

EU Geographical Islands as Leaders of Green Energy Transition

Giorgio Bonvicini, RINA

 **SUSTAINABLE
PLACES 2023**

RINA



Workshop Agenda



Time	Presentation Title	Speaker
09.00-09.10	Welcome and introduction	Giorgio Bonvicini (RINA)
09.10-09.30	EU Geographical Islands as Leaders of Green Energy Transition	
09.30-09.50	NESOI – Capacity Building and Funding Solutions to Replicate Islands’ Decarbonization Projects	Luigi Laterza (SINLOC) and Cécile Barrere (R2M)
09.50-10.10	INSULAE – Designing energy strategies to assist island decision-makers	Bruno Sodiro (RINA)
10.10-10.30	IANOS – Innovative Solutions to Decarbonize Geographical Islands	Eduardo Rodrigues (EDP NEW)
10.30-11.00	Coffee break	All
11.00-11.20	RE-EMPOWERED – Kythnos island: a living lab for innovative integrated interventions	Petros Markopoulos (DAFNI Network of Sustainable Greek Islands)
11.20-11.40	MAESHA – Demonstration of smart and flexible solutions for a decarbonized energy future in Mayotte and other European islands	Juan Varo Lopez (CREARA)
11.40-12.00	REACT – Small islands and their path towards green energy independence	Fausto Sainz Salces (COMET Global Innovation)
12.00-12.30	Wrap-up, discussion and conclusions	Giorgio Bonvicini (RINA)

Islands' Decarbonization



The European Commission is taking actions to make islands leaders of the EU energy transition and decarbonization, due to their specific features



high RES potential



isolated energy systems



strong sense of community



seasonality due to tourism



high energy prices, thus
cost-effective solutions



difficult access to finance
and high investment risks



methodologies available

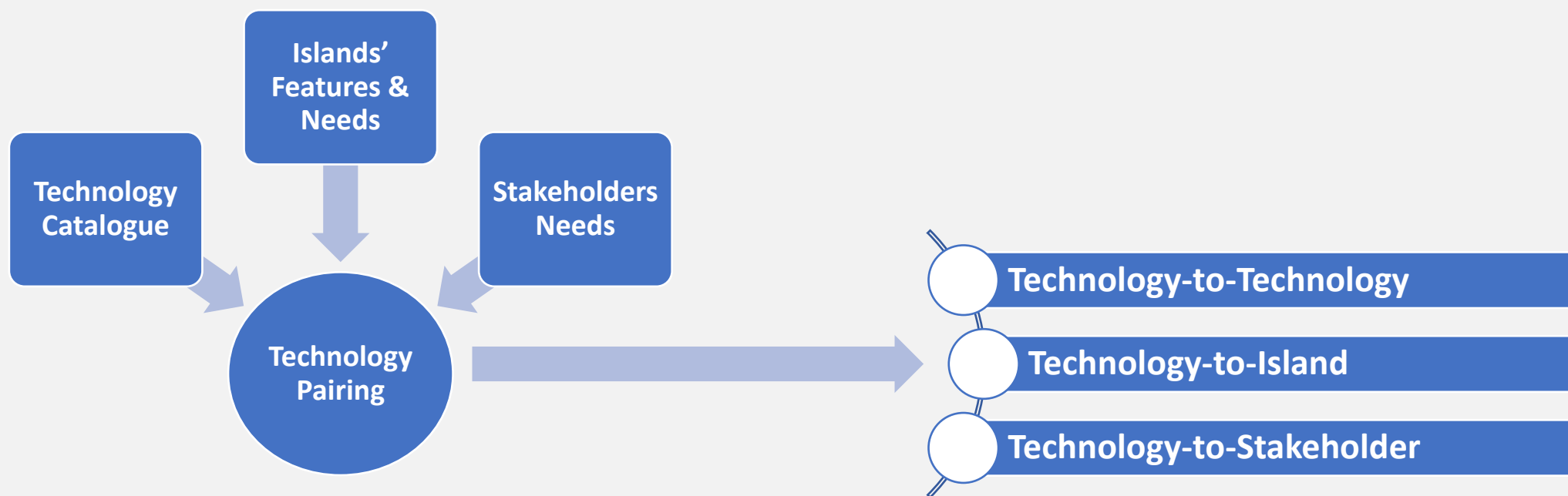


lack of local expertise

Technology Integration Analysis



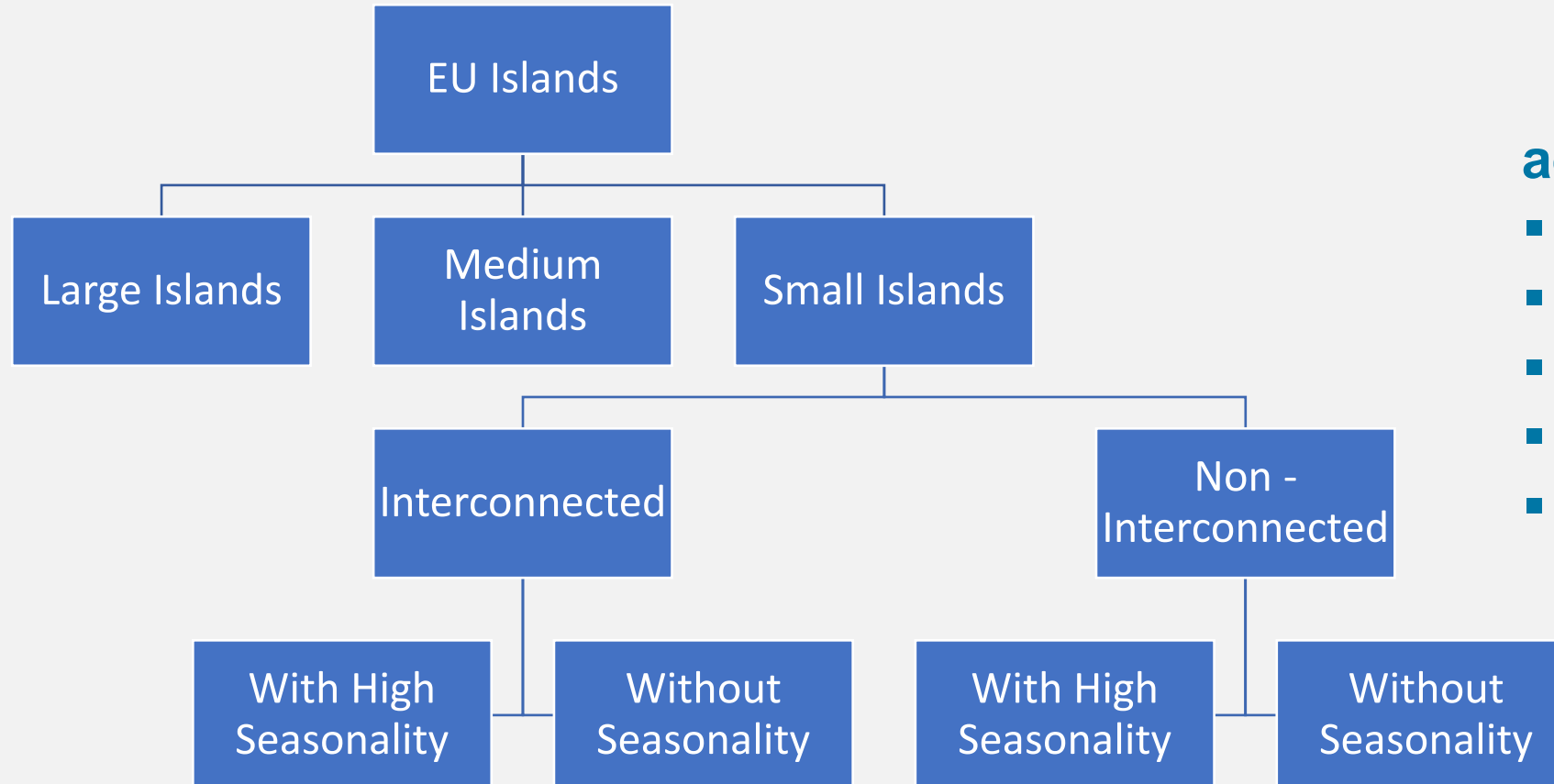
No standard solution exists for islands' decarbonization, but many technologies are available



Islands' Clusterization



To evaluate applicability of different technology solutions to various types of islands

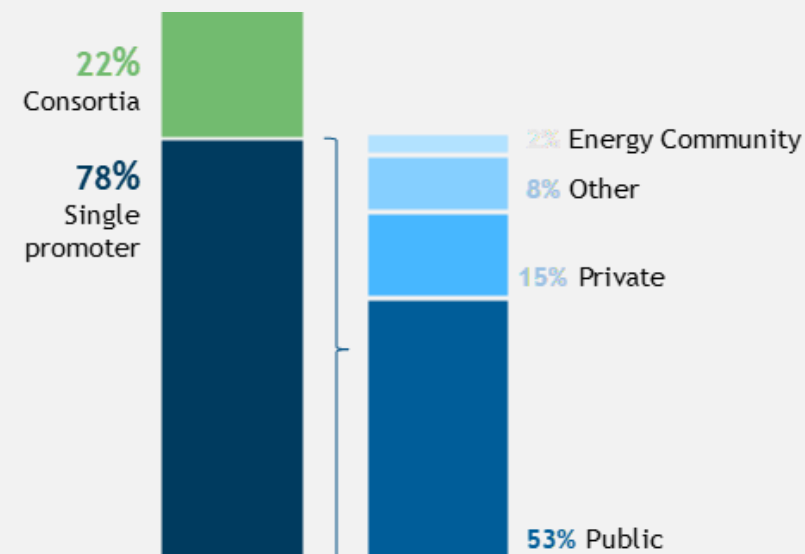
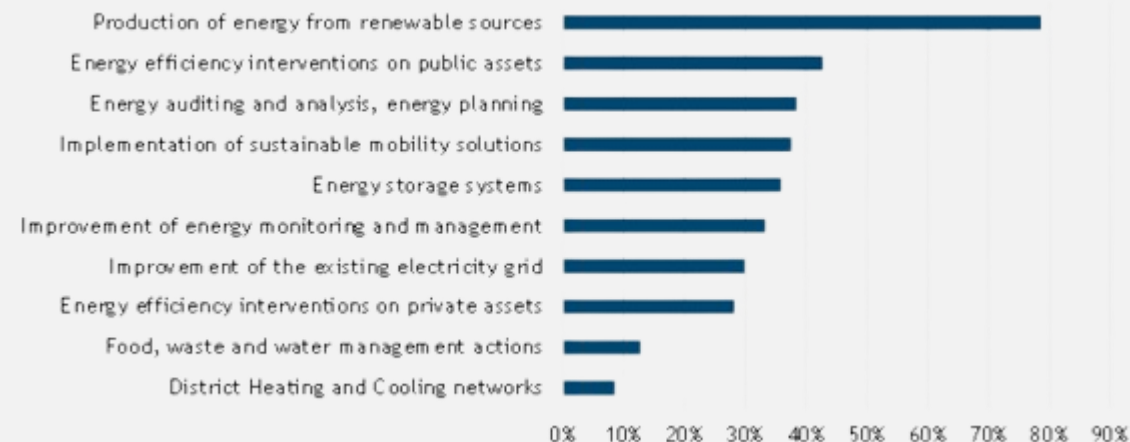
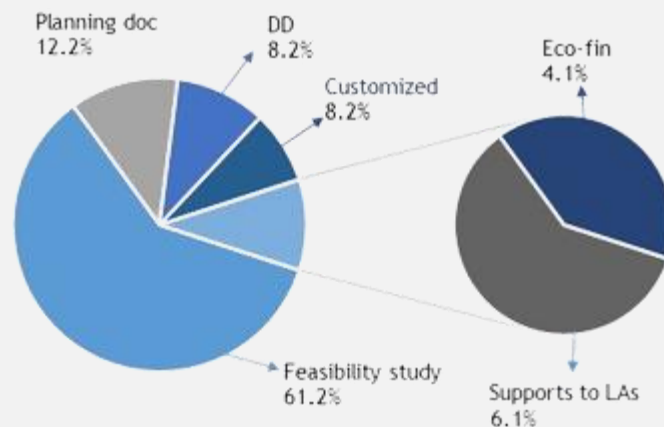
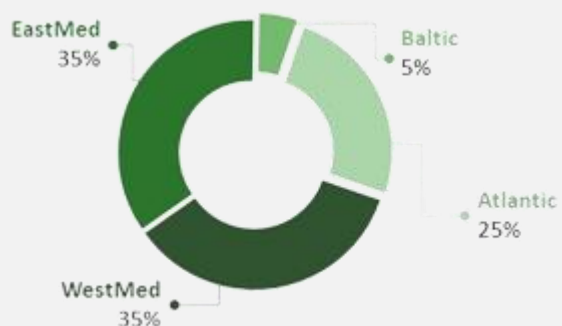
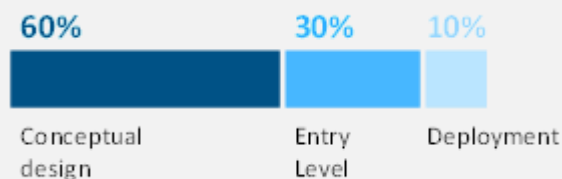


additional criteria:

- by latitude
- by orography
- by population distribution
- by economic activities
- by resources availability

NESOI – 168 Applications

168 applications received in two NESOI open calls: a representative sample of potential pathways to islands' decarbonization

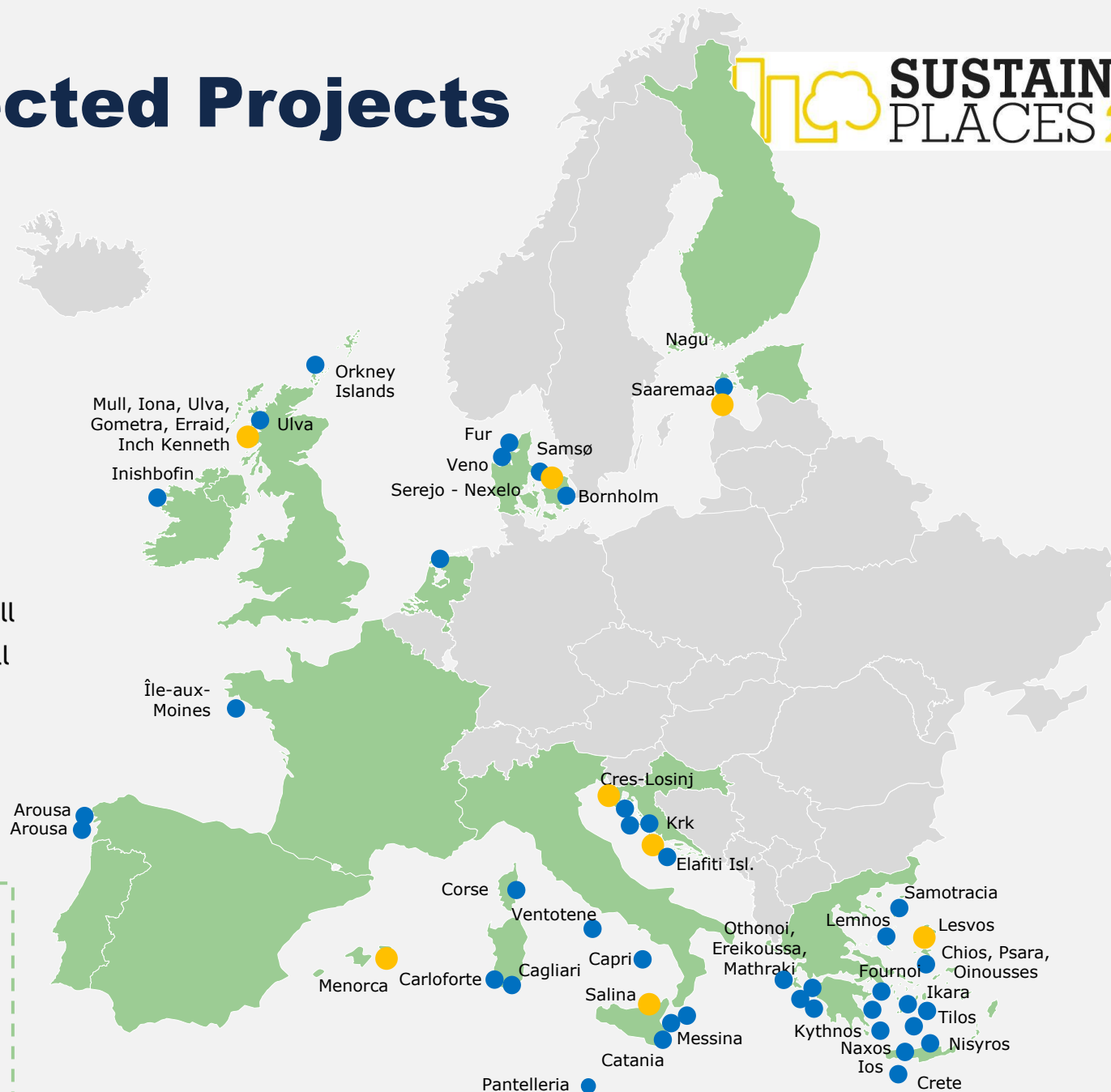


NESOI – 54 Selected Projects



Projects selected for
the provision of
technical, financial
and legal assistance
by NESOI partners
and external advisors

● 2nd call
● 1st call



Technology Clusterization

Six clusters of technologies

- Electricity production from renewables
 - solar, wind, biomass, geothermal, hydro, wave/tidal
- Thermal production from renewables
 - solar thermal, biomass, geothermal, cogeneration & trigeneration
- Electric mobility
 - electric vehicles, boats/ferries and related charging infrastructure
- Energy storage
 - battery storage, pumped hydro storage, power-to-hydrogen, thermal storage
- Upgrade of local public assets
 - grids, public lighting, cold ironing
- Energy efficiency
 - buildings, industrial processes



Technology Integration Analysis



Primary Technology Cluster	Secondary Technology Cluster	Number of Projects
Electricity Production from Renewables	None	29
	With Thermal Prod. From RES	2
	With Electric Mobility	72
	With Energy Storage	14
	With Upgrade of Public Assets	6
	With Energy Efficiency	20
Thermal Production from Renewables, including Cogeneration	None	15
	With Upgrade of Public Assets	2
	With Energy Efficiency	2
Electric Mobility	None	11
	With Electric Prod. From RES	6
	With Energy Storage	6
	With Upgrade of Public Assets	6
Energy Storage	None	2
	With Electric Prod. From RES	22
	With Upgrade of Public Assets	2
Upgrade of Local Public Assets	None	2
	With Electric Prod. From RES	18
	With Electric Mobility	2
	With Energy Efficiency	2
Energy Efficiency	None	2
	With Electric Prod. From RES	6
	With Upgrade of Public Assets	6

Most frequent couplings:

- RES + e-mobility
- RES + storage
- EE + RES
- Local public assets + RES

Conclusions and Lessons Learnt



- the most suitable island energy transition projects depends on local features → tailored energy planning plays a key role
- islands are ideal laboratories for solutions to be upscaled on the mainland: H₂ production, RES+storage, RES+e-mobility, RES+desalination, RES+DHC, “green ports” → related to public assets but impacting on citizens & economy
- energy communities have a high potential → increased security of supply, mitigation of energy poverty, maximization of RES self-consumption
- not to forget: energy efficiency → actions done in the mainland are applicable also to islands, generally with higher environmental, social, economic benefits

Time for Collaboration

We have two surveys for you!

- What are the most relevant barriers to energy transition of islands?

[www.menti.com](https://www.menti.com/join/56006115) → 5600 6115

- What are the best suitable solutions (technical and non-technical) to unlock islands' potential for decarbonization and energy transition?

[www.menti.com](https://www.menti.com/join/26344773) → 2634 4773

Discussion will be at the end of the workshop



For more info:



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**Thanks for your
kind attention**

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