**Project Portfolio**

**Company Name**

City, State

Company logo

**Work Stream “XXX”**

Note: Blue guideline text serves to provide guidance and elaboration to aid you in completing your project portfolio. It should be deleted prior to final submission. Your original text should be black and without italics (Arial, size 10), as in the text style “IT Standard” (see menu ribbon above).

This template was updated prior to the Kickoff of the IPCEI H2 Mobility & Transport on March 28th, 2022. It reflects feedback provided by the EU Commission (EC) on Feb. 4th, 2022 based on their review of project portfolios (PP) submitted with the IPCEI H2 Technology and Industry Waves in summer 2021. This feedback document has also been sent to you as a PDF file.

While you are not required to adhere to this template, we strongly recommend doing so. If you use only the former PP template dated Sept. 24th 2021, we expect the EC to require more time to review your documents and then to reply with extensive question catalogues (requests for information, RFI). Your answers to these must then be both sent separately and integrated into your PP, which will cause delays in the pre-notification process.

In addition to addressing the specific changes made throughout this template document, we request while writing / transferring your content that you bear in mind the following general recommendations made by the EC:

1. “The project portfolios (PPs) in the first two H2 IPCEI waves were generally too long. Please remove marketing and sales-type presentations of the company and project. Be brief and to the point on substance using neutral language. Avoid repetition of content.”
2. “Avoid general explanations about the technical basics of your envisaged project. The readers on the Commission’s side who assess the innovativeness of the envisaged project are technical experts; no need to explain technical basics. Limit yourself to a precise description on substance of your envisaged RDI /FID project, clearly describing what and why makes it innovative beyond the global State of the Art (SoA).”
3. Do not explain the macroeconomic context. “The PP should not repeat or copy statements from the chapeau document or general high-level policy documents. The PP should only focus on the specific envisaged project and what it contributes to the hydrogen IPCEI of which it is an integrated part.”
4. “Proofread the PP and funding gap analysis (FGA) before submission. Ensure consistency of the figures and information provided in the PP and FGA.”
5. “Avoid abbreviations, if possible. Add an explanation of all abbreviations to the PP. Avoid corporate jargon.”
6. Avoid copying pre-fabricated paragraphs into PPs that are not 100% relevant to the content of your project proposal.
7. “Submit as annex to the PP and FGC company internal documents, such as Business Plans, Management Reports, internal studies, analyses, board documents, management reports, market intelligence / studies, where qualitative and quantitative internal decision criteria, e.g. Free Cash Flow, Return on Sales (EBIT / Sales), Return on Capital Employed (ROCE), and the Net present value (NPV) are presented and discussed concerning the envisaged IPCEI project.”
   1. In the first two H2 IPCEI waves, “All PPs lack justification on expected prices, sales volumes, revenue and cost developments and their project’s counterfactual scenario based on company internal documents”

**PLEASE NOTE: Be sure to update the table of contents before submitting your project portfolio**

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1. Project Outline
   1. Executive Project Summary & Main Objectives (Work Stream[s] in which it is involved, e.g. WS 1, 2 & 3)

Please give a brief description of the individual project (< 2 pages including Table 1), name the main work streams (WS) in which the company will be active (in parentheses in the header above), name and briefly describe the main project objectives and link them to the objectives of the integrated project of common European interest (IPCEI) “H2 Mobility & Transport”.

For the purpose of this first draft of the project portfolio (PP) the WS are defined as follows:

(Please note: Alterations and adaptions in the WS structure can follow from the chapeau process).

|  |  |
| --- | --- |
| *WS 1* | *Mobility applications* |
| *WS 2* | *Fuel cell components & systems for mobility applications* |
| *WS 3* | *Onboard storage solutions for mobility applications* |
| *WS 4* | *Hydrogen refuelling stations and hubs* |
| *WS 5* | *Electrolysis technology for mobility applications* |

*Briefly explain how this individual project’s specific work packages (WP) and/or investments (FID) are integrated in the IPCEI H2 Mobility & Transport.*

*Explain the value added by this individual project to the integrated IPCEI and the dependencies on other projects.*

*Explain the key aspects of the project (economical and technical).*

*Briefly highlight the main spill-over effects anticipated*

*Why can this project not be financed by the company alone? Why is state aid necessary?*

From the EC: “Avoid marketing and sales-type presentations of the project. Be brief and to the point on substance using neutral language.”

Table 1: Key performance indicators (KPIs) for this project

| KPI  Nr. | Parameter | Unit | Global State-of-the-art  (Value) | Current company state-of-the-art  (Value) | Quantitative targets for this project  (Value) | Reference for global state-of-the-art |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | e.g. Stack Performance | kW | 300 | 250 | 350 | (source of information) |
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* 1. Company Presentation

Please give a brief (< 1/2 page) description of your company and specify your company type.

Avoid marketing and sales-type presentations of the company. Be brief and to the point on substance using neutral language.

* 1. Research & Development & Innovation (RDI) (Art. 22 of [IPCEI – Communication C(2021) 8481](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.C_.2021.528.01.0010.01.ENG&toc=OJ%3AC%3A2021%3A528%3ATOC))

While preparing your text for the sections below please bear in mind the text of Article 22:

“22.

Research & Development & Innovation (‘R&D&I’) projects must be of a major innovative nature or constitute an important added value in terms of R&D&I in the light of the state of the art in the sector concerned(\*).

(\*) This might include, when relevant, progressively advancing towards the state of the art, to the extent that a participating project clearly and credibly aims at and describes how it will go beyond such state of the art.”

* + 1. Purpose of the RDI Phase

Provide a brief summary (< ½ page) of your proposed RDI work

* + 1. RDI Projects before this IPCEI

Describe all relevant previous RDI projects, which have prepared for or are connected to the IPCEI H2 Mobility & Transport.

Please explicitly exclude any possible overlap in funding of previous RDI projects with the IPCEI project proposed here.

* + 1. RDI Objectives & Innovativeness of the envisaged project

For each WP describe the state of the art and main technical challenges, the objectives and expected innovation beyond the state-of-the-art, and indicate the relevant KPIs. Cross-border collaborators should only be briefly highlighted here, as these will be described in detail in the later section “Effective Collaborations”

Direct partners are within the same IPCEI Wave, while indirect partners may be part of other IPCEI waves (past or future) or outside of the IPCEI context.

Even if you already have large text blocks prepared in the older PP template, please do not simply copy them here as “padding”, but rather focus the text on the specific details of your project and describe them briefly, for example in bullet point format.

From the EC: “Avoid general explanations about the technical basics of your envisaged project. The readers on the Commission’s side who assess the innovativeness of the envisaged project are technical experts; no need to explain technical basics. Limit yourself to a precise description on substance of your envisaged RDI /FID project, clearly describing what and why makes it innovative beyond the global State of the Art.”

Table 2: Demonstration of innovation beyond state-of-the-art for each WP in the RDI phase, including relevant quantitative KPIs

| Work stream | Work package & main goal | Global State-of-the-art  & Main technical challenges | Expected innovation beyond the global state-of-the-art | Quantitative targets (KPIs) | Cross-border collaborators |
| --- | --- | --- | --- | --- | --- |
| WSx | WP1  **Name of WP**  Main Goal | Provide appropriate references to support assertions about the global state-of-the-art | From the EC: “Highlight innovativeness claims for RDI and FID: a clear statement on what are the innovative parts of the project that will go beyond the global State of the Art, such as innovations in technology performance / scale / new permutations combining technologies etc.”  Wherever possible, include reference to the work stream and overall IPCEI objectives and explain how the expected innovation contributes to these | Nr., parameter name and target value (as listed in Table above) | Name of company & project ID (if applicable),  Member state,  Indirect/Direct partner (indicate which) |
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**Elaboration & References for Table 2:**

Here you may provide important supporting information that is too long to include in the table, ideally as bullet points referring to the WP and column header

* 1. First Industrial Deployment (FID) (Art. 23&24 of [IPCEI – Communication C(2021) 8481](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.C_.2021.528.01.0010.01.ENG&toc=OJ%3AC%3A2021%3A528%3ATOC))

While preparing your text for the sections below please bear in mind the text of Articles 23 & 24:

“23.

Projects comprising of first industrial deployment must allow for the development of a new product or service with high research and innovation content or the deployment of a fundamentally innovative production process. Regular upgrades without an innovative dimension of existing facilities and the development of newer versions of existing products do not qualify as first industrial deployment.

24.

For the purpose of this Communication, **first industrial deployment means the upscaling of pilot facilities, demonstration plants or of the first-in-kind equipment and facilities covering the steps subsequent to the pilot line including the testing phase and bringing batch production to scale, but not mass production or commercial activities(\*)**. The end of first industrial deployment is determined taking into account, inter alia, the relevant R&D&I- related performance indicators pointing at the ability to start mass production. First industrial deployment activities can be financed with State aid as long as the first industrial deployment follows on from an R&D&I activity and itself contains an important R&D&I component which constitutes an integral and necessary element for the successful implementation of the project. The first industrial deployment does not need to be carried out by the same entity that carried out the R&D&I activity, as long as that entity acquires the rights to use the results from the previous R&D&I activity, and the R&D&I activity and the first industrial deployment are both described in the project.

(\*) Limited sales, when necessary in the specific sector, related to the testing phase, including sample or feedback or certification sales, are excluded from the notion of ‘commercial activities’.”

* + 1. Purpose of the FID phase

Provide a brief summary (< ½ page) of your proposed FID work.

Be sure to highlight the “…important RDI component which constitutes an integral and necessary element for the successful implementation of the project” (as defined in Art. 24).

* + 1. FID Objectives & Innovativeness of the envisaged project

From the EC: “Describe the development of a new product or service with high research and innovation content or the deployment of a fundamentally innovative production process planned during the FID phase.”

* PPs in the first two H2 IPCEI waves often did not demonstrate and explain which important research and development is to be performed during the FID phase. Mere upgrades of existing facilities and newer versions of existing products are not FID.

Table 3: Demonstration of innovation beyond state-of-the-art for each WP in the FID phase, including relevant quantitative KPIs

| Work stream | Work package & main goal | Global State-of-the-art  & Main technical challenges | Expected innovation beyond the global state-of-the-art | Quantitative targets (KPIs) | Cross-border collaborators |
| --- | --- | --- | --- | --- | --- |
| WSx | WP1  **Name of WP**  Main Goal” | Provide appropriate references to support assertions about the global state-of-the-art | From the EC: “Highlight innovativeness claims for RDI and FID: a clear statement on what are the innovative parts of the project that will go beyond the global State of the Art, such as innovations in technology performance / scale / new permutations combining technologies etc.”  Wherever possible, include reference to the work stream and overall IPCEI objectives and explain how the expected innovation contributes to these | Nr., parameter name and target value (as listed in Table above) | Name of company & project ID (if applicable),  Member state,  Indirect/Direct partner (indicate which) |
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**Elaboration & References for Table 3:**

Here you may provide important supporting information that is too long to include in the table, ideally as bullet points referring to the WP and column header

* + 1. Transition from the FID phase to the mass production / commercialisation phase

Indicate the beginning of FID (after RDI phases) and the end of FID (before mass production). Indicate the KPI used to determine the transition to mass production.

* + 1. Revenues in the FID phase

If applicable: Explain that revenues are not commercial sales, and how they are different from the usual commercial activity of the company. Be sure to address the volumes of products/prototypes sold, and how they are necessary to achieve the RDI-component goals of the FID phase.

From the EC: “A FID phase must never entail mass production or commercial activities. Any sales activities during a FID phase must be duly explained and justified to be carried out for research and development purposed only.”

* 1. Specific contribution to the IPCEI

From the EC: “Demonstrate and justify how your company’s project specifically contributes to the objectives of each WS in which the project is involved, as well as the objectives of the entire IPCEI.”

Do not merely copy general text from the Chapeau document or high-level policy documents, as this does not explain the value added by your particular project.

Provide a brief summary (< 1 page) and make direct references to the information provided in Tables 2 and 3 above

* 1. Effective Collaborations

*From the EC: Nearly all PP’s in the first two waves lacked a comprehensive and detailed explanation, definition and justification of the envisaged cross-border partnerships with other projects in the same IPCEI. Each project must demonstrate effective collaborations across Member State borders with other projects of the same IPCEI. Effective collaborations are defined in point 27 (section 2.2.2) of the* [*Framework for State aid for research and development and innovation (URL).*](https://eur-lex.europa.eu/legal-content/GA/TXT/?uri=CELEX:52014XC0627(01)#d1e1415-1-1)

*Clearly tabulate direct and indirect partners and their roles for your company’s envisaged project. Highlight where these are cross-border collaborations. Provide a clear description of the content of the collaboration for each partnership, demonstrating:*

1. *why each collaboration is necessary for your envisaged project,*
2. *the complementarity of the projects and*
3. *the necessity of the collaborations for the whole IPCEI.*

*In addition, it must be explained which partner bears which risks and finances which part and how the results of the collaboration are shared.*

*Please note: Buyer-seller-relationships or contract research can not be considered effective collaboration.*

*Strong positive indicators from the perspective of the EC include:*

* *2 or more direct partners from 2 or more other Member States*
* *Direct partner(s) in other work streams (in which the project is not directly involved)*

*Direct partners are within the same IPCEI Wave, while indirect partners may be part of other IPCEI waves (past or future) or outside of the IPCEI context.*

*Indicate how your cooperation with indirect partners will lead to cross-border effects in work streams. Describe all cooperation (with direct and indirect partners) in detail and provide supporting evidence (Letter of Intent).*

Table 4: Direct partnerships

| Direct partner | Work package | Content of the collaboration | Justification of the collaboration | Division of risks, financial burden & results | Cross-border? |
| --- | --- | --- | --- | --- | --- |
| Name of company,  Project ID,  Member state | WP1  “Name of WP” | Which company is doing what?  Which work stream(s) are involved, and how does the planned collaboration fit into the overall IPCEI H2 Mobility & Transport? | Why is the collaboration necessary for this project?  In which way do the projects complement each other? | (To the extent applicable – cost-sharing is not required)  Which partner bears which risks?  Which partner finances which parts of the work?  How will results be shared? | X  (place an “X” if partner is cross-border, e.g. in another EU country) |
|  |  |  |  |  |  |
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**Elaboration & References for Table 4:**

Here you may provide important supporting information that is too long to include in the table, ideally as bullet points referring to the WP and column header

Table 5: Indirect partnerships

| Indirect partner | Work package | Content of the collaboration | Justification of the collaboration | Division of risks, financial burden & results | Cross-border? |
| --- | --- | --- | --- | --- | --- |
| Name of company  Project ID (if applicable)  Member state | WP1  “Name of WP” | Which company is doing what?  Which work stream(s) are involved, and how does the planned collaboration fit into the overall IPCEI H2 Mobility & Transport? | Why is the collaboration necessary for this project?  In which way do the projects complement each other? |  | X  (place an “X” if partner is cross-border, e.g. in another EU country) |
|  |  |  |  |  |  |
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**Elaboration & References for Table 5**:

Here you may provide important supporting information that is too long to include in the table, ideally as bullet points referring to the WP and column header

* 1. Intellectual Property Rights (RDI, FID)

Please briefly address (< 1 page) the following points from the perspective of your company. Bear in mind the dissemination requirements set forth in the IPCEI Communication (see guideline text in Section 3 for more details).

* + 1. IP management principles
    2. IP protection principles
    3. IP exploitation principles
  1. Project Schedule & Work Plan
     1. GANTT chart

Include a GANTT chart detailing the beginning and end of the work packages and the RDI and/or FID phases.

Please note: the RDI and FID phases are not allowed to overlap, as the FID per EC definition is intended to be founded upon the results of the preceding RDI work. If the transition occurs within the same calendar year (e.g. RDI ends in May 2024, FID begins in June 2024), you should enter the relevant RDI & FID costs in the same “year” column in the FGA.

* + 1. Work plan & personnel resources

Please describe your work plan.

You may additionally also provide a very detailed description of WPs with sub-WPs and individual tasks. If so, this should ideally be included as an annex to the project portfolio.

Table 6: Work Packages (WP) and Person Months (PM)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| WS | WP | Title & Description of Work Package | Person Months (PM) | PM (RDI) |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  | **Total PM:** |  |  |

* + 1. Milestones

Define milestones for the project and make specific reference to the KPIs defined for this project.

Table 7: List of Milestones (MS) and Relation to KPIs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| MS Nr. | Description of Milestone | Project Phase | Target Time to Reach | Related KPIs |
| 1 |  | RDI, FID | e.g. Dec. 2023 | Nr., parameter name and target value (as listed in Table 1) |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

* + 1. Timing of present vs. future work

From the EC: “Project timelines and explanations should make clear what is present and future work to be carried out under the project.”

* Some projects have included start dates which by the time of assessment by the EC already lie in the past

To provide the EC with a clear point of reference, explicitly state the month and year in which this project portfolio was finalized, for example with a sentence like „**The proposed future work packages and financial figures contained in this project portfolio and accompanying funding gap analysis reflect the planning status as of June 2022**“.

* 1. Investment

Note: Explain all the figures. If possible, give references to the Funding Gap Analysis (FGA).

* + 1. Tools and Equipment

Please cluster your investment by technology classification. Please provide also a brief and simple description in one or two sentences to the table (what is the purpose of the investment…).

Table 8: Overview of investments in tools and equipment

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Technology  Classification | Nr. of Tools | Examples of Tools | Investment Cost [EUR] | Year\* | WS | WP |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  | Total |  |  |  |  |

\*investment year

* + 1. Construction of Buildings/Laboratories

Please provide a brief and simple description in one or two sentences to the table (what kind of building? for what purpose?…). Please cluster your investments so that the table does not exceed 1 page.

Table 9: Overview of investments in buildings or laboratories

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Technology  Classification | Nr. of Building | Examples of Building | Investment Cost [EUR] | Year\* | WS | WP |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  | Total |  |  |  |  |

\*investment year

1. Budget

*Please note: Explain all the figures.*

* 1. Eligible Costs (RDI, FID)

Refer to the Annex of the [IPCEI Communication](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.C_.2021.528.01.0010.01.ENG&toc=OJ%3AC%3A2021%3A528%3ATOC) for a summary of the eligible costs:

1. “Feasibility studies, including preparatory technical studies, and the costs of obtaining the permissions necessary for the realisation of the project.
2. Costs of instruments and equipment (including installations and transport vehicles) to the extent and for the period used for the project. If such instruments and equipment are not used for their full life for the project, only the depreciation costs corresponding to the life of the project, as calculated on the basis of good accounting practice, are considered as eligible.
3. Costs of the acquisition (or construction) of buildings, infrastructure and land, to the extent and for the period used for the project. Where these costs are determined with regard to the commercial transfer value or the actually incurred capital costs, as opposed to the depreciation costs, the residual value of the land, building or infrastructure should be deducted from the funding gap, either ex ante or ex post.
4. Costs of other materials, supplies and similar products necessary for the project.
5. Costs for obtaining, validating and defending patents and other intangible assets. Costs of contractual research, knowledge and patents bought or licensed from outside sources at arm’s length conditions, as well as costs of consultancy and equivalent services used exclusively for the project.
6. Personnel and administrative costs (including overheads) directly incurred for the R&D&I activities, including those R&D&I activities related to first industrial deployment, or in the case of an infrastructure project, incurred during the construction of the infrastructure.
7. In case of aid to a project of first industrial deployment, the capital and operating expenditures to the extent and for the period used for the project, as long as the industrial deployment follows on from an R&D&I activity and itself contains an important R&D&I component which constitutes an integral and necessary element for the successful implementation of the project. The operating expenditures must be related to such component of the project.
8. Other costs may be accepted if justified, and where they are inextricably linked to the realisation of the project, to the exclusion of operating costs not covered by point (g).”

Eligible costs only cover costs made for the purpose and the timespan of the IPCEI:

The EC emphasized in their feedback that “no costs of the mass production phase are eligible costs.”

The following costs should be broken down:

* Costs for each of the RDI activities
* Costs for each of the FID activities (In case of aid to a project of first industrial deployment, the capital and operating expenditures (CAPEX and OPEX) are eligible, as long as the industrial deployment follows from an RDI activity and itself contains a very important RDI component which constitutes an integral and necessary element for the successful implementation of the project. The operating expenditures must be related to such a component of the project).
* Within the FID costs, the costs of RDI carried out in the FID phase should be explicitly highlighted; this could give an idea of the overall importance of the RDI.

The result of these steps should be one figure: the total amount of eligible costs at the end of the IPCEI, including the FID phase.

The cut-off date between the RDI and FID phases should be stated explicitly.

Table 10: Eligible Costs broken down by project phase, WP and cost category according to the annex of the IPCEI Communication [EUR]

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project Phase | WP | a)  Feasibility studies & regulatory permiss-ions | b)  Instruments & Equipment\* | c)  Acquisition/ Construction of Buildings\* | d)  Materials &  Supplies | e)  Patents, Intangibles, contract research | f)  Personnel, Admin. & Overheads | h)  Other costs | Total Costs |
| RDI |  |  |  |  |  |  |  |  |  |
| RDI |  |  |  |  |  |  |  |  |  |
| RDI |  |  |  |  |  |  |  |  |  |
| RDI within FID |  |  |  |  |  |  |  |  |  |
| FID |  |  |  |  |  |  |  |  |  |

\*: with respect of the terminal values at the end of first industrial deployment (FID) phase in MM.YYYY.

* + 1. Explanation of cost figures

*From the EC: “Include explanations for all figures used in the PPs and FGC, such as allocation of costs.”*

* *In the first H2 IPCEI waves there was often “Missing information about cost allocation, e.g. whether tools and equipment would be used exclusively for the projects.”*
  1. State Aid (RDI, FID)

Table 11: State Aid requested (RDI and FID) [EUR]

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project Phase | WP | a)  Feasibility studies & regulatory permiss-ions | b)  Instruments & Equipment\* | c)  Acquisition/ Construction of Buildings\* | d)  Materials &  Supplies | e)  Patents, Intangibles, contract research | f)  Personnel, Admin. & Overheads | h)  Other | Planned Total State Aid |
| RDI |  |  |  |  |  |  |  |  |  |
| RDI |  |  |  |  |  |  |  |  |  |
| RDI |  |  |  |  |  |  |  |  |  |
| RDI within FID |  |  |  |  |  |  |  |  |  |
| FID |  |  |  |  |  |  |  |  |  |

1. Spill-over Effects

Provide concrete details and quantifications of the Spill-over effects.

From the EC: “Beneficiaries of support under IPCEI rules for RDI and FID projects must commit to disseminate the results achieved with public funding. Non-IP-protected results must be shared as widely as possible beyond the beneficiary / the sector / the Member State concerned. **IP-protected results of the funded projects must be licensed unconditionally based on FRAND conditions beyond the beneficiary / the sector / the Member State concerned**. Therefore, include a clear commitment, as a spillover, in clear and non-conditional terms to license (not to merely base negotiations) on non-exclusive and FRAND terms any IP-protected results that will come out of the IPCEI project. Please include such commitments in the appropriate spillover sections of the project portfolio. Please provide tangible commitments to reach out to and advertise such possibility to whoever is interested (including organizations and companies outside of the IPCEI, beyond your Member State and beyond the market sector). Specify the ways, how you would approach such organizations and companies and commit to implement those efforts. Formulate each know-how dissemination spillover as an active positive commitment.”

Common issues with PPs in the first two H2 IPCEI waves included:

* “Not quantifying to the requisite legal standard the dissemination activities envisaged/committed. Often the actual commitments are missing and simple intentions are mentioned, using vague wording as though the aim was to protect the IP created with State aid, rather than to disseminate it.
* Absence of straightforward clear commitment to license unconditionally at FRAND terms to any interested third party all (IP) knowledge that comes out of the IPCEI project.”
  1. Dissemination of non-protected results (RDI, FID)

Describe planned publications and communication on IPCEI results. Please describe specific spill-over actions which are qualitatively and quantitatively well-defined and detailed in a dissemination plan that can be evaluated and whose scope can be quantified at European level.

Formulate each know-how dissemination spillover as an active positive commitment.

* 1. Dissemination of IP-protected results (RDI, FID)

Describe your commitment to concrete dissemination in the form of licences granted under FRAND conditions on clearly identified technologies or project developments to a well-defined business target (for example small and medium-sized enterprises (SMEs) or start-ups).

Please provide tangible commitments to reach out to and advertise such possibility to whoever is interested (including organizations and companies outside of the IPCEI, beyond your Member State and beyond the market sector). Specify the ways, how you would approach such organizations and companies and commit to implement those efforts.

Formulate each know-how dissemination spill-over as an active positive commitment.

* 1. Spill-over in the FID phase

Describe specific and well-defined commitments to establishing open infrastructure for European SMEs, research and technical organisations (RTOs) and start-ups aimed at offering a cross-border spill-over effect.

* 1. Contribution to the value chain

Describe the project’s position in the European value chain and how this specific project will have positive spill-over effects on other levels of the value chain.

* 1. Spill-over by a contribution to green deal investment (beyond the IPCEI)

Comment on a reduction of carbonised emission directly and indirectly (over the value chain) due to the investment.

* 1. Spill-over by cross border effects in the IPCEI

Describe here the commitments in terms of cooperation between the direct and indirect partners that will have cross-border effects.

…

* 1. Other spill-over effects, which are created through your project generating benefit that reaches beyond your company, your economic sector, your region, your Member State.

1. Other positive effects on the market

Description of how the project will increase the level of innovation and RDI in the sector and the European economy and society.

* 1. Impact of the Project on Employment and New Investments in Europe

Estimation of the quantitative and qualitative project’s impact on direct and indirect employment and training in the European economy and in investment in the new society in Europe.

* 1. Environmental protection and energy dependence

Description of the project’s influence on environment protection and on the reduction of energy dependence. If possible, quantify the CO2-savings and describe the methodology used for the quantification.

From the EC: “Explain and justify specifically for the envisaged project its contribution to and compliance with the ‘Do no significant harm’ principle”, within the meaning of Article 17 of Regulation (EU) 2020/852, or other comparable methodologies. “Provide calculations of CO2 reduction, using a common methodology. Benchmark clearly against a baseline scenario and provide any assumptions made.”

* In the first two H2 IPCEI waves, there was “regularly no information in the PPs about the individual project’s contribution to the ‘Do no significant harm’ principle. Quantitative claims of CO2 reduction [were] often not supported.”
  1. Coordination problems

*Due to scale and complexity of the IPCEI explain the challenges to work together particularly with:*

* *RTOs (not the same objective)*
* *SMEs, suppliers and customers (it’s easier to work in customer-supplier logic than in a cooperative)*
* *Competitors and sectors actors*

*Explain the challenges due to the necessity to coordinate such a project with such divergent interests.*

* 1. Imperfect and asymmetric information

Explain the risks of the project (technical, economical, regulatory or other specific risk of the project).

Explain the difficulty to access to market finance.

Explain the difficulty to recruit.

* 1. Adequacy of the state aid instrument

From the EC: Include an explanation and justification about the choice made for a certain aid instrument and why other aid instruments are not appropriate in view of the market failure or other important systemic failures, which it seeks to address.

* In many PPs in the first two H2 IPCEI waves there was no assessment of why less-intrusive forms of aid (e.g. soft loans) would not be appropriate
  + 1. Illustration of market failure in lieu of aid

From the EC: “Each project must demonstrate its specific contribution to overcome important market or systemic failures. Avoid high-level explanations, which are detached from the envisaged project.

Guidance on market failure can be found in the [Framework for State aid for research and development and innovation point 51](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0627(01)&from=GA) and the [Guidelines on State aid for climate, environmental protection and energy point 34](https://ec.europa.eu/competition-policy/document/download/2049b565-5e6b-4153-a022-e70db769086f_en).”

* In the two preceding H2 IPCEI waves many PPs “include no description of the market failure that makes State Aid necessary for this particular project – just a general repetition of arguments for the IPCEI as a whole – or the arguments mentioned in the PP are not related to market failure.”
  + 1. Appropriateness among alternative policy instruments
    2. Appropriateness among different State aid instruments

1. Necessity and proportionality of the requested aid
   1. Absence of similar projects

Explain that there is no similar project in Europe.

Explain how the envisaged project differs from other IPCEI projects.

* 1. Counterfactual scenario

From the EC: “Each PP must include a comprehensive description of the counterfactual scenario, which corresponds to the situation where no aid is awarded by any Member State. **This description must be supported by internal documents, which demonstrate the internal discussion of the counterfactual scenario and a funding gap calculation of the counterfactual scenario.**”

* In the first two H2 IPCEI waves, “The vast majority of PPs neither includes a qualitative assessment of the envisaged project’s counterfactual scenario nor the counterfactual’s funding gap calculation. The absence of counterfactual scenario is often poorly substantiated and not supported by company internal documents where such ‘doing nothing’ counterfactual absent the aid was discussed. Sometimes an alternative scenario is described in a rather elusive manner, without supportive evidence of internal discussions about its potential implementation.”

Interpretation of the IPCEI coordination team: while the IPCEI Communication officially allows for the possibility of “doing nothing” as a counterfactual scenario, this seems to be intended primarily for small and medium-sized enterprises (SMEs) (see footnote 27 of the IPCEI Communication). The EC thus seems to consider this implausible for most participating companies and has been very clear about wanting to see a higher-quality counterfactual scenario including a separate FGA (either as an additional tab/worksheet or as a separate Excel file). We therefore strongly recommend following the advice of the EC to avoid delays in the pre-notification process. If there is definitely no counterfactual alternative project planned by your company, this must be well supported by providing internal documents.

The following prompts may help you in formulating your counterfactual scenario:

* *Describe explicitly the effect of the state aid incentive on your company.*
* *Describe what would happen if funding were not provided for the project. If you would not implement the project, how would your company maintain business capacity?*
* *Description & substantiation of the counterfactual scenario at company level:*
  + *The counterfactual scenario should be described in sufficient detail. E.g. a mere statement that “the company would not undertake the project as planned in its Member State without the aid” is not sufficient. It should be described in detail if it will not undertake the project at all, or will undertake it but in a different manner or to a different extent, or will possibly undertake it in another country.*
  + *The IPCEI Communication requires that the intended change in behaviour expected to result from the State aid be clearly specified and quantified, for example whether a new project is triggered, or whether the size, scope or speed of an already planned project is enhanced. This change of behaviour due to State aid can only be identified by comparing what would be the expected outcome and level of intended activity with and without aid.*
  + *It is vital to have sufficient substantiation of the counterfactual,* e.g. via *authentic internal company documents, showing that the company faces a clear choice and how the decision on whether to carry out the project is taken. This requirement is in line with the documentary evidence required in RDI State aid cases.*

*The following explanations may help you in completing the FGA Excel sheet calculations for your counterfactual scenario(s) (see also guideline text re: FGA in Section 6 below).*

***In the absence of alternative project*** *(often not plausible from the perspective of the EC – see guideline text above):*

* *If the counterfactual scenario is that there is no alternative project, there is no need for a counterfactual project worksheet with calculations in the Excel sheet. The Commission will only assess the eligible cost and funding gap calculations for the basic scenario.*
* *Proportionality of aid amount per beneficiary company is assessed by the following two step check of the IPCEI Communication in case there is no alternative project:*
  1. *Identify the eligible costs of the envisaged project. The possible eligible costs are listed in the Annex of the* [*IPCEI Communication*](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.C_.2021.528.01.0010.01.ENG&toc=OJ%3AC%3A2021%3A528%3ATOC)*. The aid amount for any beneficiary can in no case exceed 100% of the eligible costs;*
  2. *Identify the funding gap*

*In general, the aid amount corresponds to the funding gap. The aid amount can in no case exceed the eligible costs established in Step (1).*

***In case of a counterfactual alternative project****:*

* + *Where there is a counterfactual alternative project, add a counterfactual worksheet in the FGA Excel sheet (or create a separate Excel sheet) with full calculation of the net present value of the positive and negative cash flows of the counterfactual project.*
  + *Proportionality of aid amount per beneficiary company in the IPCEI Communication is assessed according to the following two-step check in case there is an alternative project:*
    1. *Identify the eligible costs in the basic scenario: The possible eligible costs are listed in the Annex of the* [*IPCEI Communication*](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.C_.2021.528.01.0010.01.ENG&toc=OJ%3AC%3A2021%3A528%3ATOC)*. The aid amount for any beneficiary can in no case exceed 100% of the eligible costs;*
    2. *Identify the difference between the NPV of the alternative project and the NPV of the aided project in the basic scenario.*

*In general, the aid amount corresponds to this difference. In the Excel sheet, it would be convenient to insert this calculation at the bottom of the basic scenario worksheet.*

*The aid amount can in no case exceed the eligible costs established in Step (1).*

1. Elaboration of Funding Gap Analysis (FGA)

*Each company should provide all costs and revenues associated with the investment as a whole and the boundaries of investment should be defined from the perspective of the business investor: the calculation should include all (positive and negative) cash-flows for what the investor regards as the investment project, at the time these cash-flows are to be incurred. It is not enough to only submit the eligible costs. For the purpose of calculating the funding gap, what matters are all the costs (eligible or not) associated with the investment project and all the revenues over the entire lifetime (depreciation period) including the mass production phase.*

*The funding gap calculation is to be done consistent with the following methodology:*

* *It is strongly recommended to provide the Excel sheet calculations for at least two scenarios; the basic scenario assuming state aid is received and a counterfactual scenario with alternative project. A lack of alternative project is considered unlikely by the EC (unless the company is an SME) and must be justified in the section above. re: counterfactual scenario*
* *The funding gap that must be calculated is the funding gap of the investment project (i.e. all investment costs and operating costs) to be implemented by the company for the purpose of the IPCEI*
* *It is assumed that the investments made for the IPCEI in RDI and FID by a company will generate revenues.*
* *The funding gap is the difference between discounted positive and negative cash flows over the entire economic lifetime of the investment project, i.e. covering the entire period during which the investments made generate revenues / the products that are produced. The investments are sold on the market. Hence, the funding gap must not be calculated only for the duration of the IPCEI project, which is up to the end of the FID project, but must also cover the ensuing commercial/mass production phase (after FID).*
  + *From the EC: for the first two H2 IPCEI waves “A number of funding gap calculations does not include sales revenues / positive cash flows during the mass production phase.”*
  + *One option is to include in the Excel sheet the best estimate projections that the company has for this entire period.*
  + *Alternatively, companies could provide data for the explicit forecast horizon of the company and give a residual/terminal value (i.e. net present value of expected cash flow beyond the explicit forecast horizon for the remaining years of the economic lifetime), discounted to the current value. In that case, the number of years of mass production for which data are inserted should be realistic.*
* *Sales/revenues (positive cash flows): projected sales figures should be used by each company rather than a formula. These should be the figures actually used by the company in its business plan and decision-making process. These can be best estimate figures.*
* *Cash flows should normally be discounted using the weighted average cost of capital (WACC) of the company. You should provide evidence that the discount factor applied is the actual WACC used by the company (e.g. by internal company documents showing the applied WACC for investment analysis). The reason to deviate from the WACC usually applied by the company should be explained in detail.*
* *Calculation of the terminal value: Since the Commission services expect companies to report the cash flows of the project for its whole lifetime (from the start of R&D to the last year of sales), the terminal value can be calculated as the value of long-term assets at the end of the planning period. Companies may use the residual book value of assets as a proxy. If the cash flows in the FGA Excel template do not cover the entire lifetime of the project, for example because companies find it difficult to make credible forecasts at long horizons, the Commission services may also consider as appropriate the use of a project terminal value instead of the asset terminal value indicated above. The project terminal value is the result of the following formula (Gordon’s growth formula):*

*TV = CF\_T \* (1 + g) / (WACC - g)*

*Where TV is the project terminal value, CF\_T is the after tax cash flow in the last year of the business plan, g is the perpetual growth rate of cash flows starting from the last year of the plan and WACC is the company’s internal WACC used to calculate the funding gap.*

* *The result of the FGA should be one figure: the amount of the funding gap, labelled as such in the Excel sheet.*

Note: In the Excel sheet there are two worksheets: one for the basic scenario planned assuming that state aid is authorized under IPCEI and one for the counterfactual scenario with no state aid.

* 1. Main hypothesis of the business plan

Each company should provide all costs and revenues associated with the investment as a whole and the boundaries of investment should be defined from the perspective of the business investor: the calculation should include all (positive and negative) cash-flows for what the investor regards as the investment project, at the time these cash-flows are to be incurred. It is not enough to only submit the eligible costs. For the purpose of calculating the funding gap, what matters are all the costs (eligible or not) associated with the investment project and all the revenues over the entire lifetime including the mass production phase.

Explain all assumptions (e.g. costs, revenues, depreciation, WACC…) in the Funding Gap Analysis and provide evidence. If necessary, additional worksheets can be added to the Excel sheet to better present detailed calculations (e.g. breakdown of “other costs”, assumptions of sales, prices, depreciations, etc.).

In particular, explain how ETS-cost-savings (ETS = EU Emission Trading System) are included in the calculation (e.g. in revenues).

From the EC: “Submit as annex to the PP and FGC company internal documents, such as Business Plans, Management Reports, internal studies, analyses, board documents, management reports, market intelligence / studies, where qualitative and quantitative internal decision criteria, e.g. Free Cash Flow, Return on Sales (EBIT / Sales), Return on Capital Employed (ROCE), and the Net present value (NPV) are presented and discussed concerning the envisaged IPCEI project.”

* In the first two H2 IPCEI waves, “All PPs lack justification on expected prices, sales volumes, revenue and cost developments and their project’s counterfactual scenario based on company internal documents”
  1. Necessity of state aid

Refer to Article 30 of the IPCEI Communication:

“30.

The aid must not subsidise the costs of a project that an undertaking would anyhow incur and must not compensate for the normal business risk of an economic activity. Without the aid, the realisation of the project should be impossible, or should only be possible on a smaller scale, with a more narrow scope, or not with sufficient speed, or in a different manner that would significantly restrict its expected benefits (\*). Aid will only be considered proportionate if the same result could not be achieved with less aid.

(\*) The aid application must precede the starts of the works, which is either the start of construction works on the investment or the first firm commitment to order equipment or other commitment that makes the investment irreversible, whichever is the first in time. Buying of land and preparatory works such as obtaining permits and conducting preliminary feasibility studies are not considered as start of works.”

Make references to the counterfactual scenario(s) as needed.

* 1. Proportionality of state aid

Refer to Article 32 of the IPCEI Communication:

“32.

In the absence of an alternative project, the Commission will verify that the aid amount does not exceed the minimum necessary for the aided project to be sufficiently profitable, for example by making it possible to achieve an internal rate of return corresponding to the sector or firm specific benchmark or hurdle rate. Normal rates of return required by the beneficiaries in other investment projects of a similar kind, their cost of capital as a whole or returns commonly observed in the industry concerned may also be used for this purpose. All relevant expected costs and benefits over the lifetime of the project must be considered.”

Also explain the “important co-financing by the beneficiary” (Art. 19), i.e. the planned financial contribution of your company to the project.

From the EC: “Submit a detailed calculation and explanation of the [company’s] own contribution based on total costs of the envisaged project.

Make references to the counterfactual scenario(s) as needed.

* + 1. Weighted average cost of capital (WACC)

From the EC: “The WACC and all its components must be presented for each project and company. In case the calculation deviates from the Commission’s calculation, such deviations should be explained and justified.

The justification consists in demonstrating that the internal company WACC results from the following formula:

WACC=  E/(D+E)\*(r\_f+β\*ERP)+D/(D+E)\*(r\_f+DP)\*(1-T);

Please provide and explain all input parameters used for the calculation of your WACC together with their sources and the methodology to determine them:

E = equity,

D = debt,

r\_f = risk-free rate,

β = equity beta,

ERP = equity risk premium,

DP = debt premium and

T = tax rate”

For the ERP we recommend consulting this table prepared by Aswath Damodaran at New York University:

<https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html>

* + 1. Project’s funding gap

Demonstrate that the planned State aid is not exceeding the funding gap

* + 1. State aid intensity
    2. State aid cumulation
    3. Open selection proceeding

1. Limitation of distortion of competition and trade

*From the EC: “Provide a qualitative and quantitative assessment of the competitive situation of the beneficiary before and after the envisaged project, including market shares on the relevant product and geographic markets.”*

* *In the first two H2 IPCEI waves “PPs lack an identification and assessment of what the relevant market(s) are that will be affected by the aid. No qualitative and quantitative information about the market shares or market positions of the beneficiary are provided”*
  1. Definition of the market affected by the State aid
     1. Current Industry Sector

Description of the market situation (EU and worldwide) in this sector (market share, competitors).

* + 1. Market Situation / Share after IPCEI

Provide an estimation of your company’s market situation / share (EU and worldwide) assuming the project will be successfully completed*.*

* 1. No strengthening or creation of market power
  2. Limiting distortion of dynamic incentives
  3. No maintaining of an inefficient market structure
  4. No effect on location activities

1. Annex to the Portfolio
2. Funding Gap Analysis (FGA)
3. (If necessary) Internal Company Documents substantiating the basic scenario and counterfactual scenario(s)
4. Letters of Intent (LOIs) from direct/indirect partners
5. Others (e.g. substantiating the assumptions made in the Funding Gap Questionnaire)