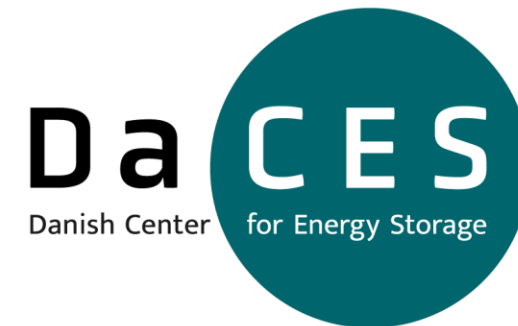


Green Hydrogen as an Effective Means of Energy Storage and key contributor to the Green Transition

Gunnar Rohde



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Effectiveness

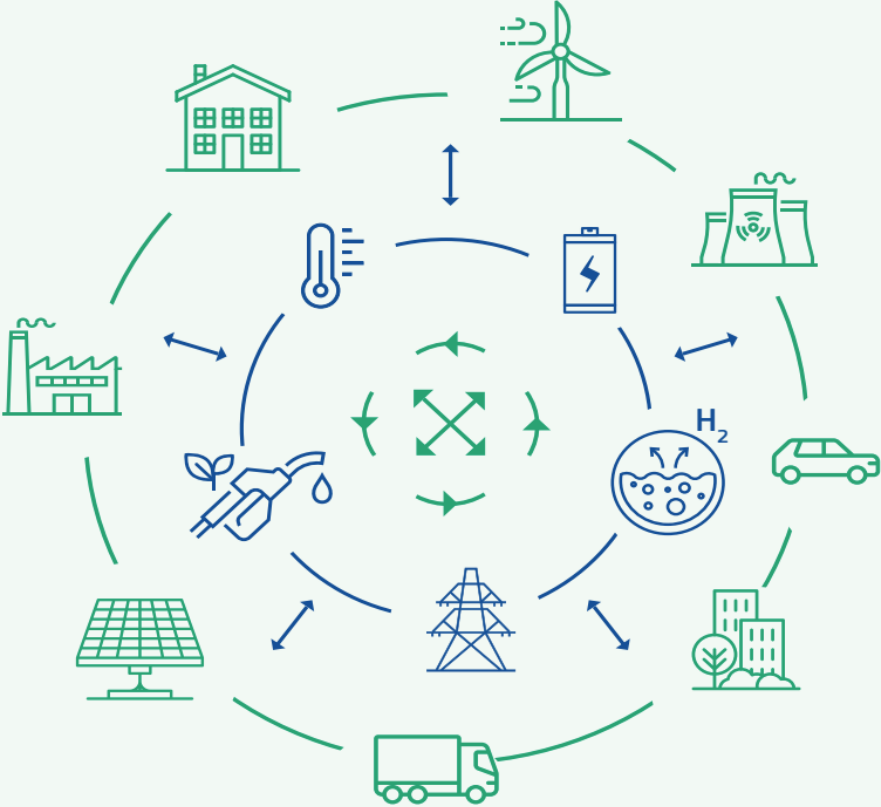
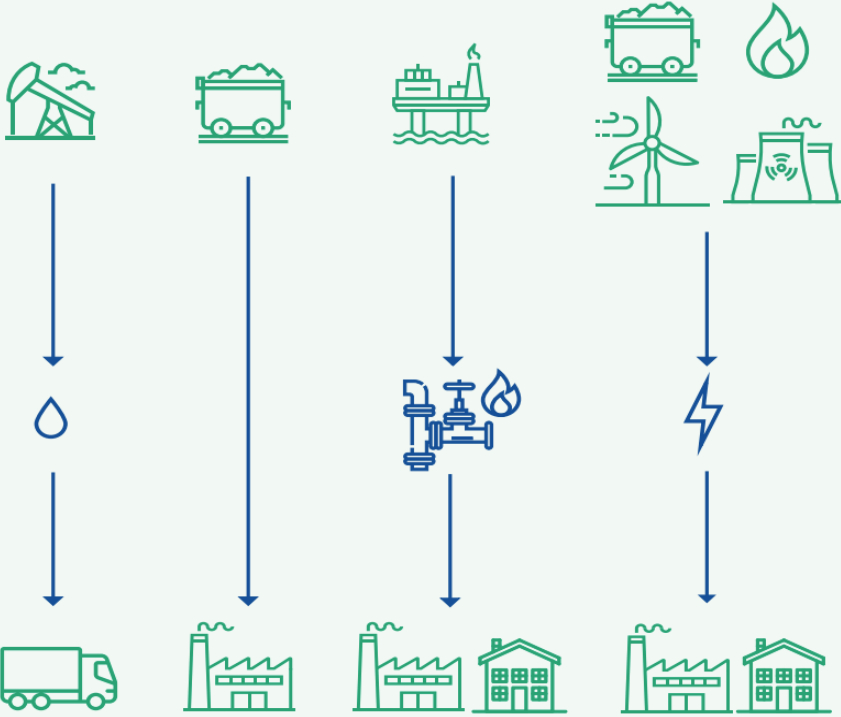
vs.

Efficiency

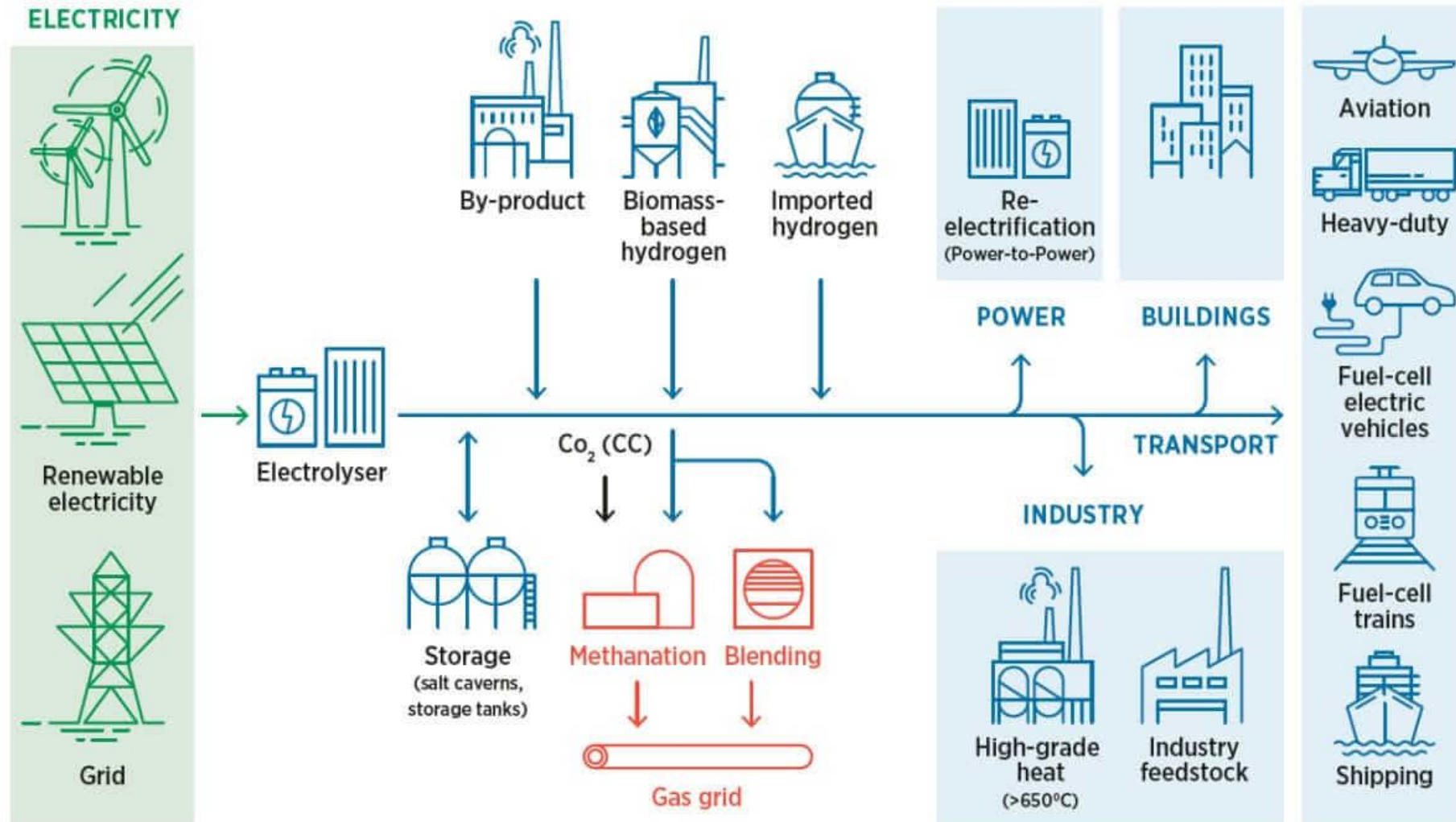
“Do the right things”

“Do the things right”

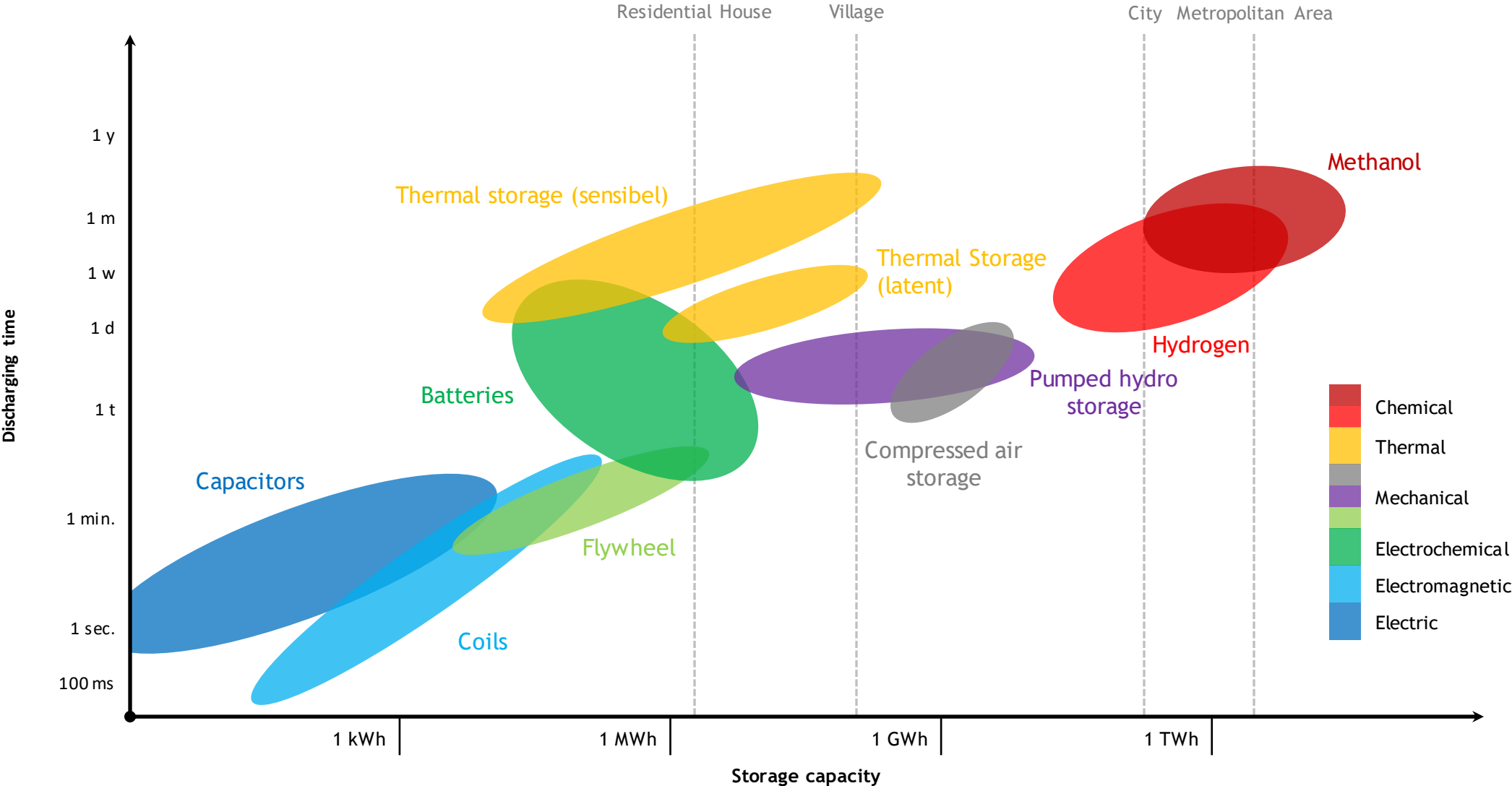
Challenge



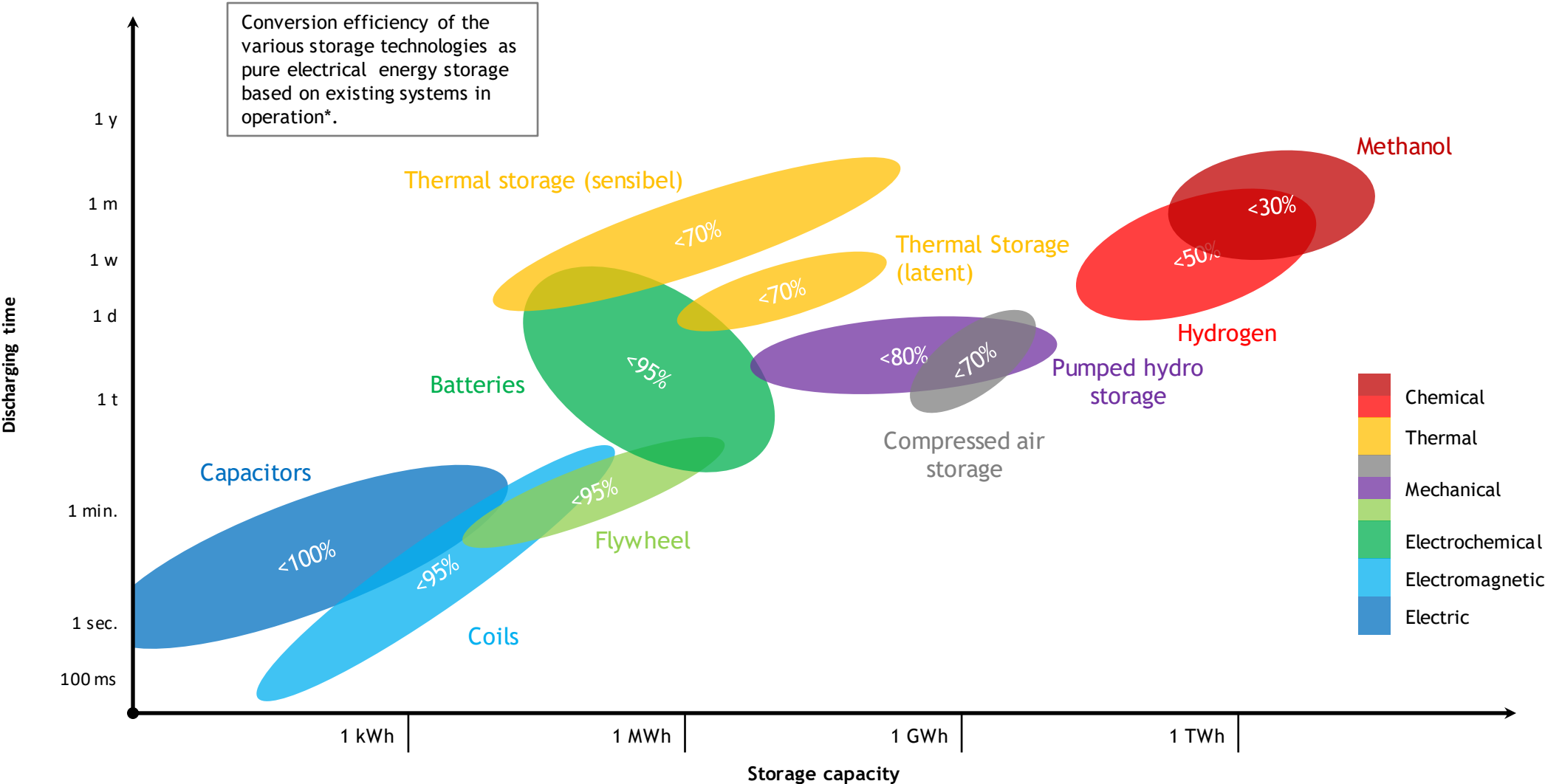
Hydrogen Pathway



Storage Technologies

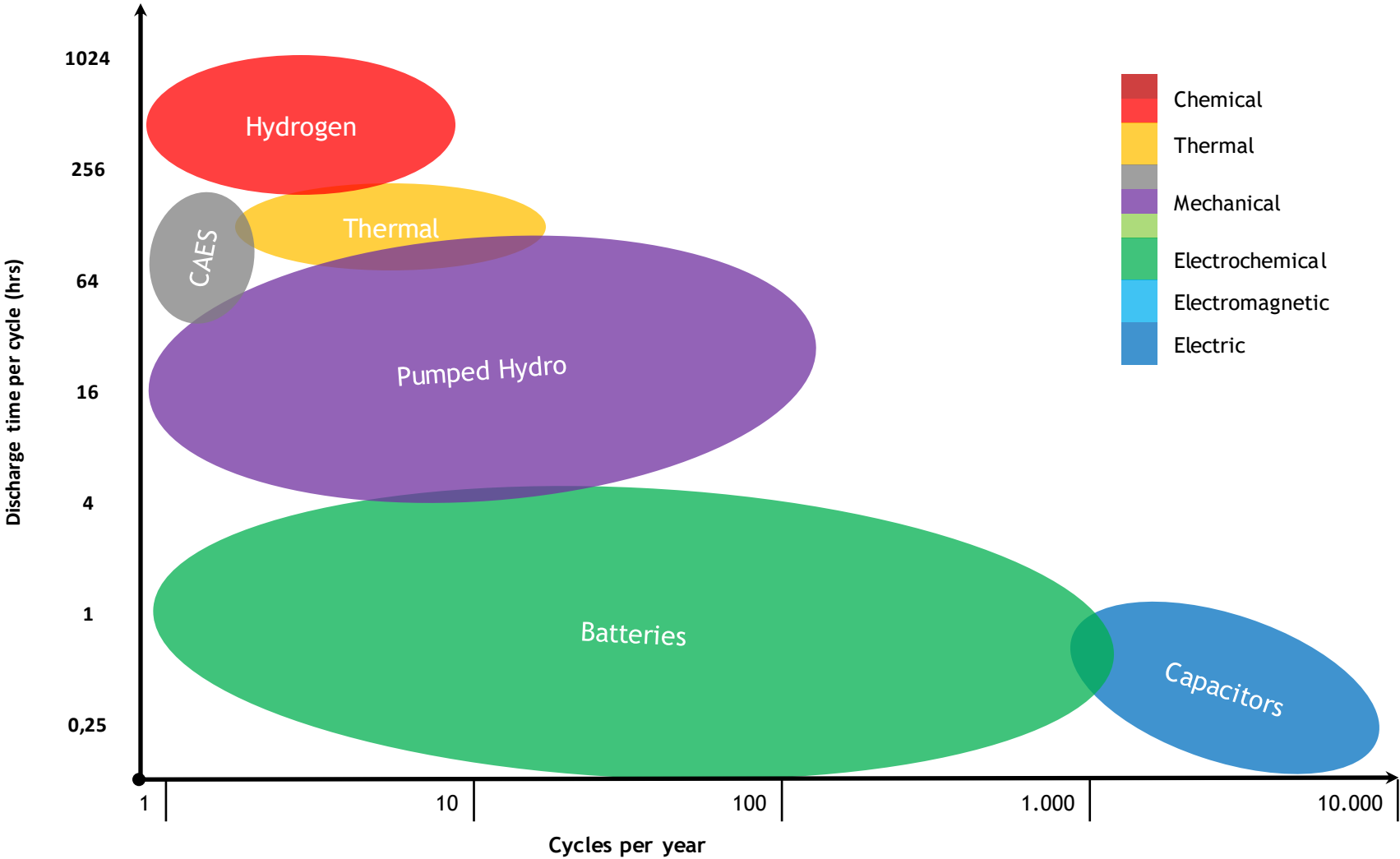


Storage Technologies

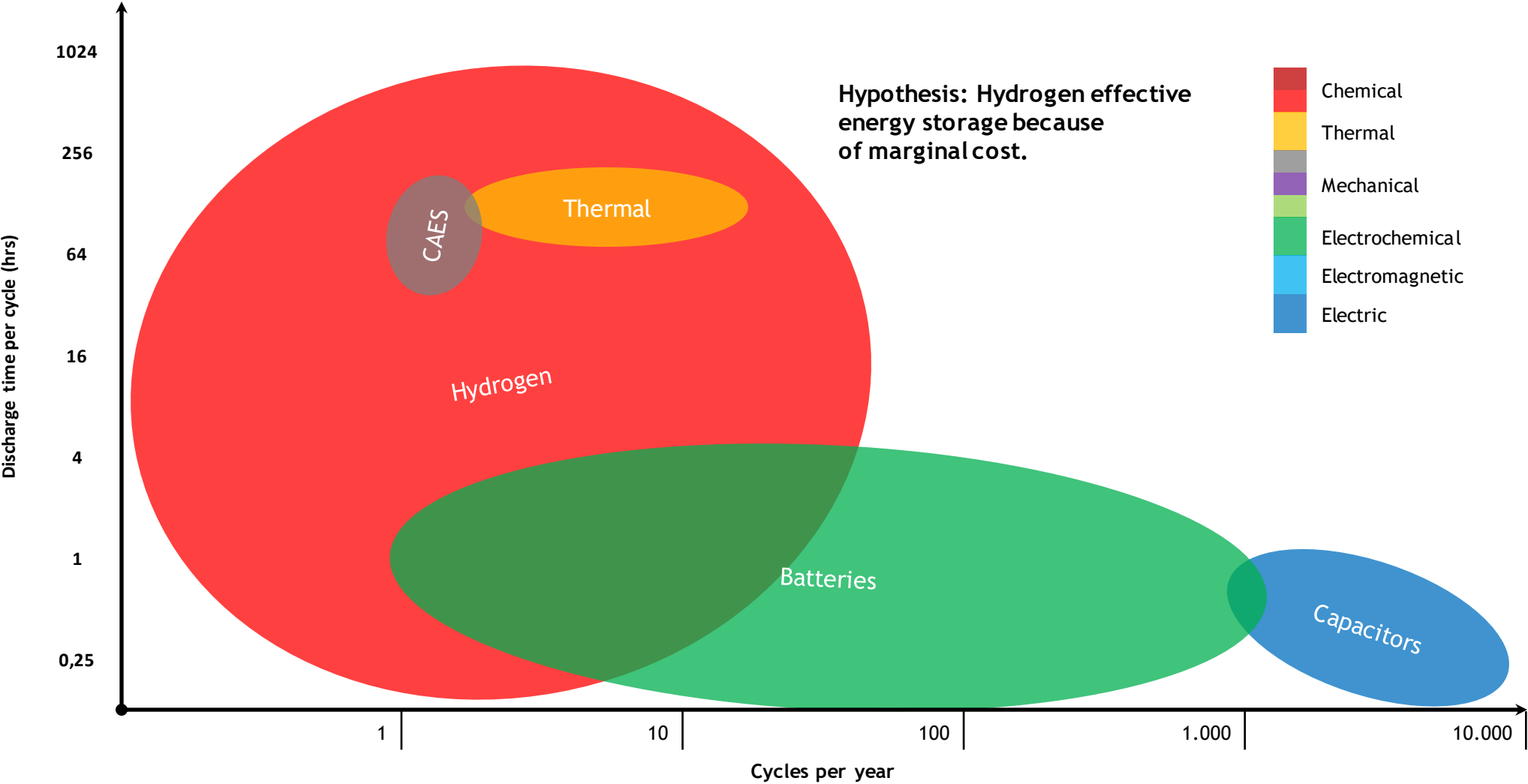


*Based on data from Denmark and Germany; may differ for other countries!

Storage Needs



Storage Needs



- Energy Storage is necessary for the green transition, but technically no "one size fits all".
- Hydrogen is not the most efficient storage for electric energy, but a certain amount of (green) hydrogen is needed for:
 - Renewable iron/steel industry
 - Renewable chemical industry
 - Heavy-duty transport (particularly shipping and aviation)
- Hydrogen becomes an effective energy storage due to already paid marginal cost.
- In most cases direct use of electric energy is preferred.