

Futu

Future availability
of secondary
raw materials

RaM

Towards a harmonized procedure & reporting standard for anthropogenic resources using UNFC

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Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
**State Secretariat for Education,
Research and Innovation SERI**

EU Framework Programmes



**Funded by
the European Union**



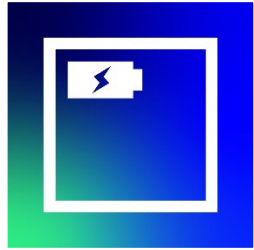
LUDWIG-
MAXIMILIANS-
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MÜNCHEN

FutuRaM – Main Goals

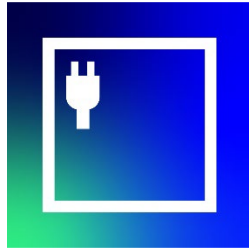


- Develop knowledge on the availability and recoverability of secondary raw materials (SRMs) within the EU with a special focus on critical raw materials (CRMs). From now to 2050.
- Enable fact-based decision-making for SRMs and CRMs exploitation in the EU+4 and third countries through UNFC applied to SRM recovery projects
- Disseminate this information via a systematic and transparent SRMs Knowledge Base

FutuRaM - Waste Streams



BATTERIES



ELECTRICAL &
ELECTRONIC
EQUIPMENT



VEHICLES



SLAGS & ASHES



MINING WASTE



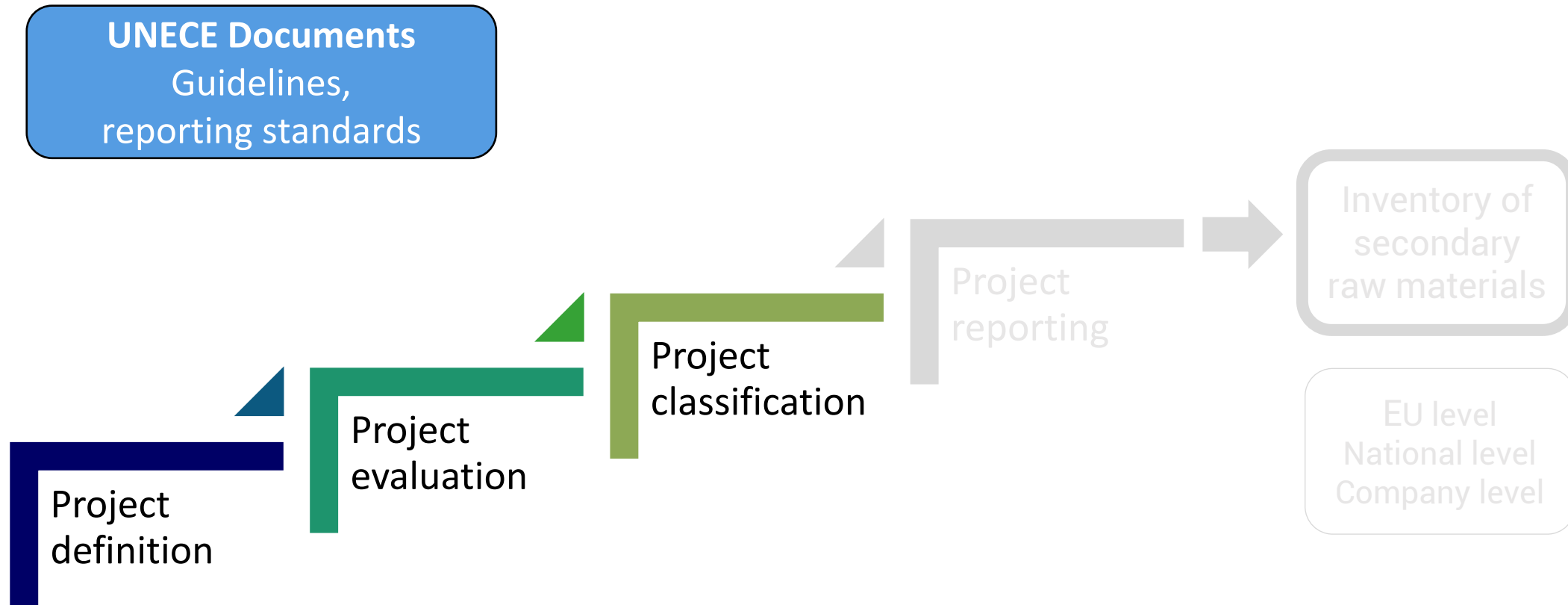
CONSTRUCTION &
DEMOLITION
WASTE

Goals regarding UNFC



- Develop a methodology for assessing the availability and recoverability of SRMs with a particular focus on the future production of CRMs
- Assess and test the developed methodology through 19 case studies on company and at national level
- Compile a harmonized procedure for UNFC application for 6 different waste streams
- Present a reporting template for communicating the UNFC assessment results

Development of the UNFC assessment tool



Recoverability of resources using UNFC

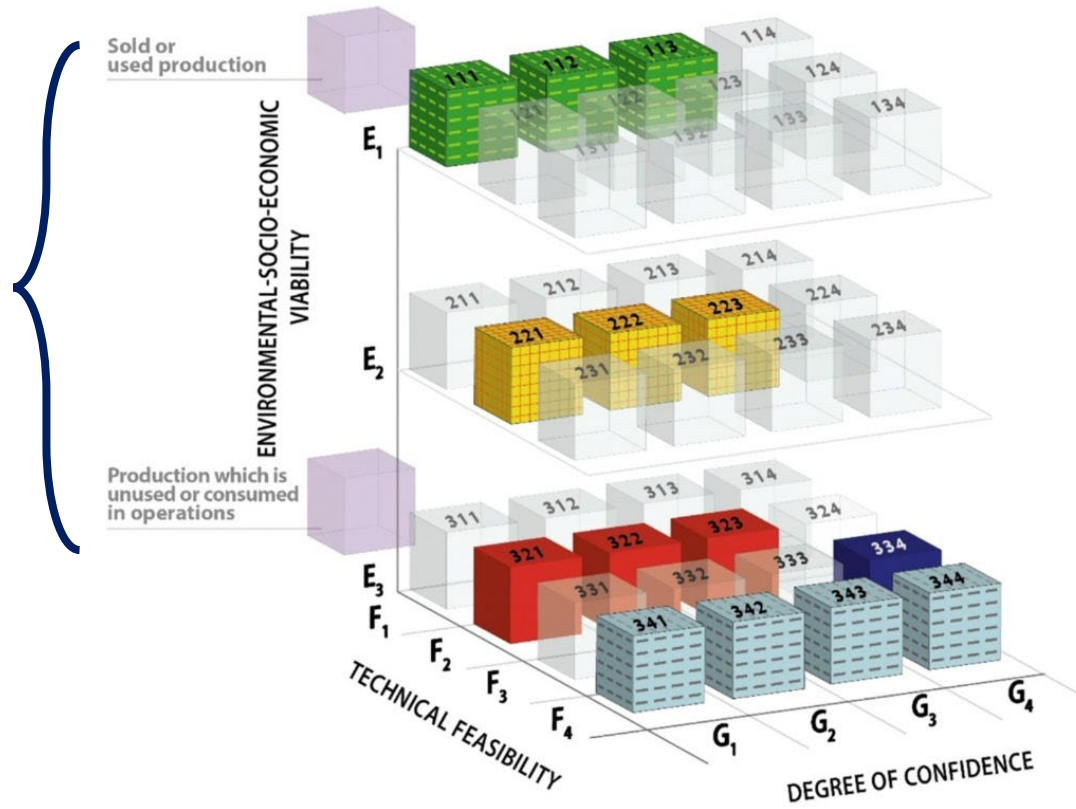


Economic viability

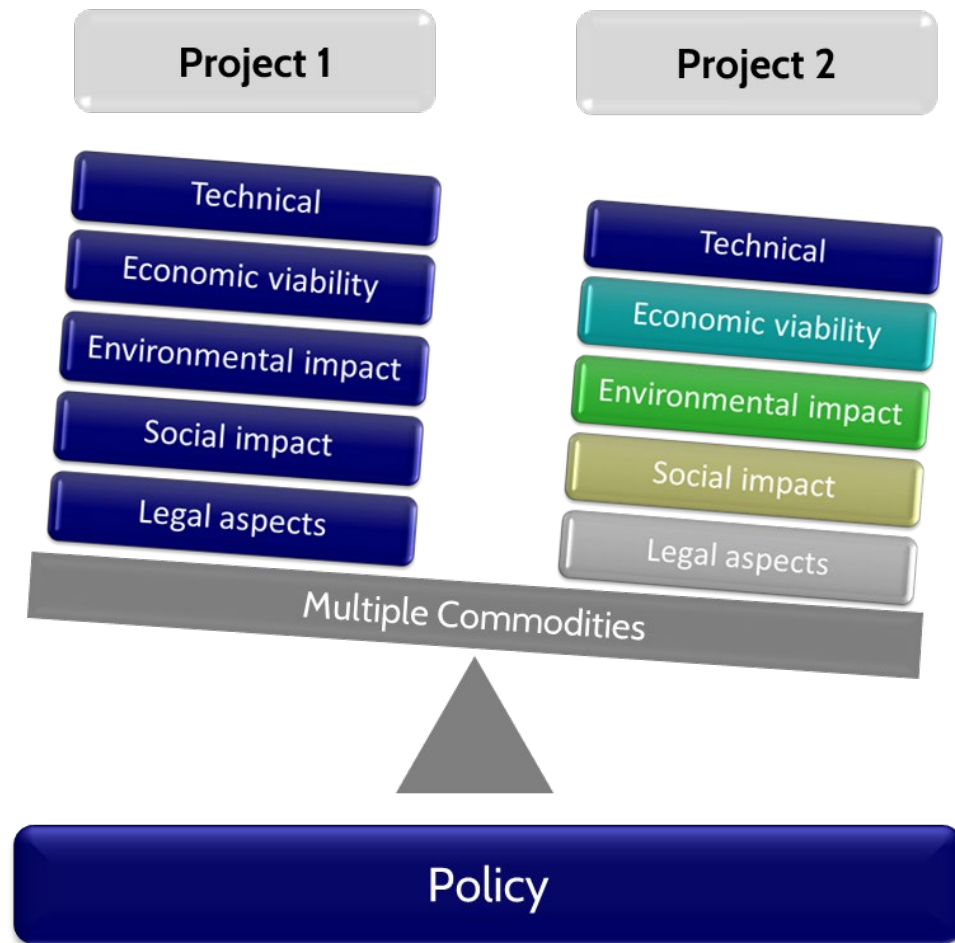
Environmental impact

Social impact

Legal aspects

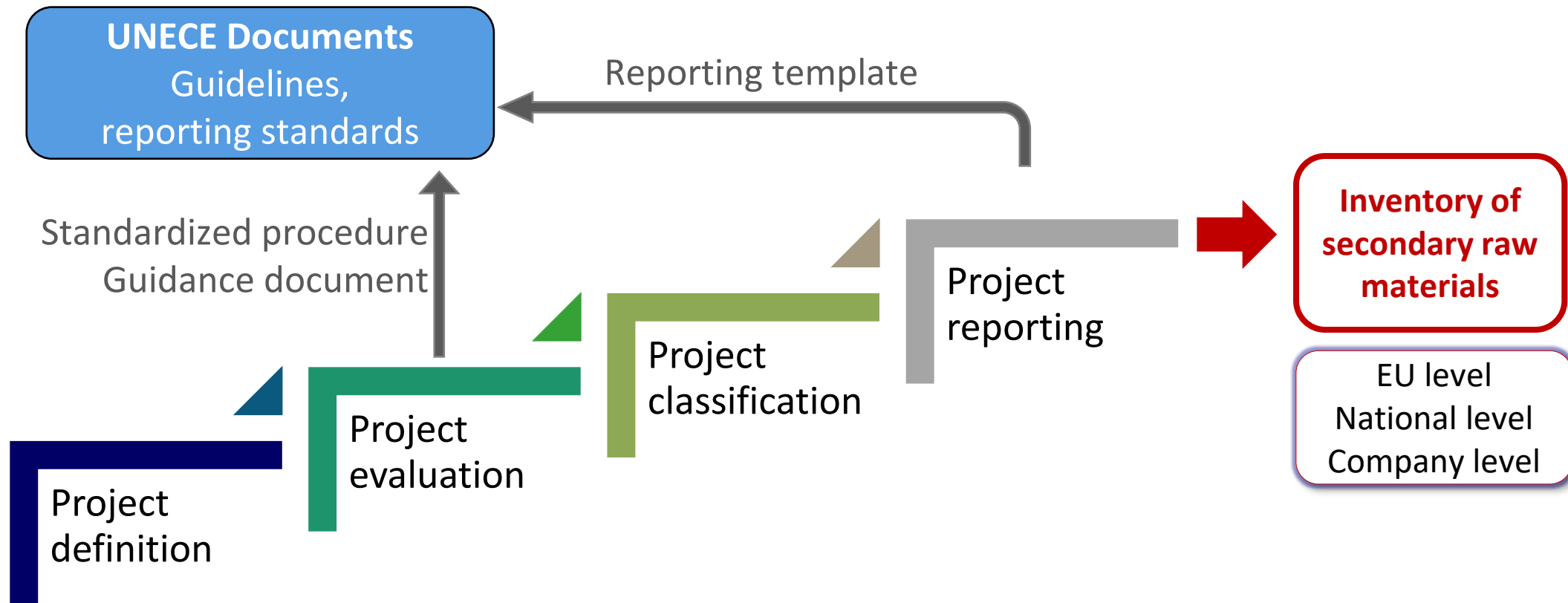


Recoverability of resources using UNFC



Consistency
Transparency
Comparability

Development of the UNFC assessment tool



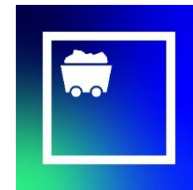
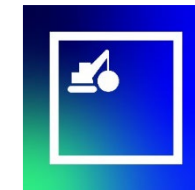
**Harmonization across
six different waste streams**



Site-specific and regional UNFC applications in FutuRaM



10 case studies

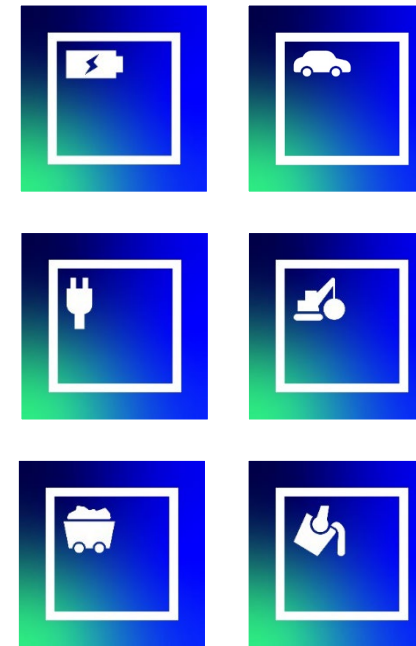


Data sources
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Natural Earth (<https://www.naturalearthdata.com/>)

National UNFC applications in FutuRaM

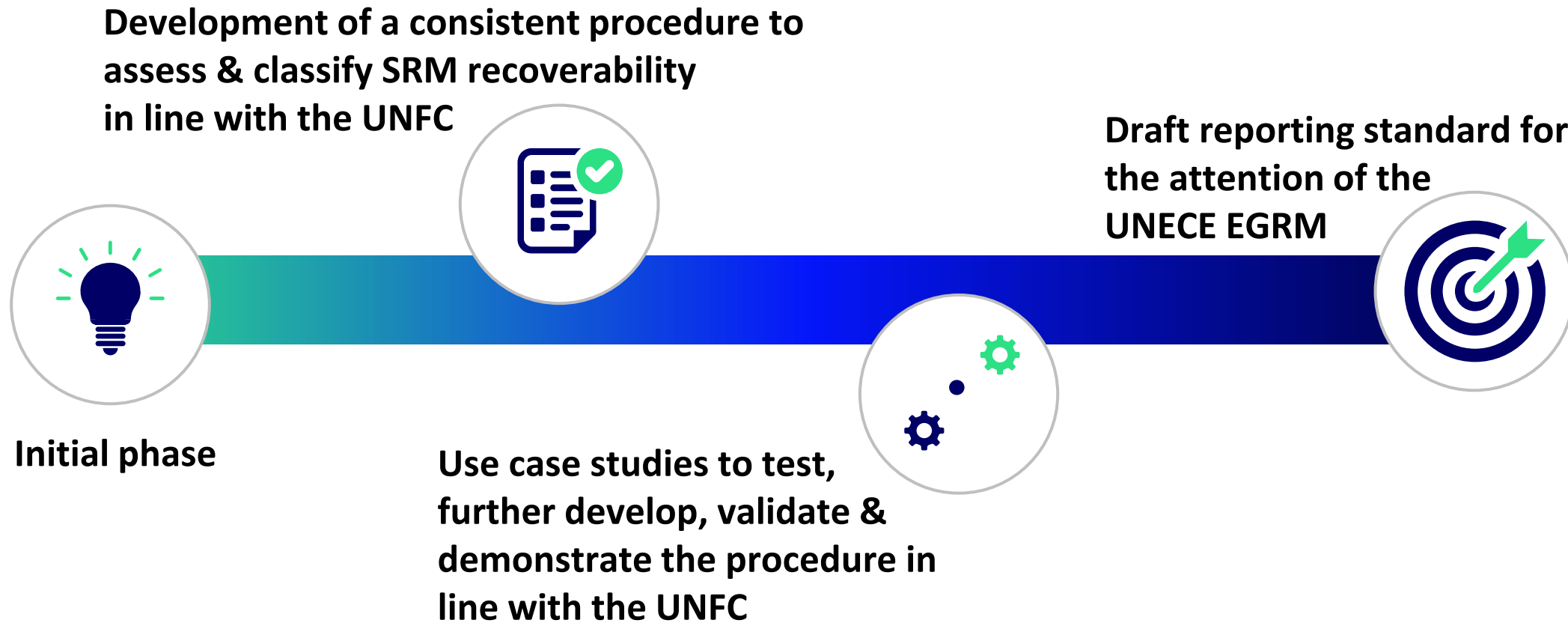


9 case studies



Data sources
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Roadmap for FutuRaM - UNFC

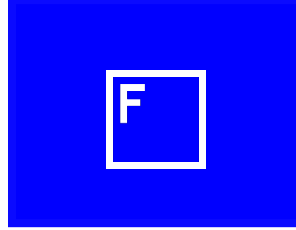


FutuRaM & UNFC: Expected Outcomes

UNFC provides a comprehensive tool to communicate the recoverability of raw materials from primary and secondary sources

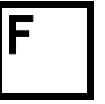
- Communication basis for the different stakeholders
- Highlighting benefits and barriers of a project
- Knowledge base for fact-based decision-making

- 19 new UNFC case studies
- Guidance document for project evaluation
- Draft reporting template
- Recommendations for UNECE EGRM and EC



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