MISSION AND VISION STATEMENT

Processes4Planet is a cross-sectorial R&I partnership that aims at transforming the European process industries to achieve the overall climate neutrality at the EU level by 2050 by developing and deploying climate neutral solutions and bringing technological and non-technical innovations to readiness for subsequent deployment.

The partnership aims to:

- close the energy and feedstock loops through sustainable circular business models, innovations, cross-sectoral collaboration and engagement with local ecosystems.
- achieve a global leadership in climate neutral and circular solutions, accelerating innovation and unlocking public and private investment.

P4Planet represents companies, associations, SMEs, research and technology organisations, NGOs, regions, etc. from ten process industry sectors.

KEY FACTS AND FIGURES

Horizon Europe Pillar and Cluster: Pillar II – Cluster 4: Digital, industry and space
Type of partnership: Co-programmed
Coordinating entity: Private members are represented by A.SPIRE. The Commission’s contacts are DG RTD E3 and DG GROW.
Total estimated budget: EUR 2.6 bn
EU commitments: Up to EUR 1.3 bn
Partners’ commitments: Up to EUR 1.3 bn
Predecessor under Horizon 2020: SPIRE cPPP

FIND OUT MORE

https://www.aspire2050.eu/p4planet/about-p4planet

info@aspire2050.eu
CLIMATE NEUTRALITY

- Net Zero GHG Emissions
- Near-Zero Landfilling and Near-Zero Water Discharge

CIRCULARITY

- Capture & Use CO₂/CO₂
- Increased number of Circular Value Chains (Upcycling)
- Increased Carbon Circularity

COMPETITIVENESS

- Faster Growth of the EU Process Industry (Global Leadership)
- Derisking Investment
- Integration into the Economic Ecosystems of EU Regions

**PROCESSES4PLANET VISION:**
Contribute to Societal Challenges through ...

**PARTNERSHIP SPECIFIC IMPACT PATHWAY (PSIP)**

**GENERAL LEVEL IMPACTS**

- Net Zero GHG Emissions
- Near-Zero Landfilling and Near-Zero Water Discharge

**SPECIFIC LEVEL OUTCOMES**

- Improve integration of renewable resources
- Develop new business circular models, new LCE
- Increase number of circular value chains (upcycling)
- Increased resources efficiency
- Increased carbon circularity

**OPERATIONAL LEVEL RESOURCES & ACTIONS**

- Processes4Planet: Partnership Fiche
- Safe & Sustainable By Design
- Establishment of EU Framework Conditions, Market Demands
- Development of new business circular models, new LCE
- Access to sustainable financial support
- Derisking investment
- Fostering new skills and jobs
- Integration into the economic ecosystems of EU Regions
- Reducing barriers for market uptake & viability

*H4C: Hubs for Circularity
**FOAK: First-of-a-kind
### Partnership's Key Performance Indicators

<table>
<thead>
<tr>
<th>KPI Name*</th>
<th>Unit of Measurement</th>
<th>Baseline</th>
<th>Target 2023</th>
<th>Target 2025</th>
<th>Target 2027</th>
<th>Ambition &gt;2027</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private investment</td>
<td>Leverage factor</td>
<td>2</td>
<td>N/A</td>
<td>5</td>
<td>6</td>
<td>10</td>
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<tr>
<td>Significant innovations</td>
<td>#</td>
<td>5</td>
<td>N/A</td>
<td>12</td>
<td>14</td>
<td>60</td>
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<tr>
<td>CAPEX &amp; OPEX reduction</td>
<td>Millions €</td>
<td>0 (P4Planet)</td>
<td>As per project</td>
<td>As per project</td>
<td>As per project</td>
<td>As per project</td>
</tr>
<tr>
<td>New skills and job profiles</td>
<td>#</td>
<td>0 (P4Planet)</td>
<td>N/A</td>
<td>&gt;2</td>
<td>&gt;3</td>
<td>20</td>
</tr>
</tbody>
</table>

### Resources (Input), Processes and Activities

| | | | | | | |
|---|---|---|---|---|---|
| Private investment | Leverage factor | 2 | N/A | 5 | 6 | 10 |
| Significant innovations | # | 5 | N/A | 12 | 14 | 60 |
| CAPEX & OPEX reduction | Millions € | 0 (P4Planet) | As per project | As per project | As per project | As per project |
| New skills and job profiles | # | 0 (P4Planet) | N/A | >2 | >3 | 20 |

### Outcomes**

<table>
<thead>
<tr>
<th></th>
<th>%</th>
<th>1990 levels</th>
<th>N/A</th>
<th>-60</th>
<th>-70</th>
<th>-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO₂ eq emission (1) integration of renewables /efficiency</td>
<td>%</td>
<td>1990 levels</td>
<td>N/A</td>
<td>-60</td>
<td>-70</td>
<td>-100</td>
</tr>
<tr>
<td>CO₂ Capture and Use</td>
<td>%</td>
<td>1990 levels</td>
<td>N/A</td>
<td>-60</td>
<td>-70</td>
<td>-100</td>
</tr>
<tr>
<td>Waste volume</td>
<td>%</td>
<td>1990 levels</td>
<td>N/A</td>
<td>-40</td>
<td>-50</td>
<td>-75</td>
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<tr>
<td>Secondary materials use intensity</td>
<td>%</td>
<td>1990</td>
<td>N/A</td>
<td>+40</td>
<td>+50</td>
<td>+80</td>
</tr>
<tr>
<td>Water reused/recycled</td>
<td>%</td>
<td>&lt; 5 %</td>
<td>N/A</td>
<td>+40</td>
<td>+50</td>
<td>+90</td>
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<tr>
<td>H4C establishment</td>
<td>#</td>
<td>0</td>
<td>N/A</td>
<td>7</td>
<td>15</td>
<td>&gt; 45</td>
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</tbody>
</table>

### Impacts***

<table>
<thead>
<tr>
<th></th>
<th>% of CO₂ emission reduction At 50 % IL</th>
<th>At 90 % IL</th>
<th>At 100 % IL</th>
<th>TBD</th>
<th>TBD</th>
<th>TBD</th>
<th>-50</th>
<th>-90</th>
<th>-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO₂ eq emission (1) integration of renewables /efficiency</td>
<td>% of CO₂ emission reduction At 50 % IL</td>
<td>At 90 % IL</td>
<td>At 100 % IL</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>-50</td>
<td>-90</td>
<td>-100</td>
</tr>
<tr>
<td>CO₂ Capture and Use</td>
<td>% of CO₂ emission reduction</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>-50</td>
<td>-90</td>
<td>-100</td>
</tr>
<tr>
<td>Waste volume</td>
<td>% of waste reduction</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>-50</td>
<td>-90</td>
<td>-100</td>
</tr>
<tr>
<td>Secondary materials use intensity</td>
<td>% of secondary materials used</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>+50</td>
<td>+90</td>
<td>+100</td>
</tr>
<tr>
<td>Water reused/recycled</td>
<td>% of water re-used</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>+50</td>
<td>+90</td>
<td>+100</td>
</tr>
<tr>
<td>First-of-a-kind plants (TRL 9)</td>
<td># of FOAKs at TRL9</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>15</td>
<td>&gt; 90</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Process industry growth</td>
<td>GDP %</td>
<td>Faster than EU-27 GDP growth</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

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* Footnote numbers refer to KPI numbers in MoU between P4Planet and EC
** Outcomes based on demonstrators at TRL 7
*** Measured on a relevant number of FOAKs (First Of A Kind) at TRL9 (50 % implementation, 90 % implementation, 100 % implementation)
**** Implementation Level
SYNERGIES WITH OTHER EUROPEAN AND NATIONAL INITIATIVES

SYNERGIES: STORY 1

SPIRE cPPP and BBI JU have collaborated during Horizon 2020 to ensure a good alignment of their work programmes and to identify opportunities to maximise the cross-fertilisation of results of the projects. This has included:

- 2012-2020: joint working group with regular meetings (two to three times per year) to share experiences, reporting methodologies, analysis of projects etc.;
- 2012: signature of the document SPIRE PPP & BIO PPP: Joint Narrative and Docking Points (annexed);
- 2018: signature of the document BBI JU and SPIRE team up for synergy of actions, which can be found here.

SYNERGIES: STORY 2

P4Planet and Clean Steel have set up discussions already at the stage of their SRIAs development. The actions have included:

- regular meetings between A.SPIRE, ESTEP and EUROFER to reach alignments;
- signature of the joint declaration in 2019 by A.SPIRE, EUROFER and ESTEP on Circular and Carbon Neutral Industry and Clean Steel-Low Carbon Steelmaking proposed partnerships for Horizon Europe, which can be found here;
- steel sector is part of A.SPIRE 10 sectors - this allows for regular conversations and to identify on the spot when alignments across the work programmes are needed. The further set up for the collaboration along Horizon Europe is under discussion.

SYNERGIES: STORY 3

P4Planet and Clean Hydrogen have set up discussions already at the stage of their SRIAs development. The actions have included:

- regular meetings between FCH JU and A.SPIRE, and with their respective units at DG RTD, along with alignments in the SRIAS and in the work programmes;
- participation of A.SPIRE in the Clean Planet Inter-partnership Assembly;
- a joint document on the collaboration of P4Planet and Clean Hydrogen during Horizon Europe is under joint development and discussion.
OVERVIEW OF MEMBERS

MEMBERS PER TYPE

- **INDUSTRY** Other Industrial and/or profit Private organisation
- **RESEARCH** Public research organisation (including international research organisation as well as private research organisation controlled by a public authority)
- **OTHERS** Non-profit, associations, state companies etc.

GEOGRAPHICAL COVERAGE

Numbers = number of partners in the country

Total number of partners: 182