



ZETA WORKSHOP

Zero Emission Transport Accelerator



10.mars 2020, Trondheim, Royal Garden



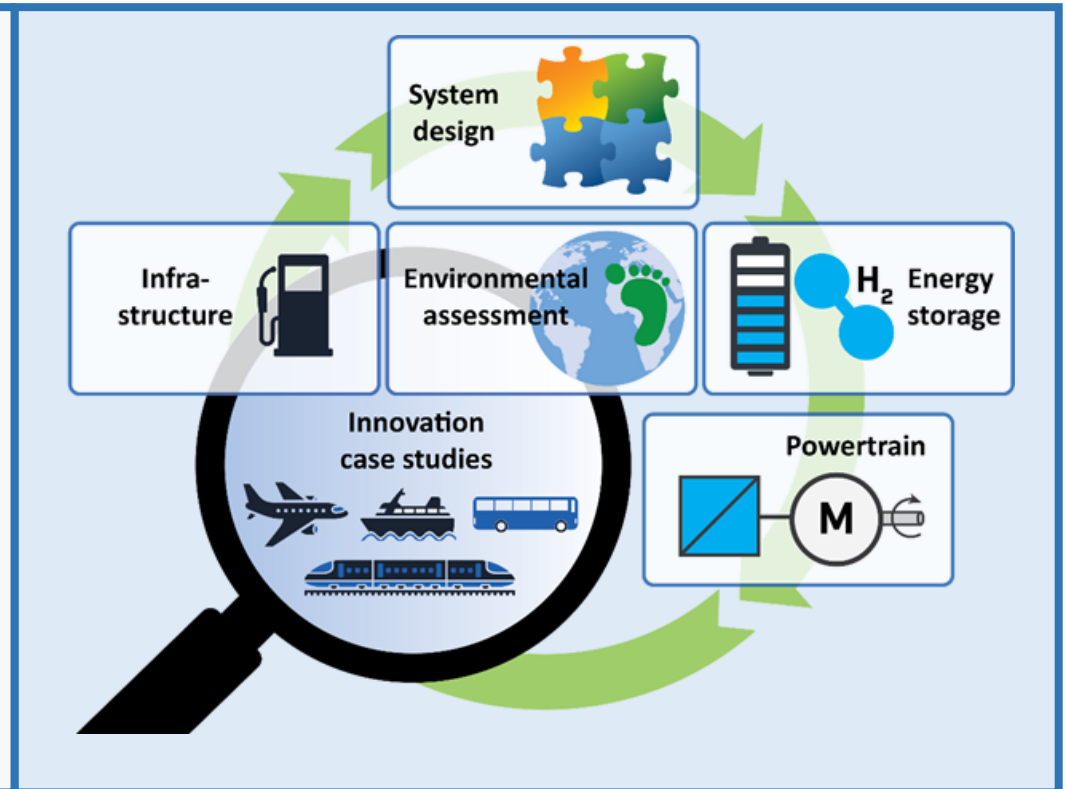
Agenda ZETA Workshop 10.03.2020

10:00	Innledning, HMS og velkommen til workshop (John Olav Tande, SINTEF)
10:15	Zeabuz – en ny måte å tenke mobilitet på (Erik Dyrkoren, Zeabus)
10:30	Fremtidens luftfart (Jan Petter Steinsland, Luftfartstilsynet)
10:45	Ammoniakk som marint drivstoff (Oddbjørn Rekaa Nilssen, Equinor)
11:00	Grønn batteriproduksjon i Norge (Tom Jensen, Freyr) – via Skype
11:15	Pause
11:30	ZETA: hvordan akselerere utviklingen av nullutslippstransport <ul style="list-style-type: none">• Holistisk design av transportsystemet (Vibeke S. Nørstebø, SINTEF)• Fremdriftssystem (Jon Are Suul, SINTEF)• Energilagring (Åsmund Ervik, SINTEF)
12:15	Lunsj
12:50	fortsettelse presentasjon av ZETA <ul style="list-style-type: none">• Infrastruktur for lading og fylling (Eirill B Mehammer, SINTEF)• Miljødesign (Jacob Joseph Lamb, NTNU)• Forskning som drivkraft for innovasjon (Inger Marie Malvik, SINTEF)
13:30	Veien videre / Oppsummering Prioritering av forskningsaktivitet Planlegge videre aksjoner
14:00	Slutt



Our Vision

- Is a future with zero emission of greenhouse gases from road, rail, sea and air transport
- ZETA will accelerate Norwegian innovation and value creation in zero-emission transport technologies for heavy vehicles, railways, coastal line vessels and ferries, and short-haul flights
- This position shall be gained through education, research and innovation within:
 - powertrains,
 - hydrogen and battery-based energy storage technology,
 - infrastructure for electrical charging and hydrogen fueling,
 - system design and
 - environmental assessment





R&D objectives and work packages



Innovation case studies: Explore and carry out case studies (demonstrators and pilots) with industry partners to foster innovation within high energy demand transportation systems for road, rail, sea and air



Infrastructure: Enable reliable and efficient large-scale infrastructure for electrical charging and hydrogen fueling through development of components and system topologies.



Energy storage: Develop hydrogen and battery-based storage technology for transport applications with a high energy demand.



Powertrain: Enable extended range or new applications of high-power battery-electric and fuel-cell-based propulsion systems by developing design methodologies and control strategies for electric and electromagnetic energy conversion systems.



System design: Assess, design and optimise overall technology choices and sizing of infrastructure, energy storage and powertrain systems.



Environmental assessment: Assess the climate change mitigation potential and broader environmental characteristics of individual technologies, systems and the combination of several of these in different transformation scenarios.

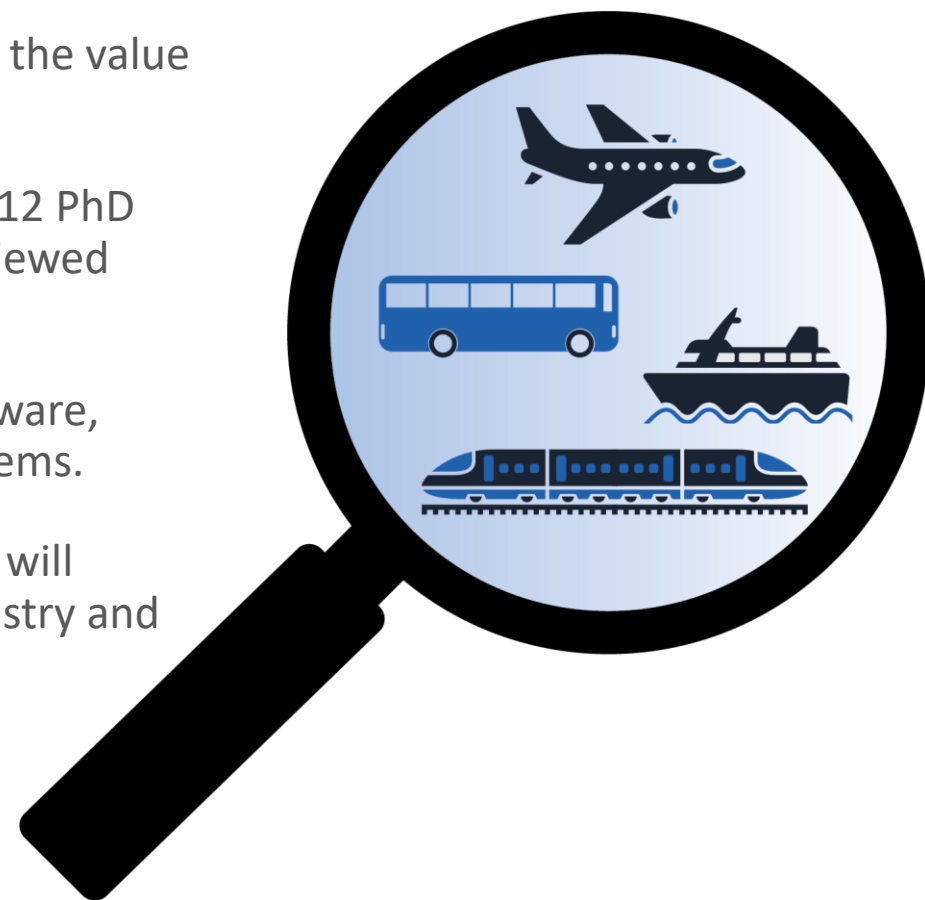


Our partners (TBC)

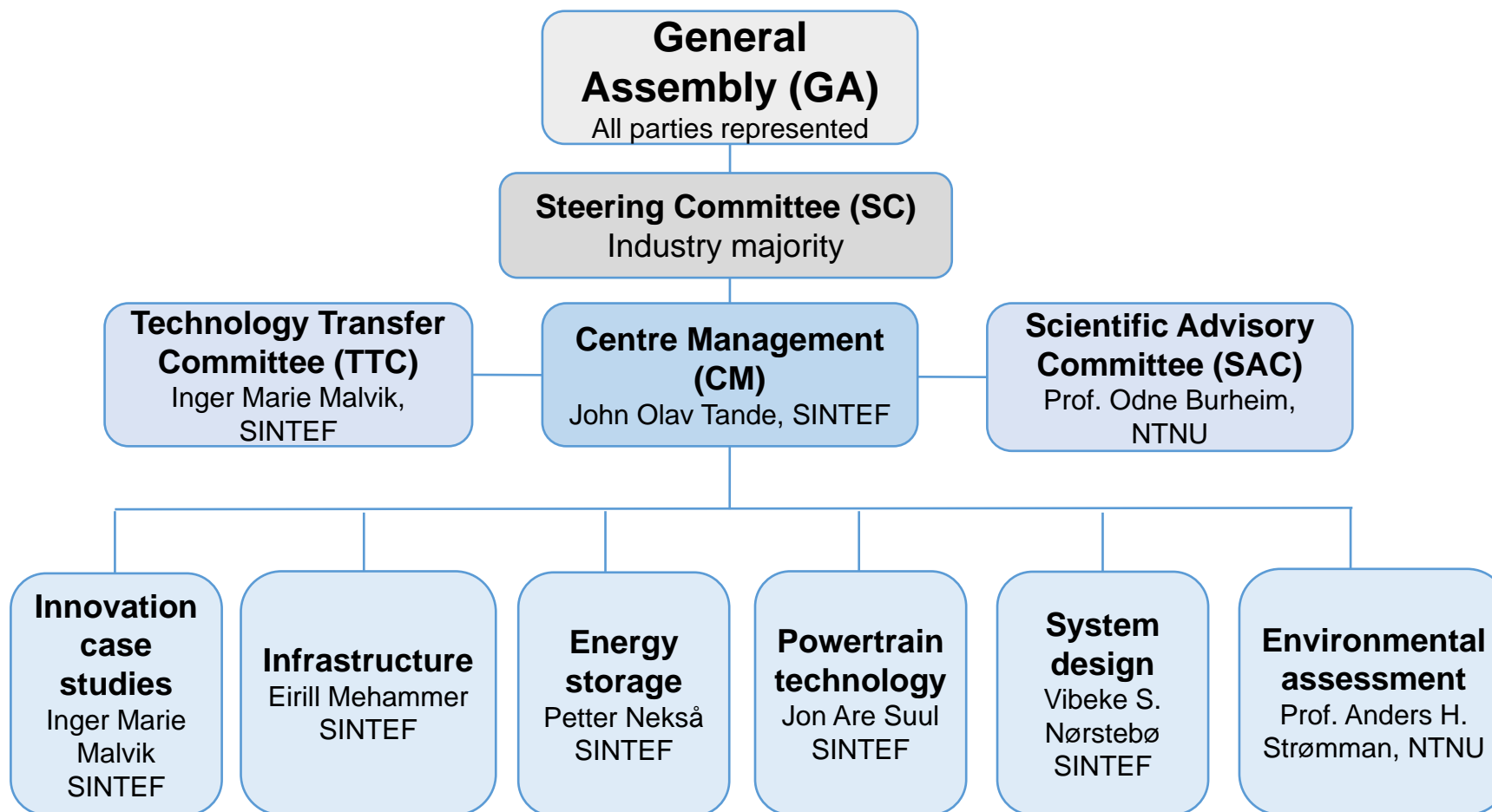


Deliverables

- The Centre will accelerate Norwegian innovation and increase the value creation within the zero-emission transport industry.
- Expected results include at least 20 innovations, education of 12 PhD and 150 MSc/BSc candidates, and publication of 100 peer-reviewed articles.
- ZETA will provide new methodologies, numerical models, software, prototypes/ demonstrators of components, products and systems.
- Active participation in industry-driven innovation case studies will enable knowledge transfer between research, education, industry and public bodies
- Development and testing of new technologies and methods in these cases will promote commercialisation and knowledge transfer to ZETA's industry partners



Organisation





Value proposition

ZETA will provide value to its partners through:

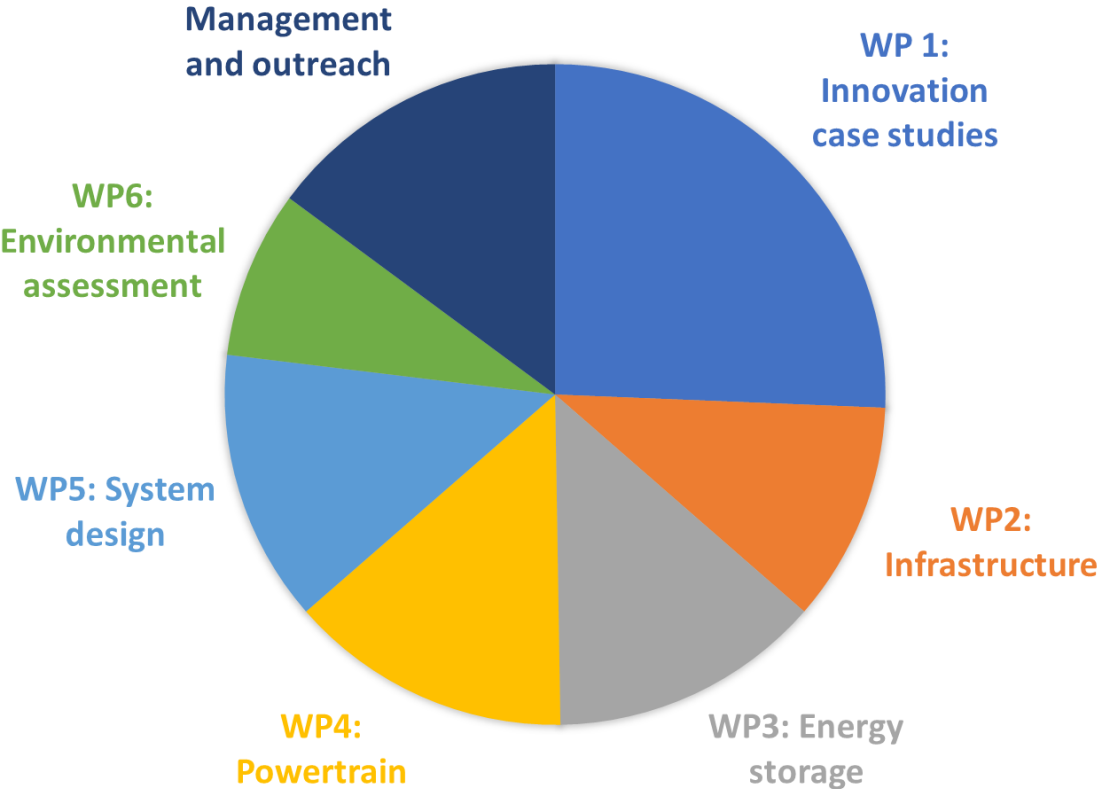
- Contribute to reaching the Norwegian and international targets for decarbonisation of the transport sector and UN's Sustainable Development Goals.
- Increase value creation in Norwegian vendor industries and service sectors.
- Commercialise products and systems in national and international markets through ZETA's industry partners and through commercialisation projects and company spinoffs.
- Utilise tools and acquired know-how for design, engineering, optimisation and deployment of charging infrastructure, hydrogen-based systems, electrification, hybridisation and retrofit.
- Plan and carry out innovation case studies for sector-specific and cross-cutting topics.



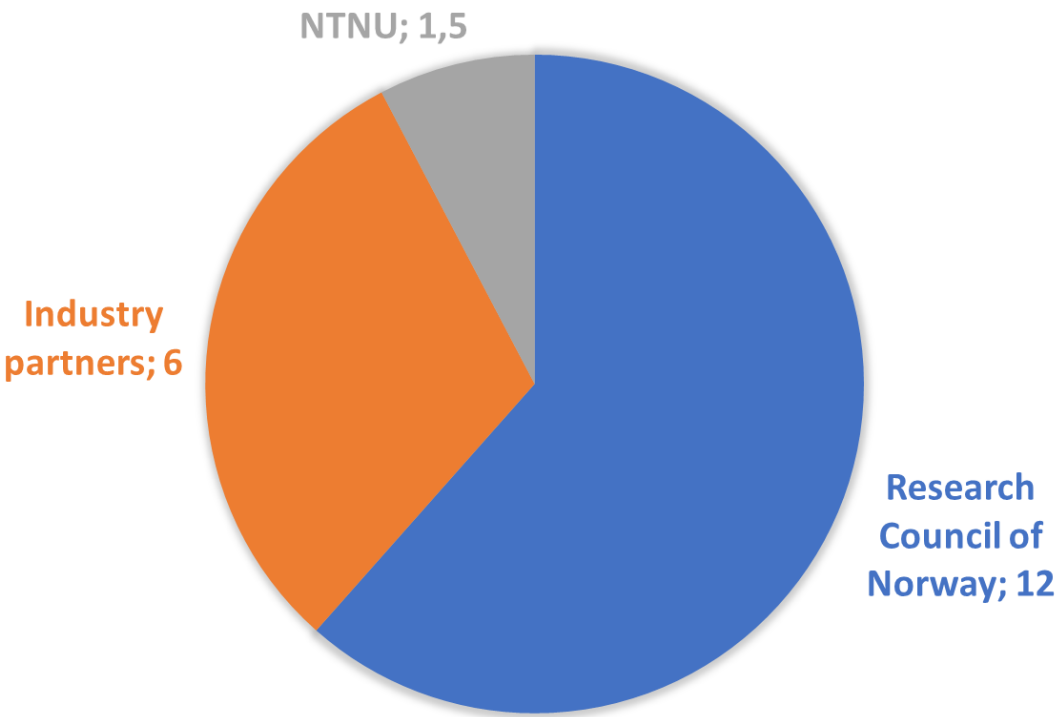


Budget and finance (2020-2028, TBC)

BUDGET



FINANCE PER YEAR (MNOK)



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