

# Consultation on Proposed Changes to MSCI Thematic Index Methodologies

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## PROPOSAL FOR CONSULTATION

This consultation may or may not lead to the implementation of any or all of the proposed changes in the highlighted or any other MSCI indexes. Consultation feedback will remain confidential. MSCI may publicly disclose feedback if specifically requested by specific market participants. In that case, the relevant feedback would be published together with the final result of the consultation.

September 2022

# Timeline

MSCI presents a consultation with proposals for changes to select MSCI Thematic Index methodologies.

**MSCI invites feedback from market participants on or before November 30, 2022; and will announce the results of the consultation on or before January 31, 2023, at which time MSCI will also communicate the implementation date of changes, if any.**

# Executive Summary

- MSCI's Thematic Index range was launched in October 2018 with indexes linked to four themes.
- The range has grown rapidly to 22 standard thematic indexes as at end-2021 and has supported the launch of customized index designs for clients.
- Alongside ongoing expansion of the suite, we have received feedback from market participants and MSCI's external theme experts on the scope of some of the themes underlying the range. We have considered this input alongside our own research as to the evolution of the underlying themes.
- This work is valuable for helping ensure the theme scope and definitions evolve with technological advancements, changing consumer behaviors, demographics and other drivers of the megatrends that underpin these indexes.

# Summary of Proposed Changes (1/2)

MSCI requests feedback from market participants on the following thematic index methodologies

S. No	Current Index Methodology*	Proposed Change	Expected Benefit (s)
1.	<b>MSCI ACWI IMI Efficient Energy</b>	<ul style="list-style-type: none"> <li>Expand the scope to include a new subtheme “Future Fuels &amp; Tech”, and</li> <li>Update the GICS® exclusions</li> </ul>	Evolve theme to capture the hydrogen economy ecosystem, as well as efficient energy technologies such as “concentrated solar power” and “ground source heating”
2.	<b>MSCI ACWI IMI Cybersecurity</b>	<ul style="list-style-type: none"> <li>Expand the scope to include a new subtheme “Rapid Response &amp; Remediation”, and</li> <li>Update the GICS® exclusions</li> </ul>	Evolve theme to reflect the ongoing transition in the cybersecurity landscape to a ‘response and remediation’ strategy from a ‘detection and prevention’ approach
3.	<b>MSCI ACWI IMI Food Revolution</b>	<ul style="list-style-type: none"> <li>Expand the scope of the theme to include a new subtheme – “Insect-based Protein”</li> </ul>	Incorporate the rising importance of edible insects as a sustainable alternative protein
4.	<b>MSCI ACWI IMI Future Education</b>	<ul style="list-style-type: none"> <li>Reduce the scope of the theme to remove makers of hardware devices such as laptops, mobile devices, headsets and webcams,</li> </ul> <p><b>or, alternatively,</b></p> <ul style="list-style-type: none"> <li>cap weight of hardware equipment subindustries to 10%</li> </ul>	Sharpen the focus of the theme on ed-tech by reducing exposure to generic hardware manufacturers of laptops, webcams, headsets etc.



\*For details of methodology, please refer to <https://www.msci.com/index-methodology>

Information Classification: GENERAL

# Summary of Upcoming Proposals (2/2)

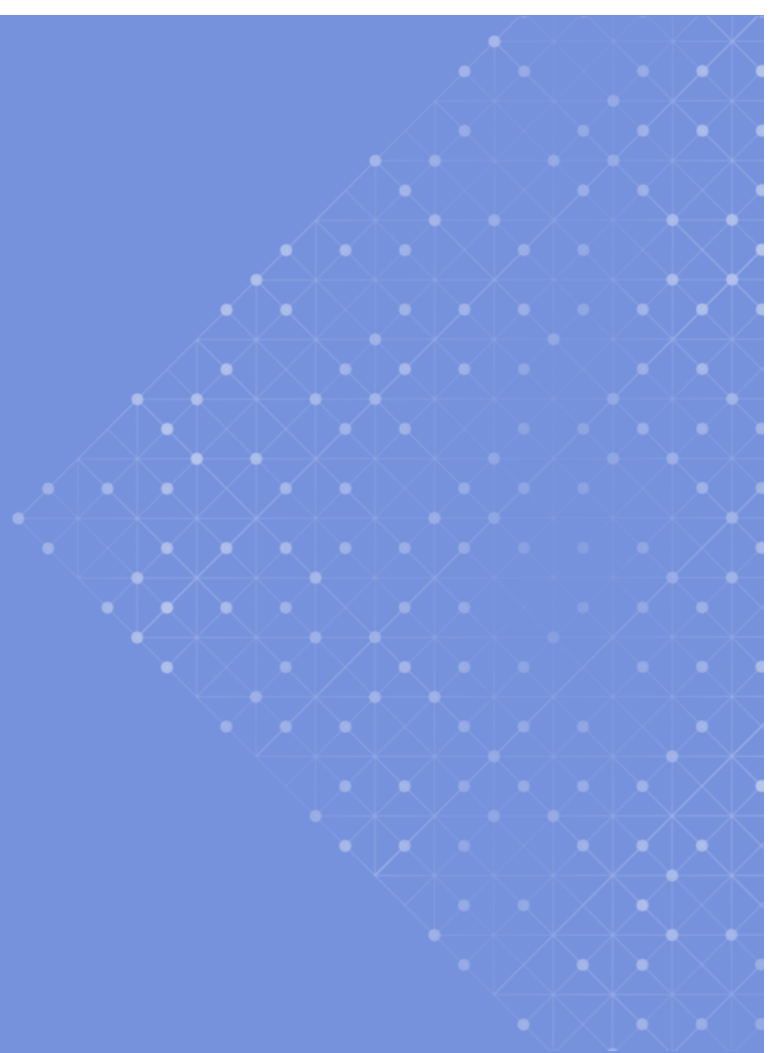
In addition, MSCI will re-organize and clarify the scope of the themes underlying the following two indexes. These changes will improve the documentation of the index methodology but do not impact the indexes in any way

S. No	Current Index Methodology*	Upcoming Change	Expected Benefit(s)
5.	<b>MSCI ACWI IMI Digital Economy</b>	Re-group some existing subthemes under a new 'Metaverse Ecosystem' label	Explicitly reference the emergent concept of the 'Metaverse Ecosystem'
6.	<b>MSCI ACWI IMI Robotics</b>	Re-organize subthemes in the methodology document	Improve transparency of theme scope description

\*For details of methodology, please refer to <https://www.msci.com/index-methodology>



# Theme 1: Efficient Energy



# “Efficient Energy” Proposal 1a – Include emerging fuel sources and technologies via a new subtheme “Future Fuels & Tech”

- Business activities in methodology :

- Power generation from renewable sources of energy
- Development of efficient energy technology
- **Future Fuels and Technology (FFT) for new products and services focusing on:**
  - **Hydrogen Economy\***
  - **Concentrated Solar Power**
  - **Ground Source Heating**

- **Rationale** for inclusion of this subtheme\*\* :

- The Hydrogen Economy\* has rapidly emerged as a key ecosystem which not only includes production of hydrogen for power generation but also hydrogen transportation and related charging infrastructure.
- There have been further advancements in solar technologies. Technologies such as parabolic troughs for “concentrated solar power” have seen cost declines, similar to those for photovoltaic cells. Government grants and tax incentives\*\*\* have been introduced to spur further adoption and growth.
- Stricter regulatory standards (especially for new buildings), government grants and tax rebates\*\*\* and economies of scale have led to growth in demand for ground source heat pumps which have energy efficiency c.4-5x of gas-powered boilers.

\*Regarding hydrogen production within the Hydrogen Economy, the scope of this subtheme has not been limited to only green hydrogen

\*\* For more details, please refer to the MSCI Thematic Insight [here](#)

\*\*\* For example, [Inflation Reduction Act 2022-White House Briefing](#)

# Impact of Proposal: distribution by industry & country

- As of May 2022 SAIR, 20 stocks would have been added to the ACWI IMI Efficient Energy Index (it currently has 171 stocks)
- Proposed index would have included companies from GICS® subindustries not in the current index



Data as of June 1, 2022. For details of the full index under the proposal, please refer to the accompanying spreadsheet



# Transition turnover would have been double current turnover, due to the addition of stocks from Industrial Gases

1-way index turnover, May 2022 SAIR	Turnover	Due to Additions	Due to Deletions	Due to Maintained
<b>Current index*</b>	<b>19%</b>	<b>8%</b>	<b>2%</b>	<b>9%</b>
<b>Proposed Index**</b>	<b>45%</b>	<b>22%</b>	<b>2%</b>	<b>20%</b>
<i>Breakdown of turnover by top sub-industries</i>				
Renewable Electricity	8%	0%	0%	7%
Oil & Gas Refining & Marketing	6%	2%	1%	3%
Oil & Gas Equipment & Services	5%	5%	0%	0%
Industrial Gases	5%	5%	0%	0%
Semiconductor Equipment	4%	0%	0%	4%
Commodity Chemicals	3%	3%	0%	0%
Electrical Components & Equipment	2%	1%	0%	1%
Heavy Electrical Equipment	2%	0%	0%	2%

\* Measured as the one-way index turnover of the current index as of May 31, 2022, and the current index as of June 1, 2022

\*\*Measured as the one-way index turnover of the current index as of May 31, 2022, and the proposed index as of June 1, 2022



# Proposal 1b: Auto and auto parts makers should be excluded from the ACWI IMI Efficient Energy Index

The proposed subtheme would have led to the addition of 2 **auto parts manufacturers** in the index (total weight of c.1%).

Since fuel cell electric vehicles produce hydrogen from fuel cells\* to power the vehicle, certain **automobile manufacturers** might be selected in future index reviews.

We do not consider these manufacturers as central to the overall objective and scope of the Efficient Energy theme

**Proposal: Exclude two GICS Subindustries:**

- 1) **Auto Manufacturers**
- 2) **Auto Parts & Equipment**

**from the ACWI IMI Efficient Energy Index after including the subtheme Future Fuel & Tech.**

Name	GICS® Subindustry	Relevance Score (Proposed Theme)	Relevance Score (Current Theme)
MAGNA INTERNATIONAL	Auto Parts & Equipment	45%	NA
SOLID POWER	Auto Parts & Equipment	29%	21%
HONDA MOTOR	Auto Manufacturers	16%	NA
GENERAL MOTORS CO	Auto Manufacturers	9%	2%
BYD CO	Auto Manufacturers	7%	7%
FORD MOTOR CO	Auto Manufacturers	4%	NA
TESLA	Auto Manufacturers	1%	NA

# Proposal 1c: Allow securities from “Construction Machinery & Heavy Trucks” to be eligible

Currently, companies mapped to the GICS® sub-industry ‘Construction Machinery & Heavy Trucks’ are excluded since this sub-industry is not pertinent to overall scope of the Efficient Energy theme.

However, if the subtheme ‘Future Fuels & Tech’ is incorporated, the ‘Construction Machinery & Heavy Trucks’ industry can be relevant given the growth of hydrogen fuel-powered truck makers as well as the providers of charging infrastructure for hydrogen powered vehicles.

**Proposal: Remove the ‘Construction Machinery & Heavy Trucks’ GICS® subindustry exclusion from the ACWI IMI Efficient Energy Index.**

Name	Relevance Score (Current)	Relevance Score (Proposed Theme)	Included in simulated May 2022 rebalance?
Cummins	NA	29%	Yes
Nikola	NA	>25%	Yes
Korea Shipbuilding	4.1%	4.1%	No

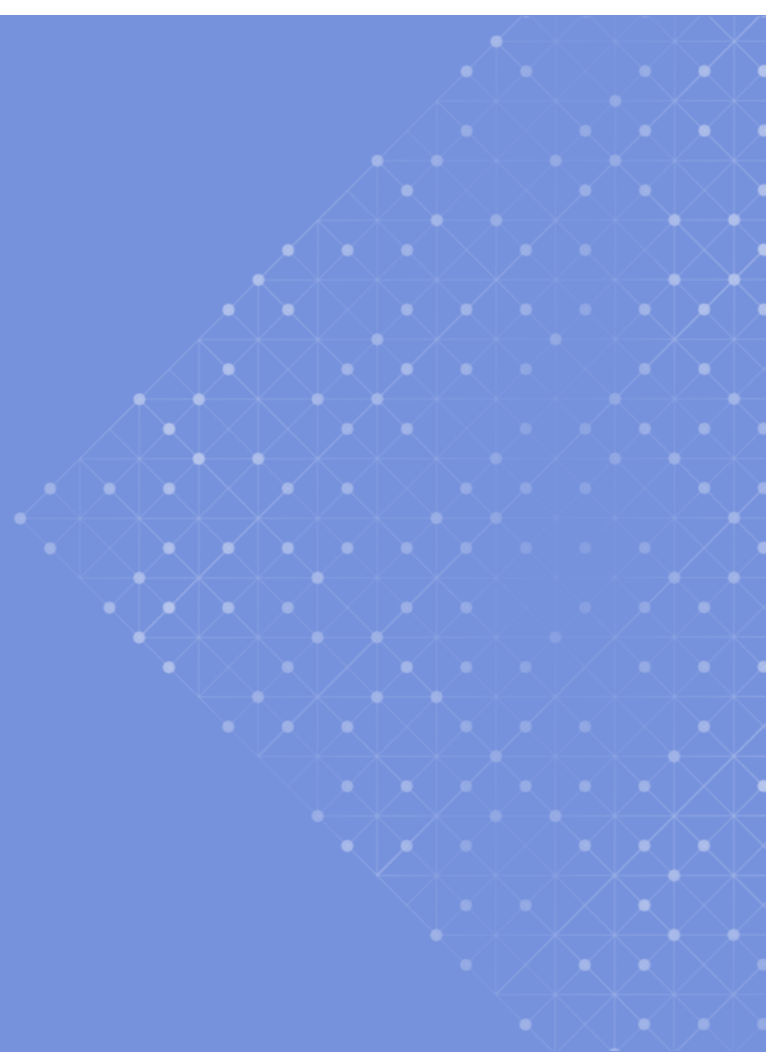
Data as of June 1, 2022



# Efficient Energy – Summary of Consultation Questions

- Should the subtheme of Future Fuels & Tech be included in the scope of the “Efficient Energy” theme?
- Should the GICS® sub-industries “Automobile Manufacturers” and “ Auto Parts & Equipment” be excluded from the ACWI IMI Efficient Energy Index?
- Should the GICS® sub-industry “Construction Machinery & Heavy Trucks” be included in the ACWI IMI Efficient Energy Index ?

## Theme 2: Cybersecurity



# Cybersecurity Proposal 2a – Add the subtheme “Rapid Response and Remediation” to reflect the changing focus of cybersecurity services

- Business activities in methodology :

- Providing cybersecurity hardware and software products
- Providing cybersecurity services
- Implementing and managing network security protocols
- Ensuring data integrity
- **Rapid Response and Remediation**

- **Rationale** for inclusion of this new subtheme\*:

- In the early and mid-2010s, cybersecurity opportunities predominantly lay with a ‘prevention and defense’ strategy.
- But the nature of cyberthreats has evolved, partly due to a remote, distributed and increasingly mobile workforce.
- This suggests that the traditional focus on ‘*the perimeter*’ is insufficient and a transition to a ‘rapid response and remediation’ strategy may be required.
- Such a strategy includes :
  - Incident response and management,
  - Incident log management,
  - Security reset

# Impact of Proposed subtheme addition: 3 new stocks are added, transition turnover inline with historical range

Three new stocks would have been added to the Index, as of May 2022 SAIR. A few other securities would see increased relevance scores.

Key stocks with exposure to new subtheme	Relevance Score (Current)	Relevance Score (Proposed)
Pagerduty	NA	96%
Datadog	NA	30%
Microfocus Intl.	NA	30%
Crowdstrike	61%	75%

1-way index turnover May 2022 SAIR:	Turnover	Due to Additions	Due to Deletions	Due to Maintained
<b>Current index*</b>	<b>19.0%</b>	<b>6.0%</b>	<b>2.7%</b>	<b>10.3%</b>
<b>Proposed Index**</b>	<b>21.8%</b>	<b>8.0%</b>	<b>2.6%</b>	<b>11.3%</b>

\* Measured as the one-way index turnover of the current index as of May 31, 2022, and the current index as of June 1, 2022

\*\*Measured as the one-way index turnover of the current index as of May 31, 2022, and the proposed index as of June 1, 2022



Data as of June 1, 2022. For details of the full index under the proposal, please refer to the accompanying spreadsheet

Information Classification: GENERAL

# Cybersecurity proposal 2b: Healthcare sector added to the list of GICS®-based exclusions

Some natural Cybersecurity terms ('worm', 'virus', 'anti-virus') may risk false positives with companies in the healthcare sector.

These false positives are currently controlled via the SIC Code validation in the methodology. However, to further reduce the risk of unintended inclusion, we propose to explicitly exclude the GICS Healthcare sector.

Affected securities, as of May 2022 SAIR, simulated rebalance:

Name	GICS Subindustry	Keyword matches	SIC Code	Relevance Score	Comment
CMG Pharmaceutical	Pharmaceuticals	virus, anti-virus	2834	NA	SIC Code safety net to control this
Well Health Technologies	Healthcare Services	security solution, cybersecurity	7379	2%	Valid for Cybersecurity

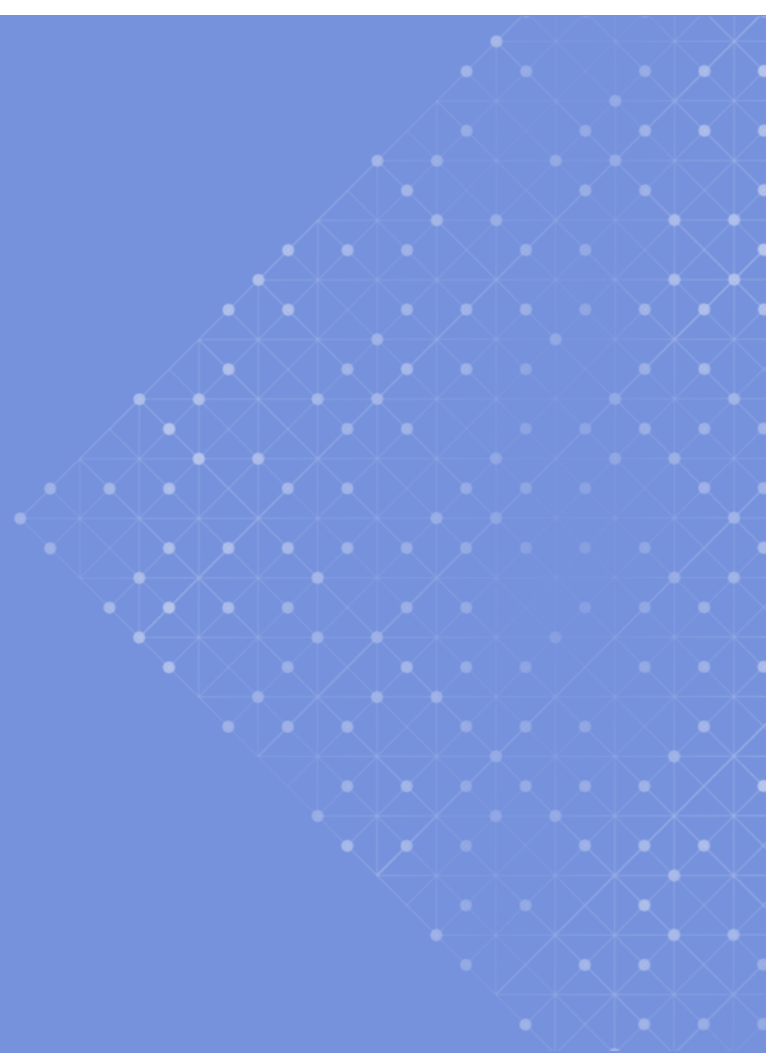
**Proposal: Exclude the GICS® Healthcare sector from the ACWI IMI Cybersecurity Index.**



# Cybersecurity – Summary of consultation questions

- Should the subtheme 'Rapid Response and Remediation' be added to the Cybersecurity theme ?
- Should the GICS® Healthcare sector be excluded from the ACWI IMI Cybersecurity Index?

# Theme 3: Food Revolution



# Food Revolution Proposal 3a – Add “Insect-based protein” as a subtheme

- Business activities in methodology:
  - Sustainable & Responsible Agriculture
  - Plant-based meat and agricultural technology
  - Zoonotic disease mitigation
  - Food delivery technology
  - **Insect-based protein**
- **Rationale** for inclusion of this subtheme\*\*:
  - Insect eating, formally called *entomophagy*, is well-established as a source of protein in many diets across Asia, Africa and Latin America.
  - It may now be poised for wider acceptance given the rise of the sustainability-conscious consumer and the impact of climate change.
  - As a farmed species, insects require fewer resources (land, water and feed) and produce far less green-house gas emissions and waste than traditional sources of meat.
  - This makes edible insects a climate-friendly alternative protein like plant-based meat (already in scope of this theme).

\*\*For more details, please refer to the links below:

<https://www.fao.org/3/i3253e/i3253e.pdf> ; <https://www.digitalfoodlab.com/%F0%9F%90%9C-big-bucks-small-bugs/>

<https://time.com/5942290/eat-insects-save-planet/>

<https://www.bbc.com/future/article/20220720-why-insects-are-the-sustainable-superfood-of-the-future>

# No additions to the Index in the simulated May 2022 index review due to the addition of the proposed subtheme

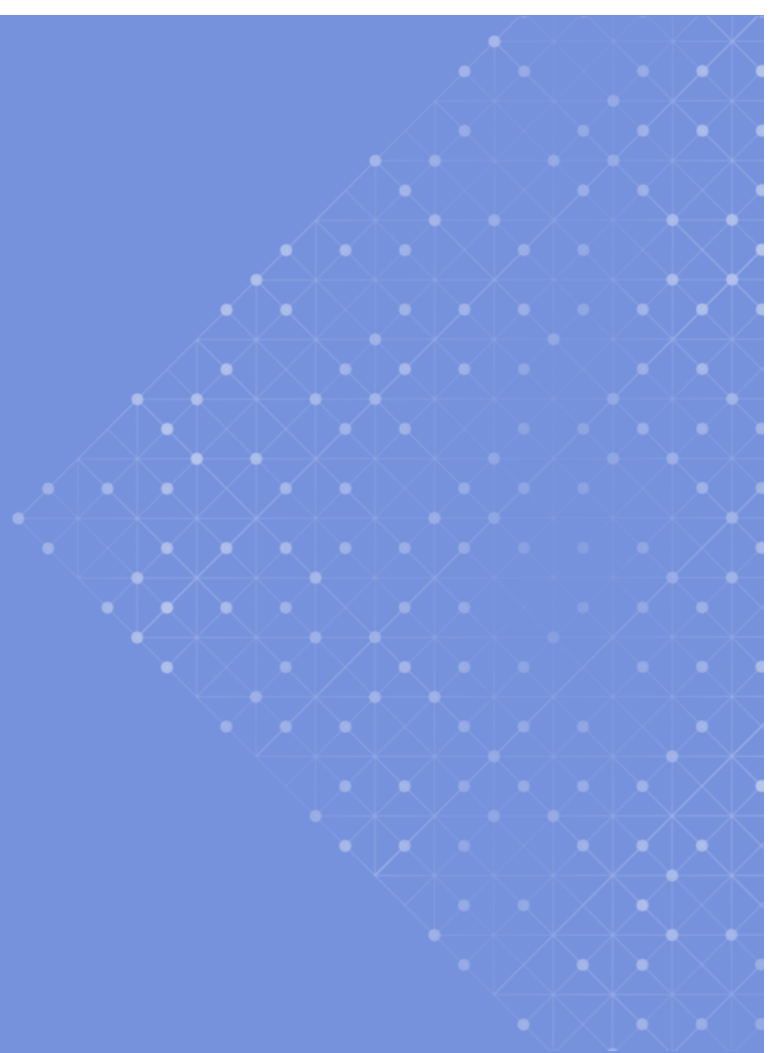
While no new stocks would have been added to the index in the May 2022 SAIR by adding this subtheme, we have illustrated the proposal with the following examples of companies involved in products and services associated with insect-based protein consumption:

- a) [Flying Spark](#) (IPO'd in 2021 but is not yet a constituent of ACWI IMI)
- b) [Ynsect](#)
- c) [Protix](#)
- d) [Agronutris](#)
- e) [Beta Hatch](#)
- f) [VeXo](#)
- g) [Chapul Farms](#)

# Food Revolution – Summary of consultation questions

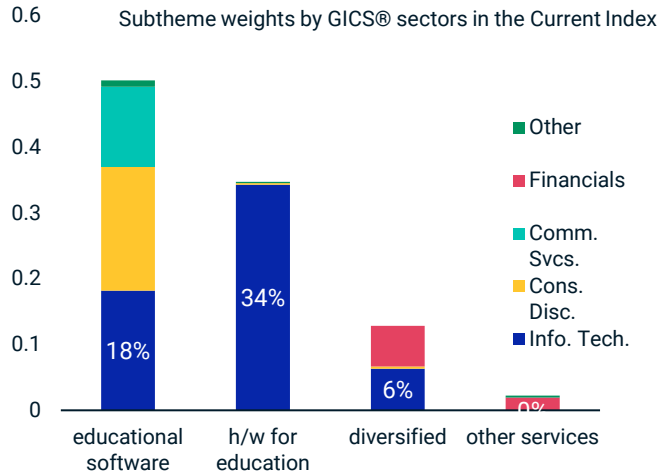
- Should the subtheme 'Insect-based protein' be added to the Food Revolution theme ?

# Theme 4: Future Education



# Future Education Proposal 4 – Tighter focus on ed-tech and learning platforms

The ACWI IM Future Education Index was launched during the accelerated phase of online learning adoption in 2H 2020. At that time, access to mobile devices and hardware such as laptops, webcams, headsets was a significant enabler. This has led to an overweight of the Information Technology sector, e.g., 59% in the index as of June 1, 2022.



To sharpen the focus on ed-tech and learning platforms in the ACWI IMI Future Education Index, we propose to

a. **Remove business activities related to generic products and services for equipment such as laptops, webcams, headsets and other mobile devices**

*Or, alternatively,*

b. **Cap the aggregate weight of the GICS® subindustries related to semis and hardware equipment in the Index to 10%. The excess weight would be re-distributed to the rest of the Index, before the issuer cap of 5% is applied.**

# Proposal 4: detailed description

## Proposal:

**Narrow the “hardware for education” subtheme by removing equipment such as laptops, webcams, headsets and other mobile devices.** No other changes\* are proposed under this proposal.

- Business activities in methodology:
  - online, digital and connected learning platforms for higher education, professional education, distance education, certification and skill development,
  - hardware such as ~~webcams, headsets, widescreen displays, biometric ids and sensors as well as~~ telepresence and video conferencing devices,
  - other education services such as student loans and student housing

## Alternative:

**Cap the aggregate weight of the following GICS® subindustries in the Index to 10%\*\*.** The excess weight would be re-distributed to the remaining securities in the Index. The usual issuer cap\*\*\* of 5% would then be applied to the Index.

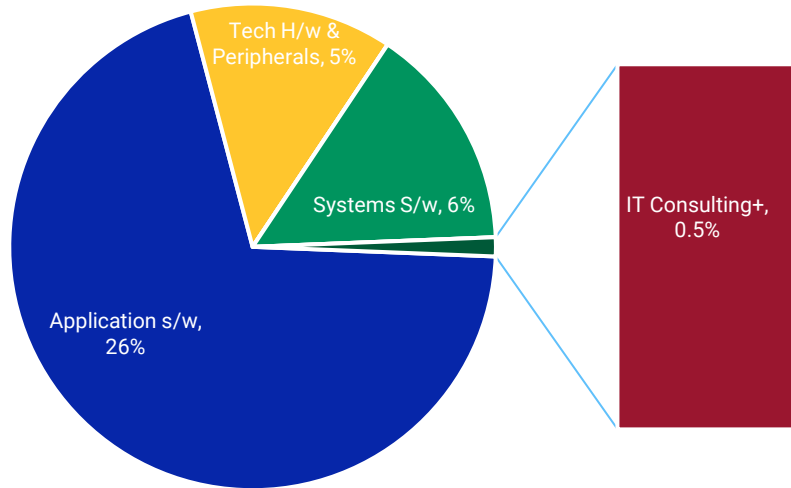
- Technology Hardware, Storage Peripherals
- Semiconductors
- Semiconductor Equipment
- Electronic Components
- Technology Distributors
- Communications Equipment
- Electronic Equipment Instruments
- Electronic Manufacturing Services



# Impact of proposals on weight of subindustries in Info. Tech

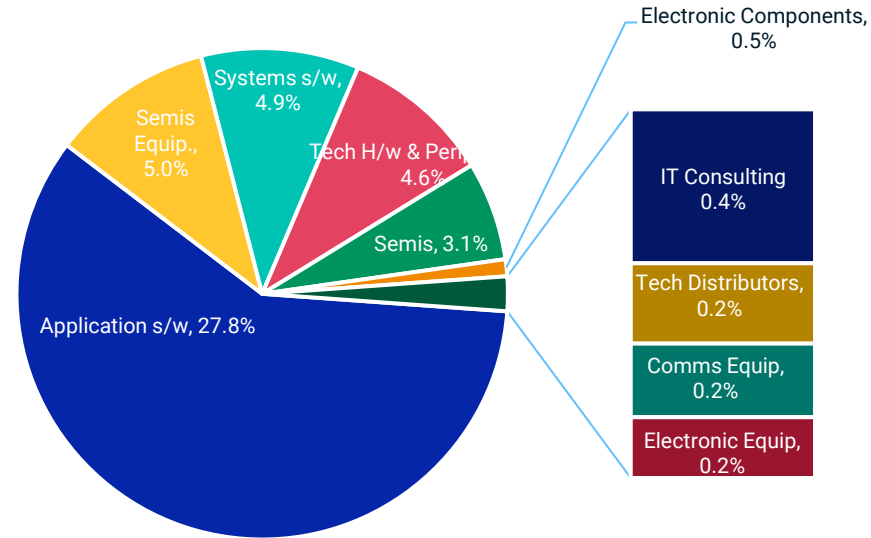
- Index for the Proposal

- Reduced scope dropped 21 securities vs. the current Index methodology
- 55 constituents in the Index
- 37.5% weight in Info. Tech. vs. 59% in current Index



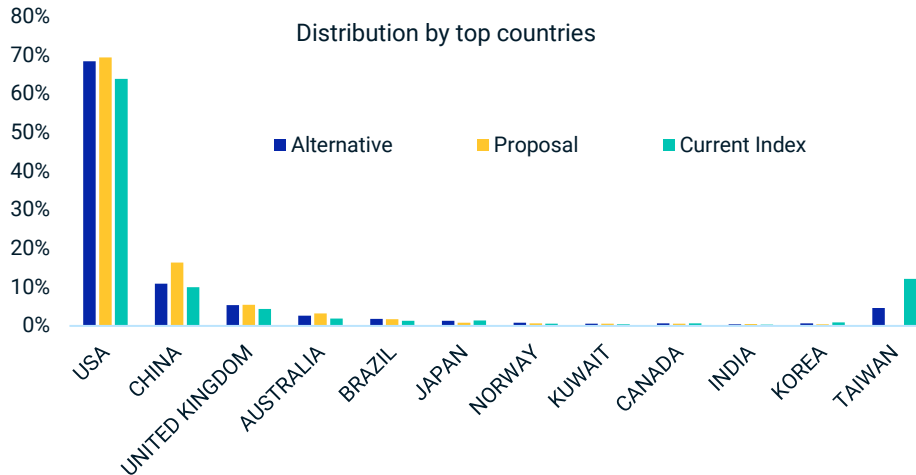
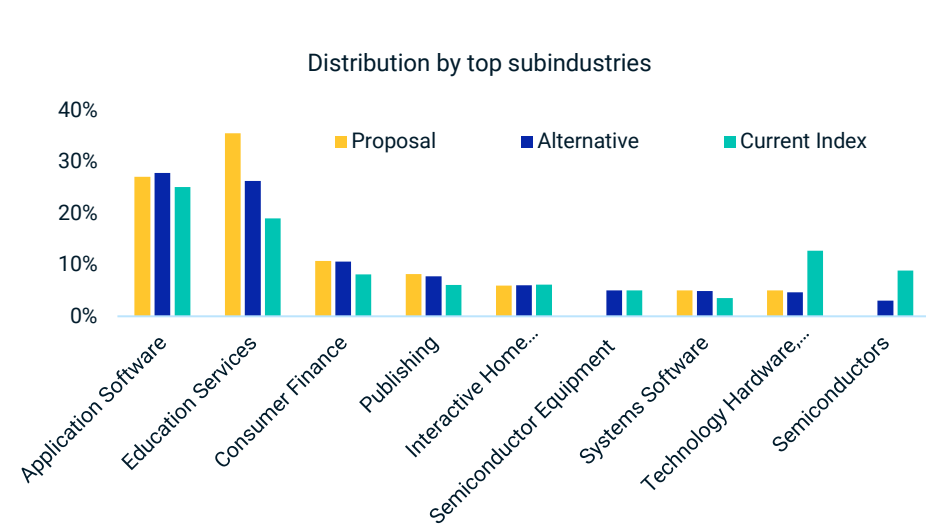
- Index for the Alternative

- No additions or deletions vs. live Index
- 76 constituents in the Index
- 47% weight in Info. Tech. vs. 59% in current Index



# Impact of proposals on sub-industry and country distribution

- **Proposal** – In May 2022 SAIR simulation, elimination of exposure to business activities related to semis, semi equipment and other hardware related component makers; it also eliminated exposure to Taiwan
- **Alternative** – Reduced exposures to semis, semi equipment and other hardware component makers



# Impact of proposal on constituent weights and index turnover

Key changes in weight of index constituents vs. the current index in May 2022 SAIR simulation (data as of June 1, 2022)

Name	GICS® Subindustry	Current Index	Proposal	Alternative
ASUSTEK COMPUTER	Technology Hardware, Storage & Peripherals	5.0%	0.0%	2.0%
APPLIED MATERIALS	Semiconductor Equipment	5.0%	0.0%	5.0%
SYNAPTICS	Semiconductors	3.1%	0.0%	1.1%
PARADE TECHNOLOGIES	Semiconductors	2.7%	0.0%	0.9%
AMBARELLA	Semiconductors	2.2%	0.0%	0.8%
WISTRON CORP	Technology Hardware, Storage & Peripherals	1.1%	0.0%	0.4%

The one-way transition index turnover for both proposed options is well above the one-way index turnover during a regular rebalance

1-way index turnover in May 2022 SAIR of :	Turnover	Due to Additions	Due to Deletions	Due to Maintained
<b>Current Index*</b>	24.1%	9.6%	7.6%	6.9%
<b>Index under Proposal**</b>	39.3%	6.9%	19.0%	13.4%
<b>Index under Alternative**</b>	31.2%	8.0%	7.6%	16.1%



\* Measured as the one-way index turnover of the current index as of May 31, 2022, and the current index as of June 1, 2022

\*\* Measured as the one-way index turnover of the current index as of May 31, 2022, and the proposed index as of June 1, 2022

Information Classification: GENERAL

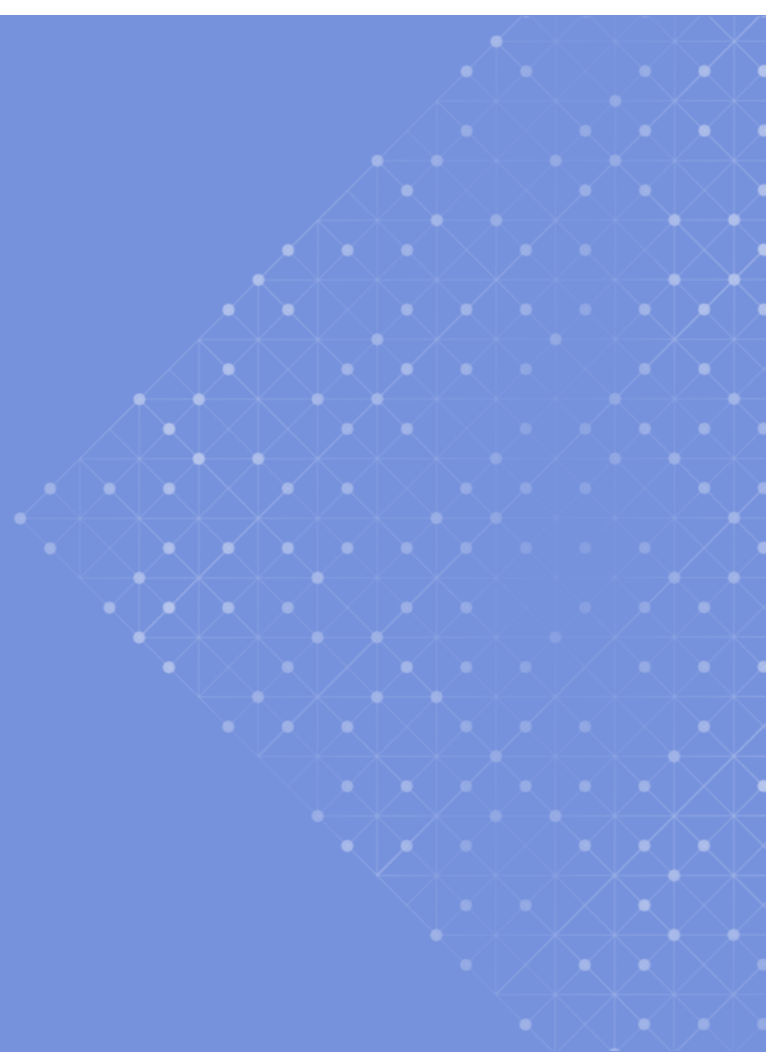
# Summary of consultation questions

- Should the subtheme 'hardware for education' be narrowed to remove generic makers of laptops, webcams, headsets from scope ?
  - *Index would lose "beta" to some enablers of education technology*

Or, alternatively,

- Should the aggregate weight of the tech hardware subindustries be capped in the ACWI IMI Future Education Index to 10% ?
  - *GICS methodology overrides thematic exposure directly – is this misaligned?*
  - *Weighting scheme becomes less transparent versus current relevance score tilt*
  - *What should be the choice of capping level?*
  - *Industry cap may not be respected by issuer cap*

# Theme 5: Digital Economy



# Digital Economy Proposal 5 – Subthemes explicitly reference the “metaverse” concept; no impact to index

- Business activities currently in the methodology:
  - Digital Payments
  - E-commerce
  - Social Media
  - Cybersecurity
  - Cloud Computing
  - Robotics
  - Sharing Economy
- Re-organized business activities to be listed in methodology book :
  - **Metaverse Ecosystem\***
    - **Digital Payments**
    - **E-commerce**
    - **Social Media (including augmented reality /virtual reality/ e-gaming)**
    - **Blockchain (including technology and protocols for decentralized finance)**
    - **Artificial Intelligence**
  - Cybersecurity
  - Cloud Computing
  - Robots and Automation
  - Sharing Economy

\*For details of the scope of the Metaverse Ecosystem, please refer to the MSCI Thematic Insight [The metaverse concept - what could it mean for a more digital future?](#)

# Overlap: “Digital Economy” and “Metaverse” concepts

## Subthemes currently in ACWI IMI Digital Economy Index

Digital Payments

E-commerce

Social Media

Robotics

Automation  
Robots (Industrial, Non-industrial,  
Autonomous)  
AI & ML

Sharing Economy

Blockchain  
Ride sharing  
Crowdsourcing  
Crowdfunding  
Peer to peer

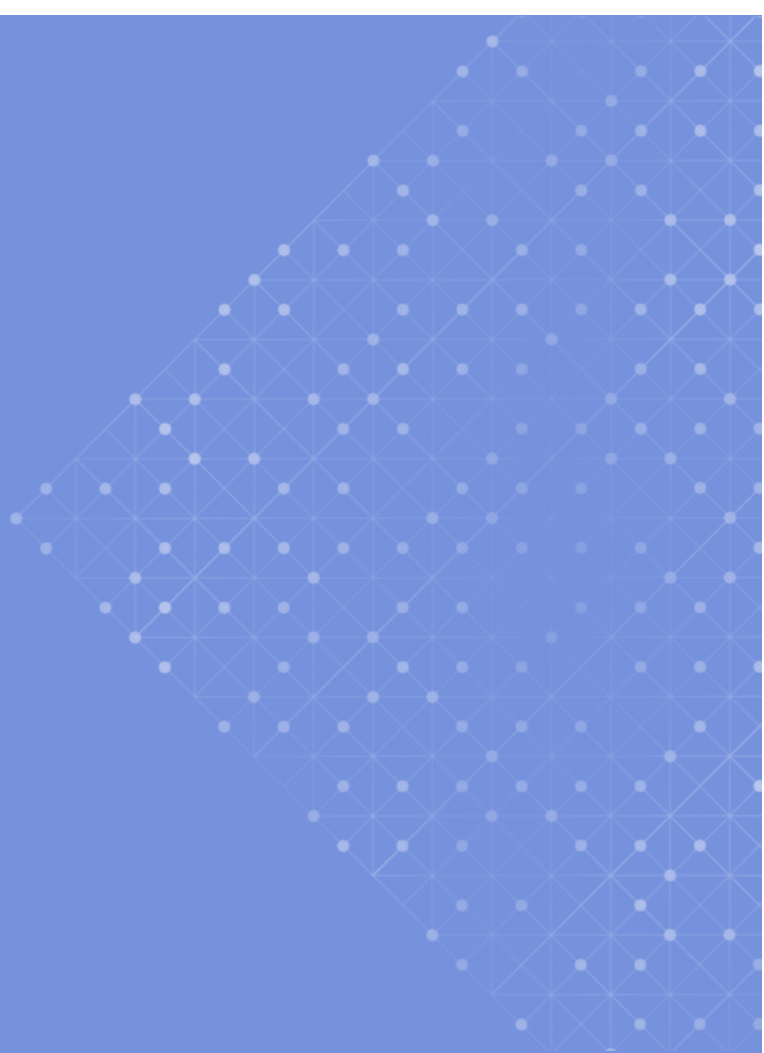
Cloud computing

Cybersecurity

Red highlighted boxes indicate subthemes that have been associated with the metaverse ecosystem and will be grouped under this new subtheme

Metaverse  
Ecosystem

# Theme 6: Robotics





# Robotics Proposal 6 – Scope of this theme to be explained better in the methodology document; no impact to Index

- Business activities currently in the methodology
  - Robots
    - Industrial Robots
    - Non-industrial Robots
    - Autonomous Robots
  - AI
  - Automation
- **Re-organization** of business activities in the methodology:
  - Robots:
    - Industrial
    - Non-industrial, including
      - Consumer robots
      - Surgical robots
    - Autonomous
  - Artificial Intelligence
  - Automation

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