global population dynamics will bring about challenges and opportunities.

*Millennials*  
|  
*Emerging Global Middle Class*  
|  
*Aging Population*  
|  
*Future of Health*



## THE NEW CONSUMER

Consumer preferences, expectations, and behavior are altering business models and corporate strategies.

*Reimagined Convenience*  
|  
*Digitalization of Human Connectivity*  
|  
*Future of Finance*  
|  
*Future of Leisure*



## PRODUCTIVE COMPETITION

Rivalry ultimately drives innovation, improves quality of life, and creates value for consumers and the economy.

*The New Cold War*  
|  
*Geopolitical Tensions*  
|  
*Localization*  
|  
*Transforming Business Models*

Technological innovation has broken down the boundaries between the physical, digital, and biological worlds.

## Data as a Commodity

Data's ability to provide **insights into consumer behavior, market trends, and operational efficiencies** is valuable for **decision-making**. The size, speed, and complexity of the data we generate requires **significant processing power, storage capabilities, and security**.

**2.5 billion  
gigabytes (GB)**

of data are created each day.  
That's equivalent to more than  
**19 million 128GB iPhones**

Google processes over

**99,000**

searches every second

**90%** of the world's data  
has been created  
since 2019

## Workforce Optimization

Improving **productivity** and **efficiency** through technology, automation, and data.

**80%** 

Improvement in productivity  
through the **use of robots** in the  
**automotive industry**

 **~50%**

of **current work activities** are  
technically **automatable** by  
adapting current technologies

Technological innovation has broken down the boundaries between the physical, digital, and biological worlds.

## Future of Transportation

Innovative technologies and infrastructure that facilitate **sustainable, autonomous, and connected mobility solutions.**

As all modes of transportation taken together account for **37% of global greenhouse gas emissions**, the sector is a key target for **emissions-reduction activity**



Teslas have driven over **three billion miles in autopilot mode** since 2014



**1 in 10 vehicles** are expected to be **autonomous** by 2030



Between 2017 and 2020, **24 U.S. states** enacted **commercial autonomous vehicles legislation**

## Enhanced Computing

The development of **powerful computing systems**, such as **quantum computing** and **artificial intelligence**, to tackle complex problems, process vast amounts of data, and drive innovation.

**35%** of **businesses** worldwide used **AI** in 2022

The **global artificial intelligence market** is expected to reach **\$1.6 trillion** by 2030

In **200 seconds**, a **quantum computer** can solve a problem that the world's current **fastest computer** would need **10,000 years** to compute

Companies and governments are prioritizing the development and protection of critical industries, resources, and services.

## Food and Water Security

The **global food and water system** faces mounting pressure from a growing population, climate change, and geopolitical tensions.

**7.8 billion**  
people to feed today



**9.7 billion**  
in 2050

**60%**

more food needed



**19%**

increase of **agricultural water consumption**



The **majority of arable land** is concentrated in **Oceania** and the **Americas** compared to the **majority of the population** living in **Asia**.

All potentially arable land – 24% of total ice-free land

**44%**

offers **no serious limitations to agriculture**

**56%**

is **not farmed** because of **inherent soil and man-induced issues**

Companies and governments are prioritizing the development and protection of critical industries, resources, and services.

## Net Zero Movement

Society's increased awareness of our **carbon footprint** and **impact** is creating **opportunities in companies and sectors** that allow for the **reduction of greenhouse gas emissions** and promote sustainable practices for a more environmentally conscious future.

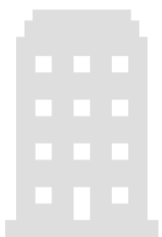


As called for in the Paris Agreement, **net-zero emissions by 2050** requires a significant spend on physical assets.

**\$9.2 trillion in annual average spending**

on energy, mobility, industry, buildings, agriculture, forestry -

**\$3.5 trillion more than today**

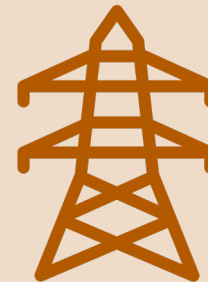


The increase is equivalent to

**half of global corporate profits and one-quarter of total tax revenue in 2020.**

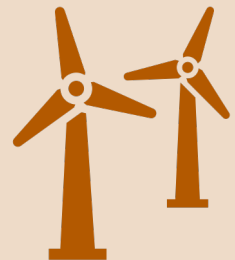
## Renewable Energy

The **allocation of capital** into sustainable energy sources like **solar and wind power** to ensure a **stable and reliable energy supply** for the future.



Global renewable energy power capacity is **expected to grow by 2,400 gigawatts (GW) by 2027**, an amount equal to the **entire power capacity of China**

Renewables are expected to account for **80% of global electricity generation by 2050** if the world is to meet climate goals



Sources: IEA, International Renewable Energy Agency (IRENA)

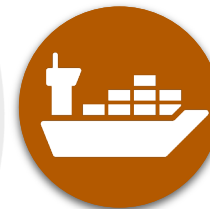
Source: McKinsey & Company

Companies and governments are prioritizing the development and protection of critical industries, resources, and services.

## Circular Economy

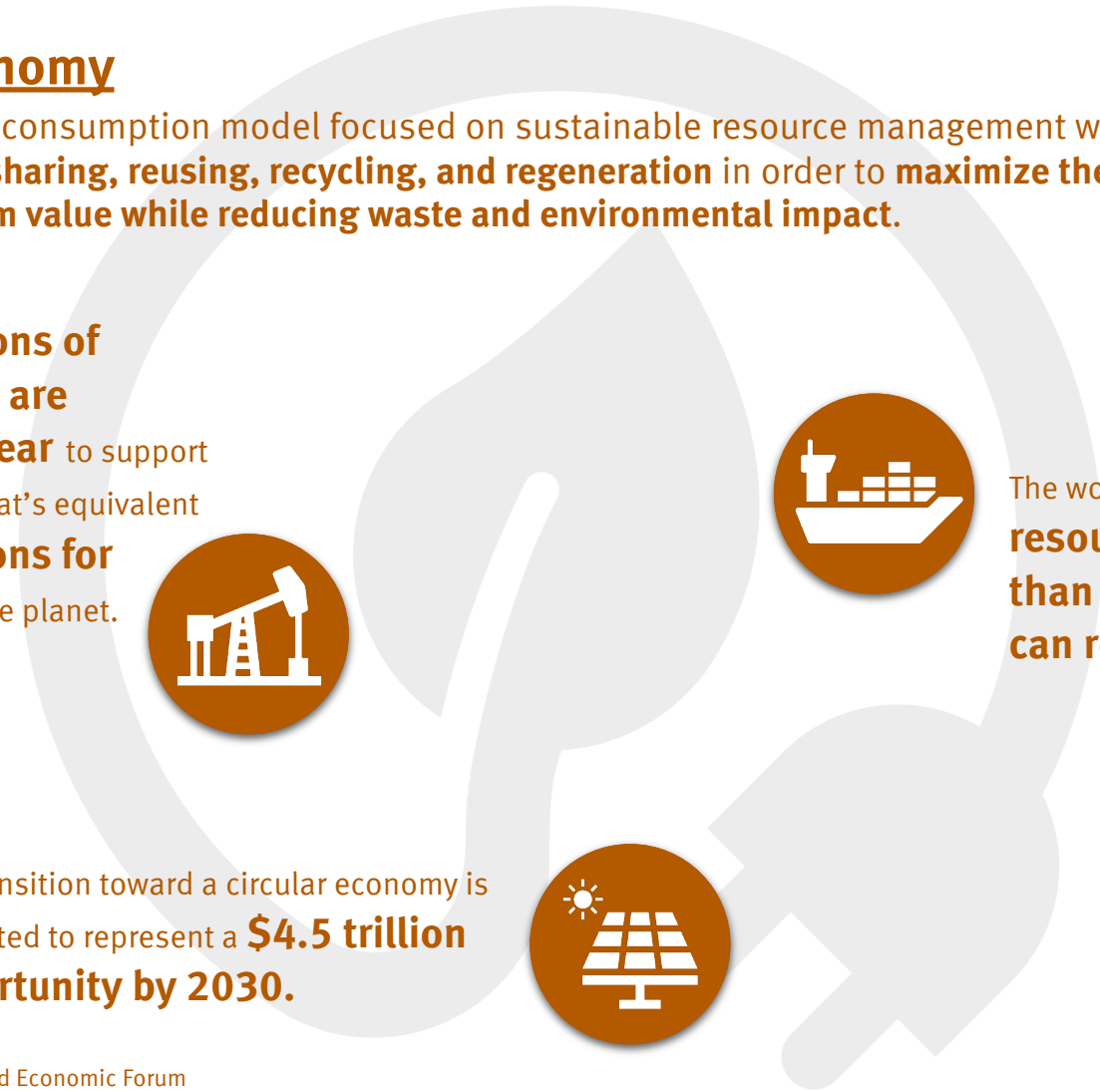
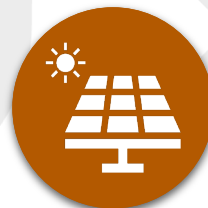
A production and consumption model focused on sustainable resource management where products are designed for **sharing, reusing, recycling, and regeneration** in order to **maximize their lifespan, creating long-term value while reducing waste and environmental impact.**

Around **90 billion tons of natural resources are extracted every year** to support the global economy. That's equivalent to **more than 12 tons for every person** on the planet.



The world uses **75% more resources each year than what the Earth can regenerate.**

The transition toward a circular economy is estimated to represent a **\$4.5 trillion opportunity by 2030.**



Sources: National Geographic, World Economic Forum



Changes in global population dynamics will bring about challenges and opportunities.

## Future of Health

The future of healthcare will be shaped by the **convergence** of the **millennial generation** and the **aging population** and cater to the evolving needs of these distinct demographics.

### Digital health:

76% of hospitals in the U.S. are using telehealth or telemedicine to provide remote healthcare services



### Preventive care:

33.4% of all health center visits were attributed to preventive care



### Robotic surgery:

Robot-assisted procedures accounted for 15% of all general surgeries, up from just 1.8% in 2012

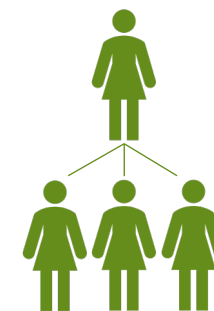
## Aging Population

We identify opportunities that address the **expanding senior population** worldwide and contribute to **enhancing lifespans** and improving the overall **quality of life**.

**BY 2050**

**1.5 billion**

people worldwide will be 65 and older



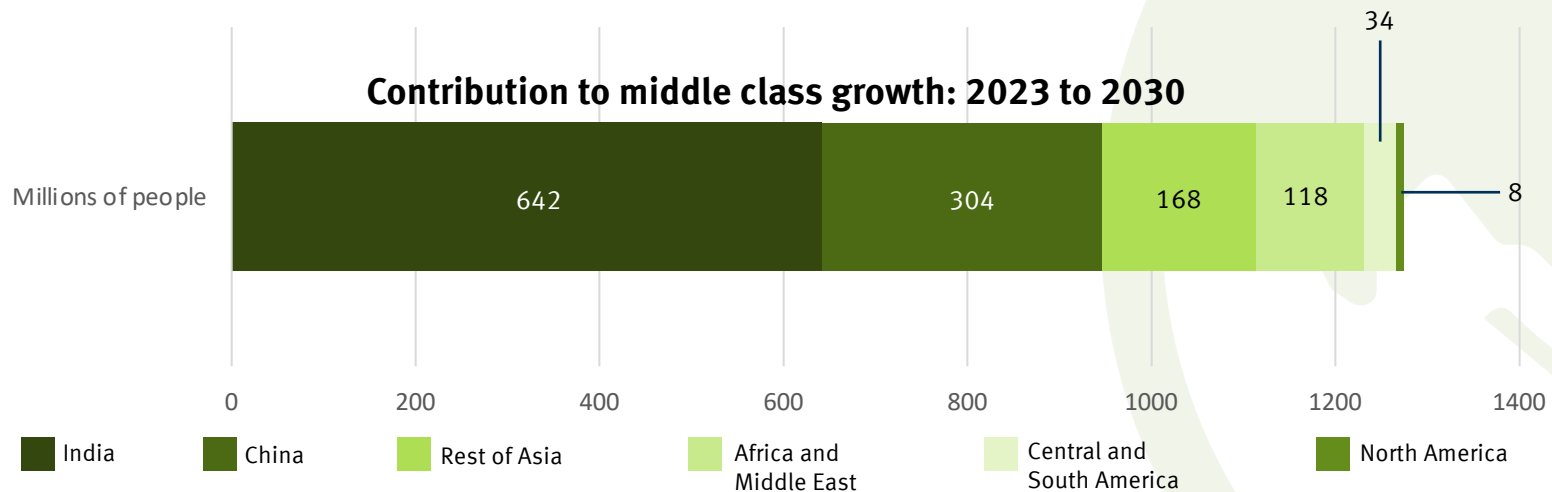
The number of people aged 80 or over will

**triple**

Changes in global population dynamics will bring about challenges and opportunities.

## Emerging Global Middle Class

**Rising disposable income** in developing countries is driving **demand for a range of products and services**. Companies are vying to capture the attention and purchasing power of this expanding consumer base, from **luxury goods** and **travel** to **entertainment, technology, and wellness**.



## The middle class

households where per-capita spending is between \$11 and \$110 a day ...

... amount to **3.75 billion people**

... and are expected to increase by over **1 billion by 2030**.

Sources: Brookings Institution, J.P. Morgan Asset Management

Changes in global population dynamics will bring about challenges and opportunities.

## **Millennials** (individuals born between 1981 and 1996)

This group's habits, preferences, and consumption behavior will **wield influence on economies and shape the demand for goods and services for decades to come.**

### **Household Formation**

As household formation increases, companies can tap into spending preferences spanning housing, credit, childcare, and more.

**89%** of millennials want to own a home

**33**

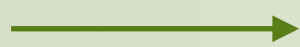
Median age of first-time homebuyer

Millennials represent the largest (and growing) share of homebuyers in the U.S. at

**43%**

Peak home-buying years

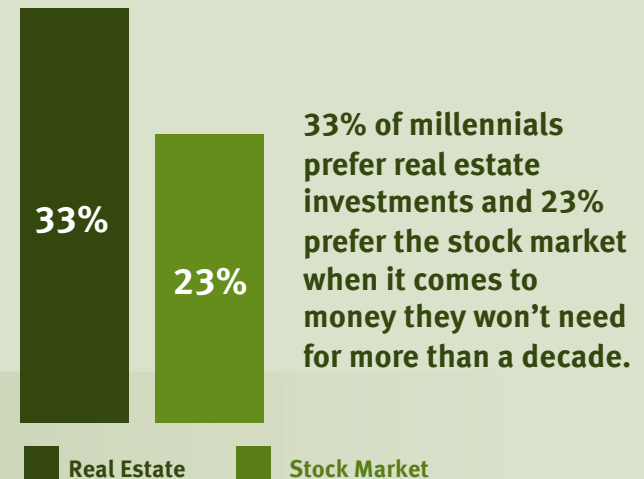
**25** y/o



**45** y/o

### **Wealth Transfer**

Millennials stand to inherit a substantial portion of the \$73 trillion net worth held by baby boomers, setting the stage for a **significant intergenerational wealth transfer.**



Sources: FreddieMac, National Association of Realtors (NAR)

Source: Bankrate

Consumer preferences, expectations, and behavior are altering business models and corporate strategies.

## Reimagined Convenience

Companies are meeting consumers where they are by adapting to digital platforms and engaging with customers through multiple channels. Artificial intelligence and big data are enabling businesses to better understand their customers and provide tailored recommendations.



### Personalized experience

Our digital footprint will allow businesses to **better understand our tastes** and provide relevant product or service recommendations.



### Contactless shopping

Consumers will be able to enter a store, grab what they want, and get going.

## SIZING THE OPPORTUNITY

E-commerce sales accounted for close to **15%** of total U.S. retail sales in 2022

There are more than **2,000 commercial drone deliveries** every day worldwide

**79%** of consumers **shop online** at least once a month

**71%** of shoppers expect companies to deliver **personalized interactions**

Sources: Census Bureau, McKinsey & Company



### Smart everything

The **Internet of Things (IoT)** will allow for things like our house lights to automatically adjust to our preferences and digital assistants to anticipate our needs.



### Near-instant fulfillment

Drone delivery will allow products to reach our **doorstep in minutes.**

Consumer preferences, expectations, and behavior are altering business models and corporate strategies.

## Future of Leisure

Consumer preferences are evolving toward an increased focus on health, wellness, and experiences.



### **Experience economy:**

76% of all consumers would rather spend their money on **experiences** than on material items

### **Healthy consumer:**

The global wellness market is estimated to be more than **\$1.5 trillion**, with annual growth of 5% to 10%



### **Humanization of pets:**

**One-third of pet-owning Americans** have a social media account for their pets

## Digitalization of Human Connectivity

The integration of **technology** into various aspects of **human interaction, communication, and relationships**, such as social media, online dating, and virtual/augmented reality.

2 out of 3 people worldwide are on social media platforms



**397 minutes** the average time individuals spend on the internet per day

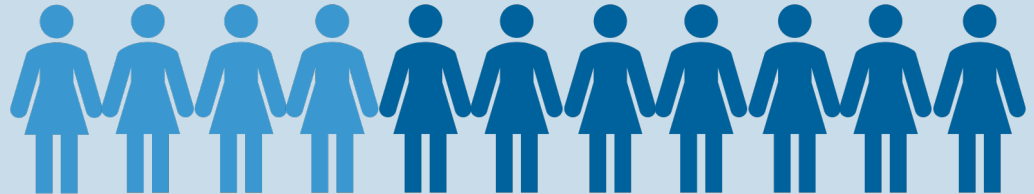
Consumer preferences, expectations, and behavior are altering business models and corporate strategies.

## Future of Finance

The payments ecosystem is supporting the build out of the digital economy and fostering innovation, resulting in more **efficient, inclusive, and personalized financial services**.

### Cashless society:

Roughly **four in ten Americans (41%)** say that none of their purchases in a typical week are paid for using cash



### Digital currencies:

More than **half of global central banks** are exploring the creation of **digital currencies**



### Digital wallets:

Allow for convenience and accessibility while tapping the underserved and **unbanked population of the world**

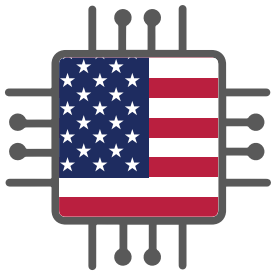
**1.7 billion people in the world don't have a bank account**

Rivalry ultimately drives innovation, improves quality of life, and creates value for consumers and the economy.

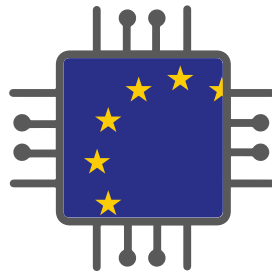
## Geopolitical Tensions

Increased geopolitical tensions are translating into a greater need for self-sustainability and **protection of critical industries** like **technology, manufacturing, agriculture, and energy**.

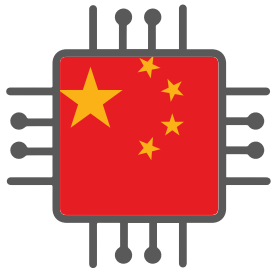
### *Global Chip Race*



**\$50 Billion U.S. CHIPS and Science Act** aims to boost domestic research and manufacturing of semiconductors in the U.S.



**\$47 Billion European Chips Act** – the EU plans to become self-sufficient and double the region's global market share in **semiconductors from 10% to 20% by 2030**



**Made in China 2025** – China set a goal of meeting **70% of its semiconductors** needs through **domestic supply**

## The New Cold War

**U.S.-China** and **U.S.-Russia** strategic competition for economic and social influence is evolving into **hostile actions and creating a more divided world**.

“The People’s Republic of China (PRC) remains our most **consequential strategic competitor** for the coming decades”  
– **2022 U.S. National Defense Strategy**

China’s trade with Russia hit a record **\$190 billion in 2022**  
– a 30% increase from 2021

**82% of Americans** have an unfavorable view toward **China**

U.S. and European allies imposed more **than 2,700 sanctions in just 10 days** against Russia following the invasion of Ukraine

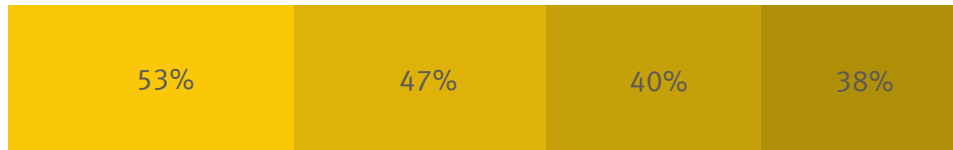
Sources: Department of Defense, Pew Research Center





Rivalry ultimately drives innovation, improves quality of life, and creates value for consumers and the economy.

## Localization

The pandemic and the war in Ukraine are marking a shift to even more focus **on localization** and **protectionism**. This will require **business logistics services** and **infrastructure development** as companies build new factories and **restructure their supply chains**.

**93% of supply chain leaders plan to increase resilience across the supply chain**



-  Said they plan to dual source raw materials
-  Said they plan to increase inventory of critical products
-  Said they plan to near-shore and increase supplier base
-  Said they plan to regionalize supply chains



The top 60 economies, which account for **96.25% of global GDP**, have adopted more than **7,000 protectionist trade measures** on a net basis since the financial crisis

## Transforming Business Models

Identifying companies that are at the **forefront of innovation**, leveraging **new technologies** or capitalizing on shifting societal trends **to transform existing industries or create entirely new ones**.

## Previous Disruptors



Netflix



Uber



Apple



Amazon



Airbnb

Sources: McKinsey & Company, Reuters



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