

# Pioneering the future of **TRANSMISSION ELECTRON MICROSCOPY**



The **IMPRESS project** aims to develop an **interoperable platform** composed of standardized hardware and software interfaces and multifunctional components that can be transferred interchangeably and customized according to needs.

## OUR INNOVATIVE DEVELOPMENTS

### e-CAT

A modular cartridge-based system which is Correlative, Adaptable, Transferable.

### Electron sources

With enhanced beam properties.

### Optics and detectors

For advanced imaging and spectroscopy.

### Sample environment

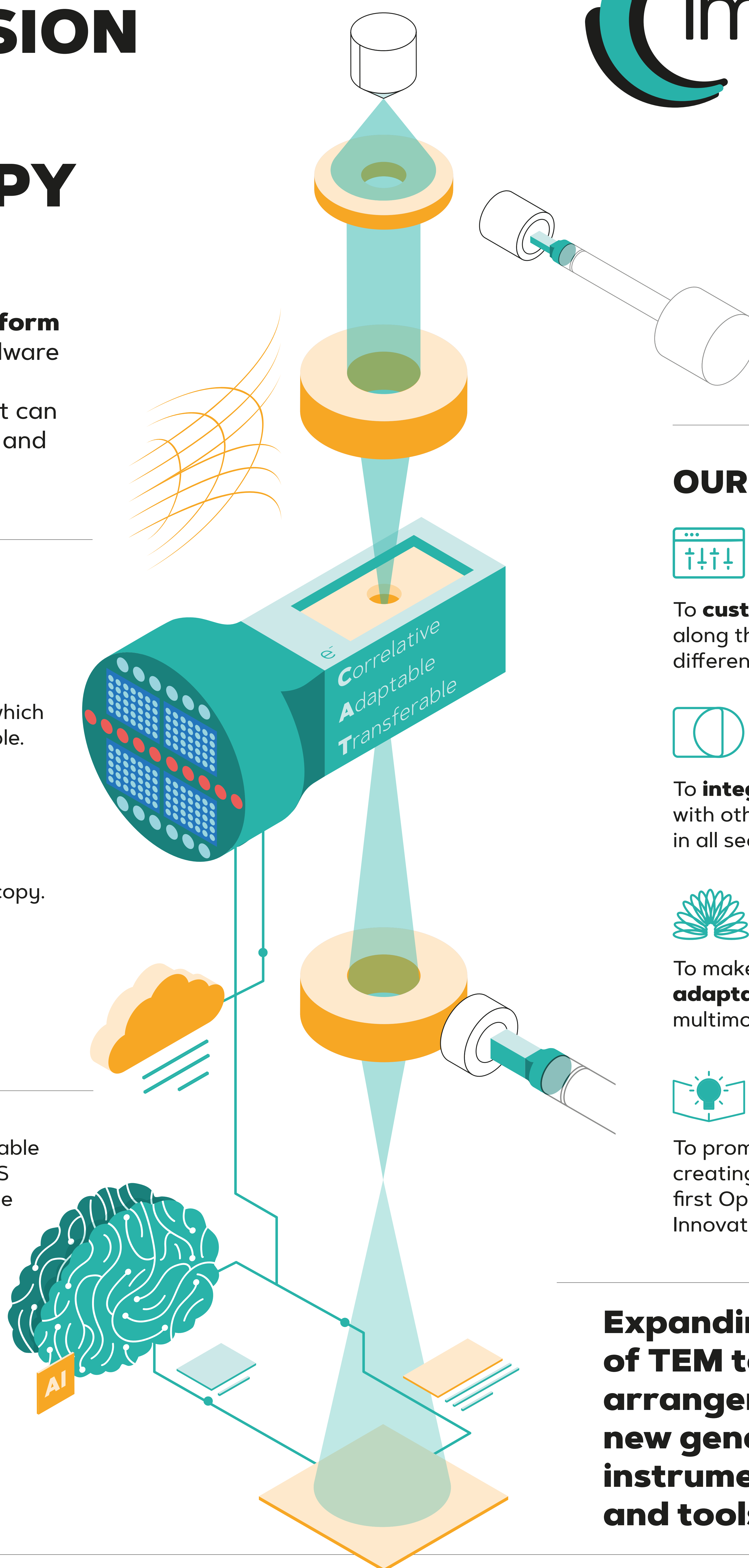
For multifunctional experiments.

### AI based software

For simulation and automation.

The novel cartridge-based interoperable platform is co-developed by IMPRESS and **selected companies** through the **Pre-Commercial Procurement (PCP) process**, composed of 3 phases.

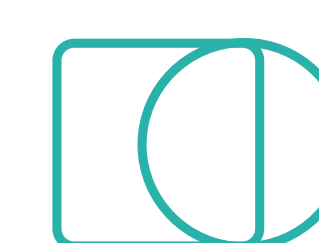
- 1 SOLUTION DESIGN
- 2 PROTOTYPE IMPLEMENTATION
- 3 VALIDATION AND DEMONSTRATION



## OUR MAIN AIMS



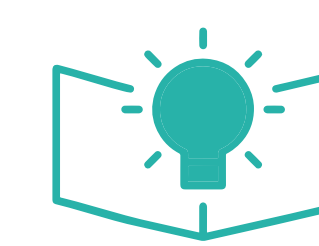
To **customize** TEM components along the column and across different microscopes.



To **integrate** TEM components with other instrumentation in all sectors of application.



To make TEMs **flexible and adaptable** to a diversity of multimodal experiments.



To promote progress by creating **FAIRcube**, the first Open Knowledge and Innovation hub for TEM.

## Expanding the horizon of TEM to innovative arrangements via a new generation of instrumentation and tools

## The IMPRESS Consortium

brings together 19 partners on a pan-European level

6  Research & Technology Organizations | 5  European Universities | 5  Research Infrastructures | 3  Small and Medium-sized Enterprises



Funded by the European Union. Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them.



IMPRESS is a project powered by e-DREAM.

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