



SR



METAL SEPARATOR AND REFINER

SOLID/SOLID separation

Removal of heavy metals in the solid state
and subsequent refining of the individual metals.

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THE PROBLEM



Raw material
I METALLI

Not present in ITALY
Imported from abroad

Critical materials
Precious materials

SLUDGE FROM
TREATMENT WASTE WATER

ITALIAN SOILS
(drying out)

Produced in Italy 3.4 million tons/year

53.5% sent for disposal

- rich in organic substance (C > 20% DM)
- they contain heavy metals which make their reuse problematic agriculture

They need organic matter carbon (C)
which is then stored in the soil (sink) and slowed down its emission into the atmosphere as CO₂
Contributing to the slowdown of climate warming (of the planet)



Change the Future

THE SOLUTION

I METAL

RECYCLING seen as
a new Italian mine

SEWAGE
SLUDGE

SR

METALS
mixture to be refined

REFINED
SLUDGE

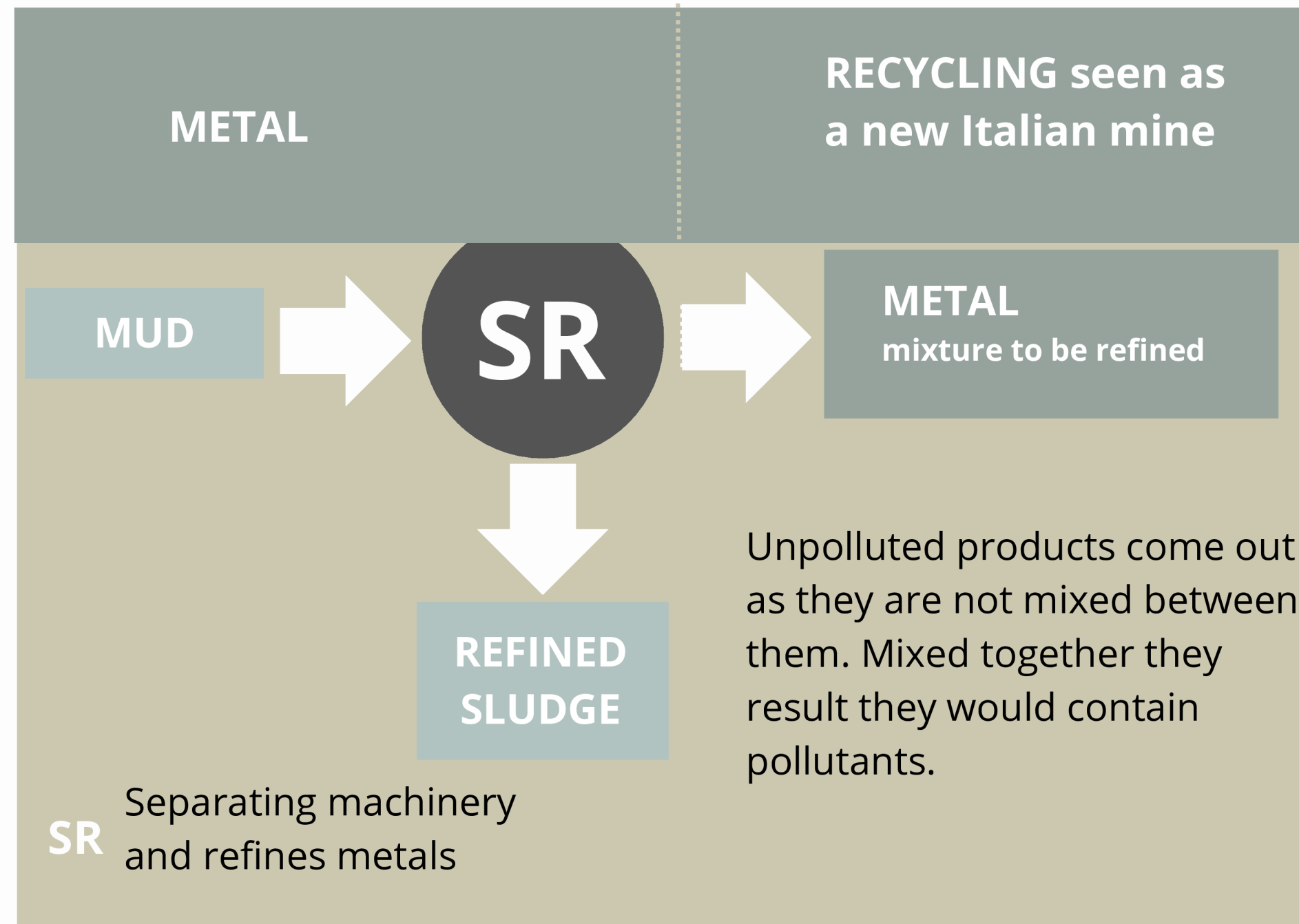
Unpolluted products come out
as they are not mixed between
them. Mixed together they
result they would contain
pollutants.

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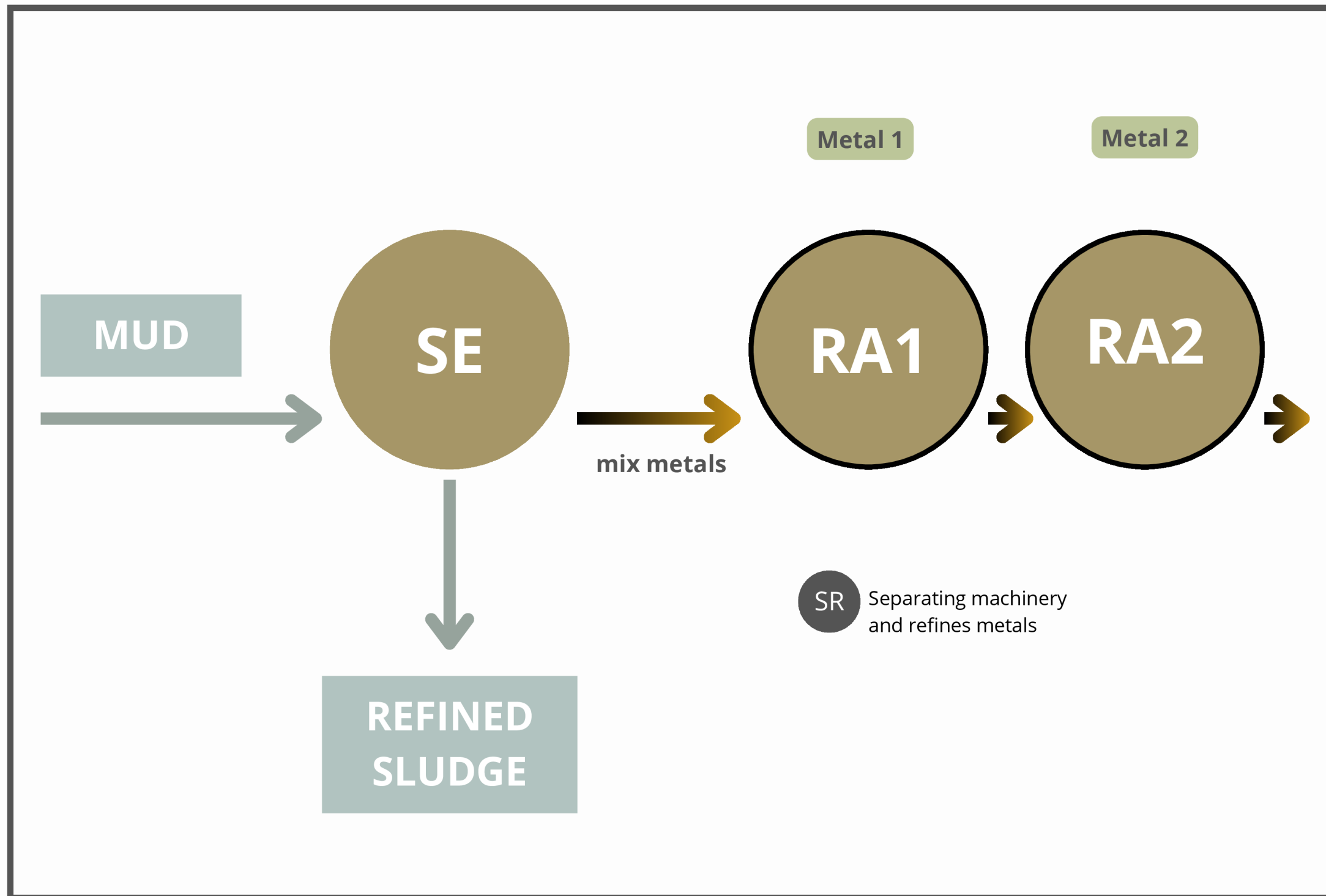
Separating machinery
and refines metals

Materiali non inquinati sono immediatamente materiali pronti a un nuovo impiego. Questo comporta nuove risorse, tra cui il recupero di tempo. Un materiale inquinato sosta in attesa di essere smesso. Un materiale raffinato trova subito il suo posto, fa risparmiare tempo. Sapere che si avranno materiali di rifiuto inquinati che subito possono essere trasformati in materiali raffinati è un vantaggio assoluto

THE SOLUTION



Non-polluted materials are materials immediately ready for new use. This involves new resources, including time recovery. A polluted material is waiting to be disposed of. A refined material immediately finds its place, saves time. Knowing that you will have polluted waste materials that can immediately be transformed into refined materials is a absolute advantage



DEVICE with a “zero waste” perspective
Machinery designed for recycling

OBJECTIVES: DO NOT CREATE WASTE and obtain
PRECIOUS MATERIALS AND PRECIOUS MUD

1 phase: separate the metals obtaining heavy ones (even non-electromagnetic) in solid matrices carried in the powder state, obtaining mud useful in agriculture,

2nd phase: refine the mixture of metals separated in matrix, in the powder state, for the reuse of individual metals in the industrial cycle.

Applicable to sludge produced in water treatment municipal wastewater, e.g. to the following metals: Cadmium – Cobalt – Chromium (Cr³⁺) – Gallium – Indium – Nickel

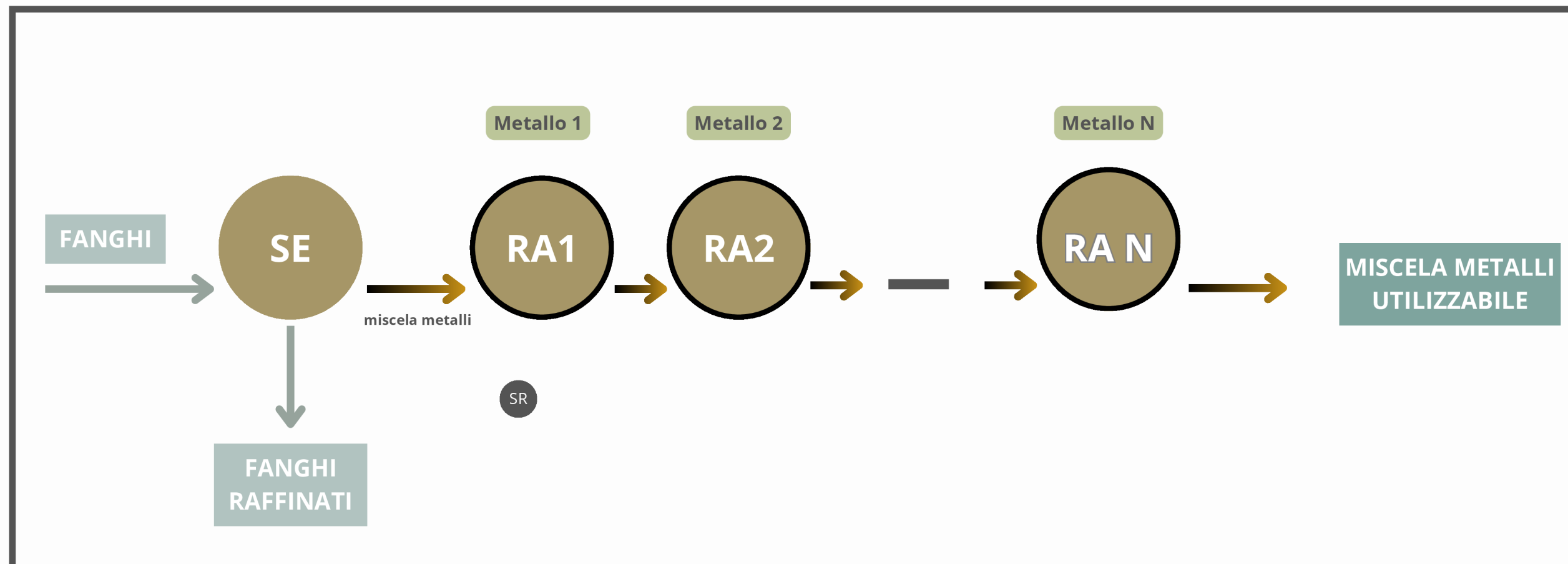
Lead – Tin – Titanium – Thallium – Vanadium
 (It is possible to define, during the design phase, the metals on which to operate.) + RA N

SOSTENIBILITA'

Sviluppo sostenibile soddisfa i bisogni del presente senza compromettere le capacità delle future generazioni di soddisfare i propri

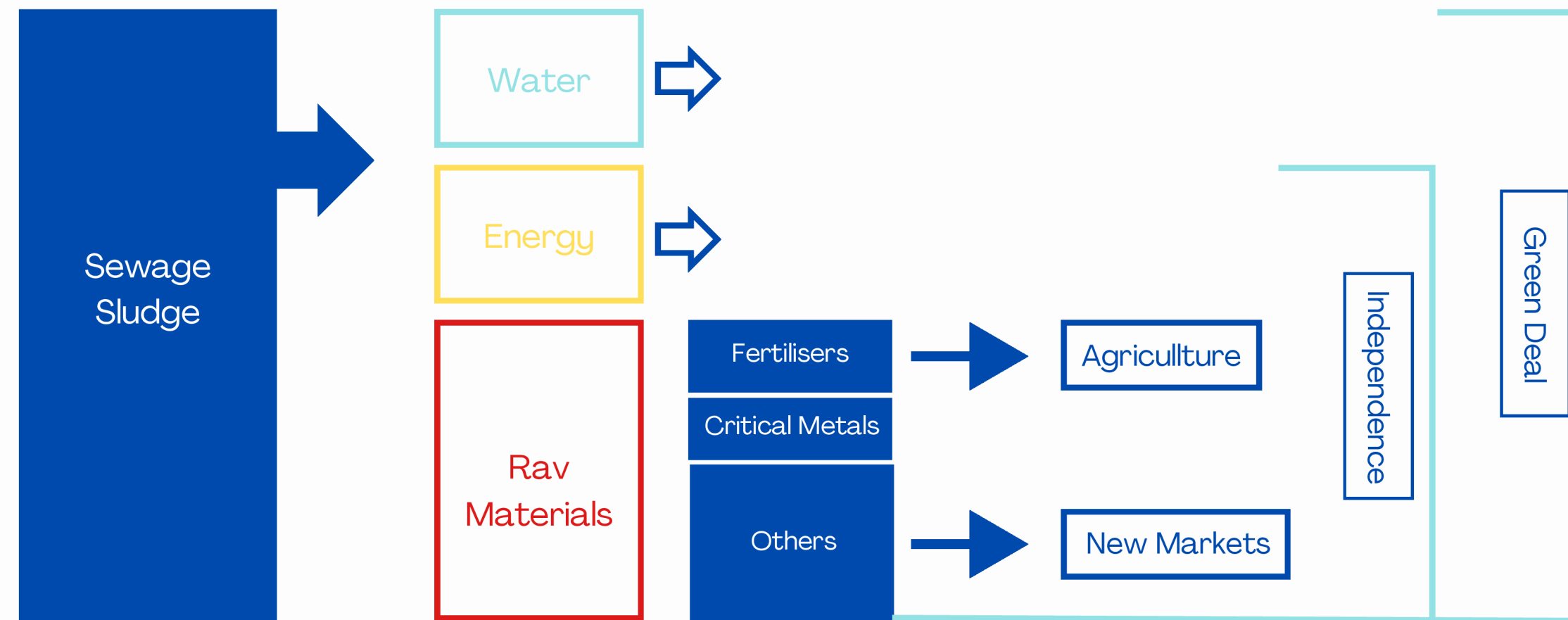


E' un modello di business sostenibile perché produce e distribuisce benefici lungo tutta la catena del valore, senza impoverire il capitale economico, umano e naturale su cui fonda il proprio successo.



PROSPETTIVE

FROM - UNLOCK THE POTENTIAL OF THE SEWAGE SLUDGE DIRECTIVE -EUROPE 2021



Nuove risorse, nuovi impieghi
creano nuove applicazioni per
l'agricoltura e nuovi mercati
Non solo non compromette,
ma assicura nuove risorse per
le nuove generazioni.

Figure explanations: sewage sludge can be reclaimed into water and recovered into energy but , the raw materials embedded in it can also be extracted. Thanks to affordable and feasible technologies, these raw materials can, for example, be used as fertilizer in agriculture or as critical metals in new markets.

<https://watereurope.eu/wp-content/uploads/WE-Position-Paper-Sewage-Sludge-Directive.pdf>

**Affordability and feasibility
of the technology**



ADA SRLS

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