



# Today's Presenting Sponsor







# Why We Created ROBO Global



New disruptive technologies may generate significant investor returns but are typically overlooked and un-allocated by the investment community.



To truly access and understand disruptive themes requires industry expertise and insights versus pure financial filters.

Disruptive innovation requires longer investment horizons.





The unstructured opportunities need to be categorized around a theme with managed subsectors and a global broad focus.



Not all strategies focused on disruptive themes are created equally.



We believe that these technologies can provide returns to investors all the while positively impacting society through ESG-driven initiatives.



#### ESTABLISHED PERFORMANCE

#### **UNIQUE STRATEGY**

Investment research and advisory company focused on robotics, AI and healthcare technologies

**Global team** of investment and industry experts

	YTD	3 YR	5 YR
THNQ	16.44%	36.59%	36.68%
HTEC	7.09%	30.83%	34.21%
ROBO	13.31%	24.56%	21.07%
Global Equities	16.79%	17.46%	14.71%

First to Market with ROBO in 2013

**Research-driven selection** of best-in-class companies in robotics, AI and healthcare technologies

Quarterly rebalance to modified equal-weight

Market Cap Exposure is highly diversified with emphasis on small and mid cap companies

Unique exposure with low overlap to ACWI and S&P500

Strong ESG policy woven throughout our active research process and index methodology

-.5+BILLION AUM >200 YEARS ROBOTICS 15 PRODUCTS 42

# Strategic Advisors



WYATT NEWMAN, PHD

Prof. of Humanoid Robotics & Al 10+ Patents, 130 Publications



ILLAH NOURBAKHSH, PHD

Prof. of Robotics, Director of the CREATE Lab, Carnegie Mellon



**DANIELA RUS, PHD** 

Prof. at MIT, Director of the CSAIL Research Center



**KEN GOLDBERG, PHD** 

Chair, Industrial Engineering Ops Research Development, UC Berkeley



MANISH KOTHARI, PHD

President of SRI Ventures
President of SRI International



RAFFAELLO D'ANDREA, PHD

Prof. of Dynamic Systems & Control Co-founder of Kiva Systems



**MORTEN PAULSEN** 

CLSA, Head of Research for Robotics and Machinery Industry



**LOUIS-VINCENT GAVE** 

Gavekal Founder; CEO Money Management & Global Research



HENRIK CHRISTENSEN, PHD

Director of UC San Diego Contextual Robotics Institute

### **Investment Committee**



**TRAVIS BRIGGS**CEO ROBO GLOBAL USA



BRAD BAKER, CFA
CTO & DIRECTOR OF OPERATIONS



RICHARD LIGHTBOUND

CEO ROBO GLOBAL EMEA



**LISA CHAI**SENIOR RESEARCH ANALYST



WILLIAM STUDEBAKER
PRESIDENT & CIO



NINA DEKA
SENIOR RESEARCH ANALYST

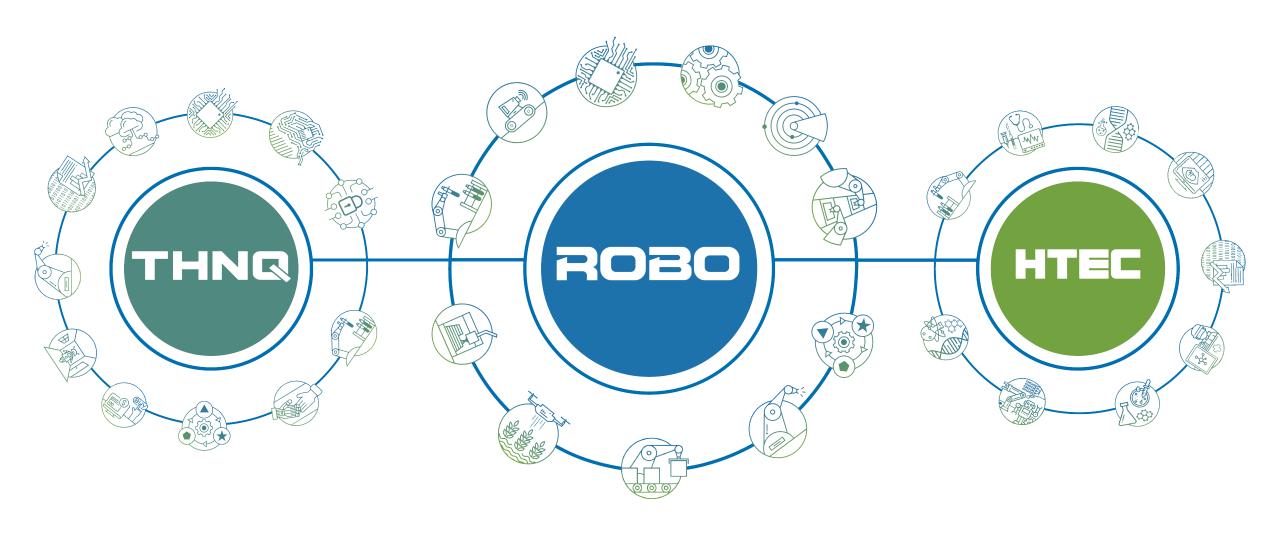


JEREMIE CAPRON, CFA
DIRECTOR OF RESEARCH



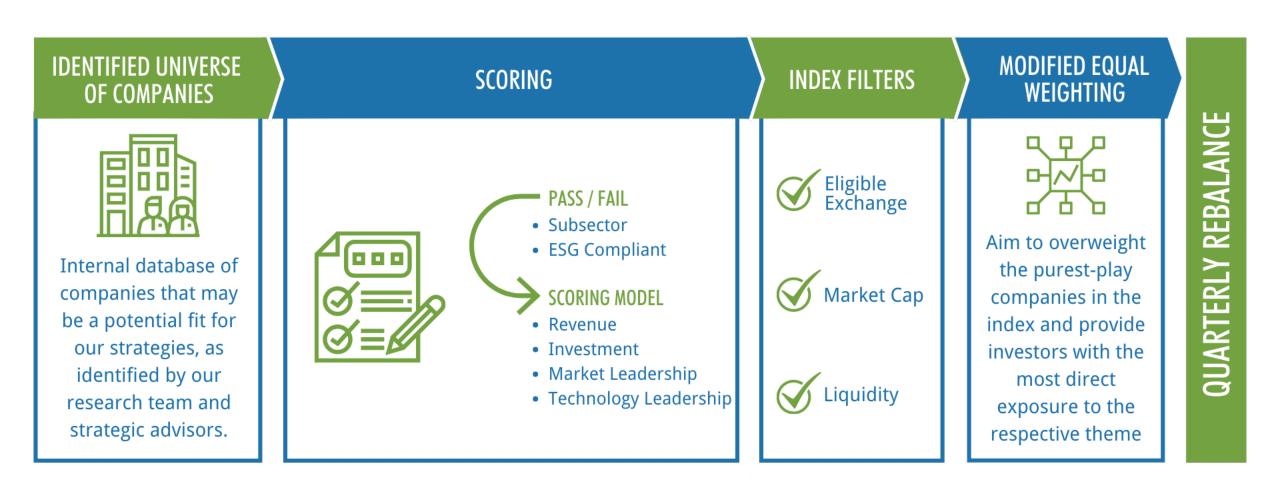
**ZENO MERCER**RESEARCH ANALYST

# Product Portfolio & Targeted Subsectors





### **ROBO Global Membership Selection Process**



# ENVIRONMENTAL, SOCIAL & GOVERNANCE

Investment exposure to themes such as robotics, AI, and healthcare technology is inherently tied with future-focused and sustainability goals, identifying and addressing global challenges.

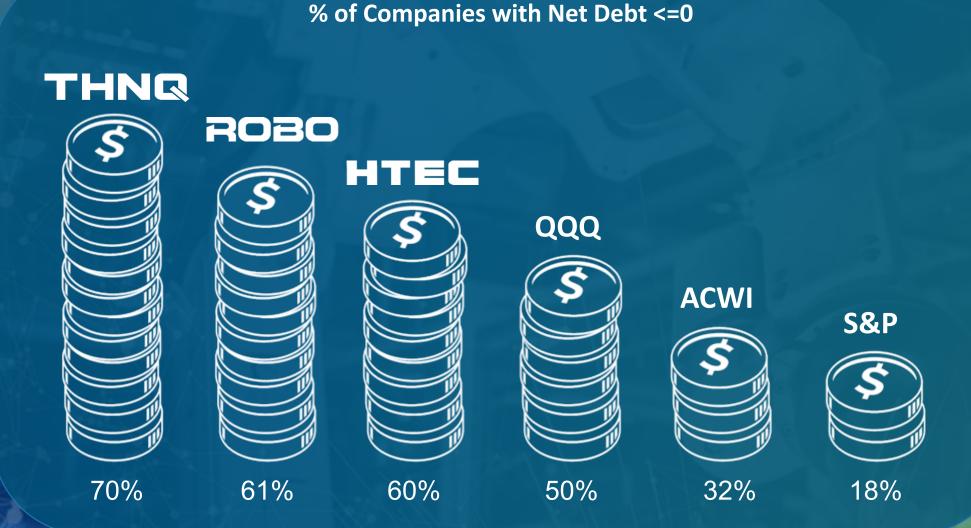
# We focus on disruptive innovation and investment opportunities where we can clearly identify:

Long Term, Sustainable Growth Strategies

Benefit Society & Investors

High-quality Universe of Companies Themes that Align & Comply with Our ESG Policy

### High-quality companies: Balance sheet strength and free cash flow generation



# Diversified and Unique Exposure



# **8080**

# HTEC

Competitor Overlap	Shared Weight
S&P 500 Index	14.51%
MSCI ACWI Index	12.96%
Artificial Intelligence Indices (x12)	17.99%
Information Technology Indices (x10)	17.18%

Market-Cap	Index Weight
Large-Cap	80%
Mid-Cap	16%
Small-Cap	4%

Country	Index Weight
United States	70%
China	7%
Taiwan	4%
Australia	3%
Israel	3%
Sweden	2%
France	2%
Russian Federation	2%
Others (7)	8%

Competitor Overlap	Shared Weight
S&P 500 Index	3.79%
MSCI ACWI Index	3.31%
Robotics & Automation Indices (x15)	23.01%
Information Technology Indices (x10)	4.80%

Market-Cap	Index Weight
Large-Cap	46%
Mid-Cap	42%
Small-Cap	12%

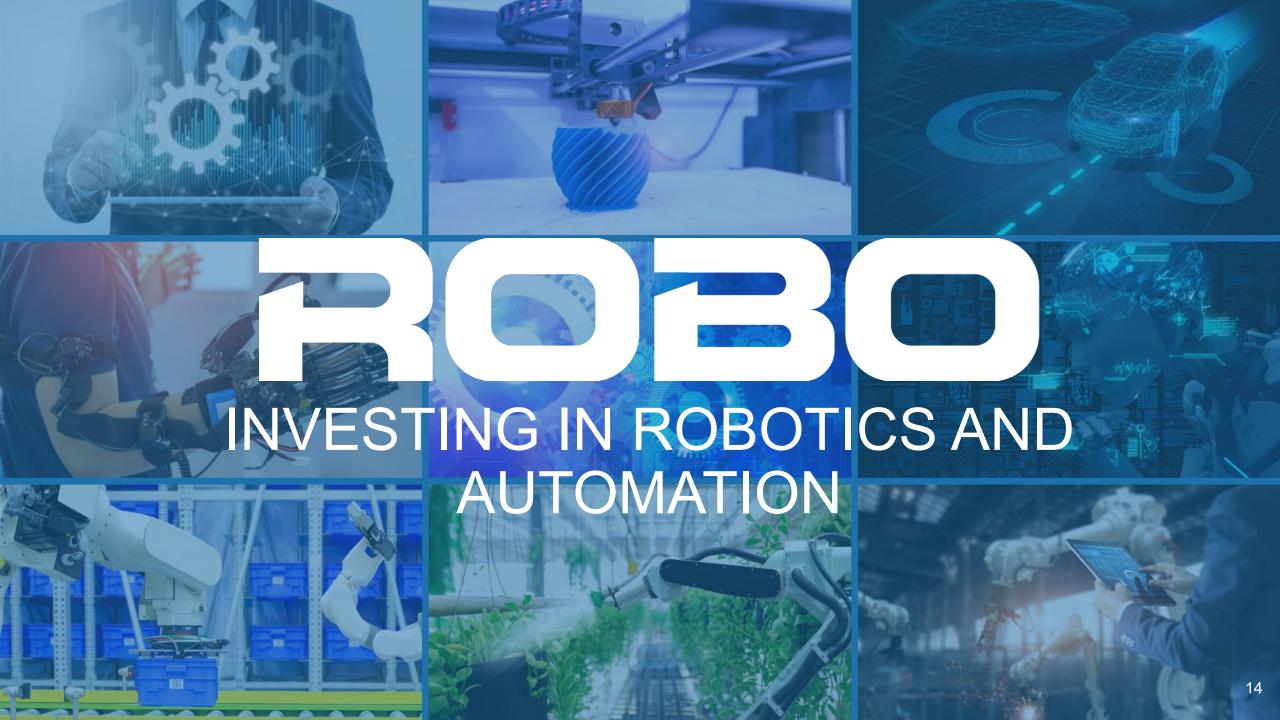
Country	Index Weight
United States	48%
Japan	19%
Germany	7%
Taiwan	4%
Switzerland	4%
China	4%
United Kingdom	4%
Sweden	2%
Others (6)	8%

Competitor Overlap	Shared Weight
S&P 500 Index	4.86%
MSCI ACWI Index	3.82%
Healthcare Indices (x45)	15.64%

Market-Cap	Index Weight
Large-Cap	56%
Mid-Cap	32%
Small-Cap	12%

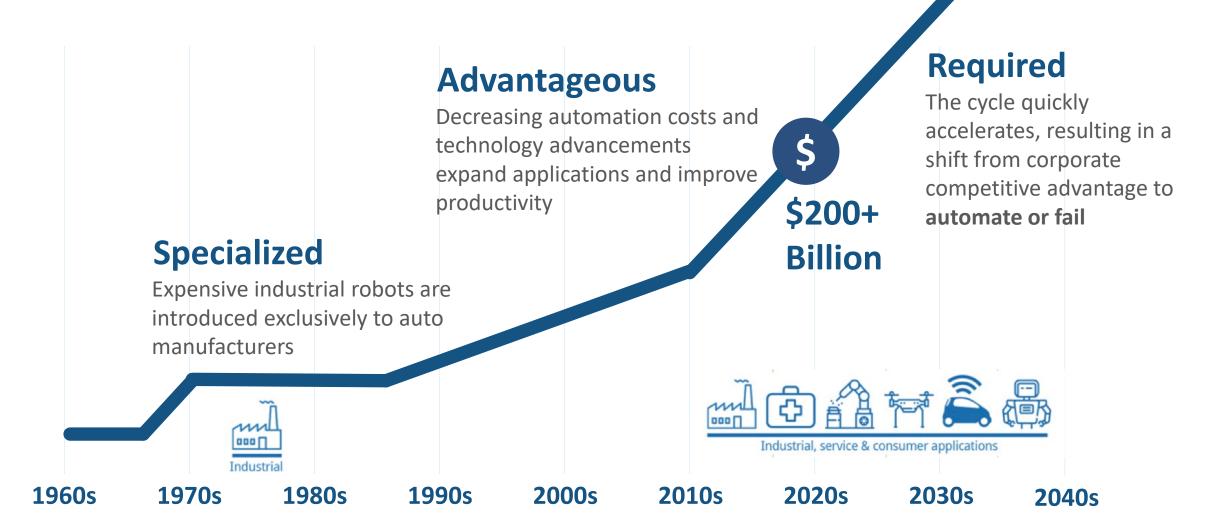
Country	Index Weight
United States	80%
Switzerland	4%
United Kingdom	2%
China	2%
Germany	1%
Italy	1%
Netherlands	1%
Australia	1%
Others (7)	6%





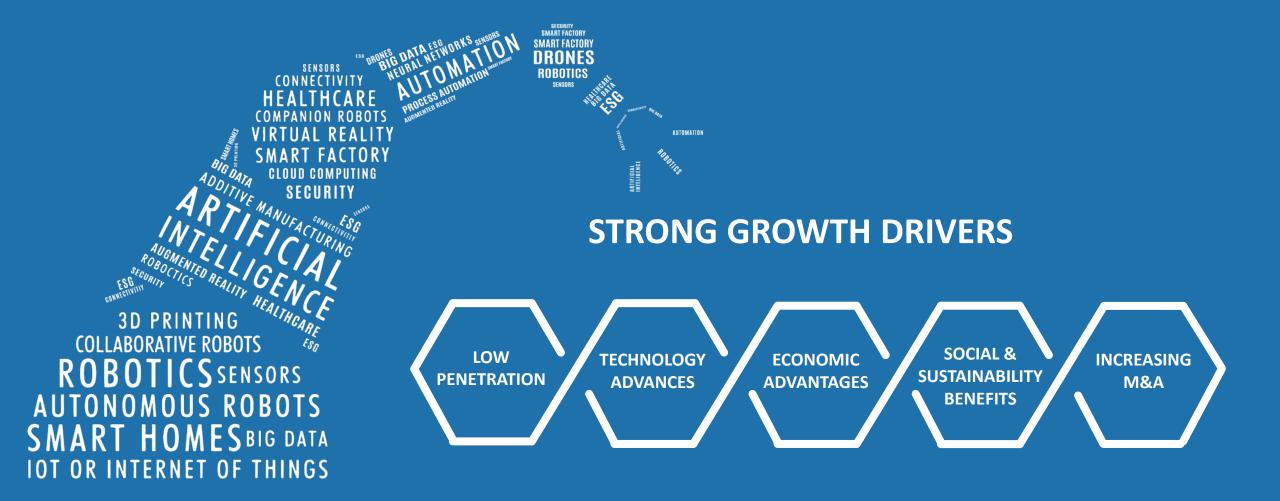
### Robotics and Automation Growth Curve





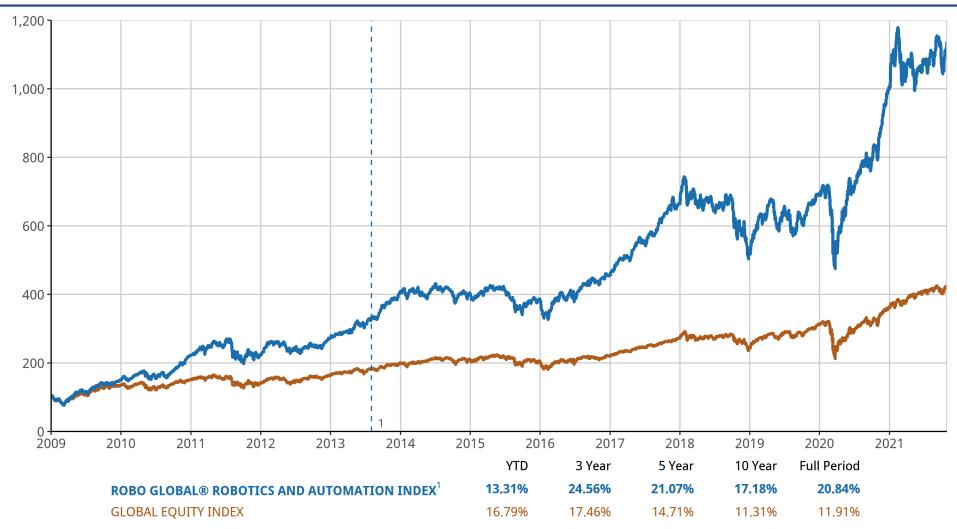


# Clear signals for long-term growth and returns





# **ROBO Global Robotics & Automation Index Performance**



Rebased 100 on December 31, 2008; Total Return through October 31, 2021; Periods greater than 1 year have been annualized 1: Includes back-tested data prior to August 02, 2013



# 11 Subsectors Covering the Entire Global Value Chain

#### **ENABLING TECHNOLOGIES**

The key technologies enabling intelligent systems to interact in the human world across many industries.



**INTEGRATION** 



SENSING



**ACTUATION** 



**COMPUTING & AI** 

#### MOST PROMISING APPLICATIONS

Captures specific and evolving areas of industry and society where we see Robotics & Automation products and solutions successfully deployed. For example, in "Healthcare" we cover Surgical Robots.



LOGISTICS



**MANUFACTURING** 



**HEALTHCARE** 



3D PRINTING



BUSINESS PROCESS



AUTONOMOUS SYSTEMS

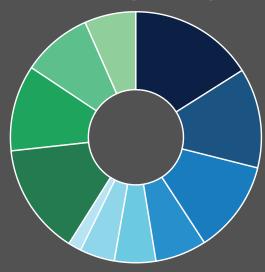


FOOD & AGRICULTURE





### Subsector Weighting



Application	59%	Technologies
Manufacturing & Industrial	16%	Computing & Al
Healthcare	13%	Actuation
Logistics Automation	12%	Sensing
Business Process Automation	7%	Integration
Food & Agriculture	5%	
3D Printing	4%	

2%

### Market-Cap Breakdown

Large-Cap Mid-Cap Small-Cap	46% 42% 12%

### **Region Allocation**

	United States and C	Canada	49%
П	Asia / Pacific		28%
	Europe		22%



Autonomous Systems

41% 14% 11% 9% 7%



# Limited competitive overlap and concentration risk

#### Index Overlap

S&P 500 Index	3.79%
MSCI ACWI Index	3.31%
Robotics & Automation Indices (x15)	23.01%
Information Technology Indices (x10)	4.80%

#### Top 10 Holdings

	Index Weight
BROOKS AUTOMATION INC	2.27%
IRHYTHM TECH INC	2.12%
STRATASYS	1.98%
KARDEX HOLDING AG	1.74%
INTUITIVE SURGICAL INC	1.73%
IROBOT	1.71%
TERADYNE INC	1.68%
VOCERA COMMUNICATIONS INC	1.66%
AMBARELLA INC	1.63%
SERVICENOW INC	1.60%
	18.13%







#### **Performance Statistics**

	YTD	3 Year	10 Year
Performance	13.31%	24.56%	17.18%
Volatility		21.01%	16.05%
Sharpe Ratio		1.06	0.98

Periods greater than 1 year have been annualized. Includes back-tested data prior to 02 Aug 2013.

### Forward Looking Growth

	Median	Mean	Coverage
EPS Growth 3 Yr	74.69%	176.55%	79.52%
EBIT Growth 3 Yr	63.30%	103.52%	84.34%
Sales Growth 3 Yr	40.86%	57.28%	95.18%

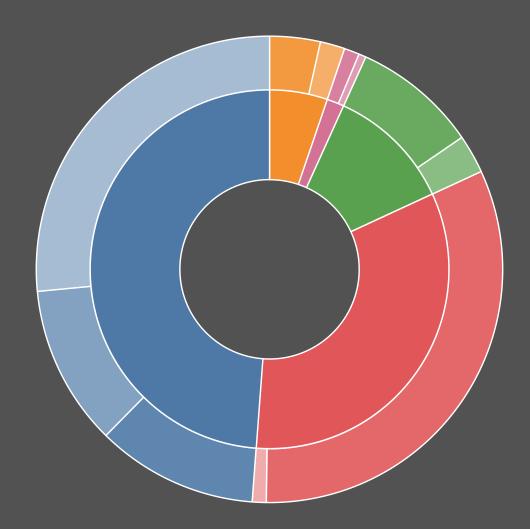


#### **Fundamentals**

P/E	60.97
P/E NTM	31.34
P/B	4.98
EV/Sales	4.61
P/Cash Flow	27.78

# **GICS Allocations**



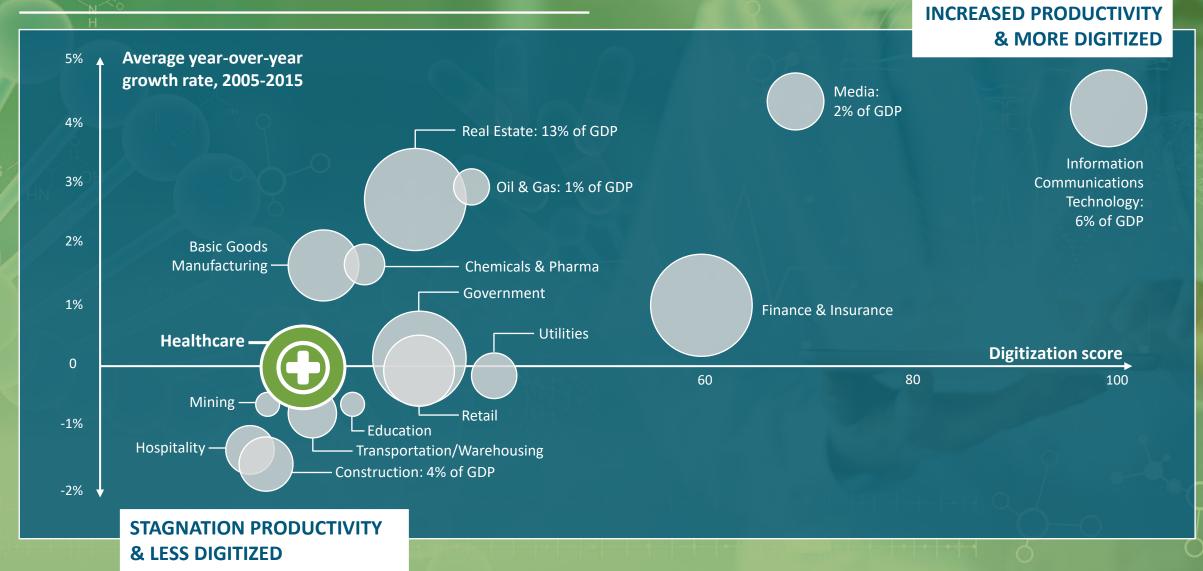


Information Technology	49%
Technology Hardware & Equipment	27%
Semiconductors & Semiconductor Equipment	11%
Software & Services	11%
Industrials	33%
Capital Goods	32%
Transportation	1%
Health Care	11%
Health Care Equipment & Services	9%
Pharmaceuticals, Biotechnology & Life Sciences	3%
Consumer Discretionary	5%
Automobiles & Components	4%
Consumer Durables & Apparel	2%
Consumer Staples	2%
Food & Staples Retailing	1%
Food, Beverage & Tobacco	1%





# Potential Growth and Returns





# Complex Challenges Will Drive the Next Decade of Disruption





# F NH N H

Innovation will drive the next decade of growth across five themes



#### **DIGITIZATION**

Software and device integration, IoT, robotics

#### **CONSUMERIZATION**

Information transparency, user experience





#### **PREVENTION**

Predictive analytics, focus on wellness

#### **PERSONALIZATION**

Curated therapies to target specific disease





#### **DECENTRALIZATION**

Move to lower cost settings, virtual care



# VC funding tripled to \$34B in the past seven years



VC Funding in life sciences, biotech and health tech (Billions)



# Defining The Future Of Healthcare Technology & Innovation

















MEDICAL INSTRUMENTS



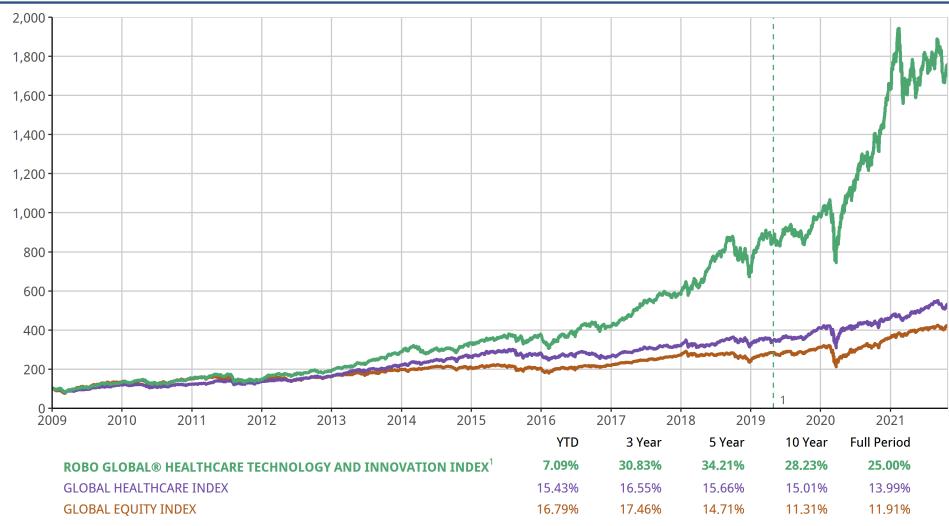
REGENERATIVE MEDICINE



PROCESS AUTOMATION



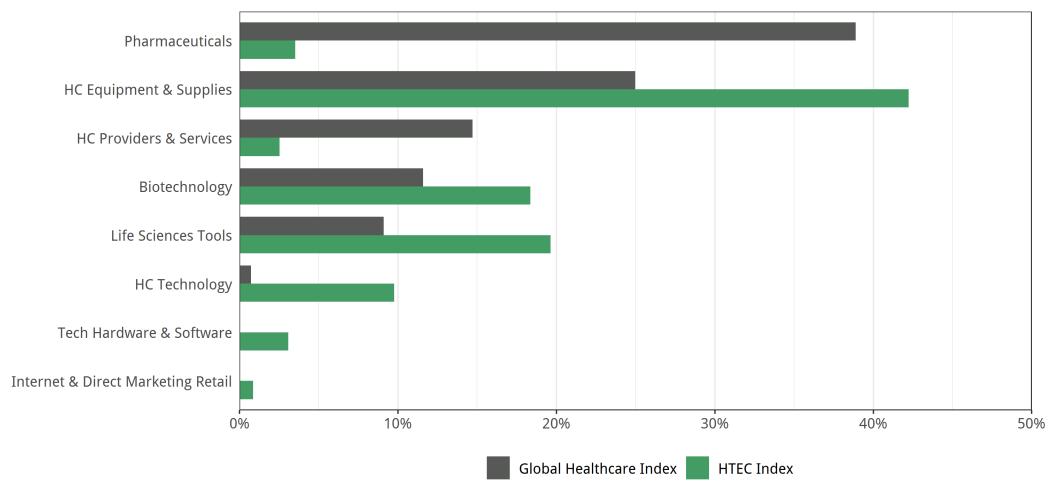
### ROBO Global Healthcare & Innovation Index Performance

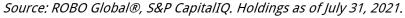


Rebased 100 on December 31, 2008; Total Return through October 31, 2021; Periods greater than 1 year have been annualized 1: Includes back-tested data prior to April 30, 2019



#### HTEC Provides Unique Exposure Compared to Other Healthcare Portfolios



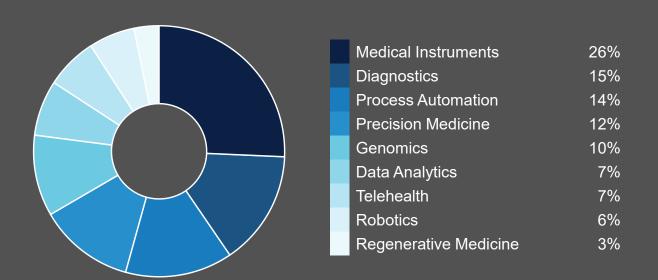








#### Subsector Weighting



#### Market-Cap Breakdown

Large-Cap Mid-Cap Small-Cap	56% 32% 12%

### **Region Allocation**

United States and Canada	80%
Europe	15%
Asia / Pacific	5%





# Limited competitive overlap and concentration risk

#### Index Overlap

S&P 500 Index	4.86%
MSCI ACWI Index	3.82%
Healthcare Indices (x45)	15.64%

#### Top 10 Holdings

	<b>Index Weight</b>
IRHYTHM TECH INC	2.17%
DEXCOM INC	1.75%
THERMO FISHER SCIENTIFIC	1.70%
VOCERA COMMUNICATIONS INC	1.70%
TELADOC HEALTH INC	1.58%
INSULET	1.56%
OMNICELL INC	1.54%
INTUITIVE SURGICAL INC	1.54%
CHARLES RIVER LABORATORIES	1.52%
BROOKS AUTOMATION INC	1.48%
	 16.55%







#### **Performance Statistics**

	YTD	3 Year	10 Year
Performance	7.09%	30.83%	28.23%
Volatility		24.49%	18.60%
Sharpe Ratio		1.16	1.41

Periods greater than 1 year have been annualized. Includes back-tested data prior to 30 Apr 2019.

### Forward Looking Growth

	Median	Mean	Coverage
EPS Growth 3 Yr	57.09%	103.29%	64.37%
EBIT Growth 3 Yr	56.45%	151.69%	71.26%
Sales Growth 3 Yr	50.37%	79.35%	96.55%

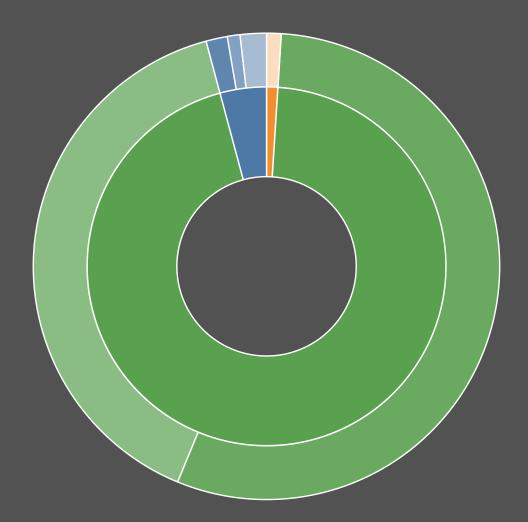


#### **Fundamentals**

P/E	84.30
P/E NTM	82.53
P/B	6.74
EV/Sales	6.42
P/Cash Flow	33.55

# **GICS Allocations**





Health Care	95%
Health Care Equipment & Services	55%
Pharmaceuticals, Biotechnology & Life Sciences	40%
Information Technology	4%
Technology Hardware & Equipment	2%
Semiconductors & Semiconductor Equipment	1%
Software & Services	1%
Consumer Discretionary	1%
Retailing	1%



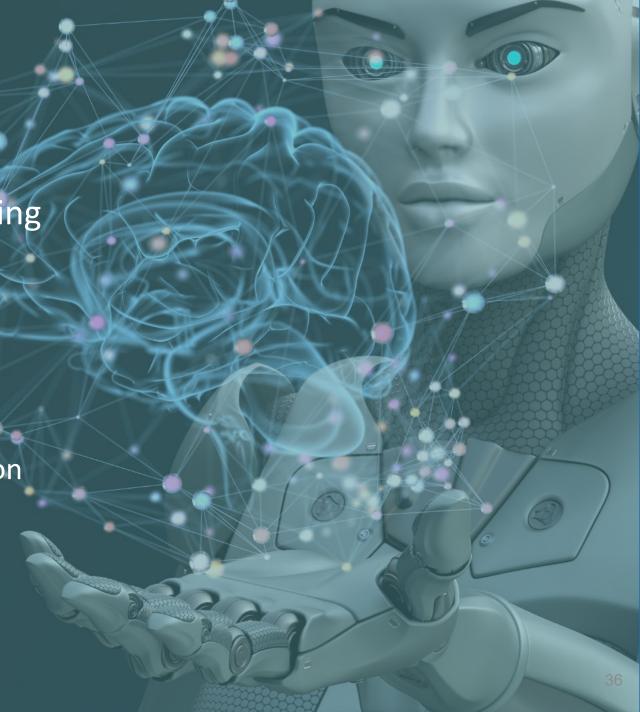


# What is AI?

Artificial Intelligence is a branch of computer science that focuses on making machines imitate intelligent human behavior.

# **Machine Learning/Deep Learning**

- Natural Language Processing and Translation
- Visual Perception and Pattern Recognition
- Decision Making



# Clear Signals For Long Term Growth Opportunities



MASSIVE DATA
GROWTH

Data is the fuel that leverages the power of Al



LOW COMPUTE COSTS

Rising compute power & affordable cloud platforms for storage



ADVANCEMENTS IN AI ALGORITHMS

Improved ML and DL algorithms fueling commercial use



CHANGING DEMOGRAPHICS

With rising population but shortage of skilled laborers, AI can help increase productivity in the workforce.



ECONOMIC BENEFITS

Al technologies could increase global economic output by \$13 trillion, or +16%, by 2030.

(McKinsey)



# The Scope of Al





#### **INVESTMENT**

into AI startups by VCs has increased

**6X** 

since 2000.



Top

100

Al Startups raised over

**\$11.7B** In 347 deals.



China accounted for

48%

of the world's total AI startup funding in 2017, compared to 38% for US.



AI market could quadruple in size to \$127B in 2025 from \$22B in 2019 attaining a

**34% CAGR** 



84%

of enterprises believe investing in AI will lead

to greater

**COMPETITIVE ADVANTAGES** 



# ROBO Global Artificial Intelligence Index Performance



Rebased 100 on December 31, 2013; Total Return through October 31, 2021; Periods greater than 1 year have been annualized 1: Includes back-tested data prior to August 21, 2018



## Defining the Universe of Al

#### **INFRASTRUCTURE**

Enablers and developers of AI systems and capabilities, including companies at the forefront of the AI ecosystem.







**CLOUD PROVIDERS NETWORK & SECURITY** 

**SEMICONDUCTOR** 



COGNITIVE COMPUTING



BIG DATA/ ANALYTICS

#### **APPLICATIONS & SERVICES**

Areas and companies that are well positioned to benefit from heavy investments into AI infrastructure.







BUSINESS PROCESS



**ECOMMERCE** 



CONSULTING SERVICES



HEALTHCARE

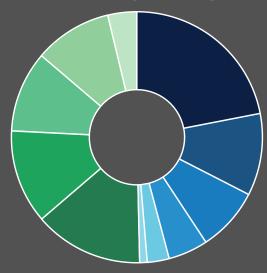


FACTORY AUTOMATION



## Portfolio Composition

### Subsector Weighting



Applications & Services	50%	Infrastructure	50%
Business Process	22%	Semiconductor	14%
Ecommerce	11%	Big Data/Analytics	12%
Consumer	8%	Cloud Providers	10%
Healthcare	5%	Network & Security	10%
Factory Automation	3%	Cognitive Computing	4%

1%

## Market-Cap Breakdown

Large-Cap	80%
Mid-Cap	16%
Small-Cap	4%

## Region Allocation

United States and Canada	719	%
Asia / Pacific	149	%
Europe	119	%
Africa / Middle East	39	%
Latin America and Caribbean	19	%



**Consulting Services** 



# Limited competitive overlap and concentration risk

### Index Overlap

S&P 500 Index	14.51%
MSCI ACWI Index	12.96%
Artificial Intelligence Indices (x12)	17.99%
Information Technology Indices (x10)	17.18%

#### Top 10 Holdings

	Index Weight
CLOUDFLARE INC	2.24%
ATLASSIAN	1.94%
TESLA INC	1.88%
ARISTA NETWORKS INC	1.80%
MICROSOFT	1.79%
SALESFORCE.COM INC	1.79%
NVIDIA	1.79%
ANALOG DEVICES INC	1.74%
SPLUNK INC	1.69%
ALPHABET INC	1.68%
	18.33%





## **Portfolio Characteristics**

#### Performance Statistics

	YTD	3 Year	Since Incep
Performance	16.44%	36.59%	28.53%
Volatility		27.35%	22.09%
Sharpe Ratio		1.24	1.19

Periods greater than 1 year have been annualized. Includes back-tested data prior to 24 Jun 2019.

## Forward Looking Growth

	Median	Mean	Coverage
EPS Growth 3 Yr	69.99%	154.74%	78.38%
EBIT Growth 3 Yr	82.23%	207.48%	87.84%
Sales Growth 3 Yr	71.33%	88.37%	97.30%

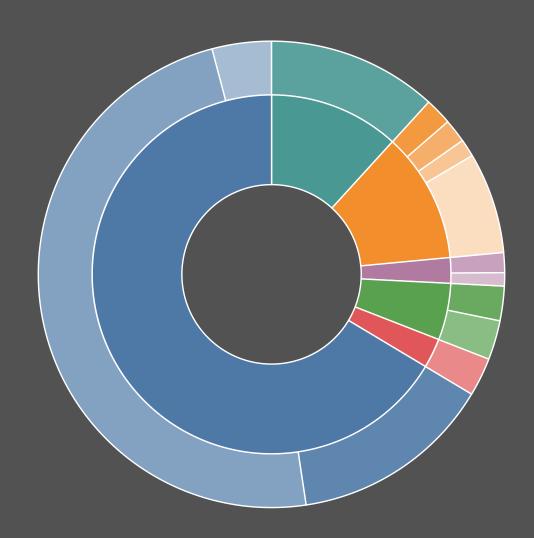


#### **Fundamentals**

P/E	86.90
P/E NTM	51.51
P/B	11.61
EV/Sales	9.47
P/Cash Flow	44.54

# **GICS Allocations**





Information Technology	66%
Software & Services	48%
Semiconductors & Semiconductor Equipment	14%
Technology Hardware & Equipment	4%
Communication Services	12%
Media & Entertainment	12%
Concumer Discretioners	12%
Consumer Discretionary	
Retailing	7%
Automobiles & Components	2%
Consumer Durables & Apparel	2%
Consumer Services	1%
Health Care	5%
Pharmaceuticals, Biotechnology & Life Sciences	3%
Health Care Equipment & Services	2%
Industrials	3%
Commercial & Professional Services	3%
Financials	2%
Diversified Financials	1%
Insurance	1%



## **ROBO Global ESG Policy**

ROBO Global® is committed to maintaining and continuously improving a research and investment process that incorporates ESG aspects. This ESG Policy represents our current approach and is expected to evolve over time. Following critical observations, ROBO Global will aim to exclude companies from its indices that we believe do significant harm to environmental, social, and governance objectives.

Companies are excluded if there is an unacceptable risk that the company may contribute to or be responsible for serious human rights violations, severe environmental damage, and/or other particularly serious violations of fundamental ethical norms, including the production of weapons that violate fundamental humanitarian principles through their normal use. Additionally, we aim to ensure companies in our indices have no direct exposure to fossil fuels.

As part of our ESG evaluation, ROBO Global will consider a company's alignment with the 10 principles of the UN Global Compact, including human rights, labor rights, environmental impacts, and business ethics.



#### **HUMAN RIGHTS**

- Businesses should support and respect the protection of internationally proclaimed human rights.
- Businesses should make sure that they are not complicit in human rights abuses.



- Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.
- Businesses should uphold the elimination of all forms of forced and compulsory labour.
- Businesses should uphold the effective abolition of child labour.
- Businesses should uphold the elimination of discrimination in respect of employment and occupation.



#### **ENVIRONMENT**

- Businesses should support a precautionary approach to environmental challenges.
- Businesses should undertake initiatives to promote greater environmental responsibility.
- Businesses should encourage the development and diffusion of environmentally friendly technologies.



#### **BUSINESS ETHICS**

• Businesses should work against corruption in all its forms, including extortion and bribery.







# INNOVATIONS, INNOVATORS & INSIGHTS. DELIVERED.

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