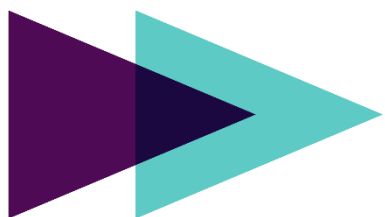


Innovation Centre for Industrial Transformation and Emissions (INCITE)

JRC-Seville
European Integrated Pollution, Prevention and Control Bureau (EIPPCB)





INCITE information platform (Questionnaire fields)

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INTRODUCTION

The European Innovation Centre for Industrial Transformation and Emissions ([INCITE](#)) promotes the uptake of innovative technologies to achieve decarbonisation, depollution, increased resource efficiency and circular economy in large industrial plants.

ADD INNOVATIVE TECHNIQUE

INCITE is created to scan systematically the horizon, gathering worldwide information on innovative industrial environmental techniques which if they are deemed ready for use at an industrial scale, provide significant environmental benefits and are cost effective could be incorporated in the *Sevilla Process* for the development of environmental norms.

Of particular importance for INCITE are the following areas in which significant environment benefits may be expected from the implementation of innovative industrial techniques:

- Decarbonisation
- Depollution
- Energy, water & material efficiency
- Circular economy

Requirements for submitting your data

Relevant techniques for INCITE shall be at a level of technological maturity that has been demonstrated in a relevant environment (industrially relevant environment in the case of key enabling technologies) or system prototype demonstration in an operational environment (i.e. at least Technology Readiness Level (TRL) 6-7). Techniques linked to first-of-a-kind (FOAK) and/or demonstration installations, or very close to being implemented at full scale, are particularly relevant for INCITE. The technology must be at least at the level of pilot production and demonstration, and must have progressed beyond initial testing. Measured data related to performance shall exist (i.e. both engineering and environmental performance metrics such as design parameters, measured consumption of energy or water, emissions to air, water or soil, etc.) and financial valuations and real-world prototype validations shall be available.

Analysing both the environmental performance and potential trade-offs

The environmental performance of a technique is analysed by comparing it with a relevant alternative or baseline, which should be a technique that is implemented in agro-industrial installations, commercially available and recognised as providing the highest possible level of environmental protection (e.g. typically a Best Available Technique). In general terms, the aim of the environmental performance analysis is to determine whether the technique either provides a higher level of environmental protection or an equal level of environmental protection at lower costs than the relevant alternative currently applied. In addition, potential cross-media effects of the technique will be assessed, including the identification of potential trade-offs or unintended consequences associated with the deployment of the technique.

Data confidentiality

If any information submitted to the INCITE database is considered confidential business information and/or sensitive information under competition law by the data submitter, this should be clearly stated when submitting the information. Confidential business information and sensitive information under competition law will be kept confidential and will not become publicly available in the INCITE database/web platform.

Please submit as much information as possible in the information platform questionnaire to enable a thorough analysis of the environmental performance of the innovative technique. Incomplete submission will not be validated and will not appear on the INCITE online platform. The INCITE team may contact you to clarify various technical aspects of the submission before final validation.

Structure of the information platform questionnaire

The INCITE questionnaire has been developed to enable a holistic analysis of the innovative techniques submitted. Essentially, this means that several environmental impacts (e.g. reduction of emissions to air or water, reduction of greenhouse gas emissions, reduction of energy or water efficiency), economic aspects (e.g. CAPEX, OPEX) and cross media effects will be considered at the same time in order to analyse the overall costs

and environmental performance of techniques using an integrated approach. Accordingly, the INCITE questionnaire has been divided into the following sections requesting information on:

- Innovative technique - Basic Information
- Associated project (if relevant)
- Installation (e.g. company developing the innovative technique)
- Production data
- Environmental performance
- Cross-media effects and environmental co-benefits
- Economics

Analysis Process for Submitted Innovative Techniques

The INCITE team is committed to carefully analysing the innovative techniques voluntarily submitted by stakeholders. Our thorough analysis process ensures that each technique is reviewed for its potential to drive decarbonisation, depollution, resource efficiency, and a circular economy in large agro-industrial plants covered under the IED. Once a technique is submitted, the INCITE team will review it through the following workflow:

Step 1: Initial Screening

Upon receipt of a submission, our team conducts an initial screening to verify that the technique: falls within the scope of INCITE, offers one or more environmental benefits, provides sufficient information for a comprehensive assessment and is near-industrial scale (level of development). If needed, the INCITE team will contact the data submitter to ask for additional information.

Step 2: Eligibility and Publication

If a technique passes the initial screening, it will be published on the INCITE platform as being under review. This is followed by a more in-depth analysis of the information submitted, aiming to determine its environmental benefits, potential trade-offs/cross-media effects and cost effectiveness of the innovative technique, by comparing it in particular with a relevant alternative technique (in many cases, a Best Available Technique). During this step, INCITE may work with external experts. In some cases, our team will also request additional information from the technique submitter to clarify or supplement the provided data. This ensures that the in-depth analysis is as accurate and comprehensive as possible. At the end of this process, techniques, which have successfully undergone a full analysis will be clearly identified in the platform as such and published.

INFORMATION PLATFORM FIELDS- INNOVATIVE TECHNIQUE

Fields marked with * are required to continue the complete the submission process.

1. BASIC INFORMATION

NO	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
1.1	Technique title*	Short text to describe the technique applied in this project	
1.2	Short technique description	Short text to describe the technique applied in this project	Provide a brief description, summarising in a very concise way the type and purpose of the innovative technique, and where relevant, the type of industrial installation where it is / could be implemented
1.3	Detailed description of the technique	Text to describe innovative technologies applied in more detail.	Describe the innovative technique in more detail. Provide information on the operation, environmental purpose, driving force for implementation and performance of the innovative technique. Highlight the advantages and innovative features of the technique and its environmental added-value
1.4	Link to the technique (Basic Information)		Please add URL and/or reference documents (if any)
1.5	Reference documents related to the innovative technique	Attachments provided to support the description of the technique	Upload any supporting information to illustrate in more detail the innovative technique submitted. This could include documents such as e.g. publications, reports, patents, technology provider brochures, permits of industrial installations, economics data, diagrams, figures, and pictures. Unlimited number of files can be uploaded to this field. 512 MB limit. Allowed types: pdf txt png jpg doc xls zip
1.6	Environmental purpose of the innovative technique *	Environmental purposes relevant for INCITE, e.g. decarbonisation, energy efficiency, water consumption, depollution, circular economy, material efficiency, reduction of emissions to water, solid or groundwater, chemical substitution, reduction of emissions to air. Options are described in a dropdown menu in Appendix 1	Please indicate the main environmental purpose of the innovative technique. If the technique can serve more than one purpose, please select more than one field
1.7	Relevant Industrial Sector	Indicate in which sector(s) the innovative technique can be applied. If the technique can serve more than one purpose, please select more than one field. Options are described in a dropdown menu in Appendix 1.	
1.8	IED activity*	Select the relevant IED activity of the installation specified in Annex I of the Industrial Emissions Directive in which the innovative technique submitted is / could be implemented. If the technique is not associated with an IED activity, specify the directly associated activity. Options are described in a dropdown menu in Appendix 1	Pick from the list the defined IED activity. In case several activities apply, indicate it in the Additional Information box
1.9	Additional information on IED activity		Please provide a short rationale if more than one IED activity has been selected
1.10	Relevant alternative technique	A 'relevant alternative' is a reference technique that will be used to determine the environmental added-value and degree of innovation of the innovative technique submitted, through a qualitative comparison (quantitative if data is available). In	A relevant alternative technique is a well-established technique, legal and accepted by end users, commercially available and fully implemented and tested full scale. Often, a relevant alternative will be a Best Available Technique (BAT), that are documented in the BAT reference documents

NO	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
		principle, a relevant alternative normally serves an identical or similar purpose as the innovative technique submitted. An innovative technique could either (i) upgrade or bring a significant incremental change to the relevant alternative technique or (ii) be implemented in replacement of the relevant alternative technique, in both cases leading to substantial and quantifiable environmental benefits	
1.11	Current status*	List of status as described in Appendix 1	Indicate the current status of development of the innovative technique
1.12	Technology readiness level (TRL) *	List of technical readiness level (TRL) (From 6 to 9) as described in Appendix 1	Indicate the TRL on completion of the technique. In general, the innovative techniques relevant to INCITE are at least at a level of technology demonstrated in a relevant industrial environment (in the case of key enabling technologies) or system prototype demonstration in operation environment (with a minimum TRL of 6-7)
1.13	Nature of the TRL on completion*	Indicate whether the provided TRL has already been achieved or is expected upon completion. Options are described in a dropdown menu in Appendix 1	
1.14	Innovative technique development – Start date	Start date of the development of the innovative technique	
1.15	Technique development – end date	End date of the development of the innovative technique	
1.16	Technology provider		Specify the technology provider who supplied/developed the innovative technique. (e.g. company, research institute, technology provider)
1.17	Project partners		Please enter the affiliation of the partners taking part in the innovative technique (e.g. company, research institute). Add each partner individually, and press enter after inserting each one
1.18	Contact details of submitter*		Provide your contact details so the INCITE team can contact you to clarify e.g. technical details on the innovative technique, environmental performance data and benefits Name * (Please provide a contact name) Phone* (Please indicate submitter phone (including country prefix) Email*(Please indicate the submitter email) Affiliation* (Please provide an affiliation)

2. PROJECT

This section gathers detailed information on the project linked to the development and implementation of the innovative technique described in the previous section. Please type the acronym of your project. If your project is already included in INCITE, it will appear and this means that basic information on the project are already included in the platform. If the project does not appear, please create a new project and fill in all the information about the project.

NO	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
2.1	Title *	Indicate the title of your project	
2.2	Project acronym	Acronym used for the project	Provide the acronym of the project, where available
2.3	Project short description		Provide a short description of the project
2.4	Project website URL	Link to project website	Specify the URL of the project website. This must be an external URL such as http://example.com
2.5	Total cost of project	Total cost of the project in EUR, (without decimal)	Specify the total cost of the project, including partner costs
2.6	Project funding	Select the source of Funding programme. Options are described in a dropdown menu in Appendix 1	Indicate the total public funding of the project selecting the source of funding from the list. In case it received no funding, please select “none”
2.7	Project leader	Specify the name and email of the project leader and contact details	Name Email
2.8	Project coordinator	Specify the name and email of the project coordinator and contact details	Name Email
2.9	Additional remarks on the project		Provide any additional project information which could be relevant to help the INCITE team to assess it: - non-EU funding - cooperation with other EU/non-EU funded projects

3. WHERE IS YOUR TECHNIQUE BEING IMPLEMENTED?

The objective of this section is to identify the industrial installation or research facility where the submitted innovative technique is being tested / implemented.

If the innovative technique development takes place in an existing industrial installation which is covered under the Industrial Emission Directive (IED), it should be possible to provide its INSPIRE ID number, which can be found from the European Industrial Emissions Portal (<https://industry.eea.europa.eu/#/home>). It is important to systematically provide the coordinates of the technique in order to be able to visualise it using the mapping functionality of the INCITE information platform. If it is a new installation please provide the details.

If an INSPIRE ID is not available, please select NO, and then proceed further to provide exact details of the location.

NO	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
3.1.1	Commissioning expected date	Year (date) of entry In case of multiple installations please indicate it in “additional information”	Indicate the expected date of commissioning
3.1.2	INSPIRE ID	Do you have an Inspire ID Number? Yes/No	If an INSPIRE ID is not available, please select NO, and then press add the details of the location
3.1.3	Installation name *	Text to identify the site	Provide the installation name(s) (e.g. company name)
3.1.4	Address	Address of the site, industrial installation or research facility	Indicate the address of the industrial installation
3.1.5	Country *	Country of the site, industrial installation or research facility	Indicate the country where the industrial installation is located

NO	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
3.1.6	Zip/Postal code	Indicate the zip/postal code where the industrial installation or research facility is located	
3.1.7	Latitude	Coordinates (latitude)	Please provide exact coordinates. Please enter the coordinates using a numerical notation (e.g.: 37.3953, -6.0108), i.e. not in degrees, minutes, seconds
3.1.8	Longitude	Coordinates (longitude)	Please provide exact coordinates. Please enter the coordinates using a numerical notation (e.g.: 37.3953, -6.0108), i.e. not in degrees, minutes, seconds

4. PRODUCTION

NO	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
4.1	Associated main production process(es) and product(s)	Specify which type of production data are associated with the innovative technique / project submitted. (e.g. production of crude steel, direct reduced iron, cement, clinker, chemical product such as ammonia)	
4.2	Short description of production process(es) and product(s)	Short description of production data	Please provide a short description of the production process(es) and product(s) associated with the innovative technique / project submitted. In particular if the information refers to a specific process or demo unit
4.4	Production data	Production data per time (generally year)	Production data per time (generally year). This is the actual production of the plant (not the permitted capacity of the plant)
4.3	Unit dimension	Enter the unit dimension of the production data. For example: ton/year)	Please enter the unit dimensions. For example: ton product per year
4.5	Additional remarks	Remarks	Please provide any additional information

5. ENVIRONMENTAL BENEFITS

Please report in this section any environmental benefits associated with the innovative technique submitted. If there are negative cross media-effects/trade-offs linked to the implementation of this technique, please report such information in the next Section 6.

Please for each section specify the exact nature of the data reported: expected data on project completion, estimated data (not measured), measured data in pilot scale installation, measured data in full scale installation.

Also please specify the following: type, reference year, and provide the range (max-min) or average value. A single value is sufficient, but minimum or maximum values could also be reported to provide a range.

5.1 GHG emissions reduction

NO	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
5.1	GHG Emissions Reduction	Select parameter (e.g. CO ₂ , CH ₄ , N ₂ O, HFC...), source, and year from the dropdown menus in Appendix 1	

NO	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
		If you wish to add another pollutant, add another entry by clicking "Add GHG emission reduction" button	
5.1.1	Percentage reduction of GHG emissions	Percentage of reduction of greenhouse gas emissions	Please enter the percentage reduction of the specified GHG emissions compared to the relevant alternative (specified in section 1.10). A single value is sufficient, but minimum or maximum values could also be reported to provide a range
5.1.2	GHG emissions data	Absolute emissions data. Select source, parameter, type and year from the dropdown menus in Appendix 1	Specify the total GHG emissions per year expressed in: <ul style="list-style-type: none"> • ton CO₂eq per year; • carbon intensity value expressed in ton CO₂eq/ton product. Data should be associated to a reference year, please specify it. A single value is sufficient but minimum or maximum values could also be reported to provide a range
5.1.3	Carbon intensity reference	Enter required remarks	Specify to which type of product the carbon intensity is reported, for example: ton of steel, direct reduced iron, sheet glass, cement, chemical pulp or clinker
5.1.4	Additional remarks	Enter remarks	Please specify what kind of GHG emissions you are reporting. Scope 1 (direct emissions from a company's owned or controlled sources), Scope 2 (include indirect emissions from purchased or acquired energy) and/or Scope 3 (indirect emissions from upstream and downstream activities in a company's value chain)

5.2 Energy efficiency

NO	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
5.2.1	Energy consumption reduction (%)	Percentage of energy consumption reduction. Select source, and year of data from the dropdown menus in Appendix 1	Please enter the percentage energy consumption reduction compared to the relevant alternative specified in section 1.10). A single value is sufficient but minimum or maximum values could also be reported to provide a range (a positive value signifies a reduction)
5.2.2	Energy consumption data	Absolute data of energy consumption. Select source, type and year of data from the dropdown menus in Appendix 1	Report the measured energy consumption as total energy consumption per year for the selected reference year (expressed in kWh or MWh) and the specific energy consumption per ton of product (expressed in kWh of product) for the selected reference year. A single value per row is sufficient but minimum or maximum values could also be reported to provide a range
5.2.3	Specific energy consumption reference	Enter required remarks	Specify to which type of product the specific energy consumption is reported, for example: ton of steel, direct reduced iron, sheet glass, cement, chemical pulp or clinker
5.2.4	Additional remarks	Enter remarks	Provide any additional information which may help understand the data reported in this section and the energy source (e.g. fossil fuel, renewable)

5.3 Water consumption

NO	COLUMN NAME	DESCRIPTION	QUESTION IN THE QUESTIONNAIRE
5.3.1	Water consumption reduction (%)	Percentage of reduction of water consumption. Select source, and year of data from the dropdown menus in Appendix 1	Please enter the percentage of water consumption reduction compared to the relevant alternative technique specified in section 1.10

5.3.2	Water consumption data	Absolute data of water consumption. Select source, type and year of data from the dropdown menus in Appendix 1	Report the water consumption as : <ul style="list-style-type: none"> • Total water consumption per year for the selected reference year (expressed in m³), and • Specific water consumption per ton of product (expressed in m³/ton of product) for the selected reference year. A single value per row is sufficient but minimum or maximum values could also be reported to provide a range
5.3.3	Specific water consumption reference *	Enter required remarks	Specify to which type of product the specific water consumption is reported, for example: ton of steel, direct reduced iron, sheet glass, cement, chemical pulp or clinker
5.3.4	Additional remarks	Enter remarks	Provide any additional information which may help understand the data reported in this section

5.4 Emission of pollutants to air

No	COLUMN NAME	DESCRIPTION	QUESTION IN THE QUESTIONNAIRE
5.4.1	Pollutant, noise or odour emission reduction (%)	Percentage of pollutant emission reduction. Select source, parameter, and year from the dropdown menus in Appendix 1	Please enter the percentage of emission reduction for the selected parameter compared to the relevant alternative specified in section 1.10. A single value is sufficient but minimum or maximum values could also be reported to provide a range
5.4.2	Measured pollutant emissions (mg/Nm ³)	Absolute data of pollutant emissions. Select source, parameter, type and year of data from the dropdown menus in Appendix 1	Specify the emissions of the selected pollutant, expressed in mg/Nm ³ . A single value is sufficient but minimum or maximum values could also be reported to provide a range
5.4.3	Oxygen reference content *	Enter required remarks	Specify to which oxygen reference level (%) in the waste gas the emission data in Section 5.4.2 are reported
5.4.4	Measured noise emissions		Specify the measured noise emissions at a receptor site expressed in dB. A single value is sufficient but minimum or maximum values could also be reported to provide a range
5.4.5	Measured odour emissions		Specify the measured odour emissions expressed in OUE/m ³ . Specify the measured noise emissions at a receptor site expressed in dB. A single value is sufficient but minimum or maximum values could also be reported to provide a range
5.4.6	Abatement technique		Select from the drop-down menu list one or a combination of abatement techniques used to reduce emissions to air when using the innovative technique
5.4.7	Remarks	Enter required remarks Specify the measured noise emissions at a receptor site expressed in dB	Provide any additional information which may help to understand the data reported in this section

5.5 Emission of pollutants to water

	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
5.5.1	Abatement technique	Select abatement technique from the dropdown menus in Appendix 1	Select from the drop-down menu list one or a combination of abatement techniques used to reduce emissions to water when using the innovative technique

	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
5.5.2	Pollutant emissions reduction (%)	Percentage of pollutant emission reduction. Select the pollutant from list (e.g. COD, total nitrogen, suspended solids, AOX, As, Ni, Cd, Pb, Cr...). Select source, parameter, and year from the dropdown menus in Appendix 1	Please enter the percentage of emissions reduction for the selected pollutant compared to the relevant alternative (specified in section 1.10). A single value is sufficient but minimum or maximum values could also be reported to provide a range
5.5.3	Measured pollutant emission (mg/L)	Absolute data of pollutant emissions. Select source, parameter, and year from the dropdown menus in Appendix 1	Specify the measured emissions of the selected pollutant expressed in mg/L. A single value is sufficient but minimum or maximum values could also be reported to provide a range
5.5.4	Additional Remarks	Enter required remarks	Please provide additional information

5.6 Chemical substitution

	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
5.6.1	Chemical substitution	Chemical substitution description	Describe how the chemical substitution is carried out in the process (e.g. total or partial substitution) and how/if the process had to be adapted to enable the chemical substitution and whether this had an impact on productivity or product specifications
5.6.2	Chemical substitute	Chemical compound substituting	For this innovative technique, indicate which chemical compound is substituting a hazardous substance or a substance of very high concern. Please specify the CAS number of the chemical compound substitute
5.6.3	Chemical substituted	Chemical substituted	For this innovative technique, indicate which chemical compound is substituted. Please specify the CAS number of the chemical compound substituted
5.6.4	Added-value of the chemical substitution	Enter required remarks	Describe the added-value of the chemical substitution, including e.g.: cost effectiveness, reduction of the toxicity of emissions, workplace exposure, reduction of hazardous waste
5.6.5	Impact on production process	Impact on production process	Describe if the chemical substitution affects any production process and how this production process or process steps should be consequently adapted or modified

5.7 Material efficiency (Reduction of raw material consumption or waste generation)

	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
5.7.1	Type of raw material	Type of raw material	Specify the raw material for which consumption reduction data is reported below
5.7.2	Material consumption reduction (%)	Percentage of reduction of material consumption	Please enter the percentage reduction of material consumption compared to the relevant alternative technique specified in section 1.10
5.7.3	Material consumption data	Absolute data of material consumption. Select source, type, and year from the dropdown menus in Appendix 1	Specify the following: <ul style="list-style-type: none"> Material consumption per year for the selected reference year, and Specific raw material consumption per ton of product for the selected reference year A single value is sufficient but minimum or maximum values could also be reported to provide a range

5.7.4	Specific raw material consumption reference	Enter required remarks	Specify to which type of product the specific material consumption is reported, for example: ton of steel, direct reduced iron, sheet glass, cement, chemical pulp or clinker
5.7.5	Waste type	Enter type of waste	Specify the type of waste product(s) generated for which reduction data is reported below. If you want to report data on several types of waste products, this is possible in Section 5.7.8
5.7.6	Waste generation reduction (%)	Percentage of reduction of waste generation	Please enter the percentage reduction of material consumption compared to the relevant alternative technique specified in section 1.10
5.7.7	Waste generation data	Absolute value of waste generation. Select source, type, and year from the dropdown menus in Appendix 1	Please specify: <ul style="list-style-type: none"> Quantity of waste generated per year for the selected reference year, and Specific quantity of waste generated per ton of product for the selected reference year
5.7.8	Specific waste generation reference *	Indicate waste generation reference	Specify to which type of product the waste generation data is reported, for example: amounts of waste generated per ton of steel, direct reduced iron, sheet glass, cement, chemical pulp or clinker
5.7.9	Additional remarks		Please specify if the process uses a critical raw material (CRM), and if so, please indicate which one(s). You can check the CRM here

5.8 Recovery/reuse/recycling of residues

	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
5.8.1	Recovery/ reuse/ recycling of residues reduction (%)	Select source, type, and year from the dropdown menus in Appendix 1	Please enter the percentage reduction of the specified residues
5.8.2	Recovery/ reuse/ recycling of residues data	Select source, type, and year from the dropdown menus in Appendix 1	Please report the measured quantity of recovered/reused/recycled residues per year (expressed in ton) for the selected reference year. A single value per row is sufficient but minimum or maximum values could also be reported to provide a range
5.8.3	Specific residue reuse/ recycling/ recovery reference	Specific residue reuse/ recycling/ recovery reference	Specify to which type of product the reuse/recycling/recovery data is reported, e.g. : amounts of residue recycled per ton of steel, direct reduced iron, sheet glass, cement, chemical pulp or clinker
5.8.4	Remarks	Enter required remarks	Provide any additional information which may help understand the data reported in this section

5.9 Industrial symbiosis

	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
5.9.1	Industrial symbiosis resource flow	Industrial symbiosis applies when by-products or waste flows of one industry become the raw materials or inputs for another. Select options from the dropdown menus in Appendix 1	Please select from the drop-down menu list a type of resource flow (e.g. steam, wastewater, condensates, or residues) pertaining to the industrial symbiosis measure applied
5.9.2	Objective of the industrial symbiosis synergy	Specify the objective of the industrial symbiosis synergy, e.g.: <ul style="list-style-type: none"> Heat recovery 	Specify the objective of the industrial symbiosis synergy

		<ul style="list-style-type: none"> • Valorisation of residues • Acid recovery • Reuse of cooling water • Recovery of e.g. sulphur, nitrogen, zinc, magnesium, calcium, phosphorus • Fuels production from solid/liquid waste 	
5.9.3	Sender sector/process	Indicate sender sector/process	Specify the sector and process providing the resource flow in this industrial symbiosis
5.9.4	Receiving sector/process	Indicate receiving sector/process	Specify the sector and process receiving / using the resource flow in this industrial symbiosis
5.9.5	Other benefiting stakeholders	Indicate other benefiting stakeholders	Please specify if any other stakeholders are affected (positively or negatively) by the industrial symbiosis synergy
5.9.6	Baseline situation	Select options from the dropdown menus in Appendix 1	Specify from the drop-down menu list what was the baseline situation before putting in place this industrial symbiosis synergy (e.g. incinerated, landfilled, sold to third party)
5.9.7	Benefits from the industrial resource synergy	Select options from the dropdown menus in Appendix 1	Please indicate what are the main benefits or gains for stakeholders deriving from this industrial symbiosis resource synergy
5.9.8	Industrial symbiosis synergy (techno-economic benefits)	Provide quantitative techno-economic information about the benefits of this industrial symbiosis synergy, e.g.: <ul style="list-style-type: none"> • State of the matter exchanged (gas, liquid, solid) • Chemical composition of the resource flow (e.g. Ca(OH), SiO₂, Fe₂O₃) • Annual quantities exchanged per year (e.g. in tons or m3) • Estimated amounts of e.g. freshwater withdrawal avoided in m3 per year or energy saved in MJ/year or CO₂ emissions avoided in kg CO₂eq / year 	Provide quantitative techno-economic information about the benefits of this industrial symbiosis synergy
5.9.9	Remarks		Provide any additional information which may help understand the data reported in this section

5.10 Reference documents related to the environmental benefits of the innovative technique

	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
5.10	Reference documents related to the environmental benefits of the innovative technique	Unlimited number of files can be uploaded to this field. 512 MB limit Allowed types: pdf txt png jpg doc xls zip	Upload any supporting information to illustrate in more detail the environmental benefits reported for the innovative technique submitted. These documents should complement data reported in Sections 5.1 to 5.9 above. This could include documents such as e.g. publications, reports, patents, technology provider brochures, permits of industrial installations, measurement test results, standards used for measurement, diagrams, figures, pictures

6. CROSS-MEDIA EFFECTS

NO	COLUMN NAME	DESCRIPTION	TEXT IN THE QUESTIONNAIRE
6.1	Cross-media effects	This may include information on high consumption of raw materials and water, energy, waste generation, noise, eutrophication, etc. Select options from the dropdown menus in Appendix 1	Specify any relevant negative impacts on the environment when implementing the innovative technique, this will enable to assess the impact on the technique on the environment as a whole
6.2	Additional files	Upload any additional files that may help INCITE analysing the cross media effects linked to the innovative technique submitted	You can upload any additional file related to the cross media effects

7. ECONOMICS

NO	COLUMN NAME	DESCRIPTION	QUESTION IN THE QUESTIONNAIRE
7.1	Reference date	Indicate a year	Specify the reference year for which the reported economic data apply to
7.2	CAPEX	Indicate the CAPEX	Capital expenditure (CAPEX) to commission the innovative technique at an industrial site. Please add specific information in the field “Economic remarks” below
7.3	OPEX (currency/year)	Indicate the OPEX	Operational expenditure (OPEX) per year for the innovative technique to be operated and maintained at an industrial site. Please add specific information in the field “Economic remarks” below
7.4	Simple pay-back period (SPP)	Indicate number of years	Indicate the simple pay-back period in years
7.5	Additional information	Any other useful information	Indicate any other useful information regarding economics. Please specify if the data reported above refers only to the innovative technique, or includes other on-site integration costs, and/or other relevant costs which need to be mentioned.
7.6	Additional Information (Attachments)	Attachments provided to support the description of the technique	Upload any supporting information on the economic aspects of the innovative technique

8. PRIVACY STATEMENT

This section gives the possibility to data submitters to select specific sections in the questionnaire that shall be considered as Confidential Business Information. It also informs the data submitter about personal data protection (Privacy statement).

By default, all the fields in this list will be displayed in the detail of the innovative technique. In case the data submitter would like to maintain confidentiality on sensitive data, sections of the questionnaire that shall remain confidential should be ticked by the data submitter.

In this section, the data submitter shall accept the following:

- ✓ Privacy statement: Acceptance of the privacy statement in order to publish the data submitted. The full privacy statement may be downloaded [here](#).
- ✓ Analysis process: Consent that the INCITE team will analyse the information submitted on the innovative technique. A document on the analysis workflow may be downloaded [here](#).

APPENDIX 1 – CONTENT OF DROP-DOWN LISTS

I. Section 1. Basic information

1.6 Environmental purpose of the innovative technique

- *Decarbonisation*
- *Energy efficiency*
- *Water efficiency*
- *Material efficiency (Reduction of raw material consumption or waste generation)*
- *Circular economy (e.g. recovery/reuse/recycling of residues, industrial symbiosis)*
- *Reduction of emissions to water, soil or groundwater*
- *Chemical substitution (e.g. of hazardous substances or substances of very high concern)*
- *Reduction of emissions to air (including noise and odour)*

1.7 Relevant industrial sector

- *Animal by-products/edible co-products industries*
- *Batteries manufacture*
- *Biogas production*
- *Cement, lime, magnesium oxide production*
- *Ceramics*
- *Chlor-alkali production*
- *Ferrous metals processing*
- *Fertilisers production*
- *Food, drink and milk*
- *Forging industry (hammers / forging presses)*
- *Foundry industry*
- *Glass*
- *Hydrogen production*
- *Inorganic chemicals production*
- *Intensive rearing of poultry/pigs*
- *Iron and Steel*
- *Landfills*
- *Large combustion plants*
- *Mining (ores)*
- *Non-ferrous metals production*
- *Organic chemicals production*
- *Pulp, paper and card board*
- *Refineries (oil and gas)*
- *Slaughterhouses*
- *Surface treatment of metals or plastics*
- *Surface treatment of substances using organic solvents*
- *Tanning of hides and skins*
- *Textiles*
- *Waste incineration*
- *Waste treatment*
- *Wood-based panels production*
- *General automation and production facilities*
- *Other*

1.8 IED activity

- *1.1 Combustion of fuels in installations with a total rated thermal input of 50 MW or more*
- *1.2 Refining of mineral oil and gas*
- *1.3 Production of coke*
- *1.4a Gasification or liquefaction of coal*

- 1.4b Gasification or liquefaction of other fuels in installations with a total rated thermal input $\geq 20\text{MW}$
- 2.1 Metal ore (including sulphide ore) roasting or sintering
- 2.2 Production of pig iron or steel (primary or secondary fusion) exceeding 2,5 tonnes per hour
- 2.3a Processing of ferrous metals: operation of hot-rolling mills with a capacity exceeding 20 tonnes of crude steel per hour
- 2.3a Processing of ferrous metals: operation of cold-rolling mills with a capacity exceeding 10 tonnes of crude steel per hour
- 2.3b Processing of ferrous metals: operation of smitheries with hammers the energy of which exceeds 50 kilojoule per hammer
- 2.3ba "Processing of ferrous metals: operation of smitheries with forging presses the force of which exceeds 30 mega-newton (MN)
- 2.3c Processing of ferrous metals: application of protective fused metal coats with an input exceeding 2 tonnes
- 2.4 Operation of ferrous metal foundries with a production capacity exceeding 20 tonnes per day
- 2.5a Processing of non-ferrous metals: production of non-ferrous crude metals
- 2.6 Surface treatment of metals or plastic materials using an electrolytic or chemical process (vats exceeds 30 m^3)
- 2.7 Manufacture of batteries, other than exclusively assembling, with a production capacity of 15 000 tonnes of battery cells
- 3.1a Production of cement, lime and magnesium oxide: production of cement clinker in rotary kilns
- 3.1b Production of cement, lime and magnesium oxide: production of lime in kilns (exceeding 50 tonnes per day)
- 3.1c Production of magnesium oxide in kilns with a production capacity exceeding 50 tonnes per day
- 3.2 Production of asbestos or the manufacture of asbestos-based products
- 3.3 Manufacture of glass including glass fibre with a melting capacity exceeding 20 tonnes per day
- 3.4 Melting mineral substances including the production of mineral fibres with a melting capacity exceeding 20 tonnes per day
- 3.5a Manufacture of ceramic products by firing with a production capacity exceeding 75 tonnes per day
- 3.5b Manufacture of ceramic products by firing (kiln capacity exceeding 4 m^3 and a setting density per kiln exceeding 300 kg/m^3)
- 3.6 Extraction including on-site treatment operations
- 4.1.(a) Production of organic chemicals, such as: simple hydrocarbons
- 4.1.(b) Production of organic chemicals, such as: oxygen-containing hydrocarbons
- 4.1.(c) Production of organic chemicals, such as: sulphurous hydrocarbons
- 4.1.(d) Production of organic chemicals, such as: nitrogenous hydrocarbons
- 4.1.(e) Production of organic chemicals, such as: phosphorus-containing hydrocarbons
- 4.1.(f) Production of organic chemicals, such as: halogenic hydrocarbons
- 4.1.(g) Production of organic chemicals, such as: organometallic compounds
- 4.1.(h) Production of organic chemicals, such as: plastic materials (polymers, synthetic fibres and cellulose-based fibres)
- 4.1.(i) Production of organic chemicals, such as: synthetic rubbers
- 4.1.(j) Production of organic chemicals, such as: dyes and pigments
- 4.1.(k) Production of organic chemicals, such as: surface-active agents and surfactants
- 4.2a Production of inorganic chemicals, such as gases
- 4.2b Production of inorganic chemicals, such as acids
- 4.2c Production of inorganic chemicals, such as bases
- 4.2d Production of inorganic chemicals, such as salts
- 4.2e Production of inorganic chemicals, such as non-metals
- 4.3 Production of phosphorous-, nitrogen- or potassium-based fertilisers (simple or compound fertilisers)
- 4.4 Production of plant protection products or of biocides
- 4.5 Production of pharmaceutical products including intermediates
- 4.6 Production of explosives
- 5.1a Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day of biological treatment

- 5.1b Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day of physico-chemical treatment
- 5.1c Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day of blending
- 5.1d Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day of repackaging
- 5.1e Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day solvent reclamation/regeneration
- 5.1f Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day of recycling inorganic materials
- 5.1g Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day of regeneration of acids or bases
- 5.1h Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day: recovery pollution components
- 5.1i Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day: recovery catalyst components
- 5.1j Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day of oil re-refining or other reuses
- 5.1k Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day of surface impoundment
- 5.2a Disposal or recovery of waste in waste incineration plants or in waste co-incineration plants (no exceeding 3 tonnes p/h)
- 5.2b Disposal or recovery of waste in waste incineration plants or in waste co-incineration plants: for hazardous (not>10t p/d)
- 5.3a(i) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day: biological treatment
- 5.3a(ii) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day: physico-chemical treatment
- 5.3a(iii) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day: pre-treatment of waste for incineration
- 5.3a(iv) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day: treatment of slags and ashes
- 5.3a(v) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day: treatment in shredders of metal waste
- 5.3b Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day
- 5.4 Landfills receiving more than 10 tonnes of waste per day
- 5.5 Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes
- 5.6 Underground storage of hazardous waste with a total capacity exceeding 50 tonnes
- 6.1a Production in industrial installations of pulp from timber or other fibrous materials
- 6.1b Production in industrial installations of paper or card board with a production capacity exceeding 20 tonnes per day
- 6.1c Production in industrial installations of wood-based panels
- 6.2 Pre-treatment (operations such as washing, bleaching, mercerisation) or dyeing of textile fibres or textiles
- 6.3 Tanning of hides and skins where the treatment capacity exceeds 12 tonnes of finished products per day
- 6.4a Products from animals Operating slaughterhouses with a carcass production capacity greater than 50 tonnes per day
- 6.4b(i) Products from animals, treatment and processing, only animal raw materials
- 6.4b(ii) Products from animals, treatment and processing, only vegetable raw materials
- 6.4b(iii) Products from animals, treatment and processing, animal and vegetable raw materials
- 6.4c Products from animals Treatment and processing of milk only, the quantity of milk received being greater than 200 tons per day
- 6.5. Disposal or recycling of animal carcasses or animal by-products with a treatment capacity exceeding 10 tonnes per day
- 6.6. Electrolysis of water for production of hydrogen where the production capacity exceeds 50 tonnes per day

- 6.7 Surface treatment of substances, objects or products using organic solvents
- 6.8. Production of carbon (hard-burn coal) or electrographite by means of incineration or graphitisation
- 6.9. Capture of CO₂ streams from installations covered by this Directive for the purposes of geological storage pursuant
- 6.10. Preservation of wood and wood products with chemicals with a production capacity exceeding 75 m³ per day
- 6.11. Independently operated treatment of waste water not covered by Directive 91/271/EEC and discharged by an installation

1.11 Current status

- Feasibility
- Planned
- Under development/testing
- Under construction
- Operational

1.12 Technology readiness level (TRL)

- 6-Technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- 7-System prototype demonstration in operational environment
- 8-System complete and qualified
- 9-actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies)
- TRL above 9 (e.g. candidate BAT)

1.13 Indicate the nature of the TRL on completion

- Achieved
- Expected

II. Section 2. Project

Project funding

- Horizon 2020
- Horizon Europe
- Innovation Fund
- InvestEU
- EIB
- RRF
- EBRD
- ERDF
- ESF
- Fully privately funded
- InnoFin
- Joint undertakings
- LIFE
- National state aid/ I[CEI]
- Step fund
- Private funded
- None
- Other

III. Section 5. Environmental benefits

For each field, you will be asked to submit data on emissions (e.g. air, water) or on consumption (e.g. water, energy). Those fields may contain the following drop-down menus:

Source

- *Expected data (on project completion)*
- *Estimated data (not measured)*
- *Measured data in pilot scale installation*
- *Measured data in full scale installation*

Parameter

- 5.1.1 GHG emissions: *CO₂, CH₄, N₂O, HFC, PFC, SF₆, NF₃*
- 5.4.1 and 5.4.2 Emissions of pollutants to air: *dust, NO_x, NH₃, SO₂, HCl, HF, PCDD/Fs, CO, TOC, Hg, Formaldehyde, Pb, H₂S, Phenol, Amines, TVOC, SO_x, BaP, Cd, Ni, Noise, Odour, Other pollutant*
- 5.5.2 and 5.5.3 Emissions of pollutants to water: *As, Cd, Cu, Hg, Zn, Co, Ni, Pb, Fe, Cr, Cr(VI), Chemical oxygen demand (COD), Total suspended solids (TSS), Total nitrogen (TN), Total phosphorous (Total P), Adsorbate organically bound halogens (AOX), BOD₅, Hydrocarbon oil index (HOI), H₂S, Fluoride (F-)*

Year: 2010-2030

Type

- 5.1.2 GHG emissions: *Total GHG emissions (CO₂-eq ton/year), Carbon intensity (CO₂-eq ton/ton product)*
- 5.2.2 Energy efficiency: *total amount (kWh/year), Specific amount (kWh/ton product)*
- 5.3.2 Water consumption: *Total water consumption (m³/year), Specific water consumption (m³/ton product)*
- 5.4.2 Measured pollutants emissions: *total pollutant emissions (mg/Nm³), Noise emissions (dB), Odour emissions (OUE/m³)*
- 5.7.3 Material consumption data: *Total raw material consumption (ton/year), Specific raw material consumption (ton/ton product)*
- 5.8.1: Recovery/reuse/recycling of residues reduction (%): *Reused, Recycled, Recovered*
- 5.8.2: Recovery/reuse/recycling of residues data: *Total amount of residues recovered (kg/year), Total amount of residues reused (kg/year), Total amount of residues recycled (kg/year), Specific amount of residues recovered (kg/ton product), Specific amount of residues reused (kg/ton product), Specific amount of recycled recovered (kg/ton product)*

5.5. Emissions of Pollutants to Water

5.5.1 Abatement technique:

- *Activated sludge process*
- *Adsorption (e.g. activated carbon)*
- *Alkaline scrubber with caustic soda*
- *Aerobic biological treatment*
- *Anoxic/anaerobic biological treatment*
- *Catalytic decomposition*
- *Chemical oxidation*
- *Chemical precipitation*
- *Chemical reduction*
- *Coagulation and flocculation*
- *Crystallisation*
- *Distillation/rectification*
- *Equalisation*
- *Evaporation*
- *Filtration (e.g. sand filtration, microfiltration, ultrafiltration)*
- *Flotation*
- *Ion exchange*
- *Membrane bioreactor*
- *Membrane filtration (micro- or ultrafiltration)*
- *Neutralisation*
- *Nitrification/denitrification*
- *Oil/water separation*

- *Oxidation*
- *Physical separation*
- *Precipitation*
- *Reverse osmosis*
- *Thermal decomposition*
- *Stripping*
- *Waste water recycling*
- *Other*

5.9 Industrial symbiosis

5.9.1 Industrial symbiosis resource flow

- *Material exchange (e.g. use of resource for its intrinsic property such as iron compounds or slag)*
- *Combustible (e.g. resource burnt to produce energy)*
- *Water resource (e.g. condensates, wastewater)*
- *Energy exchange (e.g. heat recovery, steam)*
- *Shared utilities (e.g. water treatment, steam generation)*
- *Other*

5.9.6 Baseline situation

- *Incinerated*
- *Landfilled*
- *Sold to third party*
- *Waste water treatment plant*
- *Other*

5.9.7 Benefits from the industrial resource synergy

- *Economic benefits*
- *Environmental benefits*
- *Social benefits*
- *Other*

IV. Section 6. Cross media effects

- *High consumption of energy/raw materials*
- *Increased emissions to air/water/land*
- *Increased risk of accidents*
- *Increase of waste generation*
- *Use of hazardous substances*
- *Use of chemical products which have stratospheric ozone depletion potential*
- *Use of persistent/toxic/bioaccumulable components (including metals)*
- *Limitation of the ability to reuse or recycle residues*
- *Generation of noise and/or odour*