

**Process-Informed design of tailor-made Sorbent Materials for energy efficient carbon capture (PrISMa)**

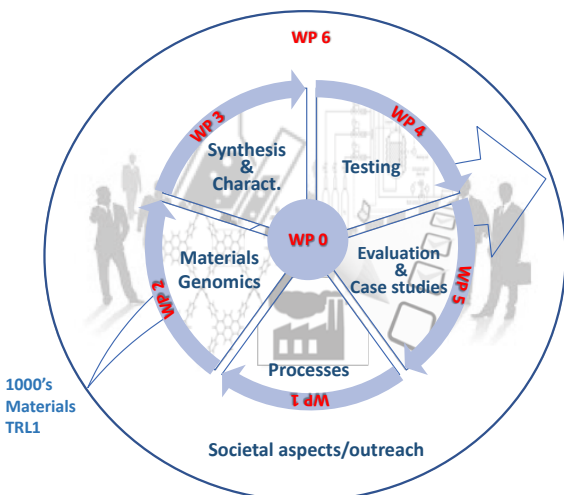
**The Challenge:**

“There is currently no ability to quickly identify what processes and process conditions are optimal for a particular adsorbent to achieve the required specifications for a capture application” (Mission Innovation report)

**Our Aim:**

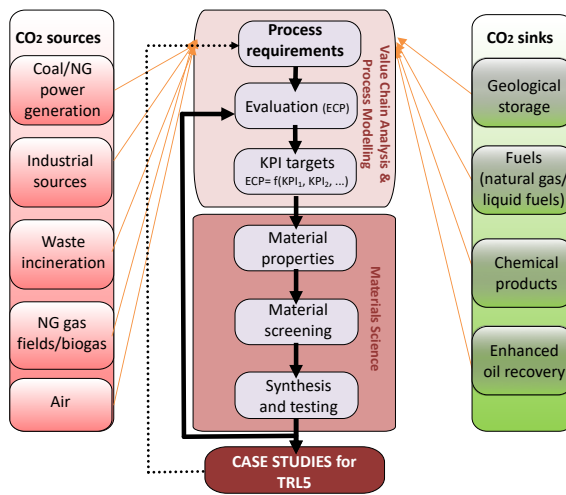
To **accelerate the transition** of energy and industrial sectors **to a low-carbon economy** by **developing a technology platform to tailor-make cost-efficient carbon capture solutions** for a range of different CO<sub>2</sub> sources and CO<sub>2</sub> use/destinations.

**How will we do it?**



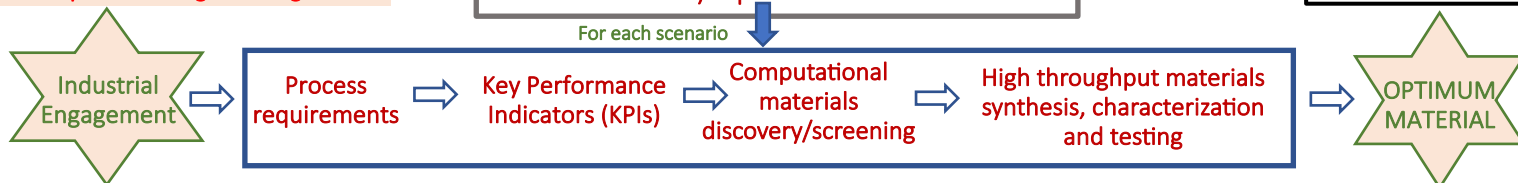
Innovation cycle : Integrating molecular science and process engineering

**Illustration of PrISMa platform**



Separation Matrix of N (CO<sub>2</sub> sources) x M (CO<sub>2</sub> destinations) representative scenarios

For each scenario



**Key Technical Outputs**

- ✓ A **technology platform** that allows us to identify for a given source and target of CO<sub>2</sub> the optimal capture technology. This platform is based on a **methodology for systematic knowledge exchange between material science and process engineering**.
- ✓ A **set of case studies**, inspired by the interest of the national funding agencies and our industrial advisory board, **to bring the technology/material to the TRL5 level**.

