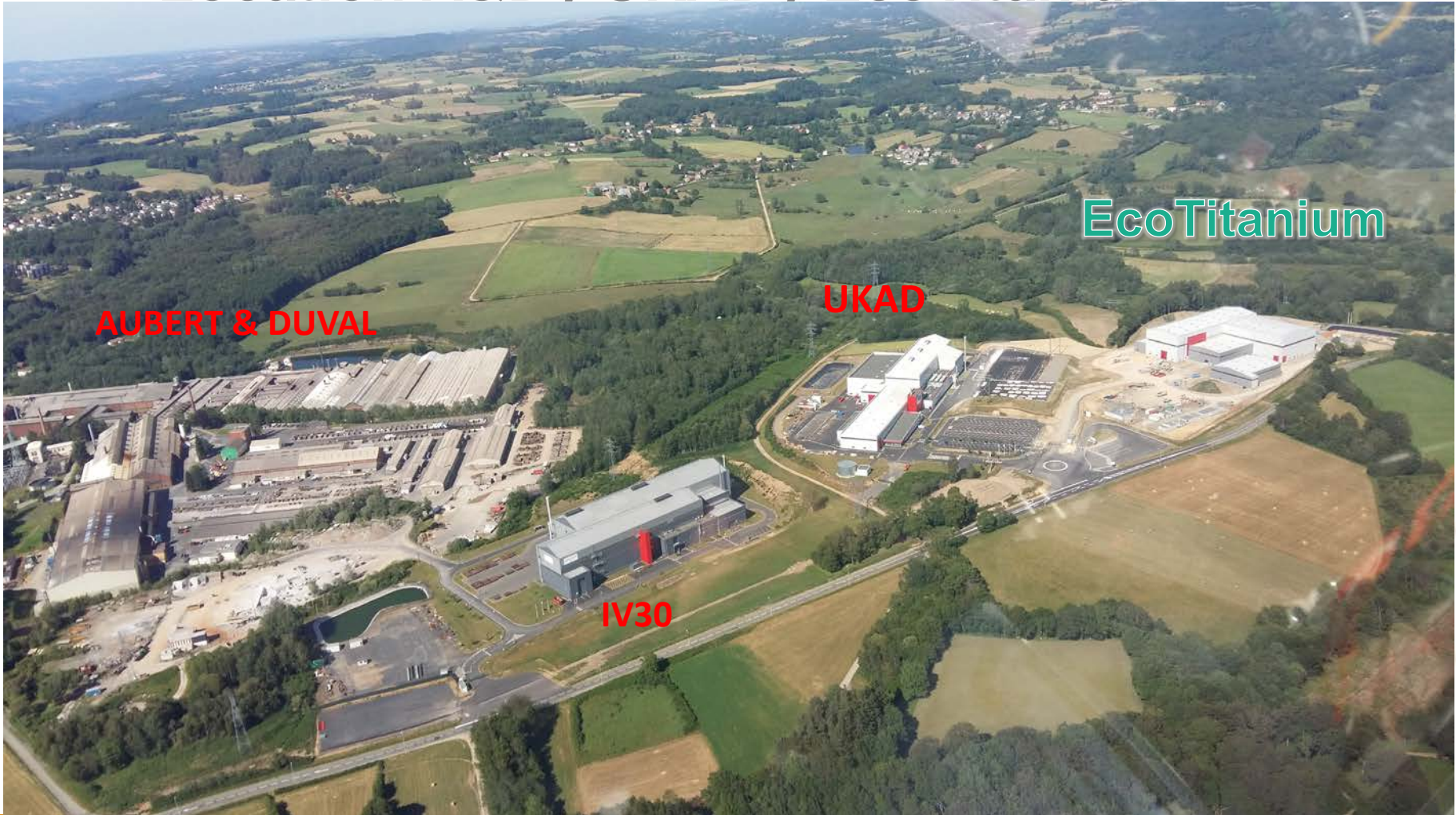




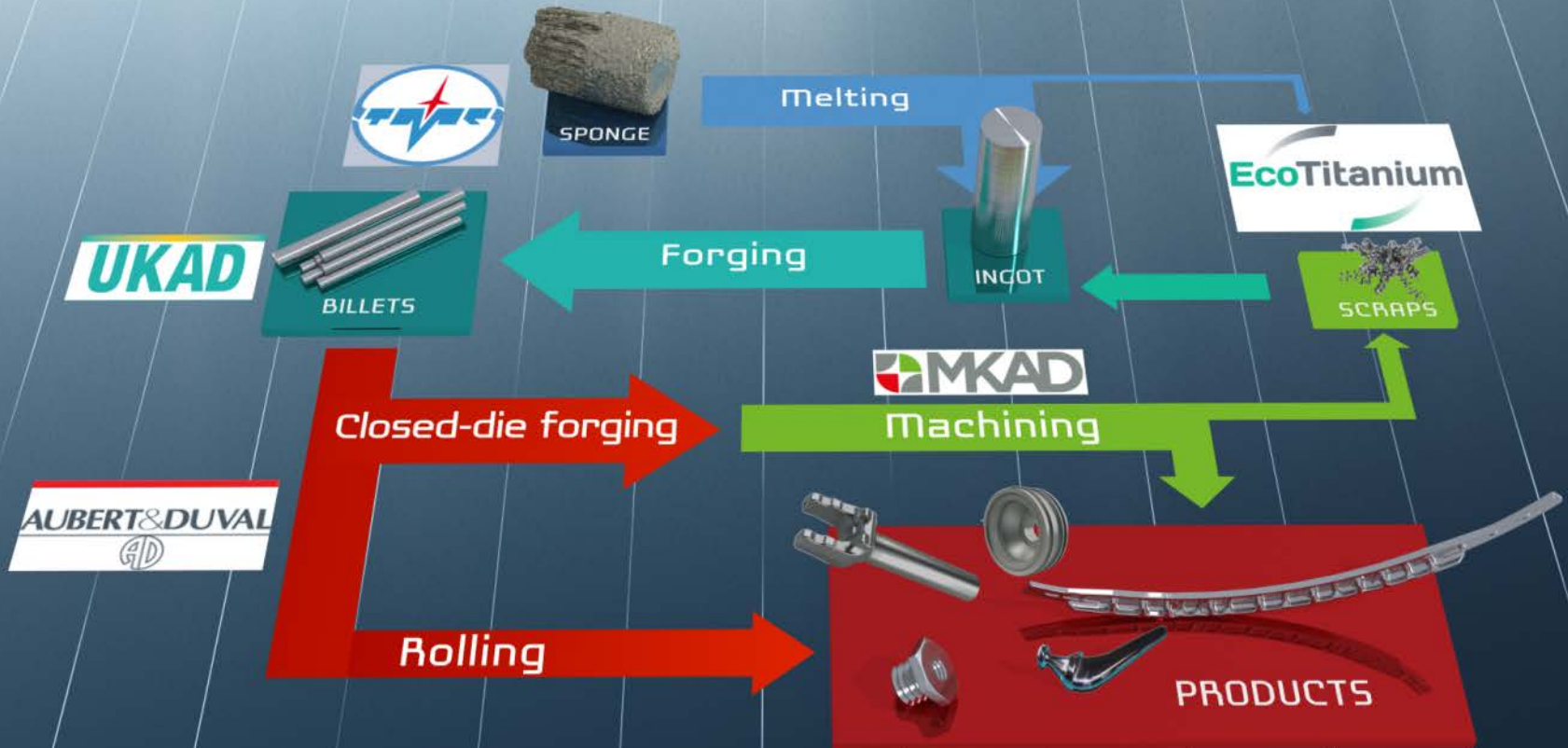
# Ecotitanium

July 2016

## Location A&D / UKAD / EcoTitanium



# Partnerships form an integrated Titanium Solution



**A FULLY INTEGRATED SOLUTION FOR TITANIUM**

# Production generates significant volume of scrap

Titanium closed die parts generate huge volume of scrap

**Billet 200kg**



**Closed Die Part 150kg**



**Finished Part 20kg**



**Ratio Buy to Fly : 10**

# Scrap generated in Europe is a key for competitiveness of US titanium melters

**European titanium scrap is mainly exported to USA : 11 850 tons in 2015**



**US ingots were mainly produced from titanium scrap in 2014 and 2015, 63 % of the total consumption Scrap + Sponge.**

# Committed shareholders



**UKAD**

43.5 %

**ADEME**



Agence de l'Environnement  
et de la Maîtrise de l'Energie

41.3 %



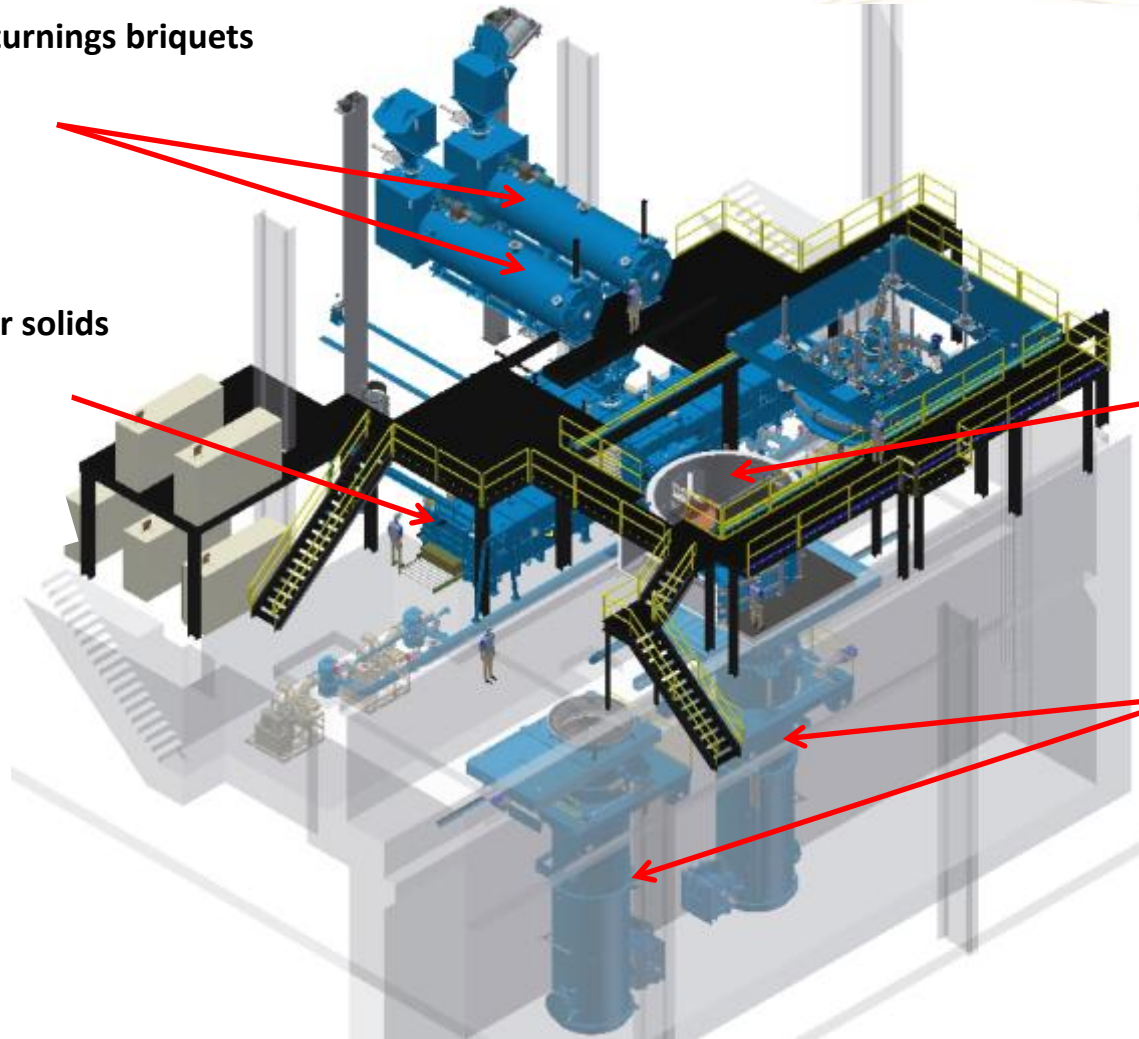
**CENTRE  
FRANCE**

15.2 %

# Main Equipment : A Plasma Furnace Cold Hearth Refining

Loading system for turnings briquets

Loadind system for solids

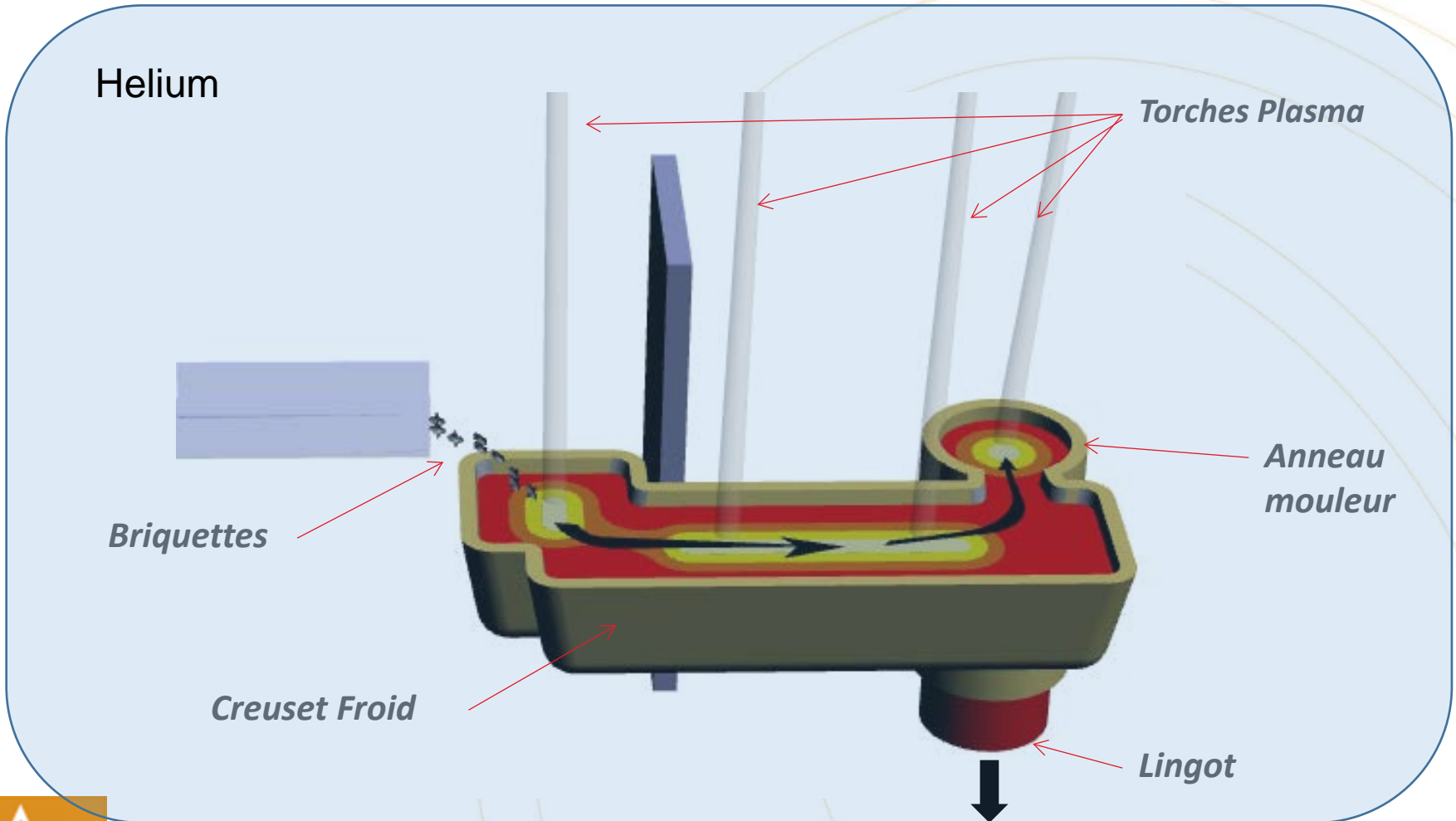


Melting Chamber

Electrods erection chamber

# Principle

Principle of a PAMCHR furnace.



Melting 1700 °C

# EcoTitanium general schedule



2010  
Reflection and  
project structuring

2015  
Building  
construction

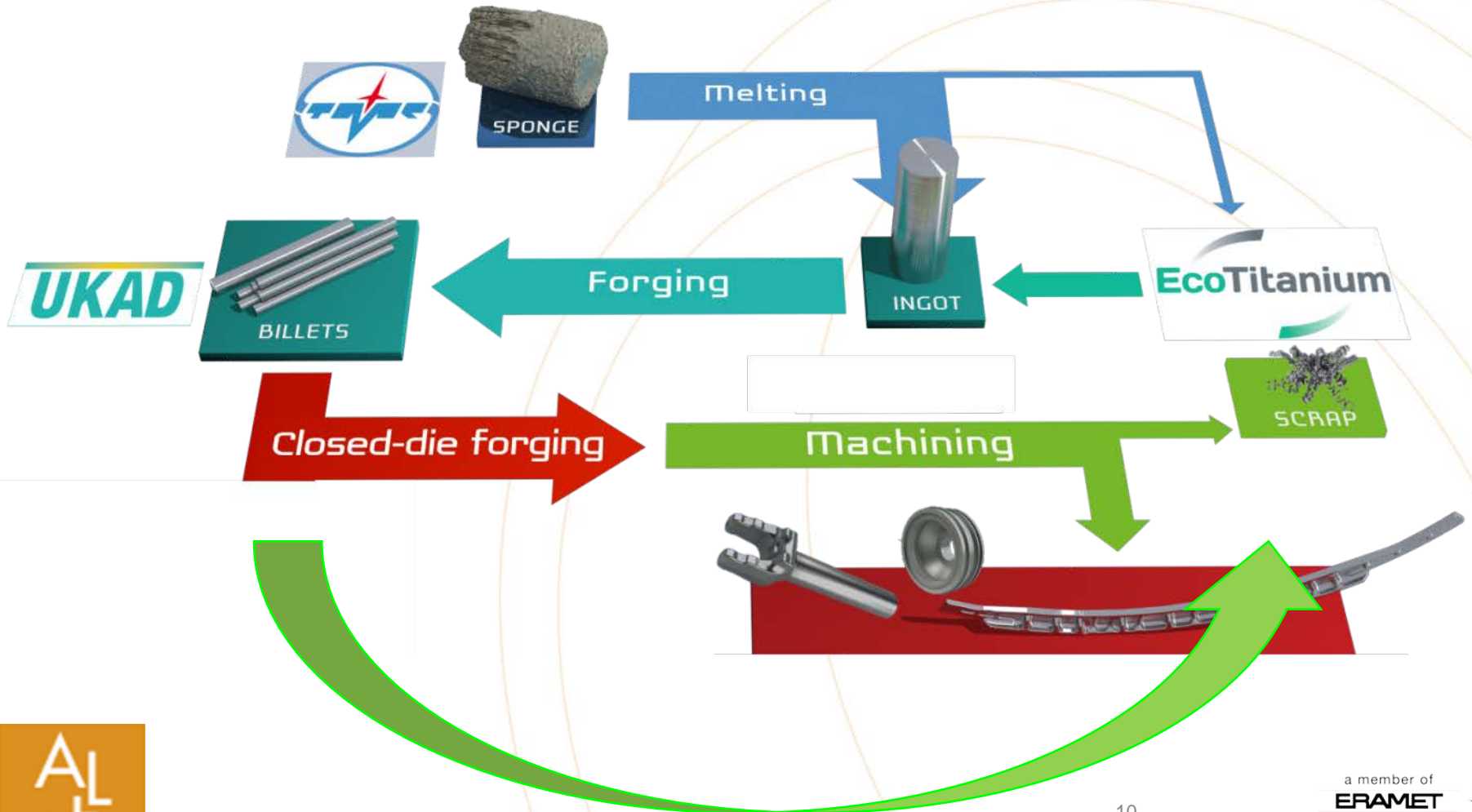
2017  
Production  
startup

2022  
Full maturity

# An open Solution for all UKAD customers



The revert loop will be available for all UKAD's customers, based on circular Economy.





Thank you for your attention

