



High Performance Buildings Initiative

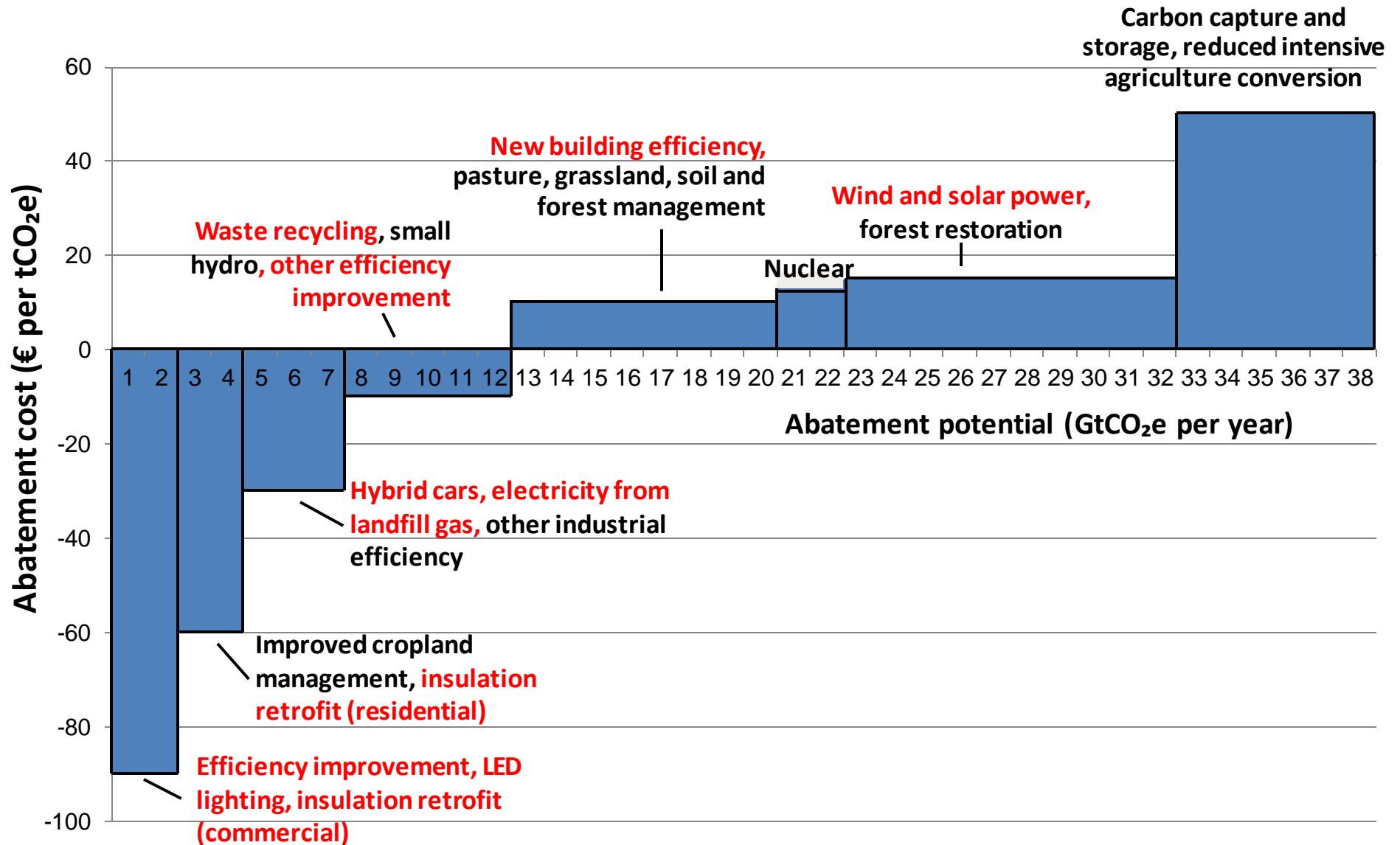
Overview and Status



Global GHG abatement cost curve for 2030

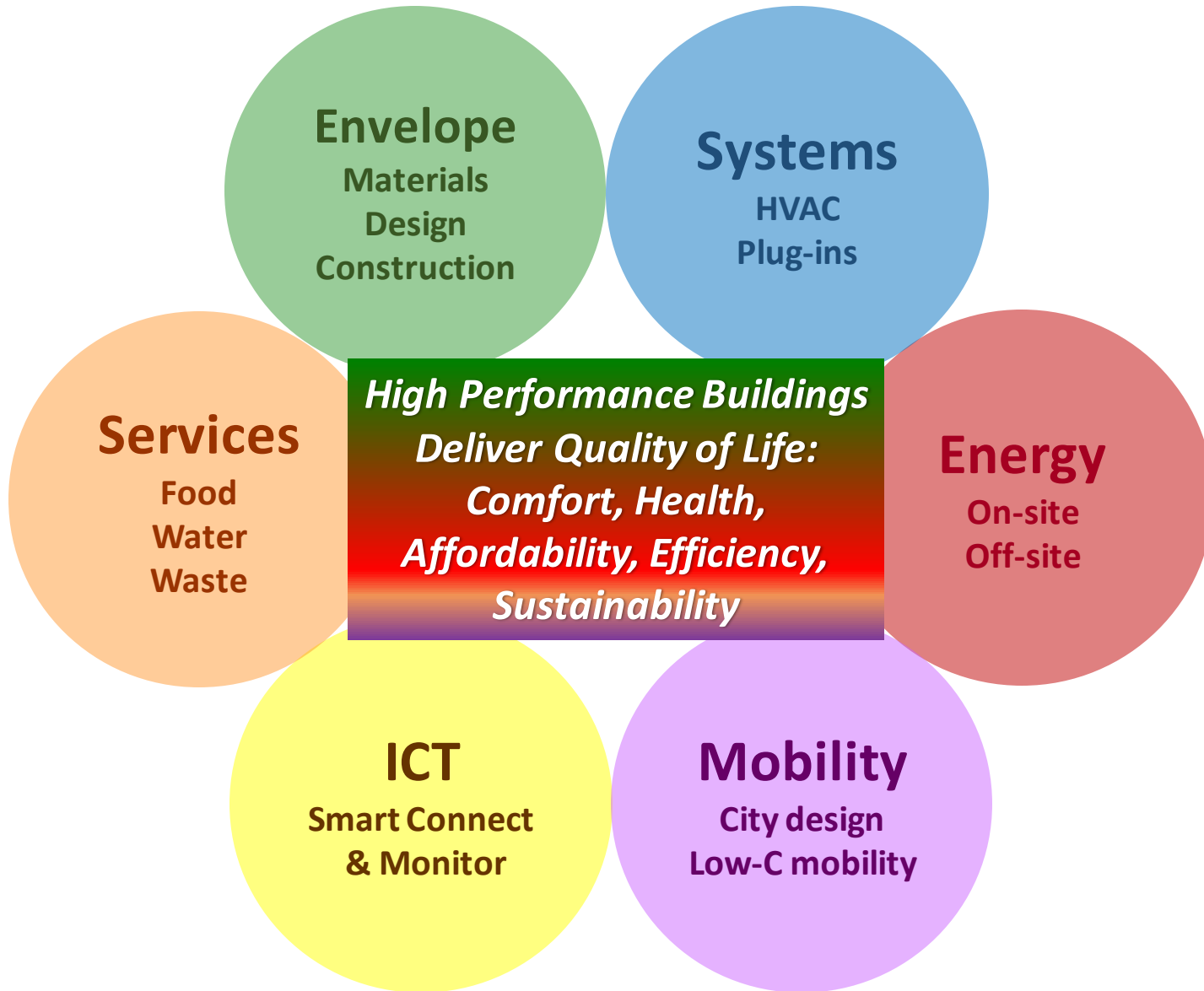


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High Performance Buildings

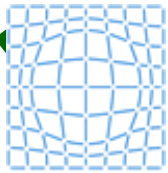
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High Performance Buildings Initiative

**International Centres
of Excellence**



**High Level
Strategy Group**



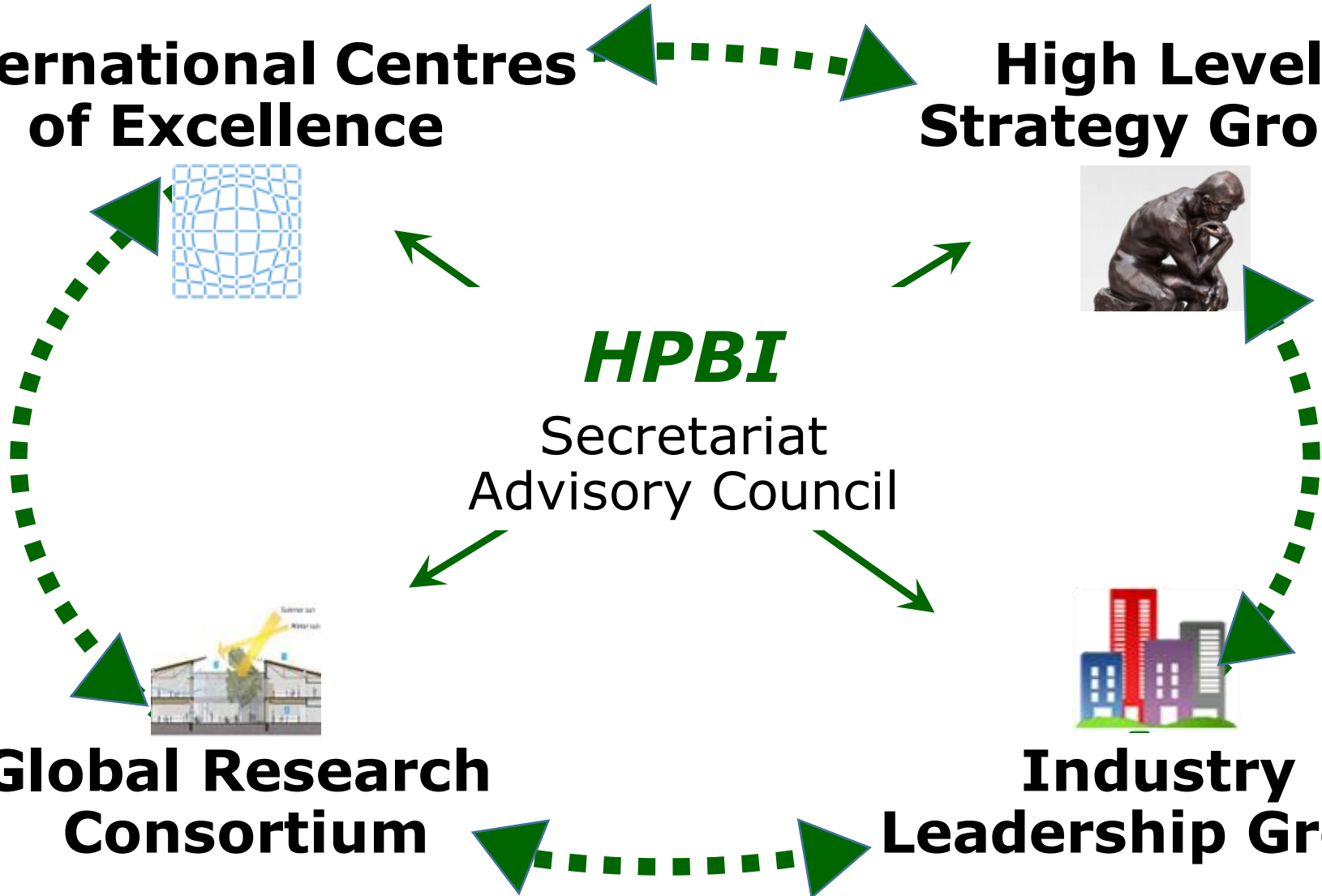
HPBI

Secretariat
Advisory Council

**Global Research
Consortium**

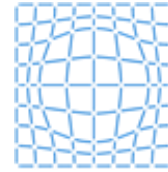


**Industry
Leadership Group**





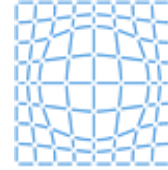
International Centres of Excellence



- Provide **implementation-oriented education and assistance** to building developers, contractors, architects, engineers, and regulatory and planning officials.
- Provide **community-centric knowledge development and sharing**, connecting with resources and accelerating uptake of high-performance buildings.
- Activities include:
 1. Dialogue to identify challenges, share best practices and build a community of practice;
 2. Dissemination of knowledge w/ education, training, exhibits, case studies, research, demonstration projects, and print and on-line resources;
 3. Catalyze design and construction industry tools and training development, and identify potential barriers to adoption and implementation; and
 4. Foster public demand and support for best practices through recognition and awards, open houses and tours, communication and marketing campaigns, public events, and demonstration projects.



International Centres of Excellence



Existing

1. New York City (BEEEx)
2. Pittsburgh (Green Building Alliance)
3. Construction Scotland Innovation Centre (Scotland)
4. High Performance Building Alliance (Ireland)
5. South West College Innotech Center (Northern Ireland/UK)
6. Building Innovation Hub (United States)
7. EnEffect (Bulgaria)
8. Passivhaus Maine (United States)
9. Passivhaus Canada (Canada)
10. Passivhaus Trust (UK)

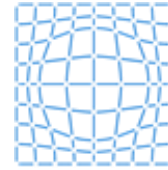
High Performance Buildings Initiative Secretariat (Ireland)



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High Performance Buildings Initiative

International Centres of Excellence

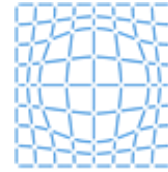


In discussion

1. Passive House Institute (Germany)
2. Econoler (Quebec City, Canada)
3. City of Vancouver, Canada
4. Hellenic Passive House Institute (Greece)
5. ZEPHIR Passivhaus Italia (Italy)
6. Onion Flats HPB Strategy (United States)
7. Bruxelles Environnement (Belgium)
8. European Center for Research & Education of Environmental Geoscience (France)
9. Barcelona Laboratory for Urban Environmental Justice & Sustainability (Spain)
10. Exeter City Council (UK)
11. City of York
12. Laval University (Canada)
13. Potomac Valley Architecture Foundation (US)
14. Innovation and Technology Department, City of Sioux Falls, South Dakota (US)



International Centres of Excellence



Future Centres

1. 2030 District Centres (5)
2. 5 associate centres of EnEffect (south-east Europe)
3. 3 centres California
4. Additional centres to be established in eastern Europe, Caucasus, and central Asia as part of the IKI programme



Global Research Consortium



Research and advanced education in building materials, design, and construction for current and next generation architects, engineers, policy makers and other stakeholders will be needed.

Development of **new, holistic curricula and texts** and regular updates as the science of buildings progresses.

Researchers and the educational community will **promote sustainable, high performance buildings worldwide** in support of both the UNECE Framework Guidelines and the International Centres of Excellence.

PSU and financial contributions

Global Research Consortium



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1	University of New South Wales	Australia		
2	University of Queensland	Australia	21	Technical University of Lisbon Portugal
3	McMaster University	Canada	22	National University of Singapore Singapore
4	Hong Kong University of Science and Technology	China	23	KTH Royal Institute of Technology Sweden
5	Berlin Institute of Technology	Germany	24	Swiss Federal Institute for Materials Testing and Research Switzerland
6	EUROPEAN GROUP FOR INTELLIGENT COMPUTING IN ENGINEERING	Germany	25	Swiss federal Institute of Technology in Lausanne Switzerland
7	TECHNICAL UNIVERSITY OF BERLIN	Germany	26	Istanbul Technical University Turkey
8	Technische Universität Darmstadt	Germany	27	Cardiff University UK
9	Technische Universität München	Germany	28	Glasgow Caledonian University UK
10	Indian Institute of Technology Bombay	India	29	Loughborough University UK
11	Heriot Watt University	Isreal	30	University of Nottingham UK
12	Alma Mater Studiorum-University of Bologna	Italy	31	University of Sheffield UK
13	Nat. Res. Cncl, DEPT. CHEM SCIENCES & MATERIAL	Italy	32	American Council for an Energy Efficient Economy USA
14	Narxoz University	Kazakhstan	33	CONSINFRA SAS/CONSINFRA LLC USA
15	Nazarbayev University	Kazakhstan	34	Hillcroft Group USA
16	Satbayev University	Kazakhstan	35	Marketing for Change USA
17	MOI University	Kenya	36	RESILIENCE CAPITAL VENTURES LLC USA
18	University of Nairobi	Kenya	37	University of Florida USA
19	Delft University of Technology	Netherlands	38	WORCESTER POLYTECHNIC INSTITUTE USA
20	Eindhoven University of Technology	Netherlands		



High Level Strategy Group



Protocol: objectives, solutions, and priority actions to deliver required outcomes.

Outreach: raise importance of built environment for addressing climate change and 2030 Agenda.

Current Membership: recognized thought leaders in the field of buildings and the built environment.

Future membership: thought leaders from mobility, energy supply, information and communications technology, water management, and other building services (e.g., food and waste).

Near-term objective for the HLSG will be to recruit a fully-representative thought leadership group.

High Performance Outcomes – QoL

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- *Energy & climate (affordable & clean energy)*
- *Resilience (affordability, weather - heat, cold, wind)*
- *Health (comfort, indoor and outdoor air pollution)*
- *Social justice, equity*
- *Water (deluge, drought, contamination, sanitation)*
- *Resource conservation (land use, materials, waste)*
- *Mobility*
- *Technology access*
- *Systemic effectiveness and technical efficiency*



Industry Leadership Group



Mobilise industry and financial partners to deliver case studies and demonstrations of the principles at work (IKI).

Ongoing contacts with industry leaders (Covestra, Kingspan, AIB, Danfoss, PJDick) – 4th pillar re-named Industry Leadership Group.

Group in formation. Expected to deliver significant resources to underpin HPBI.

Result: application of Framework Guidelines through demonstration projects around the world to validate them in different climates, stages of development, and regulatory, legislative, and physical infrastructure.

Result: library of case studies for reference and to support training and education.



Secretariat Advisory Council

The mobilisation and coordination of the initiative will require a fully resourced HPBI secretariat, mandated by member States to accomplish the following functions:

Administration

→ Administer; Recruit; Convene; Support

Outreach, Communications, Branding, Messaging

→ **Outreach:** senior-level relationships; alignment with other initiatives

→ **Communications:** website; on-line communications platform for network education and training; online audio-visual, social media, and printed media, including outreach to journalists

→ **Branding & Messaging:** coordinated curriculum and activity themes

→ **Fundraising:** Secretariat, members of the initiative, proposals for case studies

Advisory Council – Representatives of each pillar plus UNECE providing strategic direction



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Thank you!

Sustainable Energy

UNECE

23 | 04 | 2021, Cloud

