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IEA Technology Collaboration Programme

2nd webinar by IEA-ES Task 45:

LTES Systems: Technical Feasibility, Design, Tendering, Monitoring & Economic aspects

Tuesday, 16 December 2025

9:30 – 12:30 (CET)

Learn more at https://iea-es.org/task-45/

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Workshop Program

LTES Systems: Technical Feasibility, Design, Tendering, Monitoring & Economic Aspect

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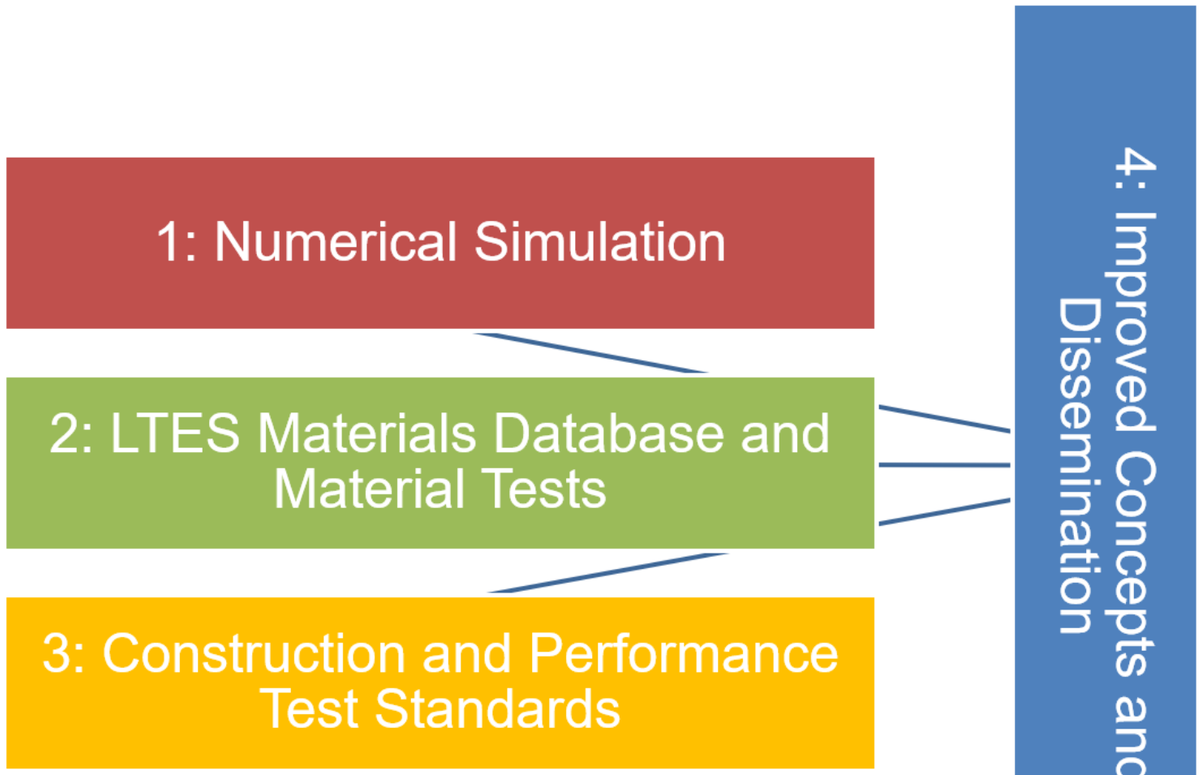
Introduction to IEA-ES Task 45

Goal of IEA-ES-Task 45

"Accelerating the uptake of Large Thermal Energy Storages”

Task subtasks



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Submit your questions !

- Ask at the end of the presentations (if time permits)

- Or submit your questions by filling in this form

  Questions will be considered during the planned Q&A sessions

  → https://forms.office.com/e/3826HwsSUw

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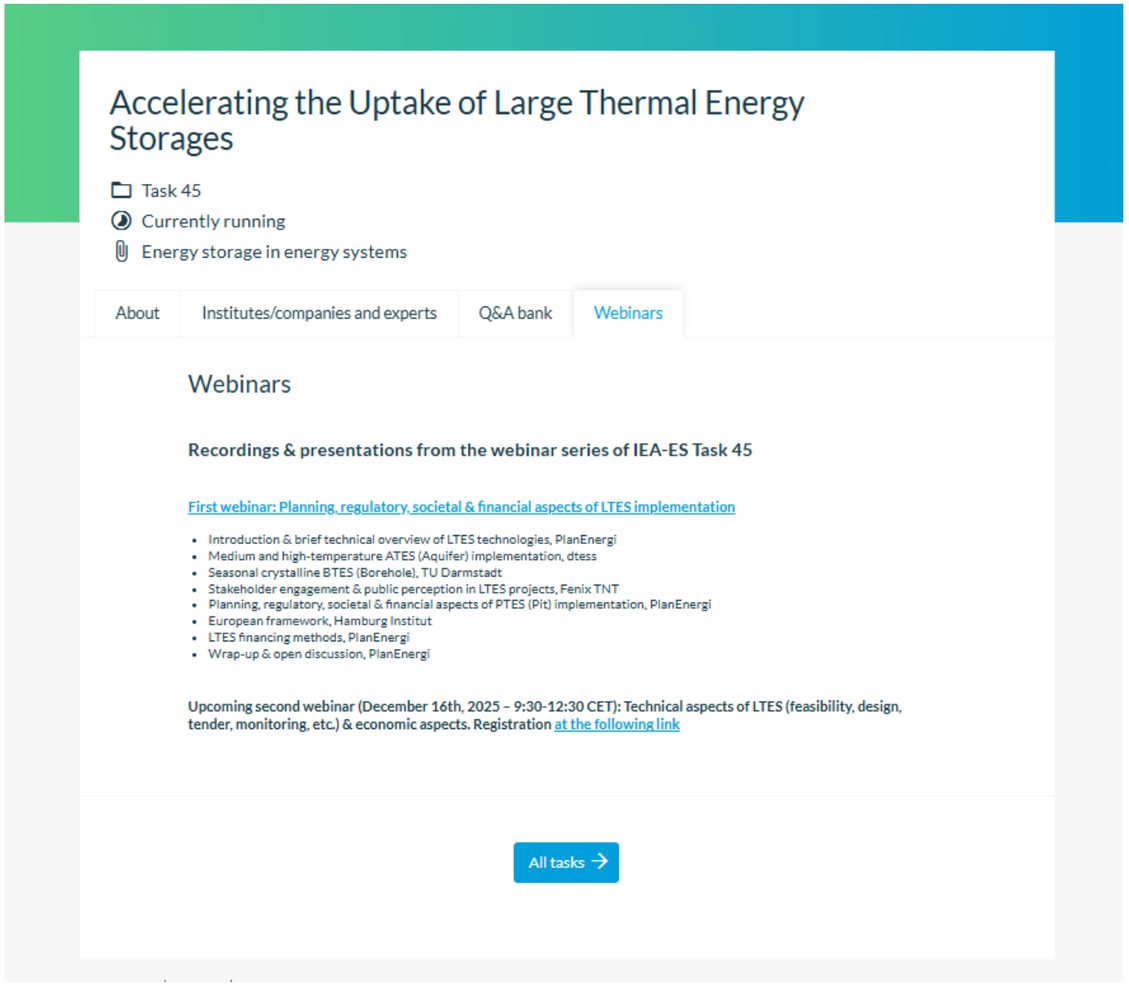
For more information, check out our website

https://iea-es.org/task-45/

Webinars



Q&A sessions

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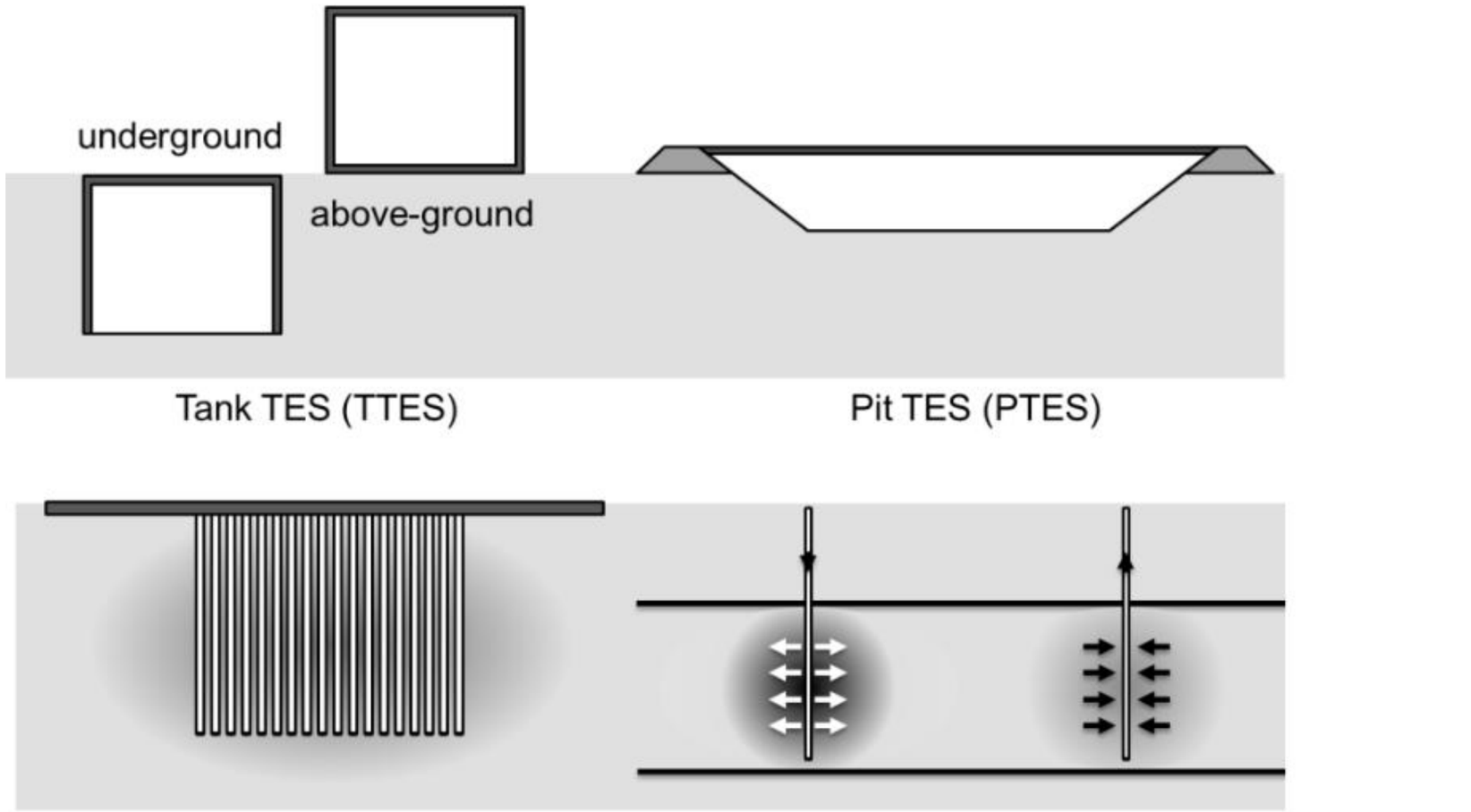
Task scope : Investigation of the 4 main LTES technologies and improved concepts



Sketch: Solites

- Yearly stored energy > 1 GWh
- Typical storage temperatures 100 °C – 120 °C
- Daily, weekly and seasonal storage
- DH or industries

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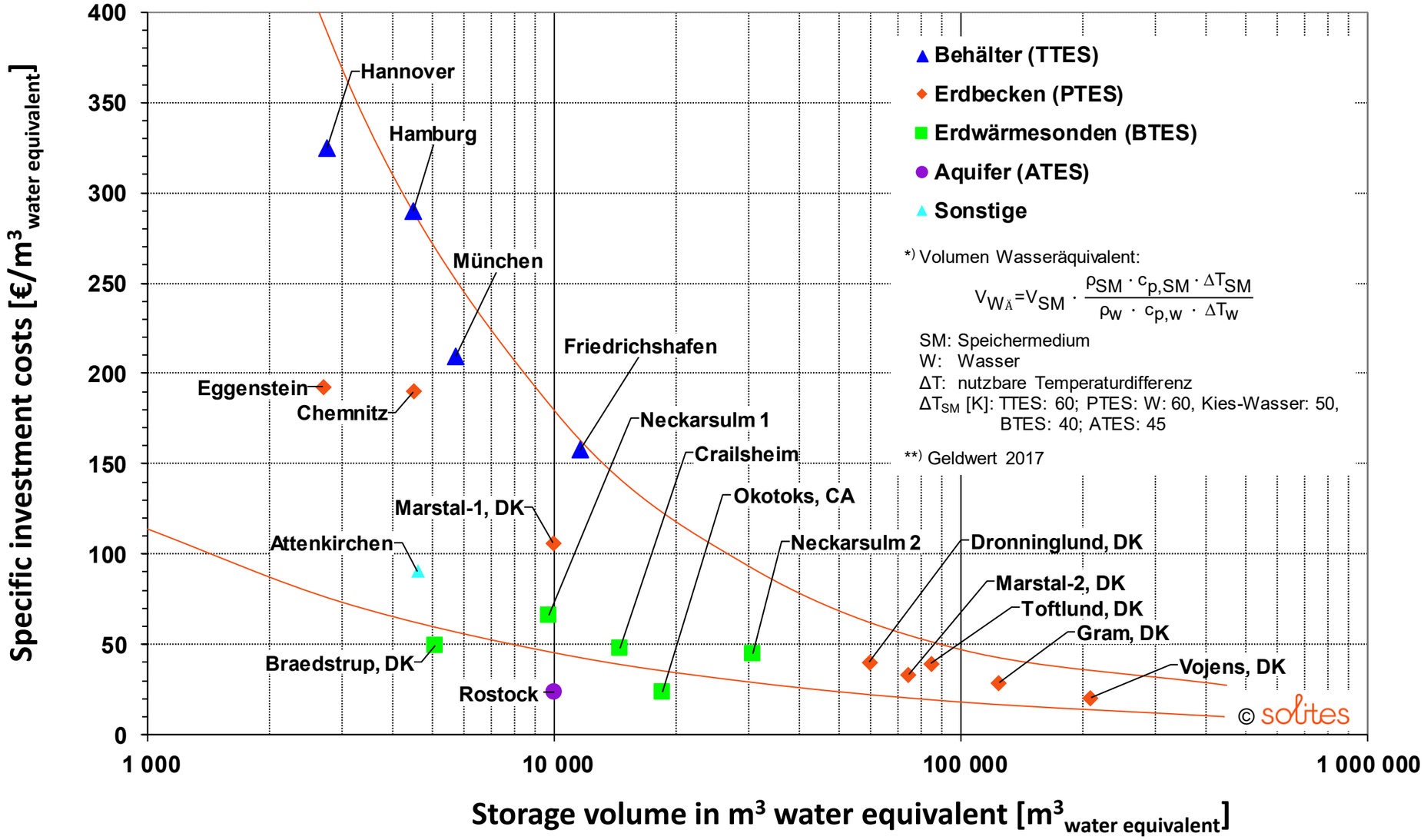
LTES benefit from economies of scale



Source: Epp, Bärbel. „Seasonal pit heat storage: Cost benchmark of 30 EUR/m³ Solarthermalworld.org“ May 17th, 2019. https://www.solarthermalworld.org/news/seasonal-pit-heat-storage-cost-benchmark-30-eurm3

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LTES implementation takes place in 4 main phases

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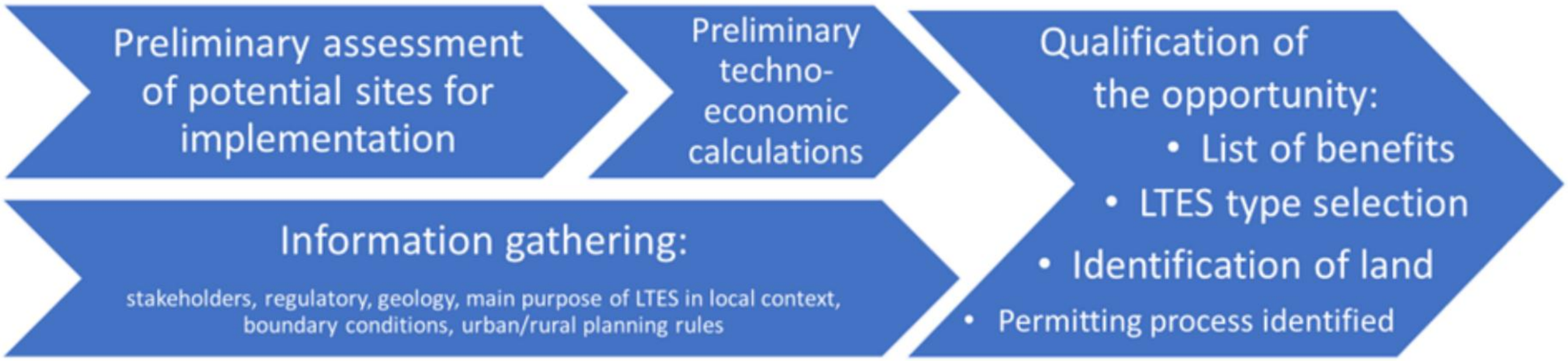
Opportunity phase



Main technical goals:

- Assess viability of a LTES within a specific context
- Pre-select LTES type

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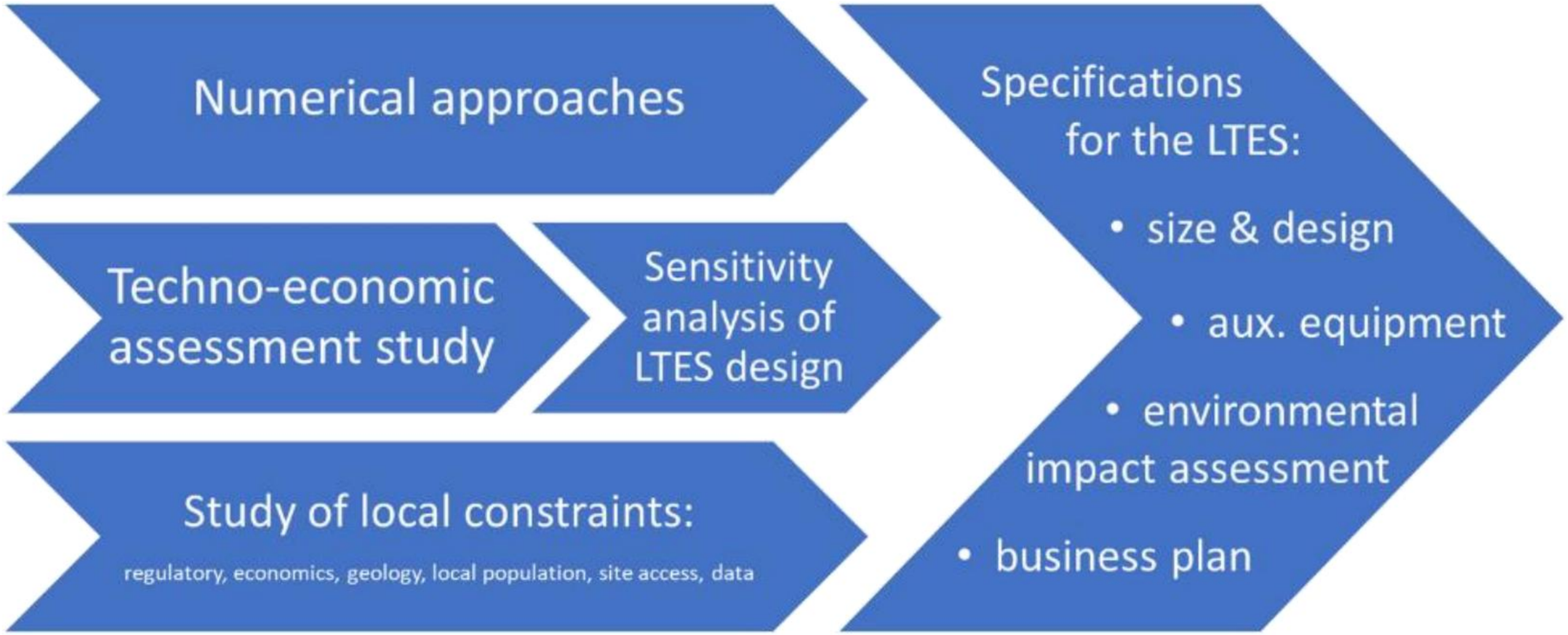
Design phase



Main technical goals:

- Analyze DHN data
- Run feasibility studies
- Define size and specifications

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Tender phase

Main technical goals:

- Prepare technical specifications
- Initiate tender
- Sign contract

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Implementation phase

Main technical goals:

- Build, operate and maintain the LTES, under regulatory oversight

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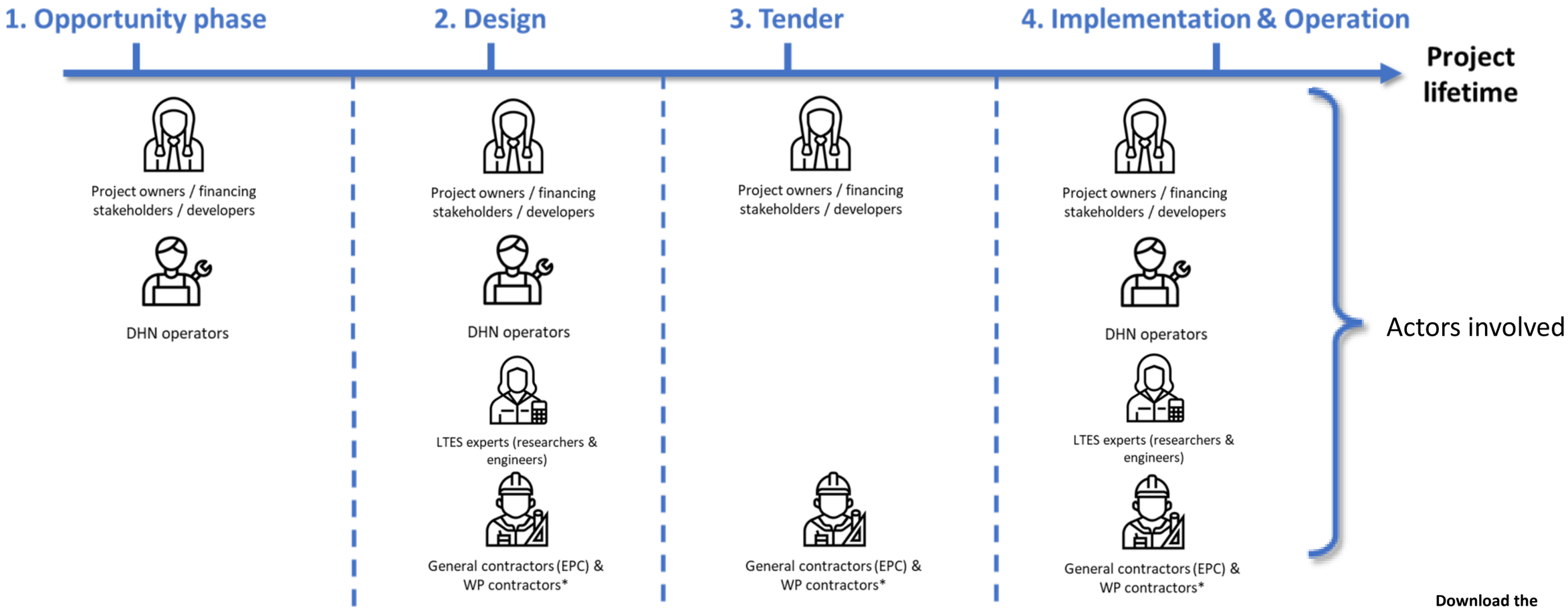
LTES implementation takes place in 4 main phases



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Thanks for your attention !

Romain Sucche

rsu@planenergi.dk

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Upcoming Webinars and Q&A Sessions

Year	2025												2026												2027											
Month	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Webinar						1						2						3						4												
Q&A Session						✓			1.1 ✓		2.1 ✓	✓	2.2		2.3		3.1		3.2		3.3		4.1		4.2											

✓ **Webinar 1** Planning, legal & societal aspects of LTES implementation & financial aspects

✓ **Webinar 2** Technical aspects of LTES (feasibility, design, tender, monitoring, etc.) & economic aspects

Webinar 3 Practical experiences with LTES & economic aspects

Webinar 4 Results from IEA-ES Task 45 studies/work (+ potential information wishes from stakeholders)

Q&A Sessions Depending on the questions gathered through the online form

→ https://forms.office.com/e/3826HwsSUw

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Evaluation form

Please fill in this evaluation form to help us improve the upcoming sessions

https://forms.office.com/e/ePFLBQhzp2

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