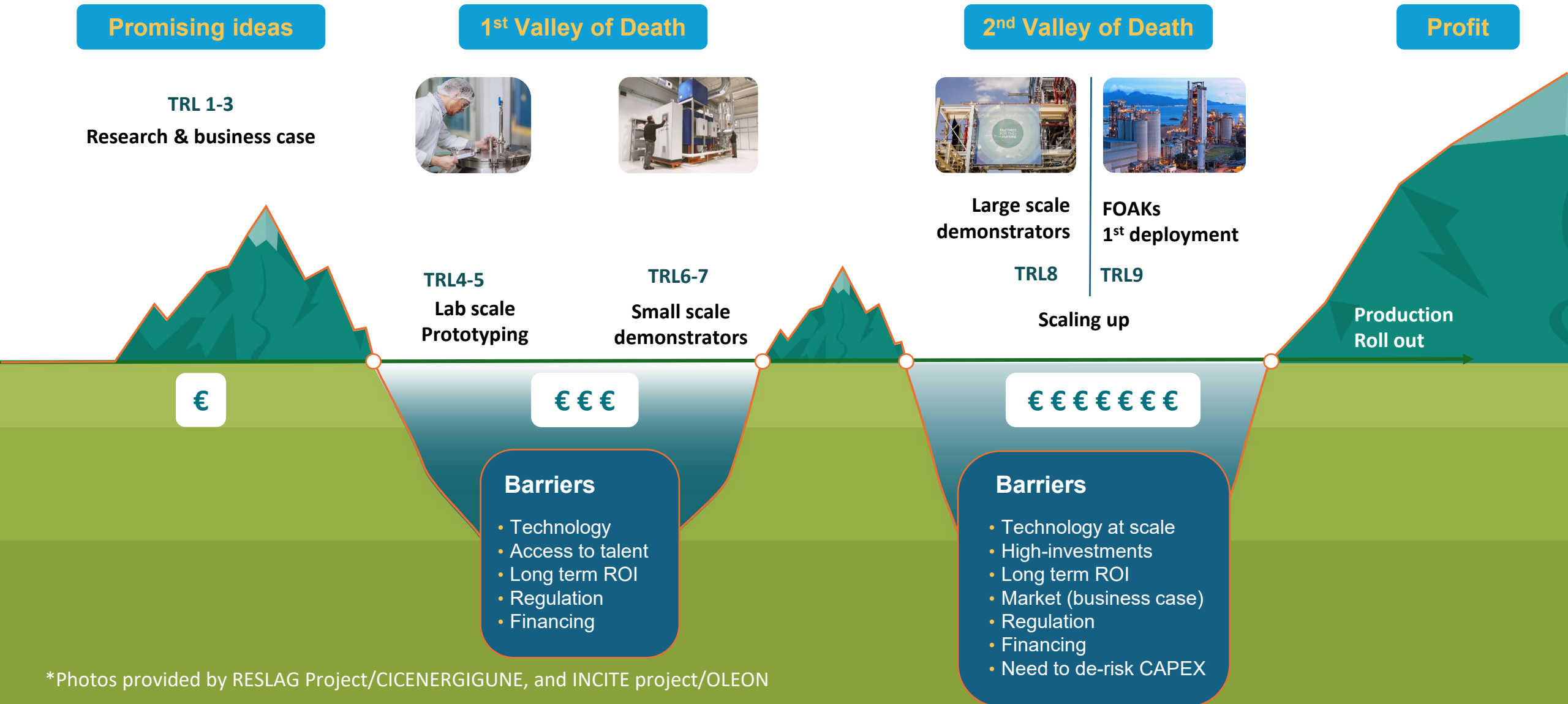


Bridging Innovation With Deployment

The Clean Industrial Deal calls

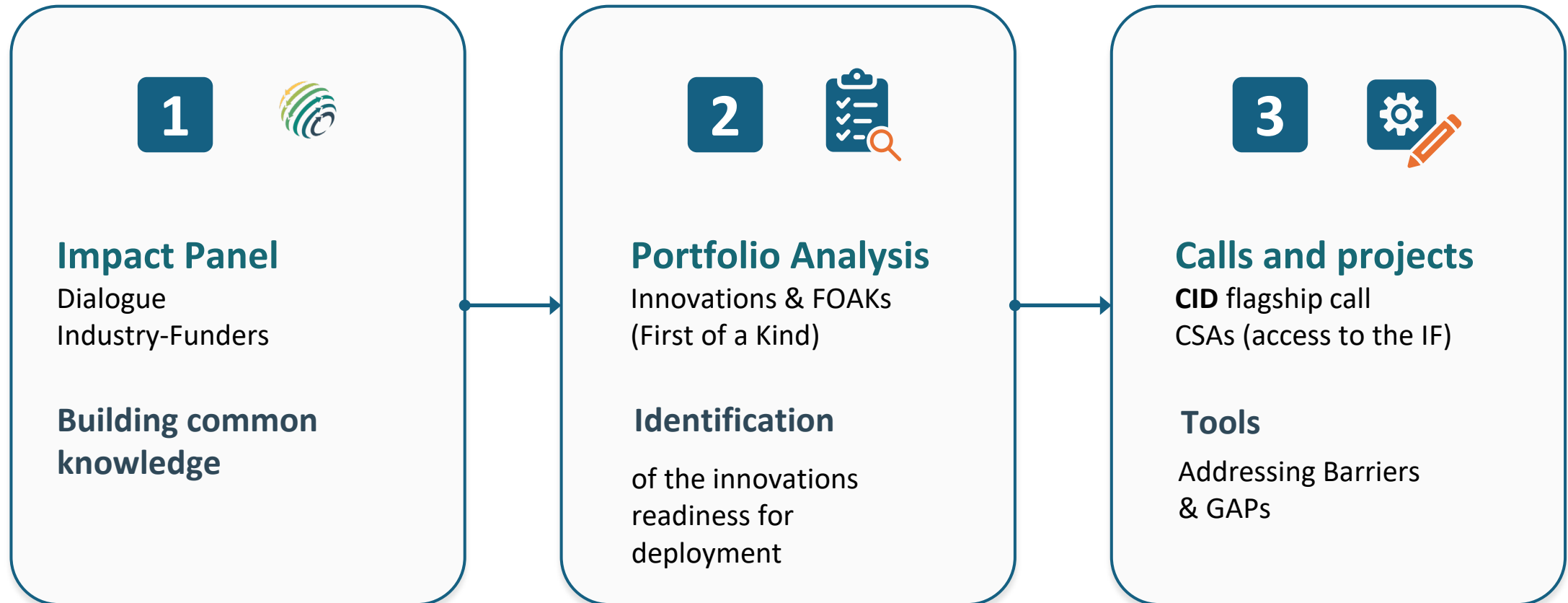
Richard H. Heyn, SINTEF Industry, P4Planet Vice-Chair for Circular Innovation
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...process manufacturing innovations can take from 10 to 20 years...



Bringing innovations to deployment requires specific support...

...P4Planet has focused on identifying barriers, gaps, needed tools...





... and a trend in the right direction to be strengthened in FP10

Portfolio analysis conclusions

- TRL7 innovations blocked to reach the 1st deployment level
- Support GAP: HEU innovations not ready for the Innovation Fund
- Uneven sectors' progress in scaling up innovations
- Not all needed innovations for the transition fit in the IF

A win-win with the CID Flagship Call

- Support for demonstrators till TRL8
- Industry led innovations, with research orgs. support
- Small and focused consortia
- 70% funding for all partners
- Most project budget for the innovation
- Bridge between HE and the IF

The need for innovative funding schemes in FP10

- 60% CAPEX support for TRL8 demonstrators
- Fast tracking schemes for scaling up towards deployment
- Flexible funding distribution for SMEs innovation
- Higher funding rates for SMEs
- Streamline access to EU and national support to accelerate the scaling of solutions for competitiveness

CID Calls

1. **HORIZON-CID 2026-01-01:** R&I in Support of the Clean Industrial Deal: Decarbonisation of energy-intensive industries
2. **HORIZON-CID-2027-01-01:** R&I in Support of the Clean Industrial Deal: Decarbonisation of energy intensive industries

Partnerships concerned: **Processes4Planet** and Clean Steel partnership

3. **HORIZON-CID 2026-01-02:** R&I in Support of the Clean Industrial Deal: Clean Technologies for Climate Action
4. **HORIZON-CID 2027-01-02:** R&I in Support of the Clean Industrial Deal: Clean Technologies for Climate Action

- Project volume: 15-25 M€
- Starting TRL: TRL 6 (key subsystems have validated performance at TRL 6)
- Final TRL: TRL 7-8 (Decarbonisation) or TRL 8 (Clean Tech) => Scale sufficiently meaningful for end-users and derisked scale-up
- Budget per call: 125 M€ for Decarbonisation, 150 M€ for Clean Tech.
- Projects funded per call: up to 8
- Deadlines: 15 September 2026 and 2027
- Anticipated timeline: approximately 5 years
- Decarbonisation linked to Cluster 4, Clean Tech to Cluster 5

This is not “new” money but diverted from existing budgets.

CID Call - Decarbonisation

HORIZON-CID 2026-01-01: R&I in Support of the Clean Industrial Deal: Decarbonisation of energy-intensive industries

Expected outcomes:

1. **Accelerate** the use of innovative processes to decarbonise industrial processes and **bring to the market** more cost-effective clean products to **strengthen the competitiveness and resilience** of EU industries (with **quantifiable** contribution);
2. Create **new innovative first-of-a-kind operational demonstrators** and/or **optimise newly installed industrial decarbonisation** solutions in Europe; and
3. Demonstrate the **market readiness** of the envisaged future clean products and their innovative processes **via a credible business plan** and an exploitation strategy for industrialisation, including **market-tested use cases**.

Proposals are expected to contribute to all of the outcomes.

CID Calls - Decarbonisation

Scope: 3 technology areas

1. **Managing of carbon cycle (CCU and/or CCUS):** further optimization and demonstration of solutions for the **capture, utilization or storage of CO₂ and/or CO** from installations of the energy intensive industries, with significant **reduction of energy input** (per ton of CO₂/CO) related to capture rate and purity compared to current available technologies (**target figure 30 % reduction**), and **potential of commercialization of the decarbonized products** with respect to LCA (compared to state of the art), market size, and cost.
2. **Clean energy usage in production** (electrification of the processes, decarbonated production, integration of alternative clean energy carriers – e.g. hydrogen – and technologies, on-site renewable energy storage solutions, usage and upgrade of waste heat): supporting **major improvements of clean energy usage in the energy intensive industries until 2035**.
3. **Circularity and resource efficiency** (material, energy, water) of production processes: **improvement by 30 % until 2035** compared to current industrial value, with technological solutions which are commercially viable; and **significant reduction of the overall raw material consumption, energy input, freshwater intake, and emissions** by circular value networks that convert industrial side-streams and/or end-of-use waste to new feedstock for which no low-CO₂-technologies currently exist. **Solutions must have an overall positive LCA and remain commercially viable under the expected regulatory and framework conditions at the end of the project.**

CID Calls - Decarbonisation

Scope: 3 technology areas

- Proposals should **explicitly select one main area**, but can also address in an integrated way *a combination of these areas* within an industrial sector, provided it is innovative and lead to low carbon solutions
 - **From the FAQ:** As per the topics' scope, *proposals are expected to demonstrate an adequate integration of relevant technologies* in support of the Clean Industrial Deal (either via direct or indirect integration). Hence, it is envisaged that proposals (under each of the topics under this call) have the possibility (to) simultaneously encompass/address several technologies and/or solutions described under each of the 3 areas listed.
 - But you **have to** choose one of the three as the main one, with **justification (sound assessment/reasoning) both in technological and business terms**
- Use of advanced, safe and sustainable materials and processes could also be addressed as part of the proposals

CID Calls - Decarbonisation

Proposals are expected to:

1. Demonstrate **an adequate integration of relevant technologies** in support of the Clean Industrial Deal. The integration can either be demonstrated in a direct (e.g. reduction of greenhouse emissions of a process) or an indirect (e.g. production of a new green/clean product) manner. **The use of relevant results of R&I projects previously or ongoing funded at EU, national or regional level is encouraged.**
 - Need a documented state-of-the-art baseline (energy, emissions, costs, resources) and project KPIs
 - A clear reference product
2. **Show industrial leadership** in the deployment after the project. To this end, they must also put together an **industry driven consortium composition with a limited number of participants** which should ensure future deployment and market readiness, including a go/no go moment. **The participation of SMEs is encouraged.**

CID Call – Clean Tech

HORIZON-CID 2026-01-02: R&I in Support of the Clean Industrial Deal: Clean Technologies for Climate Action

Expected outcomes:

1. **Strengthen the competitiveness, sustainability (including biodiversity) and resilience** of an innovative clean tech solution by clearly demonstrating the capability to, significantly:
 - i. **increase its circular material use rate**, based on a **sound and realistic baseline**;
 - ii. **reduce the levelized cost of energy (LCOE)** delivered to end-users - including, where relevant, production, distribution, and storage costs, based on a **sound and realistic baseline** and considering **different geographic scenarios**;
 - iii. **contribute to Europe's industrial leadership and competitiveness, in line with the objectives of Net-Zero Industry Act (NZIA)** for the EU manufacturing capacity of net-zero technologies
2. Bring this innovative clean tech solution to **full technological maturity and close to market-readiness** with a view to accelerating its market deployment and/or integration in key industrial sectors in Europe (e.g. manufacturing, energy and transport).

Proposals are expected to contribute to all of the outcomes.

CID Call – Clean Tech

Expected outcomes – some definitions

1. **increase its circular material use rate**, based on a **sound and realistic baseline**;
 - a. From the FAQ: Synonymous with “recycling capacity” as per the Critical Raw Materials Act: *the maximum annual production volume of recycling operations for strategic raw materials after re-processing, including the sorting and pre-treatment of waste, and its processing into secondary raw materials.*
2. **reduce the levelized cost of energy (LCOE)** delivered to end-users;
 - a. From the FAQ: The LCOE is meant to cover **the costs associated to all relevant steps of the value chain** covered by the project resulting in the delivery of the energy to the final end-user (e.g. industry, transport, manufacturing etc.) – hence, this should cover, where relevant, production, distribution, and storage costs
3. contribute to Europe’s industrial leadership and competitiveness, **in line with the objectives of Net-Zero Industry Act** for the EU manufacturing capacity of net-zero technologies
 - a. Should apply to each **main specific component of the project for which it is established that > 50 % of EU’s supply comes from a 3rd country** (non-EU or Associated Country) according to the NZIA. In these cases, **sourcing should be > 50 % EU-based**. Lower percentages OK if justified.

CID Calls – Clean Tech

Scope: 3 technology areas that have a strong and promising growth potential in Europe

The scope here explicitly mentions the need for “a considerable increase in electrification of EU energy systems and in all end-use sectors of the European economy” (not mentioned for Decarbonisation).

1. **Integrated net-zero emissions energy systems** (e.g. including energy grids, networks and systems)
2. **Enhanced zero-emission power technologies** (e.g. including renewable electricity, heat and energy technologies).
3. **Storage technologies, renewable fuels, and carbon capture and utilisation (CCU)** (e.g. including batteries and other energy storage solutions, renewable hydrogen – if complementary with activities under the Clean Hydrogen JU - advanced biofuels and synthetic renewable fuels) enabling climate neutrality.

CID Calls – Clean Tech

Scope: 3 technology areas

- Proposals should **explicitly select one main area**, but can also address in an integrated way *a combination of these areas*. Applicants are **free to decide on the specific value chain they wish to strengthen** in the above clean tech areas.
 - **From the FAQ:** As per the topics' scope, *proposals are expected to demonstrate an adequate integration of relevant technologies* in support of the Clean Industrial Deal (either via direct or indirect integration). Hence, it is envisaged that proposals (under each of the topics under this call) have the possibility (to) simultaneously encompass/address several technologies and/or solutions described under each of the 3 areas listed.
 - But you **have to** choose one of the three as the main one, with justification (sound assessment/reasoning) both in technological and business terms
- As part of bringing innovative clean tech solutions closer to the market, **proposals may also address step-change in relevant network and infrastructure deployment** to facilitate scale up across the trans-European energy and transport networks – e.g. electricity, heat, gas, hydrogen, CO₂, batteries, and refuelling networks, etc. Application of **advanced innovative materials development, connected process engineering and scale-up, resource efficiency, circularity and recycling** may also be **addressed** as part of the selected value chain, as relevant. **Attention should be paid to avoid technologies which may have a negative impact on biodiversity and ecosystems.**

CID Calls – Clean Tech

Proposals are expected to:

1. **Ensure the development of innovative technological solutions along a specific clean tech value chain.** For this, they need to involve an **adequate combination of clean tech suppliers, energy users (e.g. manufacturing, energy and transport) and other relevant stakeholders, in order to support a sound business case**, taking into account a gender-sensitive and intersectional approach.
2. Demonstrate an **adequate integration of relevant technological solutions** including clean tech and industrial decarbonisation solutions in support of the Clean Industrial Deal, and to **ensure a clear and quantifiable impact on competitiveness and reduction of GHG emissions**. Reduction or avoidance of harmful pollutants and impact on biodiversity may also be considered, as relevant. **The integration can either be demonstrated in a direct (e.g. energy to an industrial/transport sector) or an indirect (e.g. energy to grid to an industrial/transport sector) manner. The use of relevant results of R&I projects previously or currently funded at EU or national level is encouraged.**
3. **Show industrial leadership in view of the deployment after the project.** To ensure market readiness and effective collaboration amongst relevant stakeholders along a specific clean tech value chain, **the consortium should be industry driven and composed of a manageable number of participants (indicatively, not more than ten participants)**. The consortium size should be justified based on the extent of the value chain covered. **The participation of SMEs is encouraged.**
4. Seek **coherence with the work of the Strategic Energy Technology (SET) Plan** and relevant industrial initiatives

Common aspects – Business plan and market-readiness strategy

1. Address how to **prepare and support the deployment of the proposed clean tech solution across relevant EU industrial sectors** (e.g. energy, transport, manufacturing) and/or how to **ensure a high potential for market uptake through further private/public investment** (including relevant EU *deployment* programmes, such as the Innovation Fund).
 - Customers, value, revenues, costs
 - Investment needs, financing strategy, plan for further investment and potential investors
2. Include **a comprehensive analysis of the critical barriers** (technological and non-technological) for the successful market deployment and the **corresponding plan to address them**.

From the FAQ: The business plan and market-readiness strategy are **not expected to be fully comprehensive and completed** at the stage of the application – what will be assessed in the application is the degree to which the framing/outline of the plan to develop and complete the elements (as part of the projects' activities) is **sound and convincing (plausibility)**.

Deployment implies multiple applications of an innovation after the first successful application.

Common aspects – Go/no-go moment

1. Include a **clear go/no go moment** ahead of the contracting and demonstration phase (for *all* demonstration activities).
Before this go/no-go moment, the project is expected to deliver
 - **detailed engineering plans**
 - **a techno-economic assessment**
 - **all needed permits for the demonstrator**
 - **a complete business plan and market-readiness strategy**, identifying clearly the industrial partner(s) that will lead the deployment
2. Proposals are also expected to provide **a clear and credible pathway to obtaining all needed permits for the demonstration phase** of the project.

Demonstration implies R&I activities that are covered by Innovation Actions (TRL 6-8), i.e. prototyping, testing, demonstrating, piloting, large-scale product validation, up to the first application in the market.

Proposal selection – priority order (given same score)

1. Proposals that address aspects of the call that have not otherwise been covered by proposals with higher scores will have the highest priority
2. Score for Impact, then Excellence.
3. Gender balance
4. Geographical diversity

It is expected that at least one proposal will be funded under each of the three technology areas under the scope of each call, but this cannot be confirmed based on the call texts.



One hypothesis is that the 2027 CID calls will be more competitive, due to the resubmission of improved CID proposals from 2026.



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