

# Partner search/offer

Date (28-12-22)

**(\*) – Mandatory**

- **(\*) Relevant topic(s) in work programme (code & name of the topic(s) line(s))**

<ul style="list-style-type: none"> <li>• HORIZON-CL4-2023-RESILIENCE-01-05: Recycling technologies for critical raw materials from EoL products (IA)</li> <li>• HORIZON-CL4-2023-RESILIENCE-01-32: Bioinspired and biomimetic materials for sustainable textiles (IA)</li> </ul>
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- **Quick description of the project concept**

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- **(\*) Description of the expertise requested/proposed (up to 1000 characters)**

<p>Axel'One offers expertise in the field of advanced materials and polymers:</p> <ul style="list-style-type: none"> <li>• <b>Polymer processing and recycling:</b> Fonctionnalisation &amp; reactive extrusion, granulation, high temperature presses and injection, compression, coating on soft supports, 3D printing, mecano-chemical recycling of polymers</li> <li>• <b>Physico-chemical characterization of materials:</b> Mechanical and chemical characterization, surface analysis</li> <li>• <b>Advanced chemistry pilots :</b> High temperature polymerization, Organic synthesis, Solid chain, Effluent treatment</li> <li>• <b>Tools and expertise</b> for polymer-based materials synthesis, shaping, processing and recycling, going <b>from TRL 4 to 7:</b> transition from proof of concept to the pre-industrial demonstration stage</li> <li>• <b>Material modeling</b> (Behavioral Simulation)</li> </ul> <p>As we are part of a large industrial ecosystem, in particular in the fields of chemistry and textile linked to circular economy, we can also bring companies when entering a project.</p>
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- **(\*) Keywords describing the expertise requested/proposed (up to 10 words)**

Scale-up, materials, polymers, biopolymers, extrusion, smart process, online analysis, digitalisation, textile, chemistry
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## Organisation information

<b>(*) Organisation and country:</b> Axel'One - France
<b>(*) Type of organisation:</b> <input type="checkbox"/> Enterprise <input type="checkbox"/> SME <input type="checkbox"/> Academic <input type="checkbox"/> Research institute <input type="checkbox"/> Public Body <input checked="" type="checkbox"/> Other: Association
<b>Former participation in FP European projects?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Web address:</b> <a href="https://axel-one.com">https://axel-one.com</a>
<b>Description of the organisation:</b> Axel'One is the French collaborative innovation platform in the Chemistry and Environment sector created in 2011 and dedicated to smart processes and innovative materials. Located in Lyon, Auvergne-Rhône-Alpes Region, Axel'One is an independent association (French law 1901, private and public partnership) whose main missions are to provide shared facilities, tools and services for collaborative research and development projects. In 2022, Axel'One hosts around 20 SMEs and provides its services

to 30 collaborative projects representing more than 250 people located on the platform (around 6 M€ turn over).

The platform offers access to 35 M€ shared tools from basic research to pre-industrial stage (from TRL 3 to 7) in the field of advanced materials and polymers, smart processes, on-line analysis, digital solutions and catalysis. Its activities support industrial companies from the chemical, pharmaceutical sectors, but also with other industrial sectors such as textile & composite, recycling, water treatment, and energy. Axel'One has an experience in three H2020 projects on catalysts up-scaling using its specific pilot line unit and, for one of them, as a work package leader.

### (\*) Contact details

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