

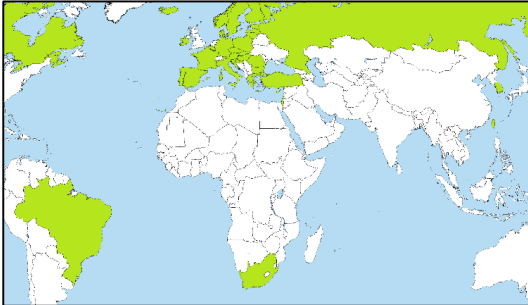


M-ERA.NET 3:

ERA-NET for research and innovation on materials and battery technologies, supporting the European Green Deal

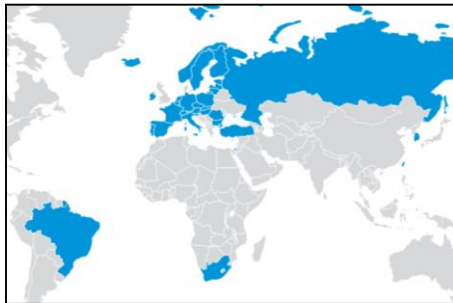
Roland Brandenburg
6 October 2022

Network evolution



M-ERA.NET 3 (2021-2026):

- ERA-NET COFUND (H2020) for research and innovation on materials and battery technologies, supporting the European Green Deal
- 50 nat./reg. public funding organisations from 36 countries
- largest ERA-NET Cofund consortium



M-ERA.NET 2 (2016-2022):

- ERA-NET COFUND (H2020) for materials research & innovation
- 43 nat./reg. public funding organisations from 30 countries

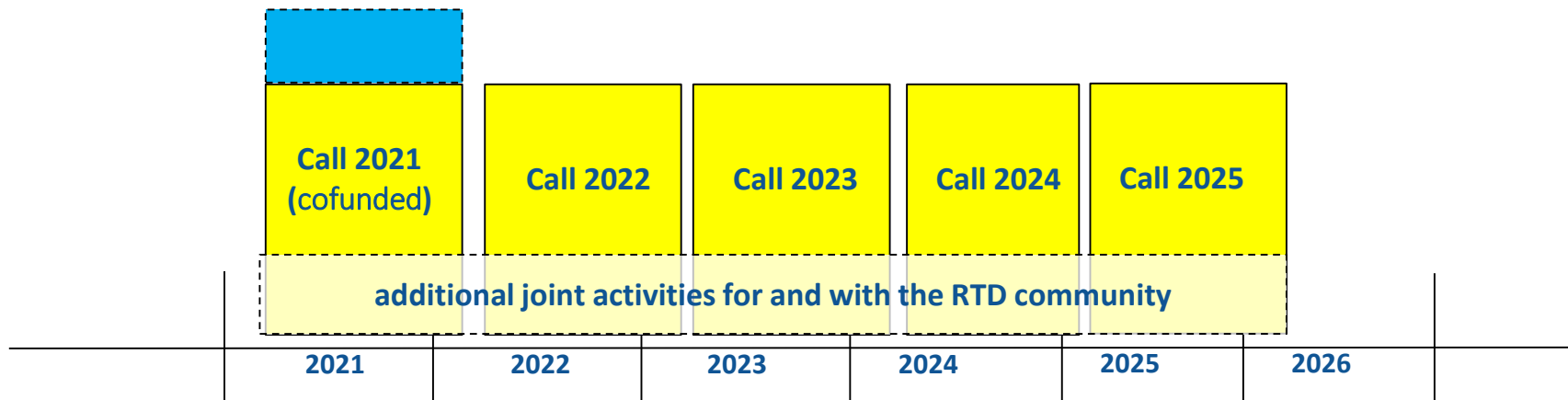
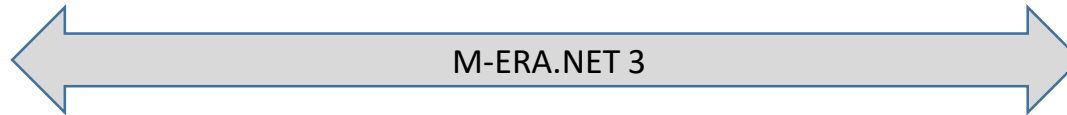


M-ERA.NET (2012-2016):

- ERA-NET (FP7) for materials science and engineering, including international cooperation
- 37 nat./reg. public funding organisations from 25 European countries

M-ERA.NET schedule 2021-2026

- duration **M-ERA.NET 3**: 3/2021-2/2026
- **M-ERA.NET 3 Vision & Policy for joint programming**
- **annual joint calls for proposals**
- **additional joint activities for and with the RTD community**

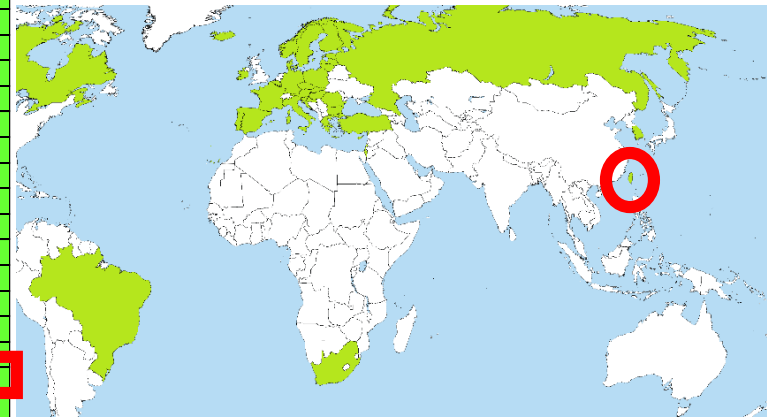
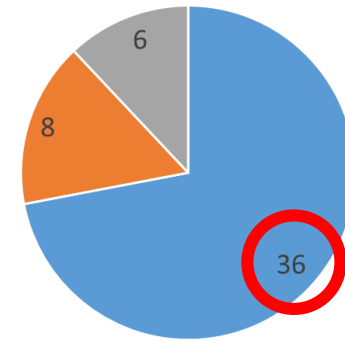


A diverse, expanding and experienced partnership

		M-ERA.NET				M-ERA.NET 2					M-ERA.NET 3				
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
AT	FFG														
BE	FWO														
BE	VLAIO														
BE	FNRS														
BE	SPW														
BG	BNSF														
BR	FAPESP														
CA	PRIMA														
CH	DETEC														
CY	RIF														
CZ	TACR														
DE	BMBF														
DE	JÜLICH														
DE	SMWK														
DK	IFD														
EE	ETAG														
ES	AEI														
ES	CDTI														
ES	IDEA														
ES	IDEPA														
ES	EJ-GV														
ES	Innobasque														
FI	AKA														
FI	BF														
FR	ANR														
FR	RNAQ														
GR	GSRT														
HR	MZO														
HU	NKFIH														
IE	SFI														
IL	IIA														
IL	MOST-IL														
IS	RANNIS														
IT	CaR														
KR	KIAT														
LT	LMT														
LU	FNR														
LV	VIAA														
NO	RCN														
PL	NCBR														
PL	NCN														
PT	FCT														
RO	UEFISCDI														
RU	FASIE														
SE	VINNOVA														
SI	MIZS														
SK	SAS														
TW	MoST-TW														
ZA	DSI														

Experience with M-ERA.NET

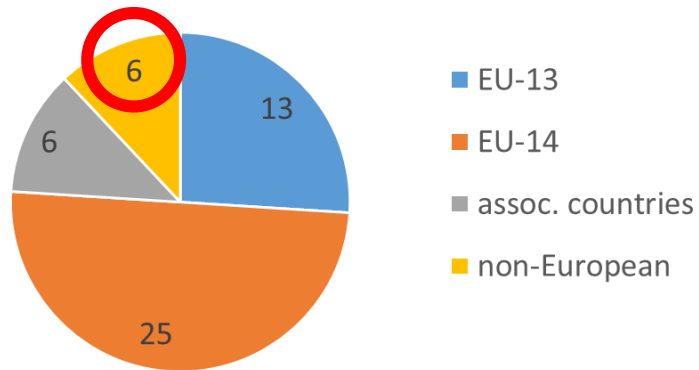
- since M-ERA.NET
- since M-ERA.NET 2
- new in M-ERA.NET 3



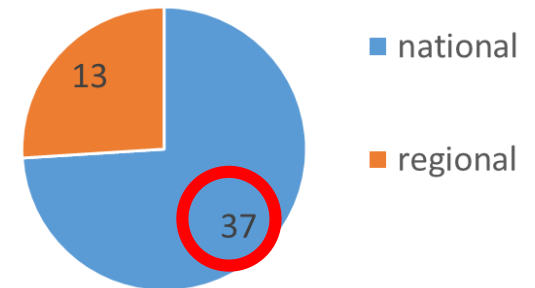
The M-ERA.NET 3 consortium

- 50 public funding organisations
- 36 countries:
 - 25 EU member states
 - 5 assoc. countries
 - 6 non-European countries
- <https://m-era.net/about/m-consortium>

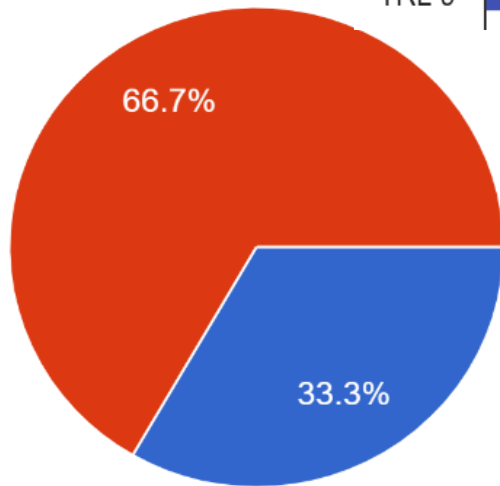
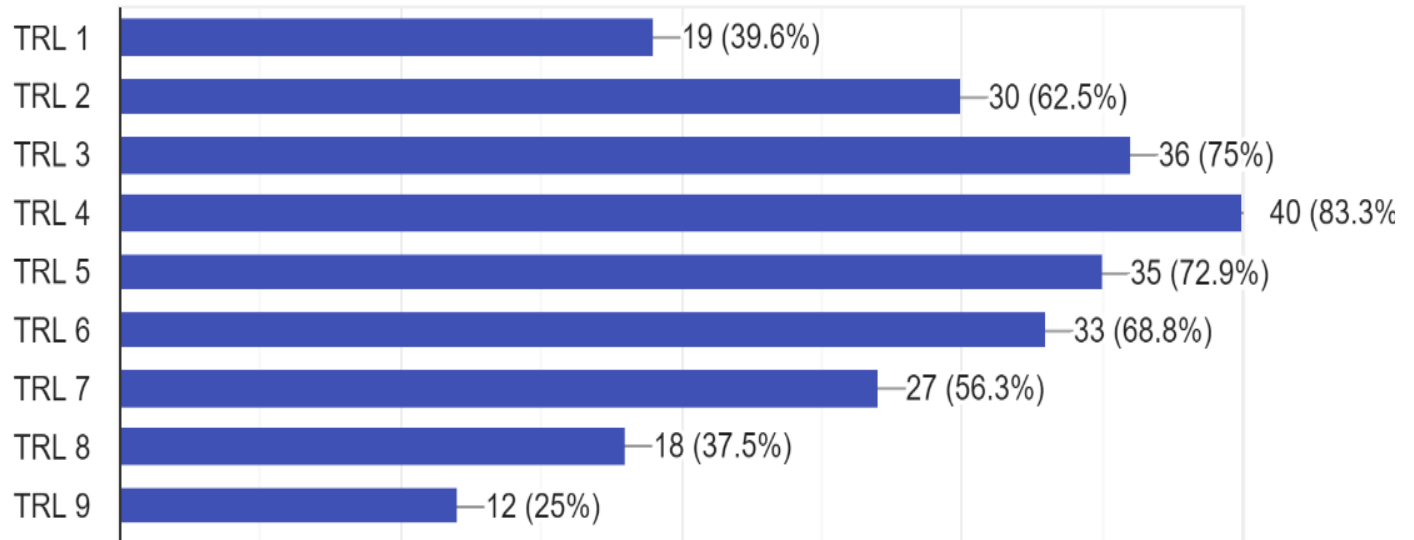
Origin of funding organisations



Type of funding organisation



Involved national/regional funding schemes



- Programme with specific thematic scope
- Programme without specific thematic scope

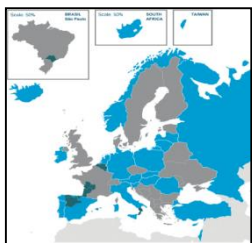
M-ERA.NET objectives 2021-2026

- ✓ **cofunded call** (“Call 2021”) -total call budget approx. 70 mio € including EU top-up funding;
- **additional annual joint calls without EU cofunding**
- **total public call budget > 150 million €** with additional private investment of 50 million €;
- highlight **research on materials supporting the circular economy** and relevant **Sustainable Development Goals**, in particular
 - **SDG 7 (“Affordable and clean energy”)** supporting future battery technologies, and
 - **SDG 9 (“Industrial innovation and infrastructure”)** by enhancing scientific research and upgrading the technological capabilities of industrial sectors.
- programmatic guidance by **“European Green Deal”, Circular Economy Action Plan, the 2030 Agenda for Sustainable Development**, the EC communication **“A clean planet for all”**
- establish a **dialogue with the European and international RTD community**
 - **to identify emerging trends and**
 - **to meet priorities and needs at European, national and regional levels**
- raise awareness among stakeholders on potential RRI (**Responsible Research and Innovation**) issues and develop RRI-guidelines for materials research
- **monitor the funded RTD projects** emerging from the joint calls
- valorise the **results of funded projects** and promote the **take-up of the developed technologies**

Annual joint calls: variable geometry

Call 2016:

35 funding orgs.
22 EU MS/AC
+ Brazil + Russia +
South Africa +
Taiwan



233 pre-prop.
89 full prop.
46 funded
projects

Call 2017:

31 funding orgs.
22 EU MS/AC
+ Brazil + Russia +
South Africa
+ South Korea
+ **Taiwan**



91 pre-prop.
48 full prop.
20 funded
projects

Call 2018:

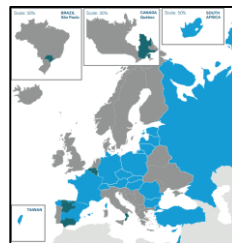
33 funding orgs.
20 EU MS/AC
+ Brazil + Russia +
South Africa +
Taiwan



166 pre-prop.
90 full prop.
27 funded
projects

Call 2019:

35 funding orgs.
21 EU MS/AC
+ Brazil + Canada +
Russia + South
Africa + **Taiwan**



233 pre-prop.
123 full prop.
37 funded
projects

Call 2020:

28 funding orgs.
16 EU MS/AC
+ Brazil + Canada +
Russia + South
Africa + **Taiwan**



237 pre-prop.
144 full prop.
42 funded
projects

Call 2021:

45 funding orgs.
26 EU MS/AC
+ Brazil + Canada +
Russia + South
Africa + South Korea
+ **Taiwan**



493 pre-prop.
171 full prop.
70 funded
projects

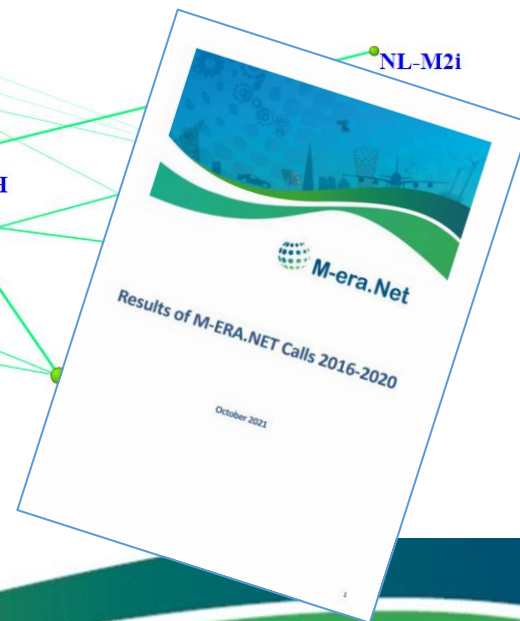
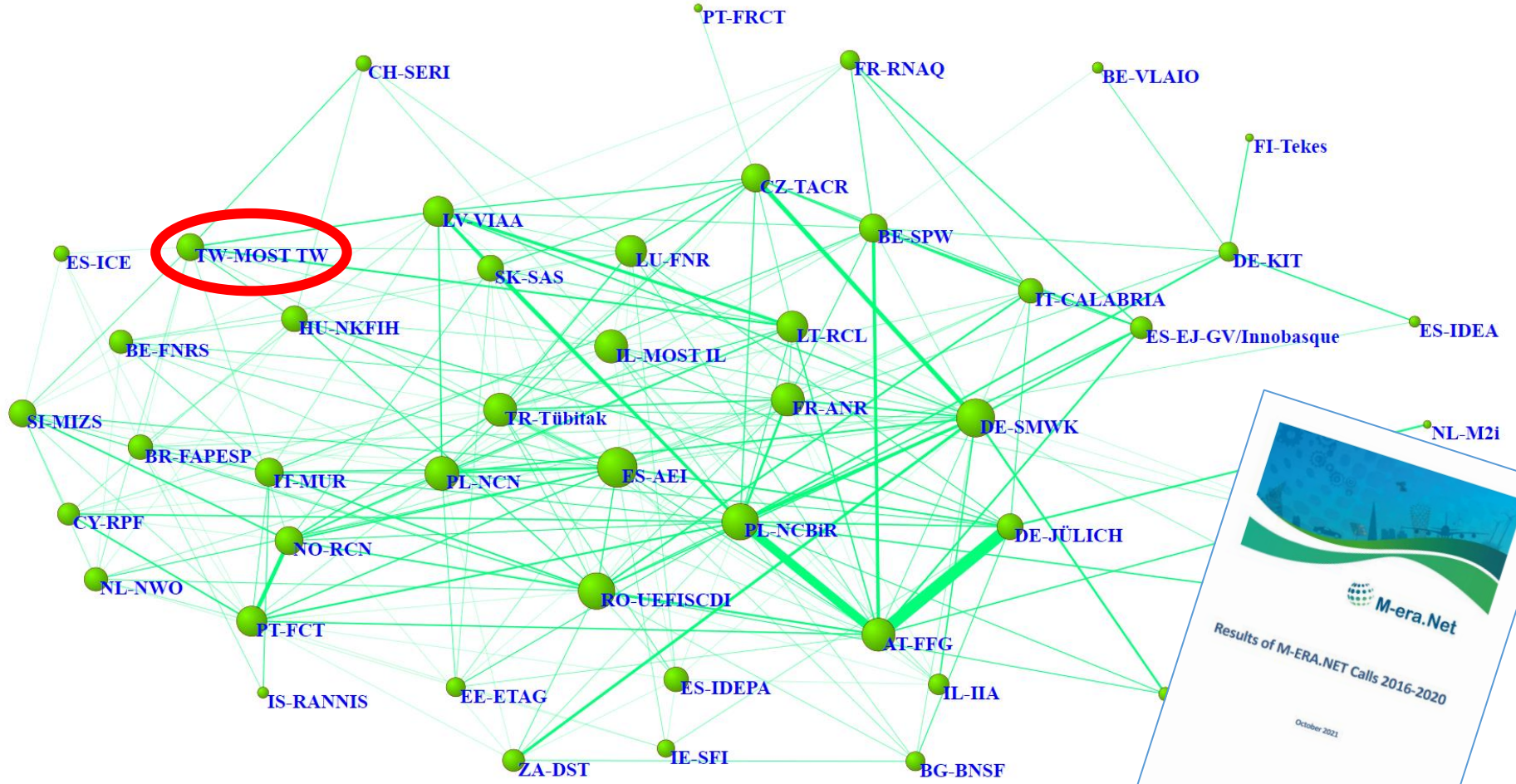
- Taiwan participation in M-ERA.NET calls since 2012

M-ERA.NET joint calls 2016-2020: Taiwan participation

M-ERA.NET 2					
Call	submitted		funded		
	# applicants	# proposals	# applicants	# projects	total funding [EUR]
2016	19	13	5	3	€ 700 800
2017	12	8	2	1	€ 600 000
2018	16	12	3	2	€ 470 000
2019	12	9	2	2	€ 424 388
2020	12	8	1	1	€ 200 000
	71	50	13	9	€ 2 395 188

M-ERA.NET 3					
Call	submitted		funded		
	# applicants	# proposals	# applicants	# projects	total funding [EUR]
2021	21	17	3	3	€ 520 000
2022	20	18			

Facilitating transnational networking



Results of M-ERA.NET Calls 2016-2020

Dissemination of results: funded projects

<https://m-era.net/success-stories>



The screenshot shows the top portion of the M-era.Net website. It includes the M-era.Net logo, a navigation menu with items like HOME, ABOUT M-ERA.NET, JOINT CALLS, SUCCESS STORIES, OTHER JOINT ACTIVITIES, NEWS, EVENTS, LINKS & DOWNLOADS, and INTRANET. Below the menu is a 'WELCOME TO M-ERA.NET' section with introductory text. A 'SUCCESS STORIES' sidebar is highlighted with a red box, containing a thumbnail image of a porous material and the text: 'Gas Separation by tailored molecular filters made from Carbon Nanomembranes (CNMs) and Graphene - MOLFIL-CHM'. Below this is a 'SUBSCRIBE TO' section with an email input field and a 'Subscribe' button.

The screenshot displays the 'SUCCESS STORIES' grid on the M-era.Net website. The grid contains ten project cards, each with a representative image and a title. The projects are: 1. MACOSYS – Magnetically active anisotropic composite systems (image of two beakers); 2. COR_ID – Design and corrosion resistant coatings targeted for versatile applications (image of a layered material structure); 3. Grace – Graphene-ceramic nanocomposites for tribological application in aqueous environments (image of a ring and a material cross-section); 4. VOCSENSOR – Hybrid Materials for Low Cost Volatile Organic Compound Sensor system (image of a sensor device); 5. MOC@SUPCAP – Design of new metallic oxide-carbon hybrid composites for supercapacitor electrodes (image of a porous material); 6. PELARGODONT – Engineering and functionalization of delivery system (image of a flow diagram); 7. STOMMMAC – STOchastic Multi-scale Modeling Methodologies (image of a multi-scale model); 8. CAPDESIGN - Encapsulation of polymeric healing agents in (image of a curved material); 9. LaminaLion – Conformal Layer-by-layer growth of hybrid (image of a layered structure); 10. BIOGRAPHY – High resolution roll-to-roll printing of biocompat (image of a printing machine).

M-ERA.NET joint activities (I)

- **programme surveys** among the entire network to identify common approaches and mutual learning needs
- **international cooperation**: participation in joint calls:
 - Taiwan (MoST/NSTC): Call 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022
 - Brazil (FAPESP): Call 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022
 - South Korea (KIAT): Call 2015, 2017, 2021, 2022
 - South Africa (DST): Call 2016, 2017, 2018, 2019, 2020, 2021, 2022
 - Canada/Québec (PRIMA): Call 2019, 2020, 2021, 2022
 - (Russia (FASIE): Call 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021)
- **cooperation with RTD community**: identify stakeholders incl. active networks with relevant thematic scope

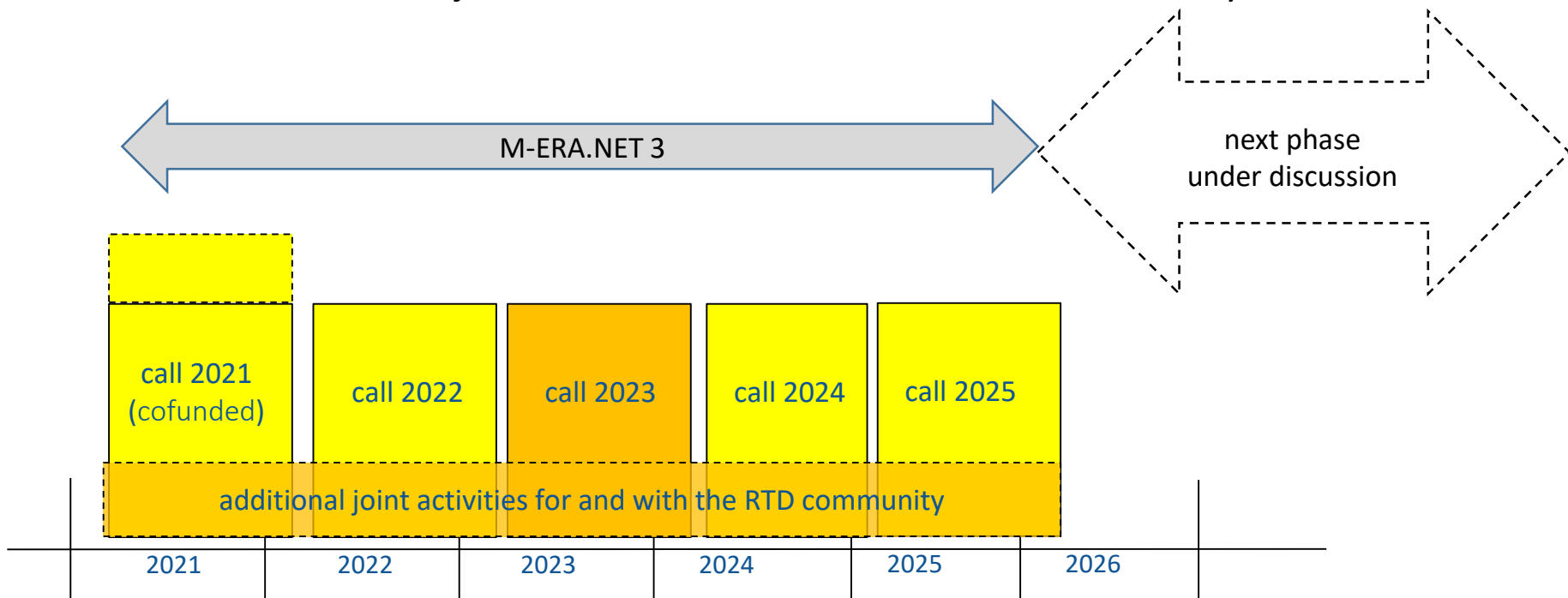
M-ERA.NET joint activities (II)

- **database of research clusters & competence centres**
- **project monitoring & assessment:** joint analysis of submitted proposals & funded projects
- **Responsible Research & Innovation: guidelines for RRI** (published 2022)
- **dissemination and events:**
 - website, Twitter, newsletter
 - publication of success stories
 - participation in national and international events (e.g. exhibition booth @Industrial Technologies 2022, TW Infoday, ...)

<https://m-era.net/other-joint-activities>

Outlook: M-ERA.NET schedule 2021-2026

- duration M-ERA.NET 3: 3/2021-2/2026
- 5 calls: annual joint calls for proposals
- additional joint activities for and with the RTD community



Thank you !

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www.m-era.net



M-ERA.NET