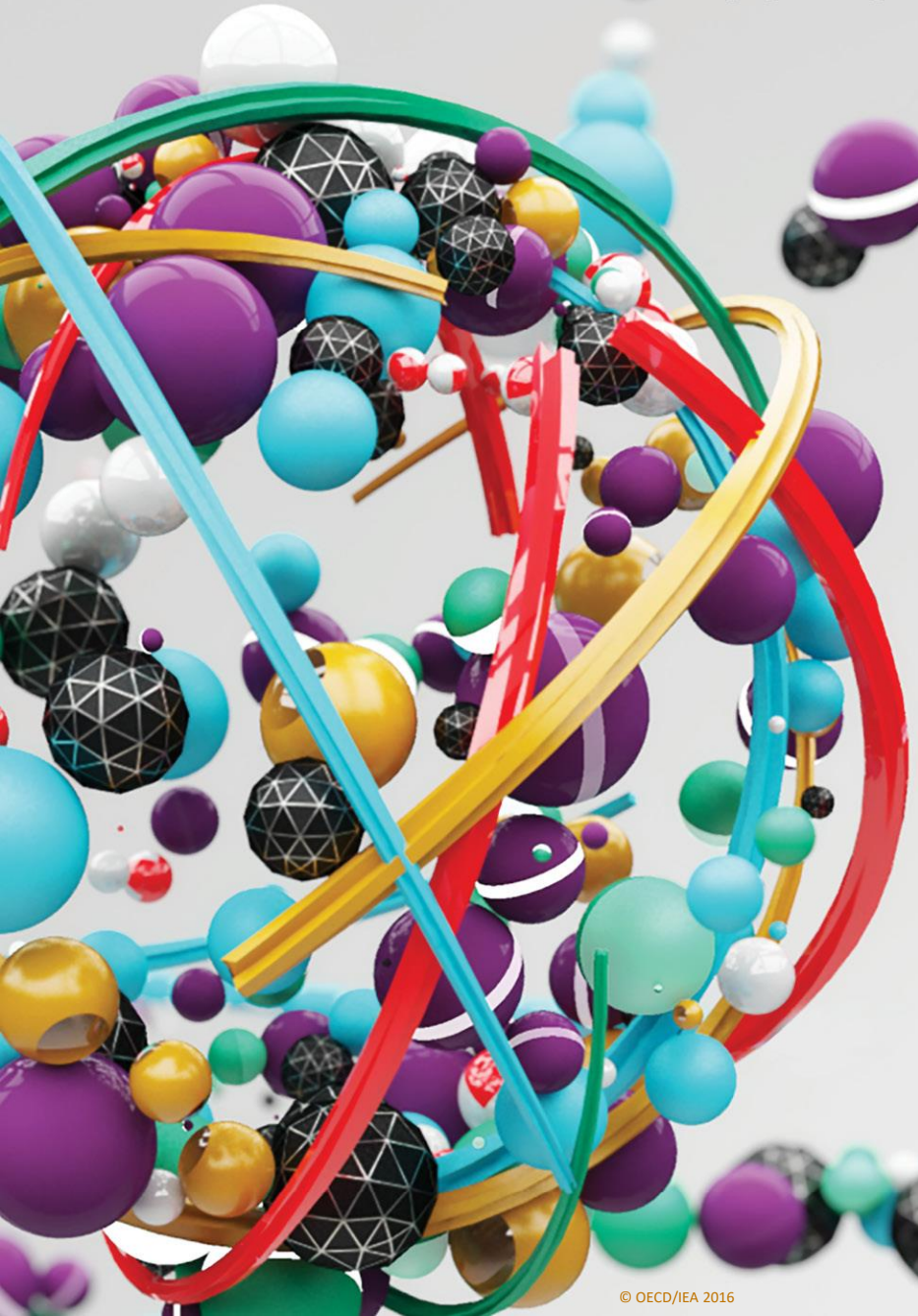
Technology Collaboration Programmes



IEA 2nd TCP Universal Meeting
9 October 2017

Working Party on Energy End-Use Technologies (EUWP)

Gudrun Maass, EUWP Chair

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Working Party on Energy End-Use Technologies

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TCPs in the EUWP portfolio (14)

- **End-use: Buildings**
  - Buildings and Communities (EBC TCP)
  - District Heating and Cooling (DHC TCP)
  - Energy Efficient End-use Equipment (4E TCP)
  - Energy Storage (ECES TCP)
  - Heat Pumping Technologies (HPT TCP)
- **End-use: Electricity**
  - Demand-Side Management (DSM TCP)
  - High-Temperature Superconductivity (HTS TCP)
  - Smart Grids (ISGAN TCP)
- **End-use: Industry**
  - Industrial Technologies and Systems (IETS TCP)
- **End-use: Transport**
  - Advanced Fuel Cells (AFC TCP)
  - Advanced Materials for Transportation (AMT TCP)
  - Advanced Motor Fuels (AMF TCP)
  - Clean and Efficient Combustion (Combustion TCP)
  - Hybrid and Electric Vehicles (HEV TCP)

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Developments since the last TCP Universal Meeting (September 2015)

- **Communication and interaction has been strengthened**
  - New RfE procedures and new Communication Framework have been implemented
  - Workshops with TCPs prior to March meetings
  - Roundtable with TCPs to address their concerns at March meeting
  - Close interaction between Chair, Vice-Chairs and TCPs in all end-use sectors
    - Mapping of activities
    - Discussion of joint activities

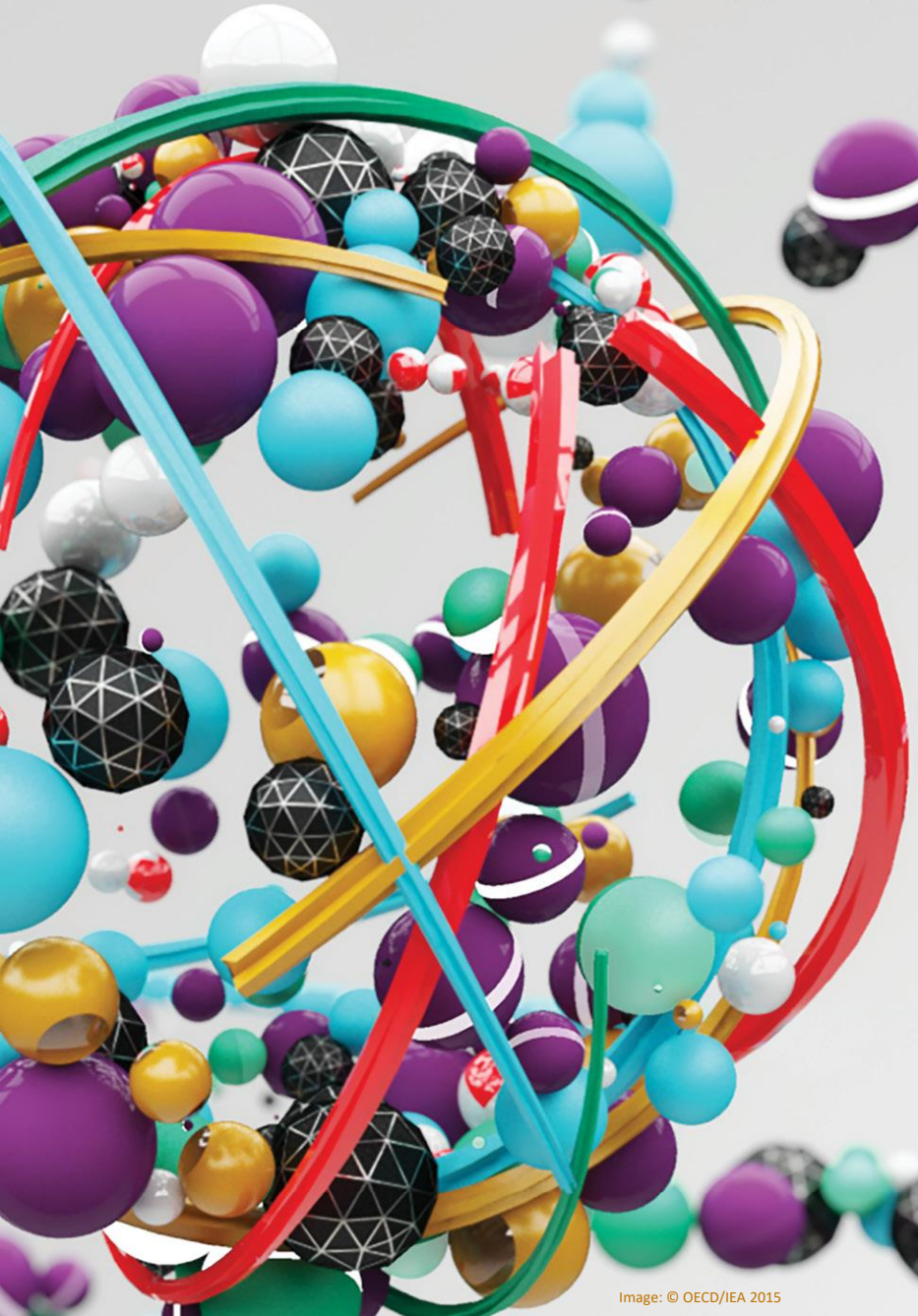
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Priorities and planned activities

- **Continue and intensify communication and interaction**
- **Advise TCPs on strategic objectives and possibilities**
- **Identify practical means to enable TCPs to contribute to Mission Innovation and the Clean Energy Ministerial**
- **Include TCPs proposals into WP work plan**
  - Discuss ways to facilitate joint TCP activities
  - Intensify efforts to establish a joint TCP platform for capacity building and outreach

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IEA TCP Universal Meeting
9 October 2017

Fusion Power Co-ordinating Committee (FPCC)

Carlos Varandas, FPCC Vice-Chair

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Fusion Power Co-ordinating Committee

Image: © OECD/IEA 2015

The FPCC portfolio: 8 TCPs

- **A broad range of activities (all TCPs)**
  - Exchange of scientists, equipment and materials
  - Sharing information through workshops, scientific journals
  - Data collection, modelling
- **Advancing knowledge through specific devices (3)**
  - Tokamak Programmes (CTP TCP)
  - Spherical Tori (ST TCP)
  - Stellarator-Heliotron (SH TCP)
- **Addressing barriers common to all devices (5)**
  - Environmental, Safety and Economic Aspects of Fusion Power (ESEFP TCP)
  - Reversed Field Pinches (RFP TCP) (plasma physics)
  - Plasma Wall Interaction (PWI TCP) (between the plasma and the materials)
  - Fusion Materials (FM TCP) (testing materials at 10M^{o}C)
  - Nuclear Technology of Fusion Reactors (NTFR TCP) (recycling fuel)

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Fusion Power Co-ordinating Committee

Developments since the last TCP Universal Meeting (September 2015)

- **Strategic sessions supporting the Strategic Plan**
  - **Identifying Gaps in Strategic Research Priorities in Support of DEMO (2016)**
    - **Aim:** Advance planning and co-operation to avoid overlaps in research plans and investment
    - **Key contributors:** Australia, China, Japan, Korea, United States, Eurofusion, IAEA
  - **The Promise of Fusion - Innovation and the Role of Industry (2017)**
    - **Aim:** Knowledge sharing of innovative devices, nascent relationship with industry
    - **Key contributors:** Private-sector 'start-ups', F4E (European Domestic Agency for ITER), spin-offs
- **Efforts to rationalise resources**
  - **Steady State Operations Coordination Group (SSOCG)**
    - Coordinates seven cross-cutting topics, or 'work packages' across all fusion TCPs
- **Guidelines for TCP Requests for Extension**
    - **ST and CTP TCPs:** approved 30 June 2017
- **Communications Framework**
    - **Annual Briefings:** used by all TCPs – FPCC Delegates very appreciative
    - **Strategic Communication:** included in the Annual Briefing
    - **Status Updates:** Need to identify opportunities - presentations to the CERT

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Fusion Power Co-ordinating Committee

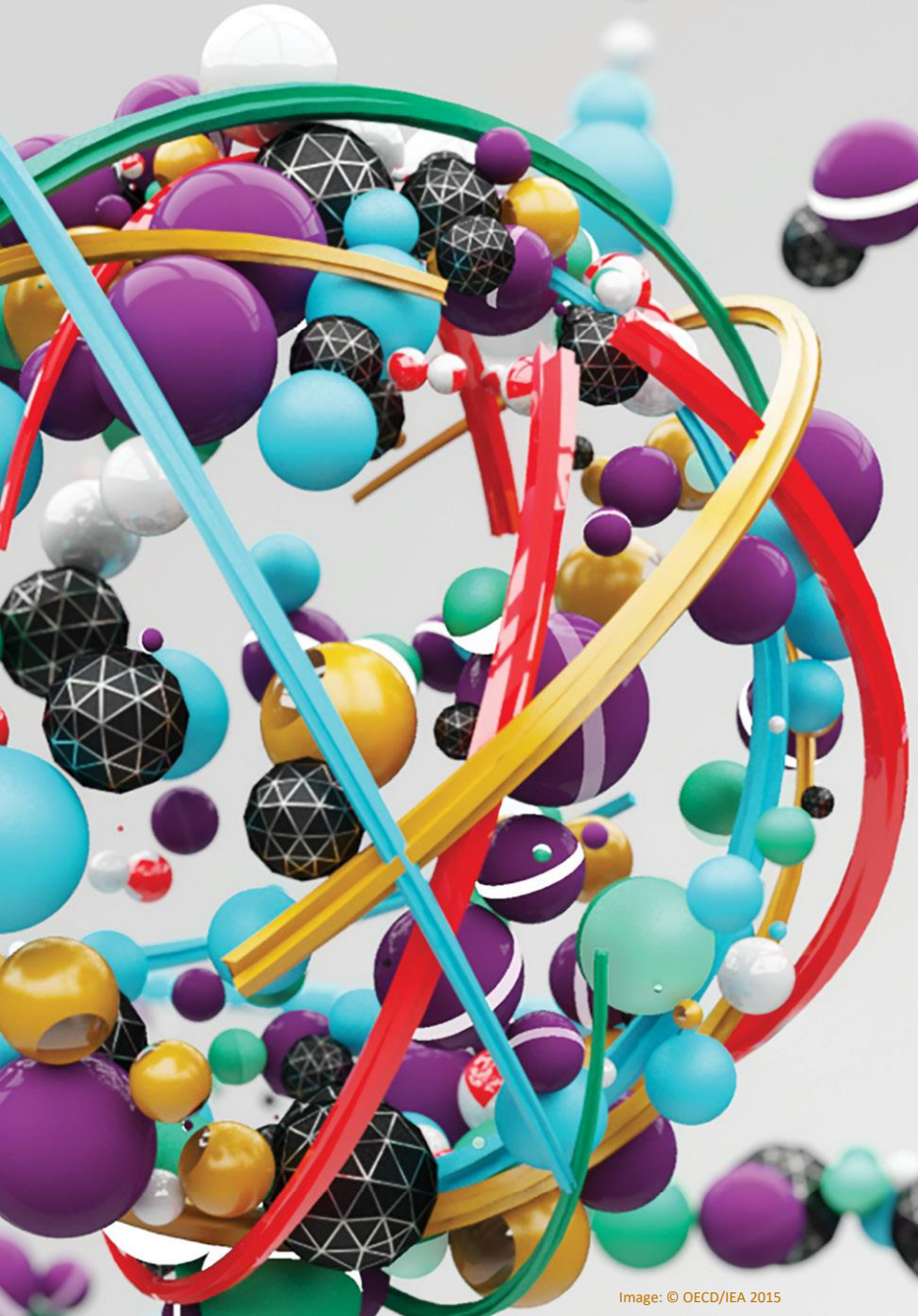
Priorities and planned activities

Strategic focus of the new mandate 2018-2020

- Accelerate knowledge transfer between fusion devices and joint experiments by highlighting and examining cross-cutting issues
- Increase the dialogue with Partner countries and industry to foster long-term coordination at global level in fusion R&D
  - **First FPCC meeting and strategic session to be hosted by ITER January 2018**
- Accelerate and strengthen cooperation among the TCPs relating to fusion power
  - **SSOCG will continue to rationalise resources by addressing cross-cutting issues across all fusion TCPs**

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Fusion Power Co-ordinating Committee

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IEA TCP Universal Meeting
9 October 2017

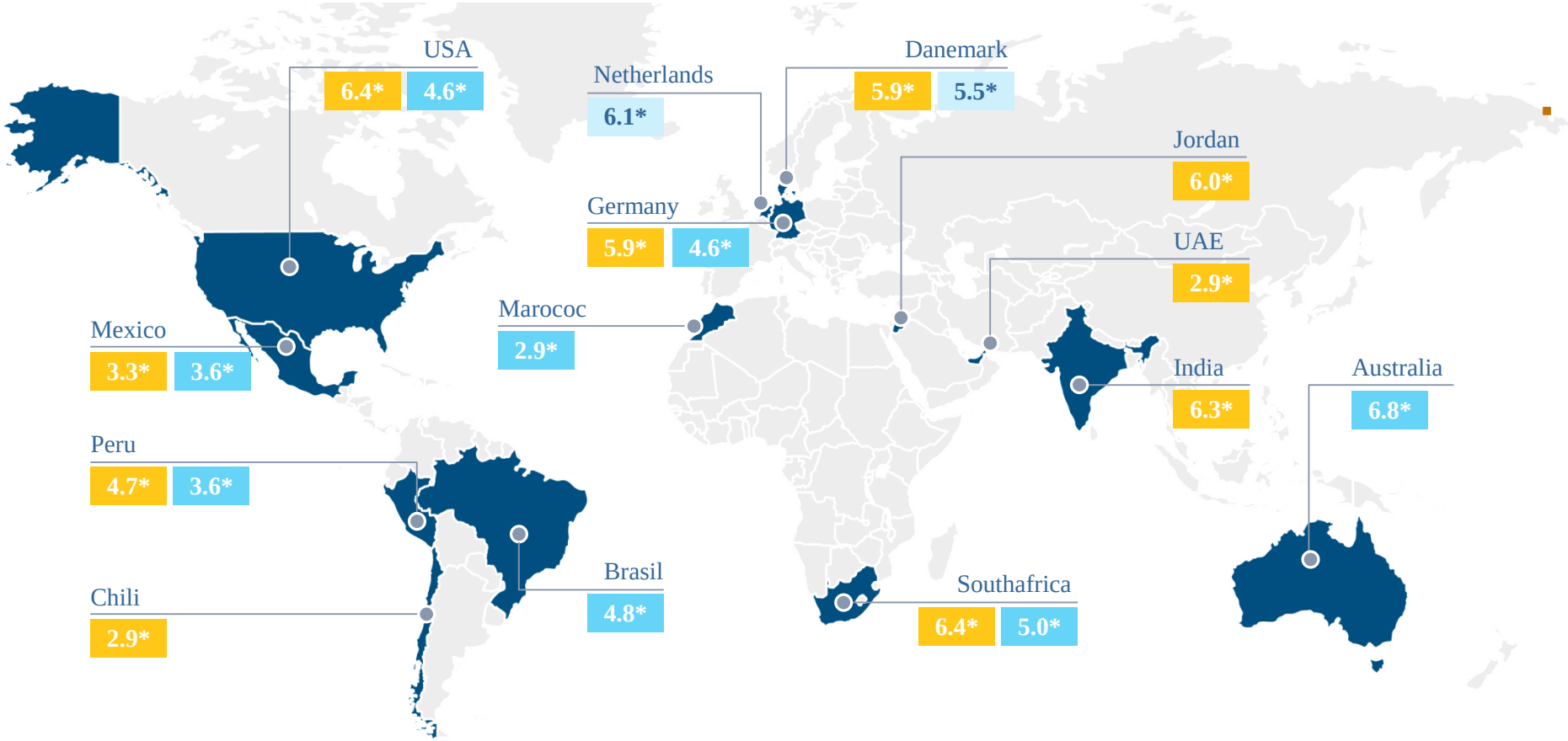
Working Party on Renewable Energy Technologies (REWP)

Martin Schöpe, REWP Chair

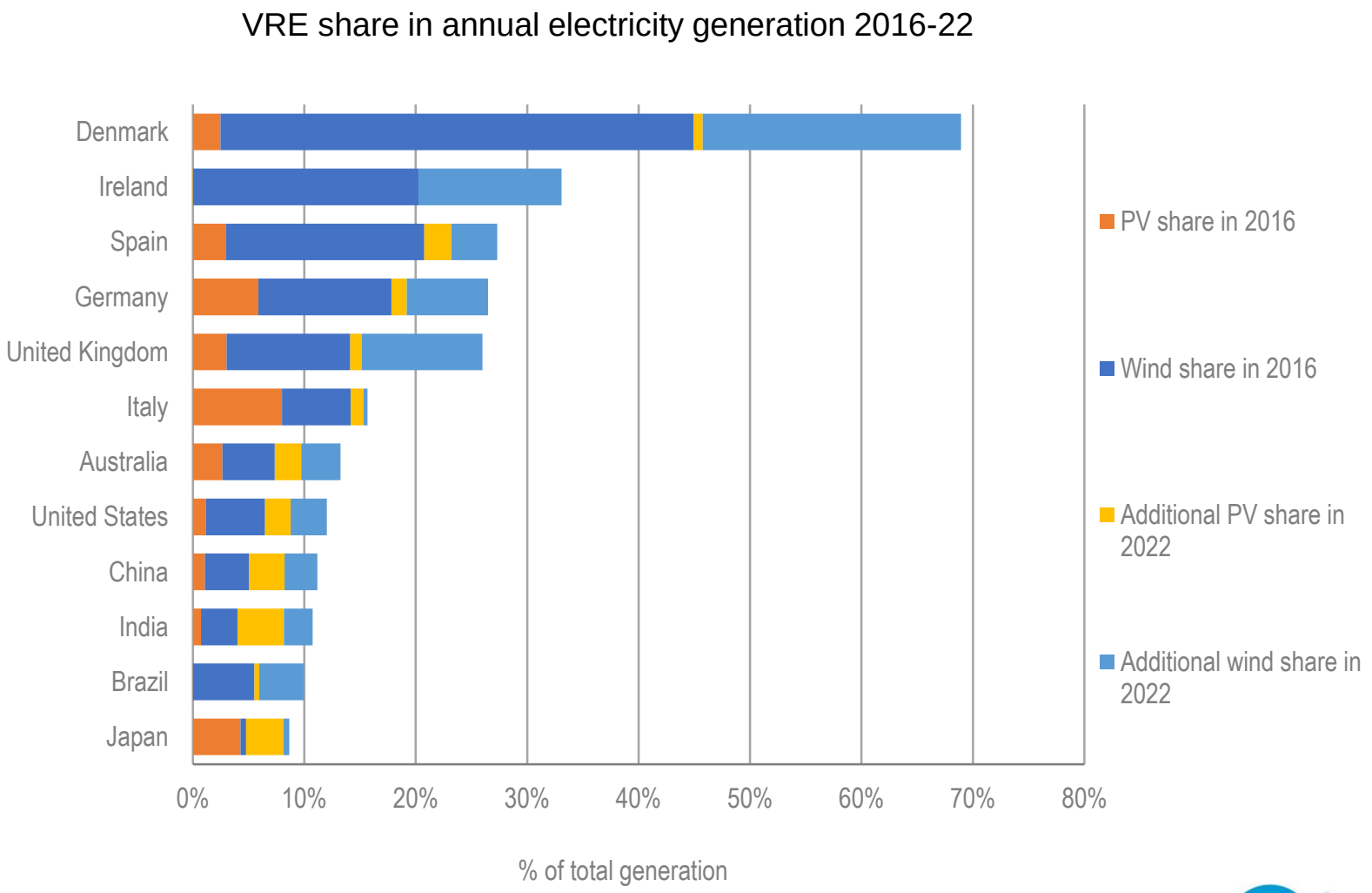
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Working Party on Renewable Energy Technologies

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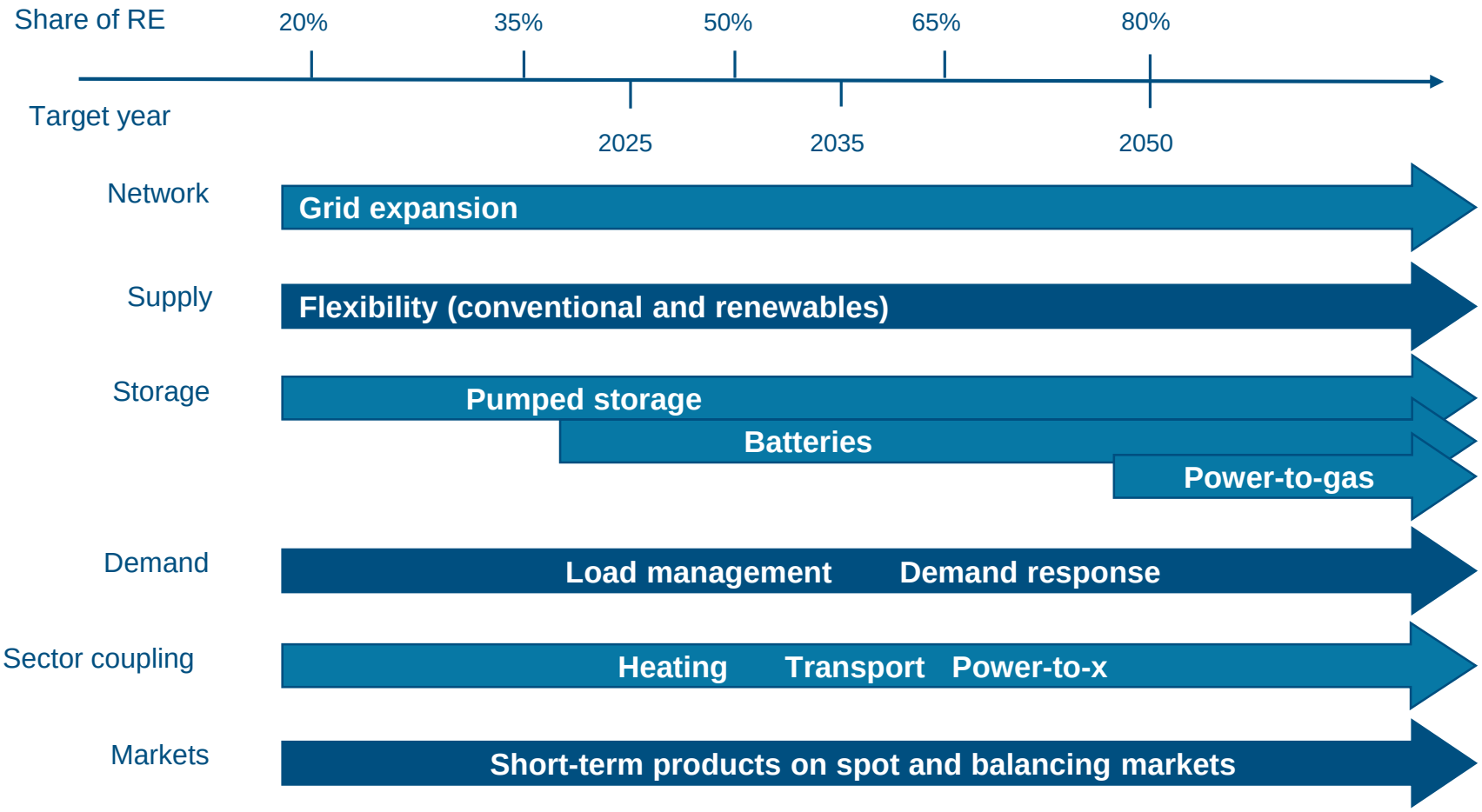
First Step: We made it!



Second Step: Integration



Third Step: Flexibility / across sectors



The REWP portfolio: 9 TCPs

- Bioenergy TCP
- Concentrated Solar Power (SolarPACES TCP)
- Geothermal Energy (Geothermal TCP)
- Hydrogen TCP
- Hydropower TCP
- Ocean Energy Systems (OES TCP)
- Photovoltaic Power Systems (PVPS TCP)
- Solar Heating and Cooling (SHC TCP)
- Wind Energy (Wind TCP)

Activities and Strategies for the future

- **Holistic approach on renewables**
  - System integration (Workshop in Berlin, Nov 2017)
  - Aligning renewable energy and energy efficiency
    (Joint EEWP and REWP Workshop in Spring 2018 (TBC))
  - Flexibility across energy sectors

- **Expand interaction and international cooperation**
  - Association and Accession Countries (e.g. India, Mexico)
  - increase TCPs' membership and collaborate with other TCPs and international organisations (e.g. IRENA, REN21)
  - Address synergies between TCPs