

IHI Call Days | Call 12



CenTral

Bringing advanced spectral photon counting X-ray technology to hospitals and clinics for equitable access to advanced cancer and stroke diagnostics

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Link to the IHI brokerage platform: [CenTral](#)

Challenges and objectives

WHY and WHY NOW? (The unmet need)

- Patients miss early diagnosis.
- Hospitals cannot afford high-end scanners.
- With recent regulations, lower radiation doses are needed for patient and hospital staff safety.
- Photon-counting CT is now mature and ready for scale-up.

TECH OPPORTUNITY

Photon counting integration into CT enables

- Sharper images at lower dose
- Earlier disease detection for low cost, early diagnosis/treatment
- More personalized care for stroke, CVD and cancer.

Topic number (2)

Boosting innovation through better integration of fragmented health R&I efforts

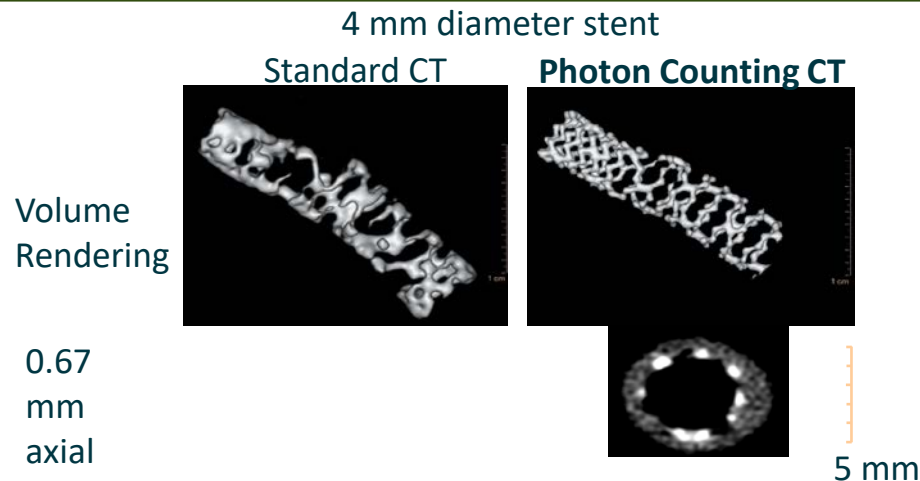
Your approach to solve the problem

Vision

CenTral develops low-cost photon-counting detectors using new materials, enabling premium-quality images at low radiation dose.

This technology can dramatically lower costs while delivering premium-quality images, for the risk stratification, prediction of disease progression, and assessment of treatment response, with a primary focus on progressing precision medicine in stroke and cancer.

The project will build and validate a full prototype and demonstrate feasibility in stroke, CVD and cancer imaging.



Outcomes and Impact



For patients

- **Stroke:** earlier detection → up to 30% fewer disabilities
- **Cancer:** 20–25% more timely treatments
- **Safer scans:** up to 45% less radiation and 40% less contrast



For healthcare providers

- >20% higher diagnostic accuracy in neuro & oncology.
- **Significant 15–20% cost savings** from fewer repeat scans/procedures.



For partners

Opportunity to collaborate on a **breakthrough** that can transform **medical imaging** for radiation-utilizing modalities and improve lives globally.



For EU

Doubling hospital access to advanced CT within 5 years after the project

Expertise and resources

- We have:
 - Industry partners: **Philips [DE]** (system integration, COCIR*), **Luxium [FR]** (scintillator, COCIR*), **ThermoFisher [NL]** (detector, MedTech Europe*)
 - Academic partners: **TU Delft [NL]** (modeling, validation), **FBK [IT]** (SiPM design).
- We are looking for:
 - **Pharma** (e.g., contrast agents for drug delivery imaging)
 - **Clinical partners** (e.g., use cases, to test and challenge)
 - **Industry partners**
 - AI/Software (e.g., spectral image interpretation and streamline workflows)
 - Hardware (e.g., (1) ASIC SME (2) read out and storage of the prototype)
 - **Professional associations** (e.g., dissemination)
 - **Health economics** (e.g., HTA assessment)