

## S&P KENSHO NEW ECONOMY INDICES

### 21<sup>ST</sup> CENTURY SECTORS

THE S&P KENSHO NEW ECONOMY INDICES CAPTURE THE INDUSTRIES AND INNOVATION OF  
**THE FOURTH INDUSTRIAL REVOLUTION**

We are at the dawn of a period of unprecedented change and industrial transformation. Every facet of our lives will be impacted: the jobs we do, how we do them, the way we communicate, the way we travel, even the threats we face. This new industrial epoch, the Fourth Industrial Revolution, has already seen an exponential increase in the pace and breadth of innovation in many areas of the global economy, driven by rapid, mutually reinforcing developments in:



ARTIFICIAL INTELLIGENCE



HYPERCONNECTIVITY



EXPONENTIAL PROCESSING POWER



ROBOTICS & AUTOMATION



DEMOCRATIZED INFRASTRUCTURE

### What are the S&P Kensho New Economy Indices?

The S&P Kensho New Economy Indices are the first and most comprehensive family of indices to capture the full breadth of companies driving the Fourth Industrial Revolution. They provide a unique lens with which to understand the disruption of existing industries and emergence of new ones; altogether, a new and innovative approach to industry classification – 21<sup>st</sup> Century Sectors.

**CUTTING-EDGE TECHNOLOGY**

+

**INNOVATIVE METHODOLOGY**

=

**UNIQUE INSIGHTS**

CAPTURES ENTIRE ECOSYSTEM

Pure-play companies and the ecosystems supporting them are included, transcending traditional sectors and market cap structure – essential for understanding the full economic exposure

FORWARD-LOOKING

Companies are categorized and weighted according to their degree of emphasis on the relevant New Economy

BALANCED & TRADABLE

Companies are equal-weighted within category and subject to minimum liquidity requirements and optimization

CUTTING-EDGE TECHNOLOGY

Advanced machine learning and natural language processing (NLP) technology used to identify companies from millions of pages of regulatory filings and other public information

# KENSHO

Kensho is a data analytics and machine intelligence company. Kensho deploys scalable machine learning and analytics systems across the most critical government and commercial institutions in the world to solve some of the hardest analytical problems of our time. Kensho is part of S&P Global.

**TECH PIONEER**  
World Economic Forum

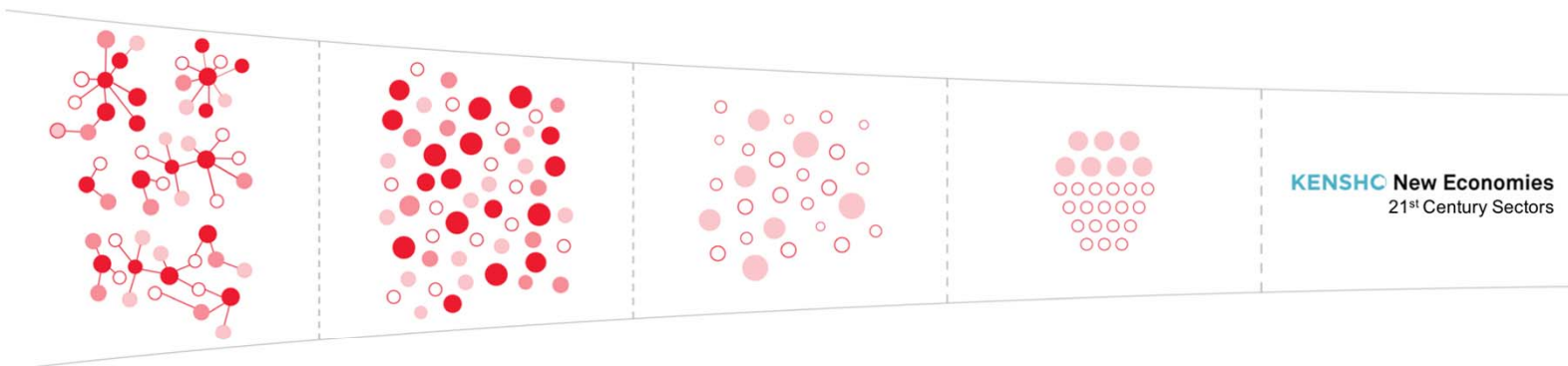
**#1 FINTECH50**  
Forbes

**TOP 5 HOTTEST  
FINTECH  
COMPANIES**  
Fortune

[www.kenshoindices.com](http://www.kenshoindices.com)

# Methodology Overview for the S&P Kensho New Economy Indices

AI-driven, rules-based, and objective



**KENSHO** New Economies  
21<sup>st</sup> Century Sectors

## 1 Industry Model    2 AI Selection    3 Categorization    4 Weighting    5 Verification

- Expert curation, combined with advanced topic modelling, is used to create a comprehensive model of the target industry
- Natural Language Processing (NLP) and machine learning identify companies from SEC filings
- Captures both pure play names, as well as the supporting ecosystems
- Each company categorized according to the degree of its focus on the New Economy (Core vs Non-Core)
- Core category over-weighted vs Non-Core
- Companies equal weight within each category
- Minimum market cap and ADTV
- Optimized to accommodate minimum daily trade size
- Index construction verified by Investment Analysts and approved by the Index Committee
- Entirely rules-based and objective

## Taxonomy of the S&P Kensho New Economy Indices

The most comprehensive family of indices to capture the industries and innovation of the Fourth Industrial Revolution.

### Composite Indices

#### S&P Kensho New Economies Composite (KNEX)<sup>^#</sup>

#### S&P Kensho New Economies Select (KNESLX)<sup>^</sup>

#### Sectors

#### Subsectors

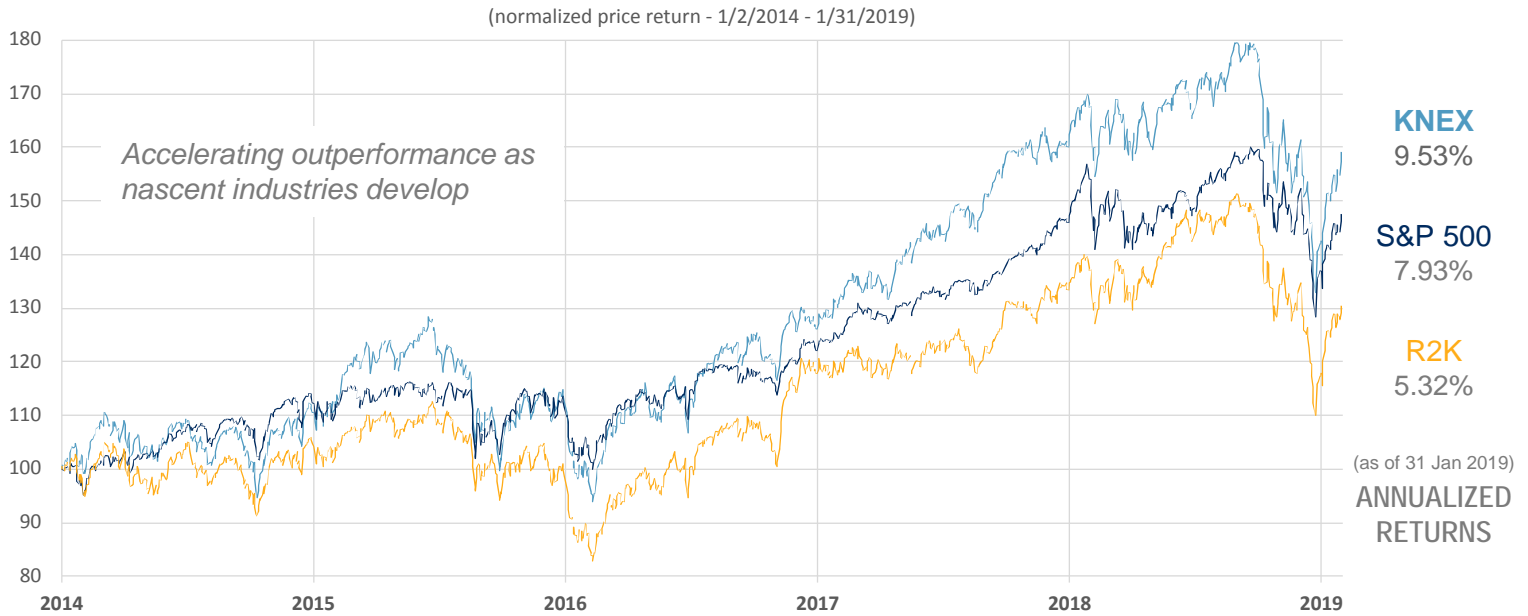
Intelligent Infrastructure (KINFRA) <sup>#</sup>	(10) (20)
Smart Transportation (KMOVE) <sup>#</sup>	(7) (11) (21)
Future Security (KSECURE) <sup>#</sup>	(1) (2) (4) (5) (6) (7) (9)
Clean Power (KPOWER) <sup>#</sup>	(3) (8)
Final Frontiers (KEXPLORE) <sup>#</sup>	(1) (7)
Future Communication (KCONNECT)	(9) (12) (13)
Democratized Banking (KFIN)	(23) (24) (25)
Human Evolution (KEVOLVE)	(2) (6) (9) (16) (17) (18)
Advanced Fabrication <sup>**</sup>	(17) (18) (19)
On Demand Economy <sup>**</sup>	(14)
Sustainable Staples <sup>**</sup>	(15) (16)

(1) Space (KMARS) <sup>^</sup>	(14) On Demand Economy (KPDQ) <sup>**</sup>
(2) Robotics (KBOTS) <sup>^</sup>	(15) Sustainable Farming (KFARM) <sup>**</sup>
(3) Clean Energy (KENERGY) <sup>^</sup>	(16) Genetic Engineering (KDNA) <sup>^</sup>
(4) Cyber Security (KCYBER) <sup>^</sup>	(17) 3D Printing (KDDDP) <sup>^</sup>
(5) Smart Borders (KDMZ) <sup>^</sup>	(18) Nanotechnology (KNANO) <sup>^</sup>
(6) Wearables (KBORG) <sup>^</sup>	(19) Smart Factories (KMAKE) <sup>**</sup>
(7) Drones (KDRONE) <sup>^</sup>	(20) Smart Grids (KGRIDS) <sup>^</sup>
(8) Clean Tech (KCLEAN) <sup>^</sup>	(21) Adv. Transport Systems (KATS) <sup>^</sup>
(9) Virtual Reality (KVR) <sup>^</sup>	(22) Electric Vehicles (KEV) <sup>^</sup>
(10) Smart Buildings (KHOME) <sup>^</sup>	(23) Alternative Financing (KALTFIN) <sup>^</sup>
(11) Autonomous Vehicles (KCARS) <sup>^</sup>	(24) Future Payments (KPAY) <sup>^</sup>
(12) Digital Communities (KSOCIAL) <sup>^</sup>	(25) Distributed Ledger (KLEDGER) <sup>^</sup>
(13) Enterprise Collaboration (KTEAM) <sup>^</sup>	

#: Tracked by State Street SPDRs    ^: Tracked by US, non-SSgA and non-US fund(s)    \*: Calculation Ready    \*\*: Not live yet

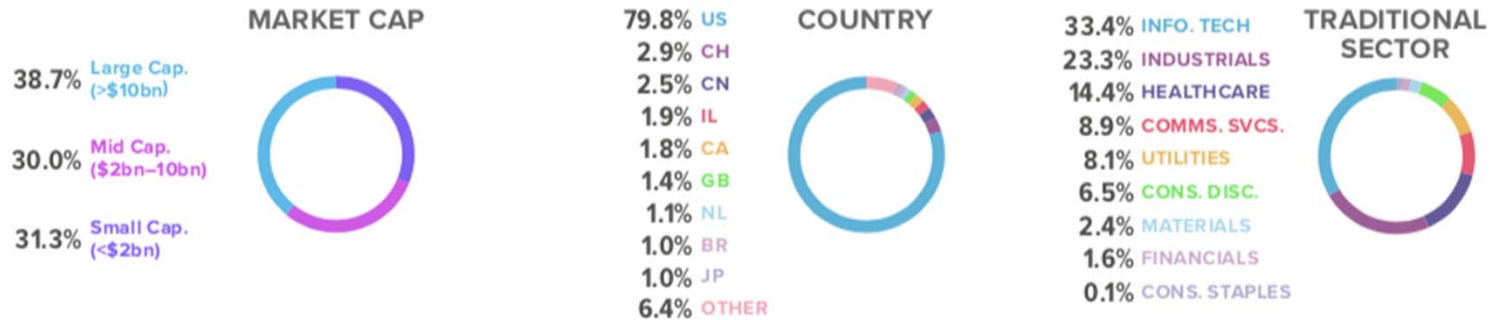
# Relative Performance of the S&P Kensho New Economies Composite Index

The S&P Kensho New Economies Composite Index (KNEX) is made up of all qualifying New Economy subsectors, the industries driving the Fourth Industrial Revolution, with each weighted according to an algorithmic proxy for industry maturity.



## Breakdown of the S&P Kensho New Economies Composite Index

(as of 31 Dec 2018)



## Style, Fundamentals, and Differentiation

(as of 31 Dec 2018)

Large				<b>Fundamentals</b>	<b>KNEX</b>	<b>S&amp;P 500</b>
				Trailing 12M PE	34.9	22.35
Mid			●	Forward 12M PE	20.43	15.55
			KNEX	Price to Book Ratio	2.4	3.49
Small				Price / Cash Flow	10.39	11.90
				1yr Diluted EPS Growth	34.00%	21.72%
				Fwd 12M Sales Growth	13.96%	6.85%
	Value	Core	Growth			
				<b>KNEX vs</b>	<b>Active Share</b>	
				S&P 500	85.54%	
				Russell 2000	90.46%	
				Nasdaq 100	91.32%	
				Morningstar Exp. Tech.	86.35%	
				S&P 1500	84.48%	
				S&P 500 Growth	87.48%	

Source: Kensho, S&P Dow Jones indices. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

## Performance Disclosure

The S&P Kensho New Economies Composite Index was launched February 6, 2017. All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance. The back-test calculations are based on the same methodology that was in effect on the index Launch Date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. Complete index methodology details are available at [www.spdji.com](http://www.spdji.com). Past performance of the Index is not an indication of future results. Prospective application of the methodology used to construct the Index may not result in performance commensurate with the back-test returns shown.

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the Index is set at a fixed value for calculation purposes. The Launch Date designates the date upon which the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its datafeed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

The back-test period does not necessarily correspond to the entire available history of the Index. Please refer to the methodology paper for the Index, available at [www.spdji.com](http://www.spdji.com) for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Another limitation of using back-tested information is that the back-tested calculation is generally prepared with the benefit of hindsight. Back-tested information reflects the application of the index methodology and selection of index constituents in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities, fixed income, or commodities markets in general which cannot be, and have not been accounted for in the preparation of the index information set forth, all of which can affect actual performance.

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