



# ALTRIS

Altris is a technology provider that enables Sodium-ion batteries to become the next big generation battery design.

Our technology gives reliable batteries with outstanding safety and sustainability, combining competitive performance in power, energy density, and price.

May 2022

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# Altris core business - Fennac

Fennac is a sodium-ion battery cathode material that is extraordinarily sustainable, due to the non-toxic and abundant elements it consists of.

Whilst this type of material is not entirely new, Altris has a patented method for manufacturing Fennac – making it a sustainable, safe, and cost-efficient alternative.

This, together with the use of cheap raw-materials, makes Fennac the most competitive cathode material for rechargeable batteries.



# Fennac cathode material

Fennac is made of abundant and cheap substances: Iron (Fe), Nitrogen (N), Sodium (Na) and carbon (C). Together with a water based production it becomes a drop-in solution with lower Capex and Opex.

No toxic elements, no conflict-metals or geo-political sourcing issues, and very easy to recycle.

Due to inherent properties the battery can operate at a wide temperature window.

Altris offer superior safety. The combination with of a oxygen free material and a non-flammable (patented) electrolyte we are confident that Altris can provide the markets safest battery.

## Competitive cost structure

- Low-cost raw materials and patented manufacturing method
- Water based slurry → no NMP → CAPEX & OPEX savings
- Current collector: Only Al (no Cu)

## Outstanding sustainability

- Non-toxic
- No conflict metals
- No geo-political sourcing issues
- Very easy to recycle

## Functional in a wide range of temperatures

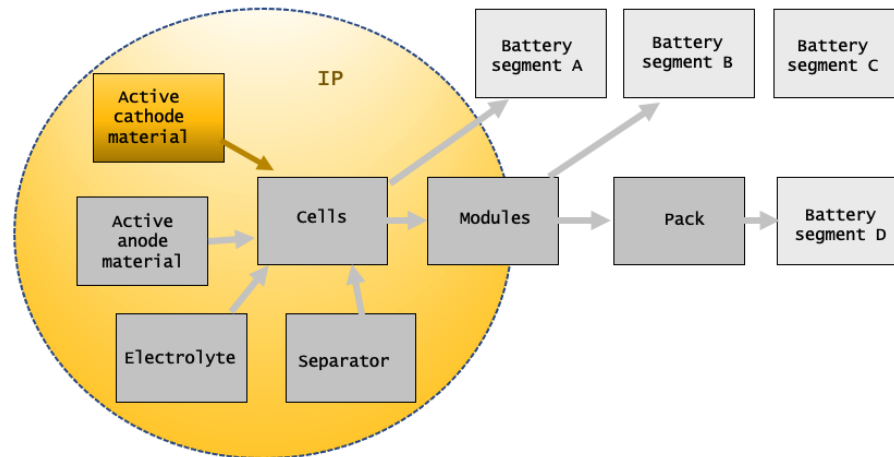
- At -25°C Fennac has x2 the energy density of LFP\*

## Superior safety

- Extremely fire safe
- Transported fully discharged
- No thermal runaway
- Non-flammable electrolyte

# Business Concept

Altris is developing IP for cell design, which will be licensed to cell manufacturers. The core of our technology is Fennac, which will be produced by Altris and sold to the companies that use Altris license.



# Fennac production

2017-2019  
Opportunity  
assessment

2020-2021  
Market  
introduction

2022-2023  
**Industrial production  
of Fennac**

2024-2025  
Scale-up production of  
Fennac

## Site Ferrum: Industrial Production of Fennac in Sandviken, Sweden

Factory Ferrum will have an annual capacity to produce 1GWh / year of Fennac by 2023.

Altris is sourcing for a next factory which will produce 20 GWh / year of Fennac.



# Our locations

