



**CERA4in1**  
CERTIFICATION OF RAW MATERIALS

# **CERA 4in1 – A Raw Material Certification Scheme**

February 2021

# Intro

- **Head of development and strategy at LTU Business**, largest business development firm in northern Sweden
- **Co-leads strategy services** at LTU Business, focused on industrial and raw materials sector
- Been involved in over **15 European innovation** projects past few years
- **Part of the CERA project since 2017 – An EIT Raw Materials project**



Our Project Team consists of **universities**, **institutes** and **independent audit and consulting companies**.



An **international Advisory Board** supports the project team and brings different aspects into the discussion.



# OVERALL PROBLEMS CERA IS ADDRESSING



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High number of existing specific standards of raw material(s) (fragmentation)



Some standards are not very trustworthy



The actors within a supply chain follow different standards



There is a lack of harmonization and cross recognition between existing standards during the certification process



Companies are confronted with a confusing overall situation (more than one standard necessary)



# CERA 4in1 OFFERING

- ❖ applicable to the **entire value chain** from greenfield to consumer
- ❖ ensure environmental, social and economic sustainability
- ❖ applicable on a **global scale**, all mining-related operations, all sizes of operation and for all raw materials
- ❖ harmonizing the standard market
- ❖ introducing **mechanisms** to ensure **reliability** in the **Chain of Custody**



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# OVERALL SOLUTION – 4 STANDARDS TO CAPTURE VALUE CHAIN

The CERA 4in1 system consists of four consecutive standards, each of which focuses on different areas of the value chain and is thus optimised for each value chain actor.



Readiness  
Standard  
**CRS**

**Exploration**



Performance  
Standard  
**CPS**

**Upstream**



Chain of Custody  
Standard  
**CCS**

**Upstream/  
Downstream**

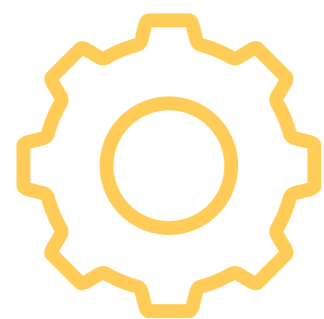


Final Product  
Standard  
**CFS**

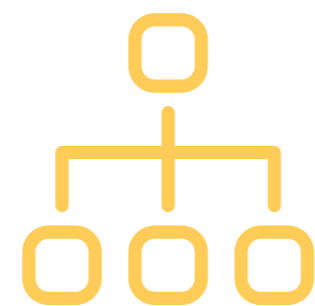
**End product**

# CERA 4in1 PERFORMANCE STANDARD

## 1. CERA Performance Standard (CPS)



The Performance Standard **certifies** a **facility or sequence of operations**.



The standard **defines a set of minimum criteria**, which every operation in the upstream supply chain have to fulfil.



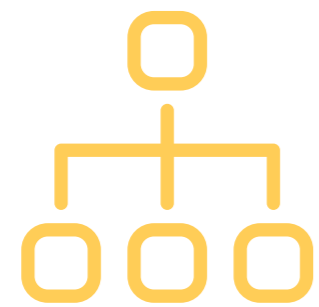
The **individual aspects** of the respective minerals or processes are **taken into account**.

(→ **Implementation Details**)



# CERA 4in1 CHAIN OF CUSTODY STANDARD

## 2. CERA 4in1 Chain of Custody Standard (CCS)



The **Chain of Custody Standard** refers to the mining product respective commodity.

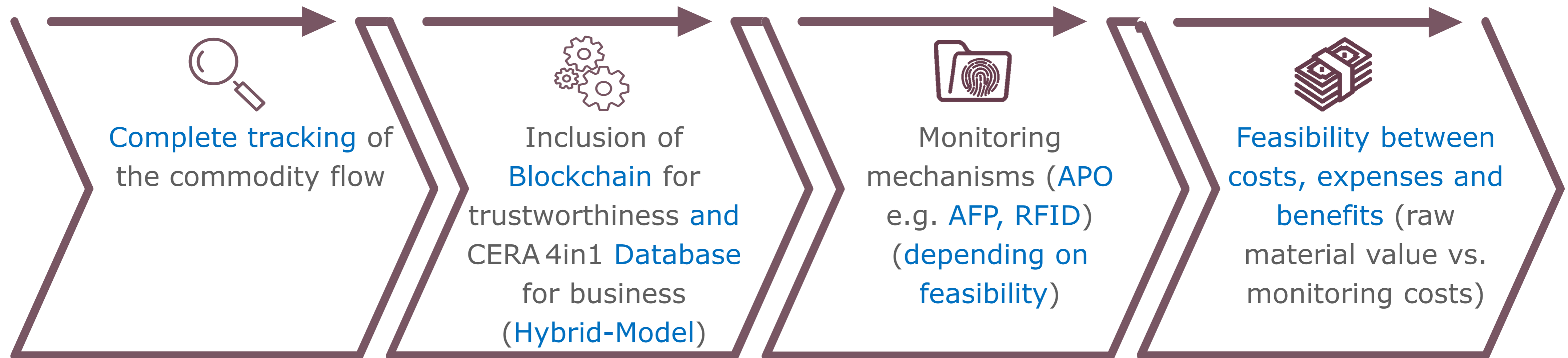


The standard aims to provide **criteria** for appropriate management **systems** for a **complete traceability** that **guarantee a chain of custody** of sustainable sourced raw materials.



The standard will **also include ASM and recycling** through specific approaches.

# CERA 4in1 CHAIN OF CUSTODY STANDARD



## Integration of Hybrid-Application

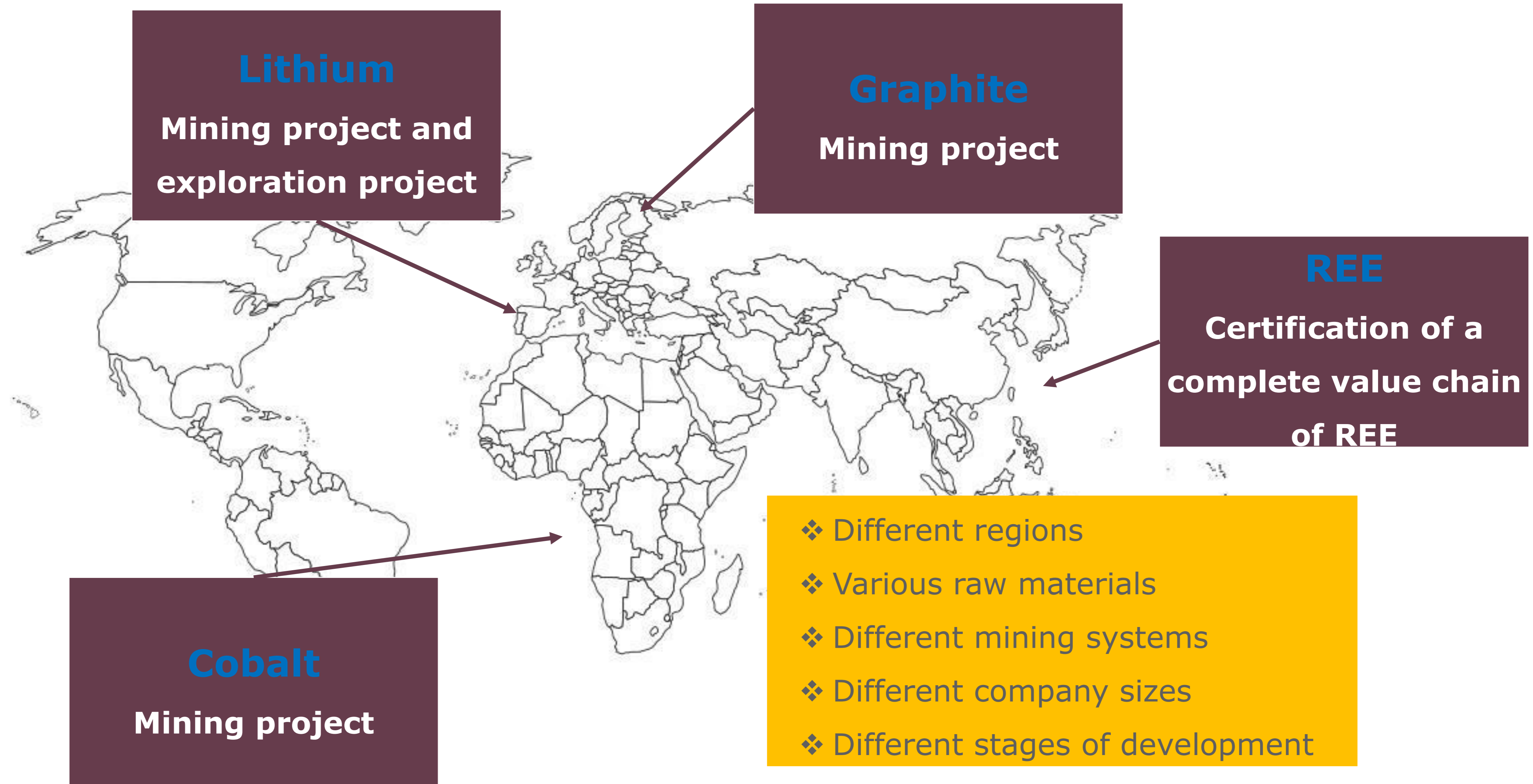
- **decentralized chain of custody** application for the CERA 4in1 CoC standard.
- A **degree of business confidentiality is essential**, so that all data cannot be put on the blockchain

Different tracking models will be used depending on commodity and risk assessment  
[e.g, high-value critical commodities will be of initial focus for blockchain]

# USE CASES – Confidential as for now



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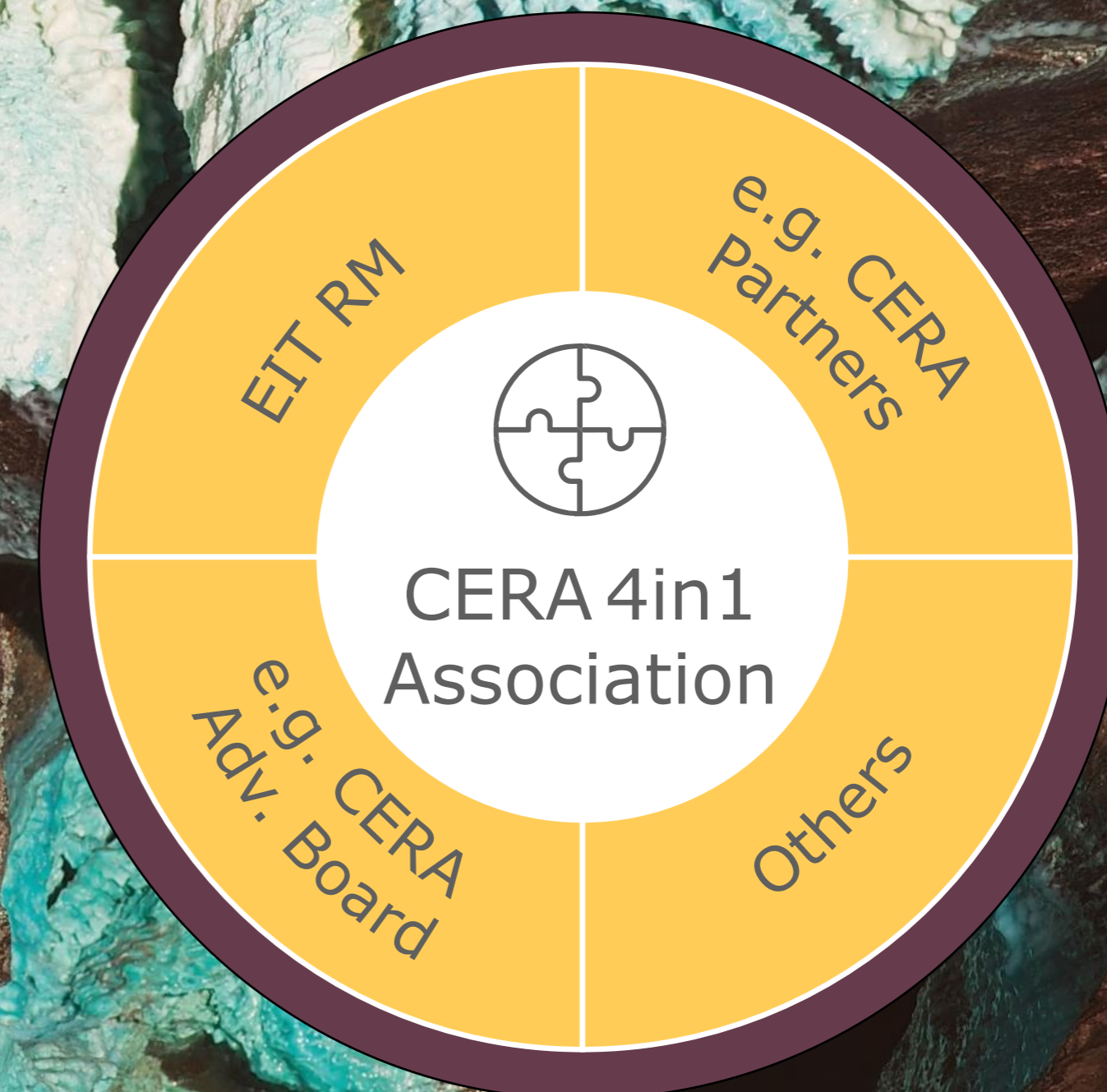


# ESTABLISHMENT OF CERA 4in1 ASSOCIATION

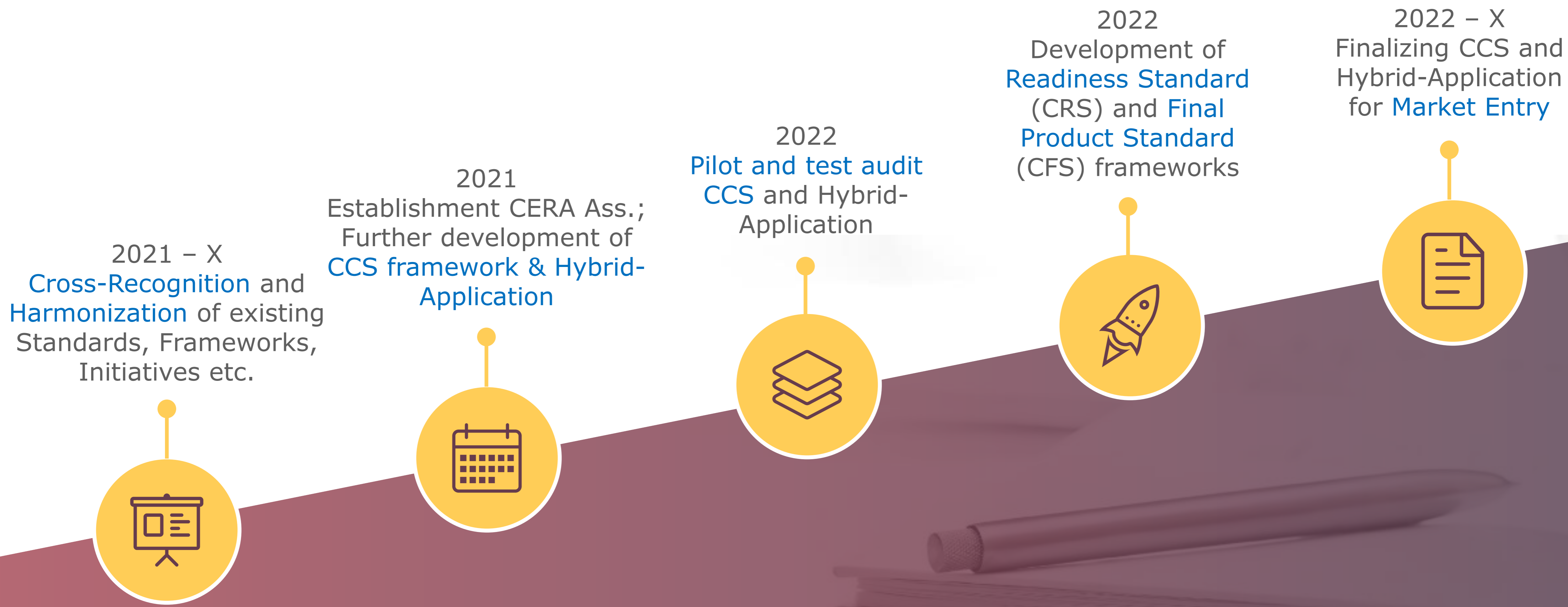
- ❖ CERA 4in1 is committed to achieving full accreditation in accordance with ISO/IEC 17065.
- ❖ This requires involvement of interested parties:
  - clients of the certification body
  - customers of clients
  - Manufacturers
  - Suppliers
  - Users
  - conformity assessment experts
  - representatives of industry trade associations
  - representatives of governmental regulatory bodies or other governmental services
  - representatives of non-governmental organizations, including consumer organizations
- All parties are welcome in the CERA 4in1 Association!



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# PLAN GOING FORWARD



# CERA 4in1 CONTACT

You are welcome to become part of CERA 4in1,

Join us as

- ❖ Member of the **Advisory Board** (Development Phase)
- ❖ Member of the **CERA 4in1 Association** (Operation Phase, Association will be founded in 2021)



WEBSITE  
[cera4in1.org](http://cera4in1.org)



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