

VIABLE ALTERNATIVE MINE OPERATING SYSTEM

iVAMOS! is developing a prototype underwater, remotely controlled, mining vehicle with associated launch and recovery equipment.

Start date	1 February 2015
Duration	42 months
EC funding	9.2 million EUR
Coordinator	BMT Group Ltd
Technical management	SMD
Quality and risk management	Damen Dredging Equipment

For any additional information please visit us at
WWW.VAMOS-PROJECT.EU

iVAMOS! PARTNERSHIP

BMT Group Ltd
United Kingdom

SMD
United Kingdom

Damen Dredging Equipment
The Netherlands

INESC TEC
Portugal

Fugro EMU
United Kingdom

Zentrum für Telematik
Germany

Montanuniversitaet Leoben
Austria

Mineralia Minas, Geotecnia e Construcões
Portugal

Marine Minerals
United Kingdom

Empresa de Desenvolvimento Mineiro
Portugal

Sandvik Mining and Construction G.m.b.H.
Austria

Geoloski Zavod Slovenije
Slovenia

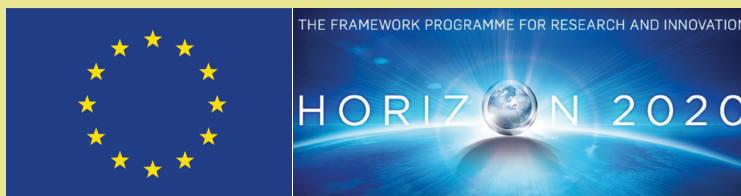
La Palma Research
Spain

Fédération Européenne des Géologues
Belgium

Trelleborg Ridderkerk
The Netherlands

Federalni Zavod za Geologiju Sarajevo
Bosnia and Herzegovina

Fondacija za Obnovu i Razvoj Regije Vareš
Bosnia and Herzegovina



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i vamos!



VIABLE ALTERNATIVE MINE OPERATING SYSTEM

A SAFE, CLEAN AND LOW IMPACT WAY TO ACCESS
UNEXPLOITED EUROPEAN MINERAL RESOURCES



Estimates indicate that the value of unexploited European mineral resources at a depth of 500-1,000 metres is in the order of 100 billion EUR. The vast majority of these deposits are submerged, in unmined deposits which are below the water table.

The iVAMOS! project is developing a novel automated solution for the extraction and pre-processing of ores found in water-bearing strata inland or in coastal waters.

The project will engage with all stakeholders to make sure that the solutions developed are environmentally, economically and socially acceptable. This will be demonstrated at selected pilot sites across Europe.

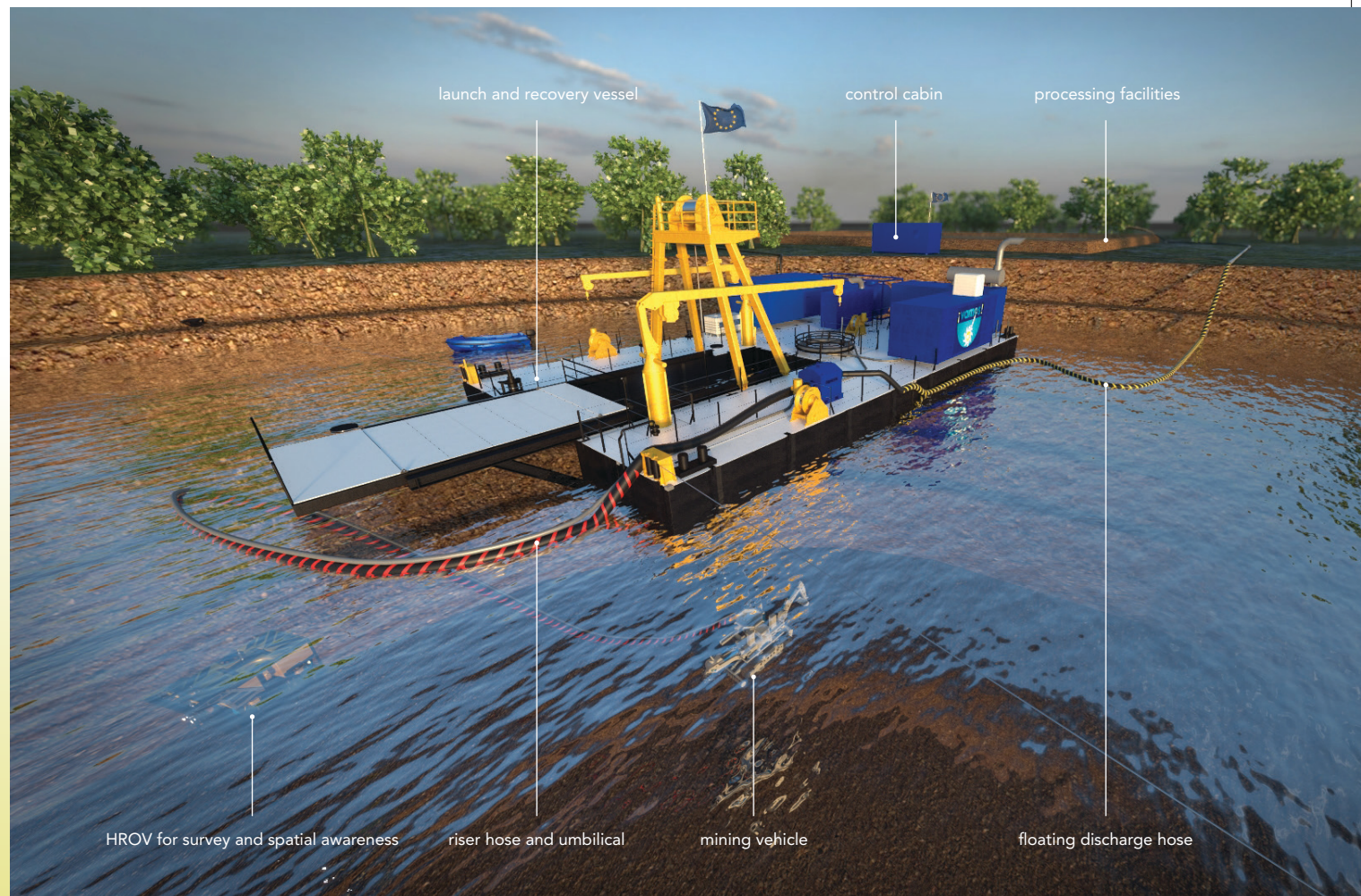
The safe, clean and low visibility mining technique will provide access to currently unreachable deposits, thus encouraging new investment and helping to safeguard EU access to strategically important minerals.

The iVAMOS! mining technique will enable:

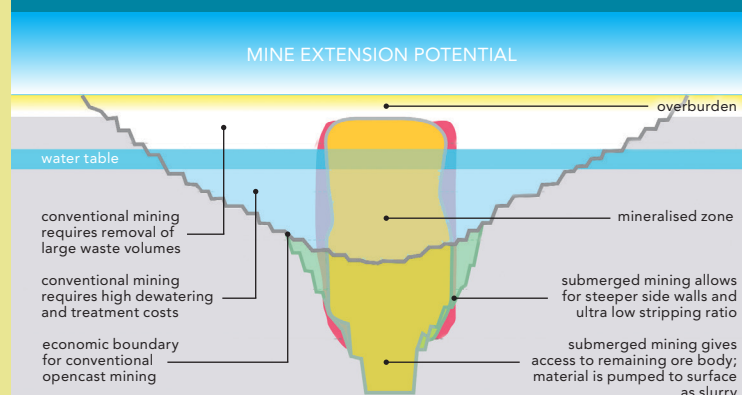
- re-opening of abandoned open pit mines;
- extension of mines which are limited by stripping ratio, hydrological or geotechnical problems; and
- opening of new underwater mines.

In each case iVAMOS! will result in a smaller environmental footprint than conventional mining.

The system is modular and the individual components are light enough to be transported on European roads by standard haulage vehicles without special escort. This will allow deployment at small mining sites, abandoned sites and difficult to access areas.



THE iVAMOS! MINING TECHNIQUE: REMOTELY CONTROLLED VEHICLES WITH LAUNCH & RECOVERY EQUIPMENT



Advantages of iVAMOS! compared to conventional inland mining:

- ultra low stripping ratio (in (semi-)vertical deposits);
- no dewatering costs and/or barrier construction and maintenance;
- no blasting noise, ground vibration, fumes or dust nuisance;
- no discharge of mine water;
- no personnel in the mine.

Additionally iVAMOS! provides a chance to address rehabilitation problems that have been left behind at former mining sites.