

INCITE: a new mechanism for promoting innovation in the the revised Industrial Emissions Directive



European Innovation Centre
for Industrial Transformation and Emissions

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UNECE Workshop: Impacts of air
pollution and implementation of BATs

Eric Aries
Project leader

Joint Research Centre - Seville
EU- BRITE (European Bureau for Research on
Industrial Transformation and Emissions)

Overview



INCITE (Introduction / concept)



INCITE Information Platform



Stakeholder engagement



Site visits to First-Of-A-Kind (FOAK) installations



INCITE other key outputs



The 'Sevilla Process' – Industrial Emissions Directive

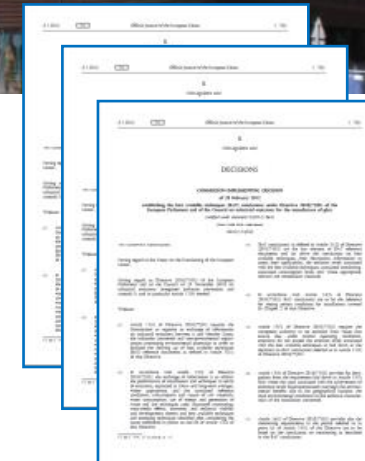
Developing Environmental Norms for the European Industry for +25 years from Sevilla



33 BREFs
with the Best
Available
Techniques
(BAT)



Cooperating
with +2100
experts



BAT Conclusions:
→ **Environmental Norms** (4 years implementation period)



INCITE is a **new** element of the revised Industrial Emissions Directive (IED) for **tackling industrial transformation**. It adds to the 'Sevilla Process' a **forward-looking mechanism**: a necessary evolution of the **Best Available Techniques** concept (what is after BAT?).

INCITE will **promote innovation** and accelerate the **uptake of green innovative techniques**:

- Integrated approach: decarbonisation, resource efficiency, depollution & circular economy
- Initial focus on **Energy Intensive Industries (EII)**, later expand to all IED sectors.

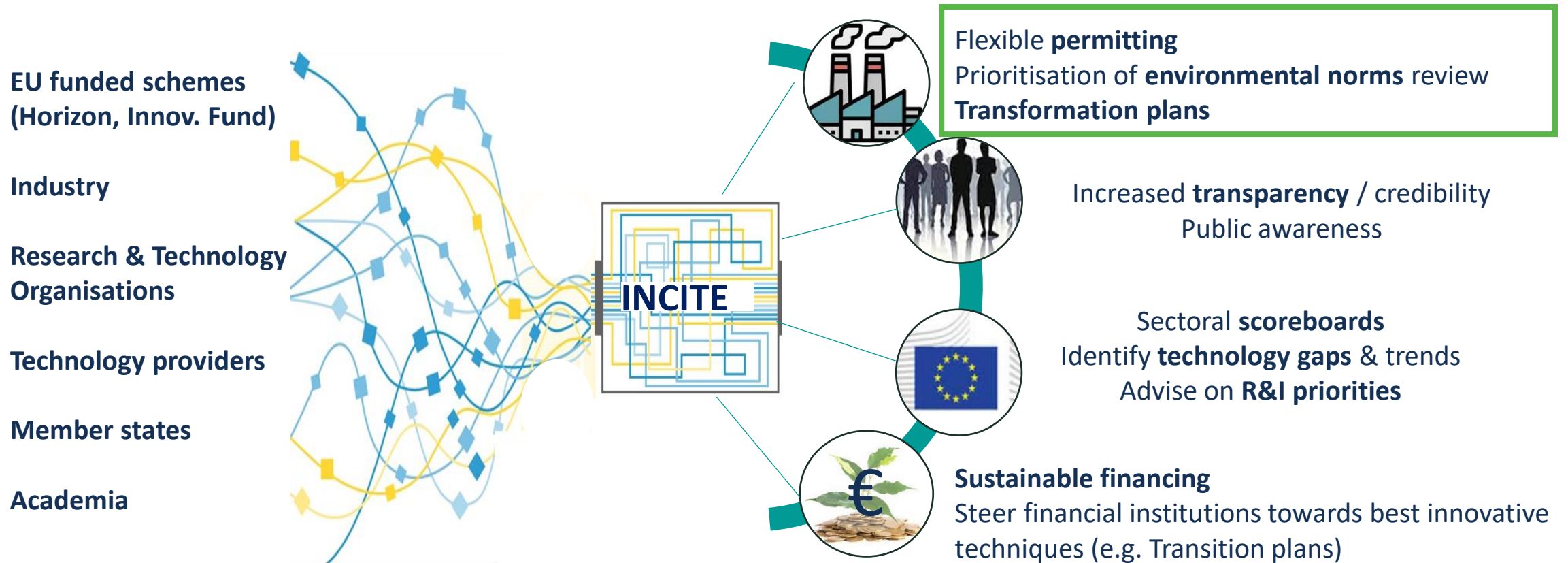


INCITE

Objectives and potential



Become a central point of reference for identifying and analysing the environmental performance of innovative techniques in Europe and beyond, and informing policy developments and investments.



INCITE information platform

First release / Mid-October 2024

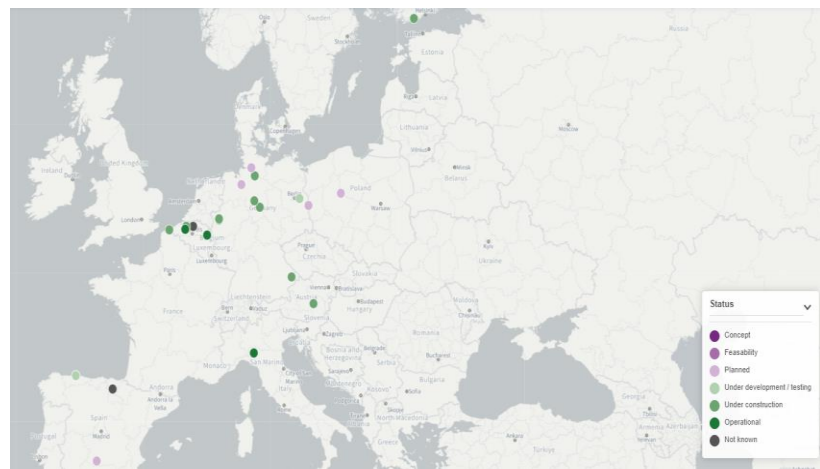


Submit your innovative technique >

- 1 Basic information
- 2 Projects
- 3 Where is your technique being implemented?
- 4 Production
- 5 Environmental performance
- 6 Cross media effects / environmental co-benefits
- 7 Economics
- 8 Privacy Statement

Filters

Innovation Technique	Environmental purpose	TRL	IED Activity
Advanced separator membranes for hydrogen production	Decarbonisation - Reduction of emissions to air (including noise and odour)	8	
Hydrogen production from Municipal Solid Waste (MSW) gasification		9	
Energy storage container systems built from second life EV batteries	Circular economy (e.g. recovery/reuse/recycling of residues, industrial symbiosis)	9	
Low CO2 Footprint Battery-Full Current Collector for Li-Ion Batteries Production	Circular economy (e.g. recovery/reuse/recycling of residues, industrial symbiosis)	9	
Advanced flame monitoring system and heat pump for waste heat recovery	Decarbonisation	7	2.2 Production of pig iron or steel (primary or secondary fusion)
Waste heat recovery and electricity generation using Organic Rankine Cycle	Energy efficiency	7	
CO2 conversion into carbon-captured energy carriers	Decarbonisation	7	2.2 Production of pig iron or steel (primary or secondary fusion)
Development of DISPLACE and CASCH carbon capture technologies	Decarbonisation	7	2.2 Production of pig iron or steel (primary or secondary fusion)
Direct reduction of iron ore using hydrogen combined with electric arc furnace steelmaking 9	Decarbonisation	9	2.2 Production of pig iron or steel (primary or secondary fusion)
Direct reduction of iron ore using hydrogen combined with electric arc furnace steelmaking 10	Decarbonisation	9	2.2 Production of pig iron or steel (primary or secondary fusion)
Direct reduction of iron ore using hydrogen combined with melting units and basic oxygen steelmaking	Decarbonisation	9	2.2 Production of pig iron or steel (primary or secondary fusion)
Direct reduction of iron ore using hydrogen combined with electric arc furnace steelmaking 12	Decarbonisation	9	2.2 Production of pig iron or steel (primary or secondary fusion)
Direct reduction of iron ore using hydrogen combined with electric arc furnace steelmaking 13	Decarbonisation	9	2.2 Production of pig iron or steel (primary or secondary fusion)



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Stakeholder engagement activities



Direct engagement with:

- **Industry associations** (e.g. EUROFER, CEMBUREAU, CEPI, European Aluminium)
- **Technology providers**
- **Leader/coordinator of research projects** (e.g. EU-funded projects such as Innovation Fund, Horizon Europe, Clean Steel Partnership, A.SPIRE, Processes4Planet, RFCS)



Sectoral workshops (Expected start – Q1 2025)

- **Hybrid meetings** involving industry (relevant EII associations), MS competent authorities, research and technology Organisations, environmental NGOs, relevant Commission DGs (e.g. ENV, RTD, GROW, ENER)
- **Forum to show-case and exchange on the most promising technologies**, pathways towards sustainability



Participation to conferences

- Carbon Zero 2024, Madrid, 10 October 2024
- Pollutec, Paris, 26-27 November 2024



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Site-visits to FOAK installations



Objective

- **Organise site visits to key FOAK plants with plant operators, industry associations, MS competent authorities, Commission representatives to better understand technological advancements and potential barriers to implementation / permitting**

Example: INCITE site visits to Sweden

(Iron and Steel Sector / 11 to 13 September 2024)

- Kanthal technology provider for electric heating furnace applications (Hallstahammar)
- Hybrit (SSAB/LKAB): hydrogen steelmaking using direct reduction of iron ore (DRI) – tested at a semi-industrial scale pilot plant located in Lulea
- Stegra (previously H₂ Greensteel), commissioning a new integrated steel works for production of green steel using H₂-DRI in Boden.



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Other key outputs

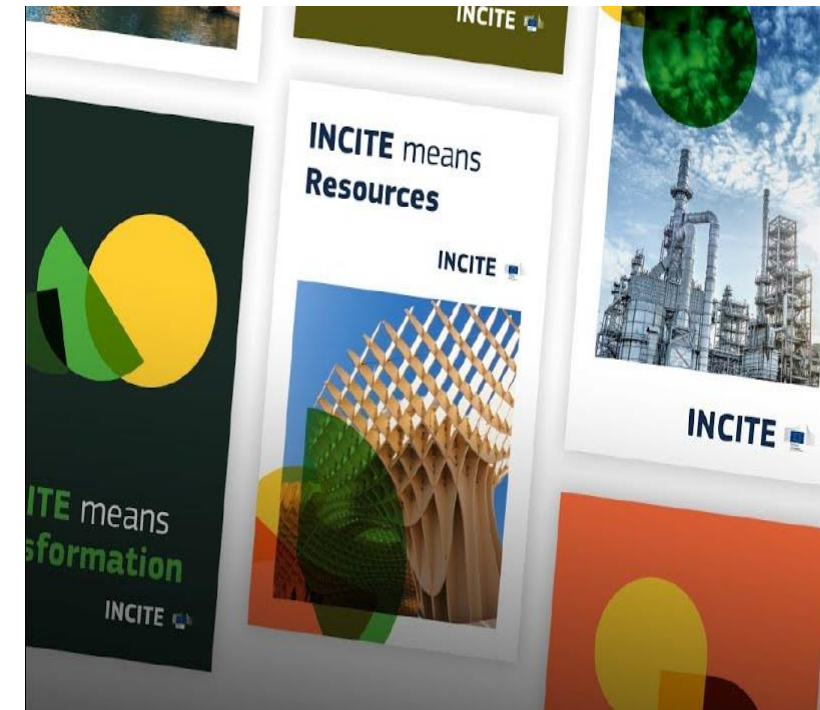


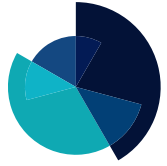
Commission Implementing Decision (INCITE)

- Document outlining the operation and working procedures of INCITE. Expected 2026 (following consultation with stakeholders).

Annual INCITE report (first publication expected December 2025)

- Report summarising (e.g. per sector) the innovative techniques received and analysed by INCITE, recommendations for BREF prioritisation and techniques considered relevant for inclusion in the scope of a BREF revision.





INCITE – CONTACT US



<https://innovation-centre-for-industrial-transformation.ec.europa.eu/>

EMAIL

JRC-INCITE@ec.europa.eu

ADDRESS

Joint Research Centre
Directorate B – Fair and Sustainable Economy
Unit B.5. Circular Economy and Sustainable Industry
EDIFICIO EXPO
CALLE INCA GARCILASO 3
E-41092 SEVILLE, SPAIN

