



agder energi



FIVEN

Elkem

NIKKELVERK
A GLENCORE COMPANY



IFE

UiA University of Agder

toi

NTNU



- Established 2007
- 19 Core companies
- 41 Competence suppliers
- *Norwegian Centre of Expertise* since 2015

SINTEF **ROBOTNORGE** **SAFECLEAN**
Cleaning Up Industry
NORCE **NIVA** **noenco** **BILFINGER**
Norsk institutt for vannforskning **NORDIC ENERGY CONSULTING**
norner **SINTEF MOLAB** **SCANWATT** **PEMAC** **NORSHIPS**
The Polymer Experts **at skog** **VITEN SENTERET** **AVITELL** **Uia** **University of Agder**
Prediktor **NAVIC** **Intelecy** **Periti** **munio** **SEAFRONT** **TRATEC** **OTECHOS** **Kvadraturen skolesenter** **IOT Solutions** **Lindum**
innoventus **EGDE CONSULTING** **SØRLANDETS FAGSKOLE GRIMSTAD** **STENA RECYCLING**
Viking Heat Engines **ØGREY FARSUND** **Membranteknikk** **Noroff** **ReSiTec**
*School of technology and digital media
AIR PRODUCTS **wsp** **necto** **LEAN partner***

Hydro **Elkem** **GE** **REC**
ALCOA **eramet**



FIVEN
NIKKELVERK
A GLENCORE COMPANY
ALUDYNE™
BOLIDEN
3B *the fibreglass company*
Borregaard



Sam Eyde
 (1866-1940)
Norwegian Industrialist
Founder of four Eyde cluster member

nordic **HUNTONIT** **BERRY=ALLOC®** **Fibo** **HENNIG OLSEN** **Returkraft**
ETB.1924

TITANIA
a KRONOS Company

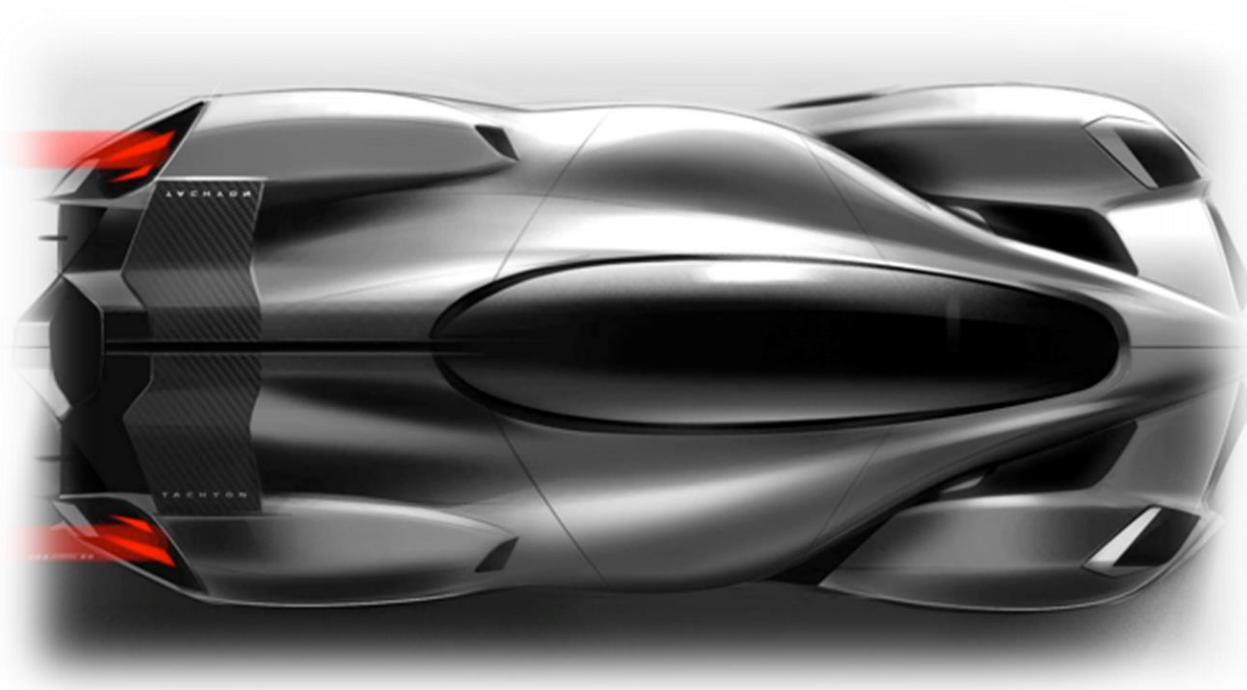


Prioritised UN Sustainable development goals



BATMAN (2019-2022)

Lithium ion **BAT**teries - Norwegian opportunities within sustainable end-of-life **MAN**agement, reuse and new material streams



Kilde: <https://www.motor1.com/news/186144/raesr-tachyon-speed-debut/>

BATMAN (2019-2022) Lithium ion BATteries - Norwegian opportunities within sustainable end-of-life MANAgement, reuse and new material streams. Budget 30 MNOK.

Business Partners



Research Partners



Advisory Board



Associated Partners



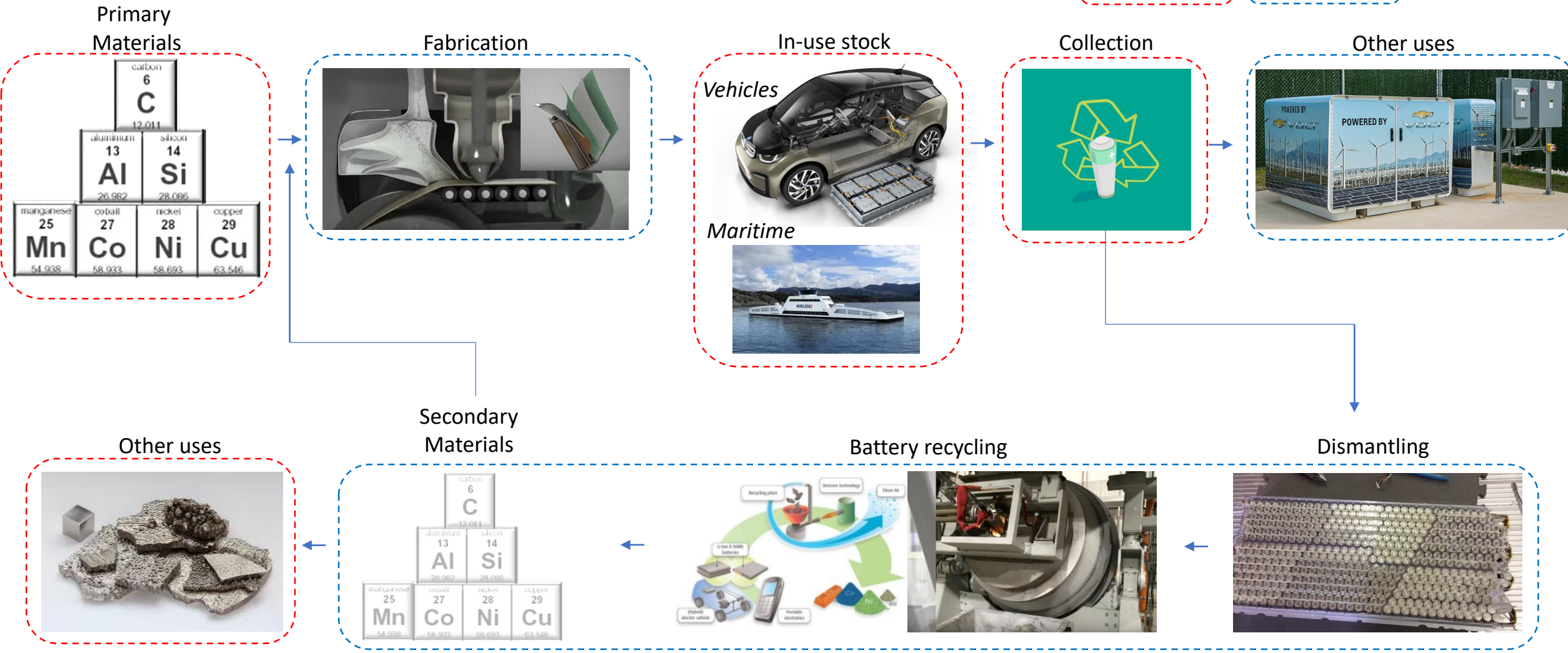
Project management



Battery life cycle – Norway in a unique position

Competitive advantage

Potential

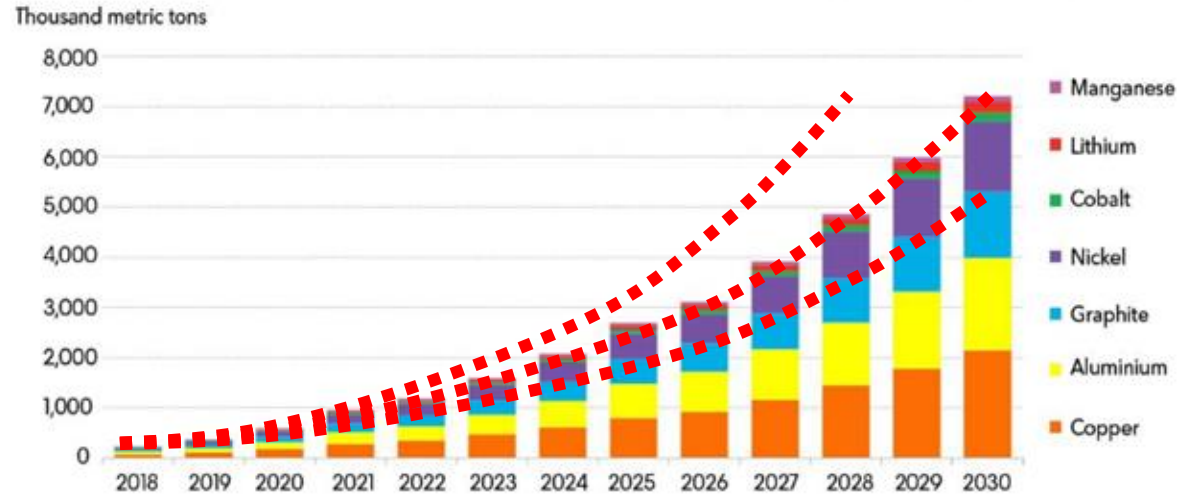


BATMAN - Predictive model for material demand and secondary use/recycling volumes

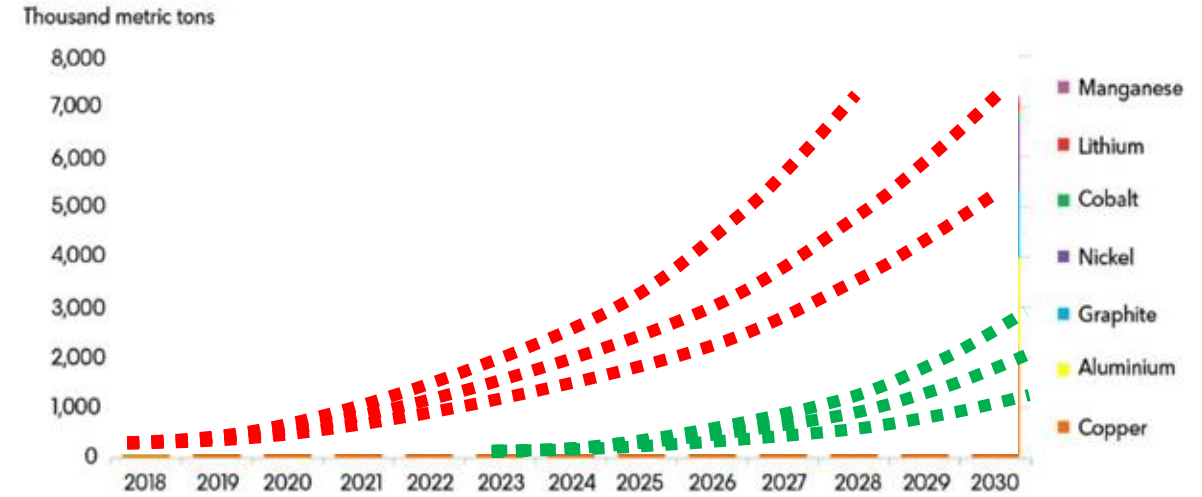


BATMAN - Predictive model for material demand and secondary use/recycling volumes

Metals and materials demand from lithium-ion battery packs in passenger EVs



Metals and materials demand from lithium-ion battery packs in passenger EVs



- - - - Demand
 - - - - LIBs available for secondary use/ recycling

Partner companies can, in a timely fashion, identify their value creation opportunities within i) refurbishing, ii) secondary use, iii) recycling and iv) new energy systems and models. Enabling them to take strategic decisions, and to better understand when to make investments in product development and/or facilities.

Image source: "Electric Vehicle Outlook 2018 | Bloomberg New Energy Finance." Bloomberg NEF, 2018, about.bnef.com/electric-vehicle-outlook/#toc-download