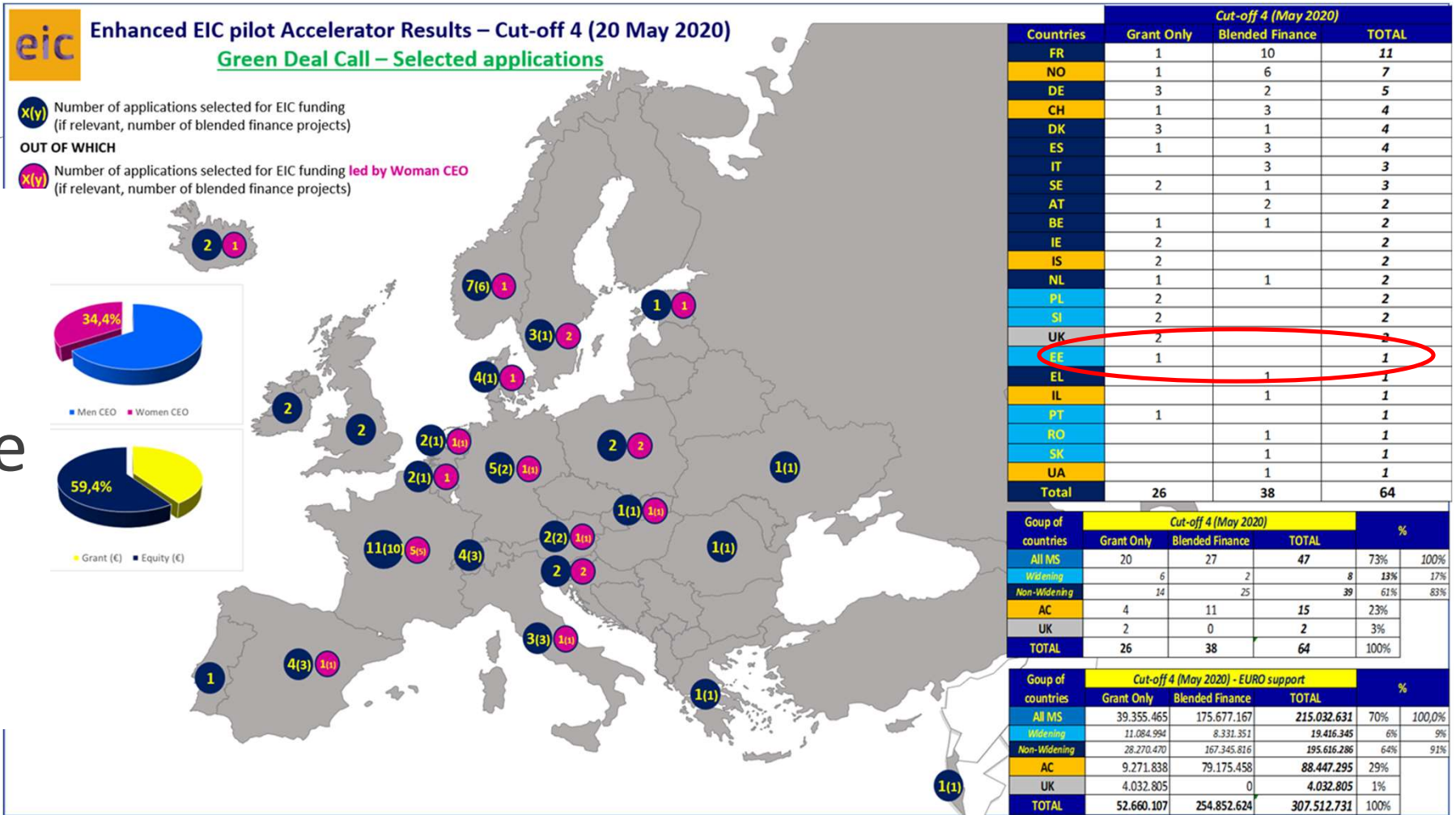



# BiotaTec

---

# EIC kiirendi roheleppe kutsung maikuus 2020



Proposal Evaluation Form		
	<b>EUROPEAN COMMISSION</b> Horizon 2020 - Research and Innovation Framework Programme	<b>Evaluation Summary Report - step 2</b>

**Call:** H2020-EIC-SMEInst-2018-2020-4  
**Type of action:** SME-2b  
**Proposal number:** 101010499  
**Proposal acronym:** BiotaMet  
**Duration (months):** 24  
**Proposal title:** A novel biotreatment technology for sustainable metal extraction from low-grade ores, tailings and WEEE  
**Activity:** EIC

N.	Proposer name	Country	Total Cost	%	Grant Requested	%
1	BIOTATEC OU	EE	3,290,668.75	100.00%	2,303,468.13	100.00%
	<b>Total:</b>		<b>3,290,668.75</b>		<b>2,303,468.13</b>	

### Evaluation Result

Status: **A**

### Form information

Evaluation Result:  
 - Status A = Funded  
 - Status B = Not Funded

Indicative Appraisal Scale per Sub-Criterion:

- Very Good to Excellent (4.5 - 5)
- Good to Very Good (3.5 - 4.49)
- Fair to Good (2.5 - 3.49)
- Insufficient to Fair (1.5 - 2.49)
- Insufficient (0-1.49)

### Step-1 Overall Consensus Score (Threshold 13/15):

Score:

13.7

### Operational Capacity

Status: **Operational Capacity: Yes**

### Criterion 1 - Impact

Score: **4.60** (Threshold: 4/5.00 , Weight: -)

### Criterion 2 - Excellence

Score: **4.50** (Threshold: 4/5.00 , Weight: -)

### Criterion 3 - Quality and efficiency of implementation

Score: **4.60** (Threshold: 4/5.00 , Weight: -)





# RESEARCH & INNOVATION

## Grant Management Services

Help

Sirli SIPP KULLI

### MY PROJECT



Call: H2020-EIC-SMEInst-2018-2020-4  
Type of Action: SME-2b  
Acronym: BiotaMet  
Current Phase: Grant Management  
Number: 101010499  
Duration: 24 months  
GA based on the: H2020 MGA EIC Accelerator - Mono - 5.null  
Start Date: 01 Oct 2020  
Estimated Project Cost: €3,290,668.75  
Requested EU Contribution: €2,303,468.13  
Contact: Natalia NOWINSKA

- Latest Legal Data
- Active Processes
- Document Library
- Communication Centre
- Archived Processes

H2020 ONLINE MANUAL



Launch new interaction with the EU +



- #### Process documents
- Evaluation Result Letter (2)
  - Evaluation Summary (1)
  - Grant Agreement (1)
  - Grant Declaration (1)
  - GrantData (1)
  - Proposal (1)

#### Process communications

- #### Process history
- EU signed the grant agreement on 22 Sep 2020 17:51
  - BIOTATEC OU (SIPP KULLI, Sirli) signed the agreement on 22 Sep 2020 13:59
  - EU proposed the agreement for signature on 22 Sep 2020 12:55
  - BIOTATEC OU (SIPP KULLI, Sirli) submitted reviewed data on 15 Sep 2020 10:25
  - EU requested data on 15 Sep 2020 09:26
  - BIOTATEC OU (SIPP KULLI, Sirli) submitted reviewed data on 09 Sep 2020 15:59
  - EU requested data on 09 Sep 2020 15:19
  - BIOTATEC OU (SIPP KULLI, Sirli) submitted reviewed data on 28 Jul 2020 11:00
  - BIOTATEC OU (SIPP KULLI, Sirli) signed the declaration on 27 Jul 2020 09:13
  - EU requested data on 22 Jul 2020 15:10
  - EU requested declarations on 22 Jul 2020 15:10
  - EU ranked the proposal and invited to prepare grant data on 22 Jul 2020 15:07
  - BIOTATEC OU (SIPP KULLI, Sirli) read evaluation information letter on 19 Jun 2020 17:11
  - EU requested to read evaluation information letter on 19 Jun 2020 16:29
  - EU registered the proposal on 19 May 2020 01:00

# Novel **Green Technology** providing metals essential for **Green Deal**

# BiotaTec



from



low-grade ores, tailings,  
e-waste, polluted water

through



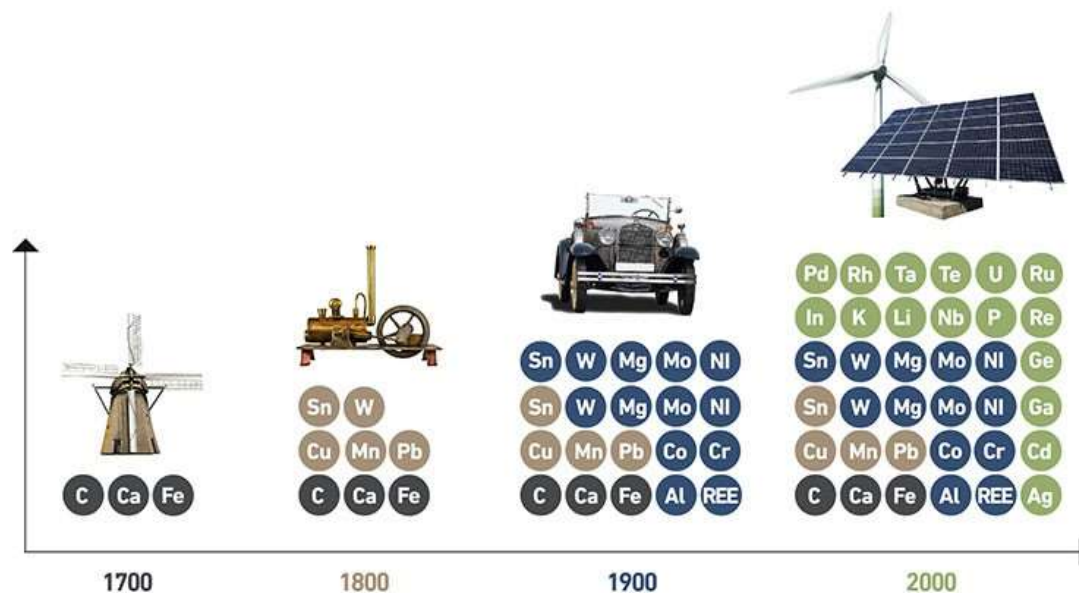
adapting and boosting the  
team-work of specific bacteria

resulting



methane gas for energy  
extracted metals

# Growing need for metals for Green Deal



Global industrialization has been followed by increasing demands for both quantities and types of raw materials. As recently as 1950, the world manufactured only one-seventh of the goods it does today, and produced only one-third of the minerals (UN Documents A/42/427).

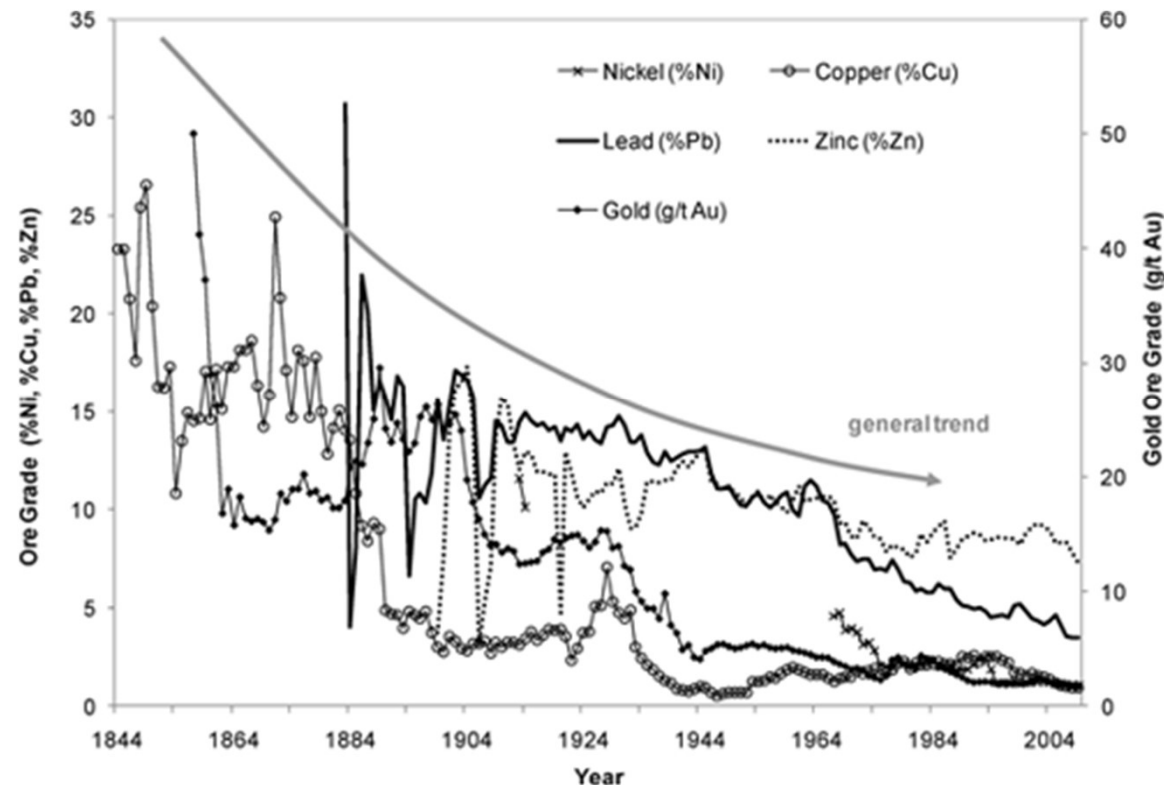
[www.ngu.no/nyheter/rapport-det-gr-nne-skiftet](http://www.ngu.no/nyheter/rapport-det-gr-nne-skiftet)

The high-tech revolution and the green shift have led to a need to use a steady greater part of the periodic system - here exemplified by the need for elements in core technologies through the last three hundred years. (drawing from Norge Geologiske Undersokelse 2016)

# Declining grades of ores

Prior et al. (2012) show that ore grades in Australia, an important mineral-producing country, have **declined by a factor of 2–5** since the beginning of mining in that country, and that environmental costs are increasing at the same pace.

In the USA, the grade of mined copper has declined from more than 2% in the early part of the 20th century to 0.5% at the beginning of the 21st century (Tilton, 2003). During the same period and also in the USA, the grade of iron ore declined from 60% to 20% (Tilton, 2003).



# 2000 years old technology

---

The first miners to exploit microbes, albeit unknowingly, were probably the Romans who worked the Rio Tinto copper mine in Spain 2,000 years ago. They noticed that the fluid running off the mine tailings was blue, an indication that it contained copper salts, from which they then recovered the valuable metal.

However, not until 40 years ago did it become clear that the copper in the fluid was in fact the handiwork of a bacterium named *Thiobacillus ferrooxidans*.



<https://www.downtoearth.org.in/news/biomining-and-bacteria-32220>



# New rise of the ancient technology

Cost-efficient technology for low-grade polymetallic ores have been searched for a long time. During the past 15 years, EC funds have supported ~10 R&D projects with total budgets exceeding 60M€ - all focusing on adapting an „ancient“ nature-based technology - **biomining** for nowadays needs of the Metallurgy Industry.

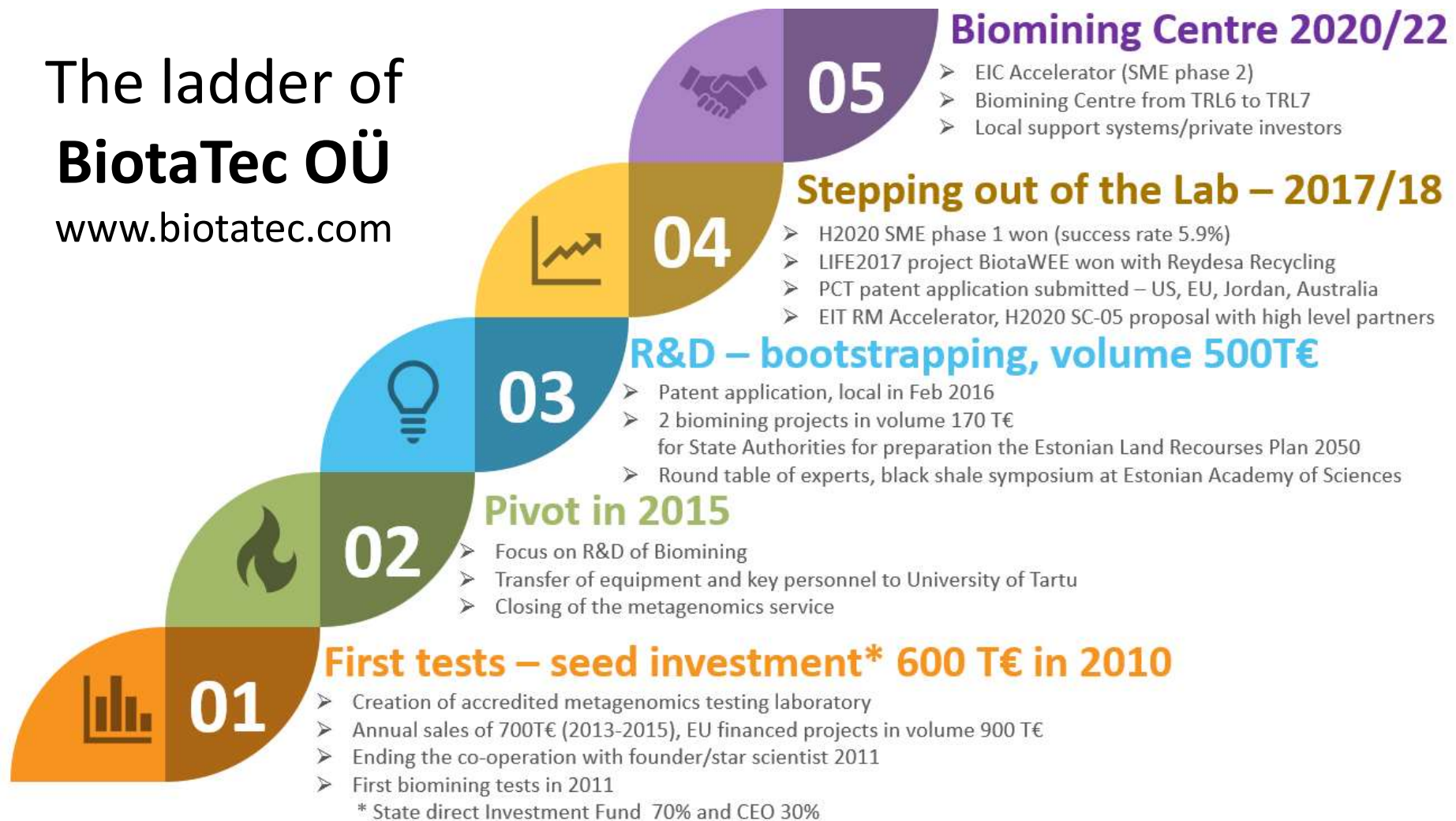


**Biomining** as a biotechnical solution is successfully used for processing of metal containing ores and concentrates as a cheap, reliable, efficient, safe and environmentally friendly technology. To refine ores and concentrates the mining industry uses microorganisms' natural ability to digest, absorb and change the quality of different metals and chemicals.

An estimated 21% of copper, 5% of gold and smaller amounts of other metals (e.g. zinc and nickel) are currently produced globally using biomining technology (Codelco, Mintek, etc).

# The ladder of BiotaTec OÜ

www.biotatec.com



# BiotaTec OÜ

---

- ❑ Spin-off from Technical University of Tallinn, created 2007
- ❑ Seed of 600 t€ from Estonian State through direct funding via Estonian Development Fund
- ❑ Various successful R&D projects funded in amount exceeding 1,5M€
- ❑ Pivot in 2015: from metagenomic lab to biomining R&D SME
- ❑ Champion of EIC Accelerator Green Deal (2020)
- ❑ Champion of Horizon2020 SME Instrument Phase 1 (2017)
- ❑ Champion of LIFE2017 ENV (2017-2020)
- ❑ Champion of EIT Raw Materials Accelerator (2018-2019)
- ❑ Very close co-operation with Estonian Universities and the National Technical University of Athens.
- ❑ 50% of shares belong to CEO – strong commitment
- ❑ 35% of shares being managed by fund manager Tera Venture I - selected by an independent selection committee of the European Investment Bank in Dec 2016.

# Investment with a Purpose

---

**Answer to a missing technology with  
a novel energy creating  
nature-based solution  
of high efficiency method  
for extracting metals,  
from low grade ores, tailings or other unutilized resources.**

**[Please contact: Sirli@biotatec.com](mailto:Sirli@biotatec.com)**