

## SOLUTION OVERVIEW

# FTSE Thematic Index Series

A lens into medium to long-term structural trends



### Overview

The FTSE Thematic Index Series is a family of single and multi-theme indices aimed to represent the performance of companies associated with particular structural trends. The indices focus on themes that are expected to dominate investment opportunities in the medium to long-term.

The engine behind the FTSE Thematic Index Series is the Dynamic Classification Algorithm, which employs natural language processing (NLP) and machine learning techniques to design a dynamic, unconstrained, country and sector-agnostic approach to help identify and select companies with exposure to specific themes.

### Available indices

#### FTSE Global single-theme indices

- FTSE Global Artificial Intelligence Index
- FTSE Global Battery Tech Index
- FTSE Global Cloud Computing & Services Index
- FTSE Global Cybersecurity Index
- FTSE Global Fintech & Blockchain Index
- FTSE Global Future Transportation Index
- FTSE Global Health Tech Index
- FTSE Global Internet of Things Index
- FTSE Global Robotics & Automation Index
- FTSE Global Semiconductors Index
- FTSE Global Video Gaming Index
- FTSE Global Solar Energy Index
- FTSE Global Wind Energy Index
- FTSE Global Biofuel Index
- FTSE Global Hydropower Index
- FTSE Global Nuclear Power Index

#### Russell US single-theme indices

- Russell Artificial Intelligence Index
- Russell Cloud Computing & Services Index
- Russell Cybersecurity Index
- Russell Fintech & Blockchain Index
- Russell Health Tech Index
- Russell Internet of Things Index
- Russell Semiconductors Index
- Russell Solar Energy Index

#### Multi-theme indices

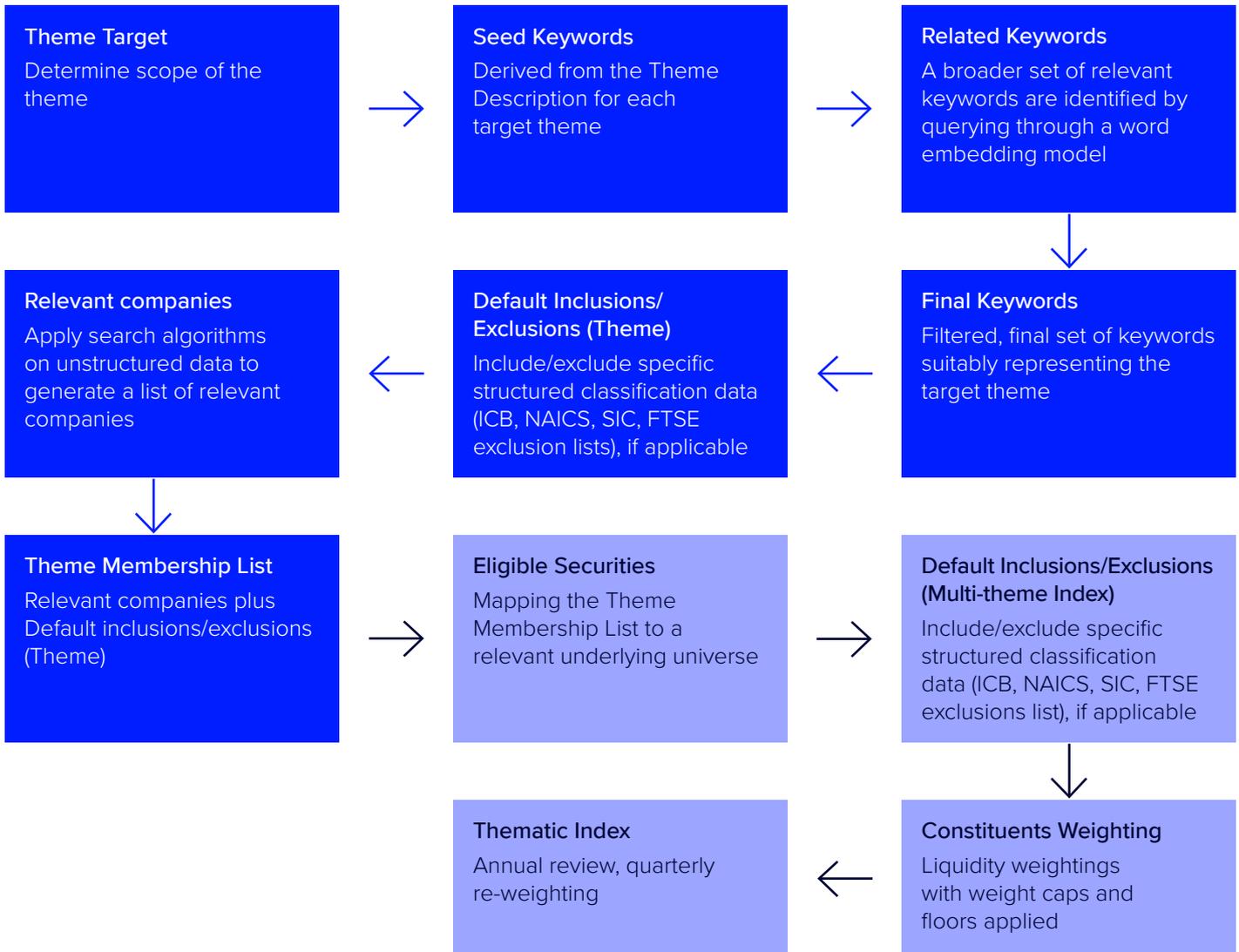
- FTSE Global Technology SuperTheme Index
- FTSE Global Metaverse Index
- FTSE Global New Energy Index
- Russell Technology SuperTheme Index
- Russell Metaverse Index
- Russell New Energy Index



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## Index construction

Construction of a thematic index involves a two-part approach. The first part is theme creation utilising a Dynamic Classification Algorithm. The second part is single-theme or multi-theme index construction based on individual theme membership list(s).



## Features

### Dynamic & unconstrained

The FTSE Thematic Indices are constructed by mining unstructured data to select potential companies for the defined themes using a set of thematic keywords. This country and sector-agnostic approach results in an index with constituents going beyond rigid industry sector classifications.

### Evolve with the development of trends

The set of thematic keywords can be updated over time, allowing the index to keep up with evolving trends.

### Transparent, rules-based approach

Disclosed in publicly available ground rules, the rules-based methodology utilises publicly available unstructured data. The NLP model in the Dynamic Classification Algorithm captures insights from unstructured content in a speedy and consistent manner, with minimal human intervention.

### Diversified and tradable

A thematic index will only be maintained and made available if there is a minimum of 20 constituents in the index. Our liquidity weighting guidelines ensure that a 5% cap is applied to excessively weighted securities so that liquidity is prioritised. This results in better tradability.

### Single and multi-theme indices available

Single theme indices offer investors more targeted exposures, whereas multi-theme indices may help mitigate investment cyclicality by diversifying across several themes.

### Rigorous governance framework

A strong governance framework ensures theme relevance and reliability, with oversight from a dedicated Internal Thematic Classification Committee. The Thematic Challenge Process involves companies and market participants serving as a valuable checkpoint to ensure the alignment of constituents and keywords with the relevant theme.

## Themes

Technology	Lifestyle	Industrial	Health Care	New Energy
Artificial Intelligence	Future Transportation	Battery Tech	Health Tech	Solar Energy
Cloud Computing & Services	Video Gaming	Robotics & Automation		Wind Energy
Cybersecurity				Hydropower
Fintech & Blockchain				Biofuel
Internet of Things				Geothermal Energy
Semiconductors				Nuclear Power
Virtual Reality				

## Theme coverage

Theme	Description	Examples of theme focus
Artificial Intelligence	The Artificial Intelligence theme aims to include companies that provide products and services to facilitate the use of artificial intelligence (AI), or are expected to benefit from the utilisation of AI.	<ul style="list-style-type: none"> <li>- Artificial intelligence</li> <li>- Machine learning</li> <li>- Data science</li> </ul>
Battery Tech	The Battery Tech theme aims to include companies that design, develop and provide essential, advanced battery technology. This theme also includes companies focusing on energy storage technology or battery charging solutions.	<ul style="list-style-type: none"> <li>- Lithium batteries</li> <li>- Fuel cells</li> <li>- Charging systems</li> <li>- Battery systems</li> <li>- Energy storage</li> </ul>
Cloud Computing & Services	The Cloud Computing & Services theme aims to include companies that provide hardware, software, data centres, or platforms for cloud computing. This theme also includes cloud-based businesses, companies that build their products on cloud services, and providers of software-as-a-service products.	<ul style="list-style-type: none"> <li>- Cloud platforms</li> <li>- Cloud applications</li> <li>- Software-as-a-service</li> <li>- Infrastructure-as-a-service</li> <li>- Data centres</li> </ul>
Cybersecurity	The Cybersecurity theme aims to include companies that provide products and services (hardware and software) to enhance cybersecurity.	<ul style="list-style-type: none"> <li>- Anti-virus software</li> <li>- Internet security</li> <li>- Network security</li> <li>- Cybercrime detection</li> <li>- Firewalls</li> </ul>
Fintech & Blockchain	The Fintech & Blockchain theme aims to include companies that provide products and services in relation to technological innovation for the financial industry. It also includes companies that employ blockchain technology outside of financial applications. This theme includes Transaction Processing Services, and excludes Banks.	<ul style="list-style-type: none"> <li>- Financial technology</li> <li>- Blockchain technology</li> <li>- Crypto currencies</li> <li>- Digital payments</li> <li>- Digital finance/funding</li> </ul>
Future Transportation	The Future Transportation theme aims to include companies that design, develop and provide products and services (including, but not limited to auto parts and software) for autonomous driving vehicles and/or electric vehicles.	<ul style="list-style-type: none"> <li>- Autonomous driving</li> <li>- ADAS (Advanced Driver Assistance Systems)</li> <li>- Electric vehicles</li> <li>- Hybrid vehicles</li> <li>- Driver assistance</li> </ul>
Health Tech	The Health Tech theme aims to include companies that provide innovative medical equipment or devices, as well as healthcare software or technology solutions. This theme also includes companies engaged in digital health platforms, such as online health consultations.	<ul style="list-style-type: none"> <li>- Medical systems</li> <li>- Medical software</li> <li>- Surgical technology/solutions</li> <li>- Digital/Online healthcare</li> <li>- Genetic testing</li> </ul>
Internet of Things	The Internet of Things (IoT) theme aims to include companies that research, develop, or provide products or services catering to the IoT both at home and in industrial settings.	<ul style="list-style-type: none"> <li>- Intelligent homes</li> <li>- Home automation</li> <li>- Wearable technology</li> <li>- Smart meters</li> <li>- Mesh networks</li> </ul>

Theme	Description	Examples of theme focus
Robotics & Automation	The Robotics & Automation theme aims to include companies that provide robotic and automation hardware, equipment, or solutions. This theme also includes companies that provide software solutions for process or system automation.	<ul style="list-style-type: none"> <li>- Industrial/factory automation</li> <li>- Robotics</li> <li>- Automation technology/solutions</li> <li>- Automatic systems</li> <li>- Automation equipment</li> </ul>
Semiconductors	The Semiconductors theme aims to include companies that design, develop and manufacture products and services for semiconductors. This theme excludes companies that provide products and services catering to clean room systems or facilities.	<ul style="list-style-type: none"> <li>- IC Design</li> <li>- IC Manufacturers</li> <li>- IC Assembly &amp; Testing</li> </ul>
Video Gaming	The Video Gaming theme aims to include companies that develop or provide hardware (including parts), software, or platforms for video games or e-sports. The theme excludes casino gaming activities.	<ul style="list-style-type: none"> <li>- Game consoles/hardware</li> <li>- Game software</li> <li>- Online/mobile games</li> <li>- Gaming platforms/streaming</li> <li>- E-sports</li> </ul>
Virtual Reality	The Virtual Reality (VR) theme aims to include companies that provide products and services in relation to virtual or augmented reality (AR) applications, or benefit from the usage of VR/AR.	<ul style="list-style-type: none"> <li>- Virtual reality hardware/software</li> <li>- Augmented reality hardware/software</li> <li>- Mixed reality hardware/software</li> <li>- VR/AR content development</li> <li>- VR/AR applications</li> </ul>
Solar Energy	Solar Energy is defined as energy that is created by the light and heat of the sun, which mainly includes solar photovoltaic and solar thermal energy. The Solar Energy theme aims to include companies that research, develop, utilise, or provide products or services that are related to solar energy.	<ul style="list-style-type: none"> <li>- Solar power equipment</li> <li>- Solar power production, storage, and distribution</li> <li>- Solar power solutions and systems</li> <li>- Solar power technology development</li> </ul>
Wind Energy	Wind energy is defined as energy that is generated by harnessing the wind. The Wind Energy theme aims to include companies that research, develop, utilise, or provide products or services related to wind energy.	<ul style="list-style-type: none"> <li>- Wind farm management and development</li> <li>- Wind power equipment</li> <li>- Wind power production, storage, and distribution</li> <li>- Wind power solutions and systems</li> <li>- Wind power technology development</li> </ul>
Biofuel	Biofuel is defined as energy that is generated from the conversion of biomass into heat, electricity, biogas and liquid fuels. Biomass resources include crop waste, forest residues, purpose-grown grasses, woody energy crops, microalgae, urban wood waste, food waste etc. The Biofuel theme aims to include companies that research, develop, utilise or provide products or services that are related to biofuel.	<ul style="list-style-type: none"> <li>- Biofuel equipment</li> <li>- Biofuel production, storage, and distribution</li> <li>- Biofuel solutions and systems</li> <li>- Biofuel technology development</li> </ul>

Theme	Description	Examples of theme focus
Hydropower	Hydropower is defined as energy that is generated from moving water. The Hydropower theme aims to include companies that research, develop, utilise or provide products or services that are related to hydropower.	<ul style="list-style-type: none"> <li>- Hydropower equipment</li> <li>- Hydropower facilities and infrastructure</li> <li>- Hydropower production, storage, and distribution</li> <li>- Hydropower solutions and systems</li> <li>- Hydropower technology development</li> </ul>
Geothermal Energy	Geothermal energy is defined as energy generated from the Earth. It is a renewable energy source with multiple applications including heating, drying and electricity generation. The Geothermal Energy theme aims to include companies that research, develop, utilise, or provide products or services that are related to geothermal energy.	<ul style="list-style-type: none"> <li>- Geothermal energy equipment</li> <li>- Geothermal energy production, storage, and distribution</li> <li>- Geothermal energy solutions and systems</li> <li>- Geothermal energy technology development</li> </ul>
Nuclear Power	Nuclear power is defined as energy generated from nucleus, which can be used to produce heat and electricity. Uranium is the most widely used resource for nuclear reactions. The Nuclear Energy theme aims to include companies that research, develop, utilise or provide products or services related to nuclear power. The theme excludes companies engaging in nuclear weapons business.	<ul style="list-style-type: none"> <li>- Nuclear power plant construction and management</li> <li>- Nuclear power equipment</li> <li>- Nuclear power production, storage, and distribution</li> <li>- Nuclear power solutions and systems</li> <li>- Nuclear power technology development</li> <li>- Uranium mining, exploration, and production</li> </ul>

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