

# Developing technologies to ensure profitable environmental protection

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Faced with the urgent need to tackle climate change, governments, companies and institutions have been focusing on a possible transition towards a sustainable future. However, some believe that the adoption of more ambitious environmental and energy policies requires drastic financial or behavioral sacrifices. This isn't necessarily the case, as innovative products and new clean and energy-efficient processes can help create worldwide change, according to the Solar Impulse Foundation (SIF).

The SIF has selected 1,000 solutions that can protect the environment in a profitable way. The EU-funded DISIRE project was among the initiatives awarded the Solar Impulse Efficient Solutions Label in May for the potential to bridge the gap between economic and ecological interests. "The Solar Impulse Efficient Solution Label is designed to shed light on existing Solutions that are both clean and profitable and have a [positive impact](#) on quality of life," as stated on the SIF website.

Covering physical or financial products, technologies, [industrial processes](#) and services, the solutions that have received the Solar Impulse Efficient Solution Label have been developed and/or partially/fully owned by a member of the World Alliance for Efficient Solutions. The World Alliance network, which was created at the initiative of the SIF, "brings together the main actors in the field of clean technologies to create synergies, facilitate matchmaking between [solution](#) providers and investors, and showcase clean and profitable solutions that have the potential to address today's environmental challenges," as noted on the SIF website. The Solar Impulse Efficient Solution Label is awarded to solutions that help achieve at least one of the UN's sustainable development goals (SDGs).

## Inline sensing

The DISIRE project addresses an SDG that involves building resilient infrastructure, promoting sustainable industrialisation and encouraging innovation. The SIF website explains the project's solution: "DISIRE is creating inline sensing that can be utilized with big data cloud analytics in order to achieve an optimal integrated process control reconfiguration for industrial plants and processes." It states: "Addressing the needs for more energy and resource-efficient processes in multiple industrial sectors, including the non-ferrous, ferrous, chemical and steel sectors, DISIRE provides miniaturized Process Analyzing Technique (PAT) technologies capable of being inserted into flows of raw materials. The 'Intelligent Raw Materials' technology allows better characterisation of the material, optimisation of the processing plants, increase of the process intensification and energy efficiency in chemical, steel, and mineral processing while improving the industrial combustion processes."

The technologies introduced by DISIRE reduce "by 4% the CO<sub>2</sub> emissions and up to 10% NO<sub>x</sub>

[nitrogen oxides] related to the chemical sector," the SIF website notes. It states that the energy savings in the steel sector are 10 % to 20 %. The DISIRE (Integrated Process Control based on Distributed In-Situ Sensors into Raw Material and Energy Feedstock) project ended in December 2017. Project partners emphasize that their concept will enable the self-reconfiguration of all the production lines by the produced products themselves.

**More information:** DISIRE project website:  
[www.spire2030.eu/disire/](http://www.spire2030.eu/disire/)

Provided by CORDIS

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