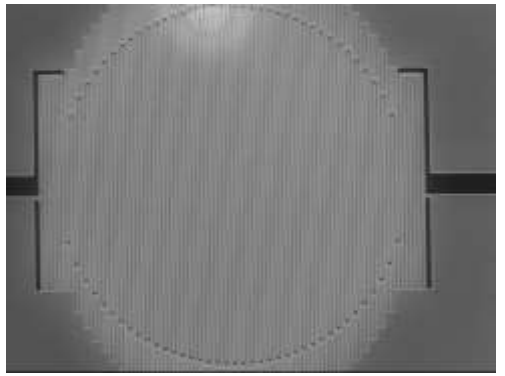
Arrays of Superconducting Quantum sensors

Single Quantum single-photon detectors

SNSPD

x1-24

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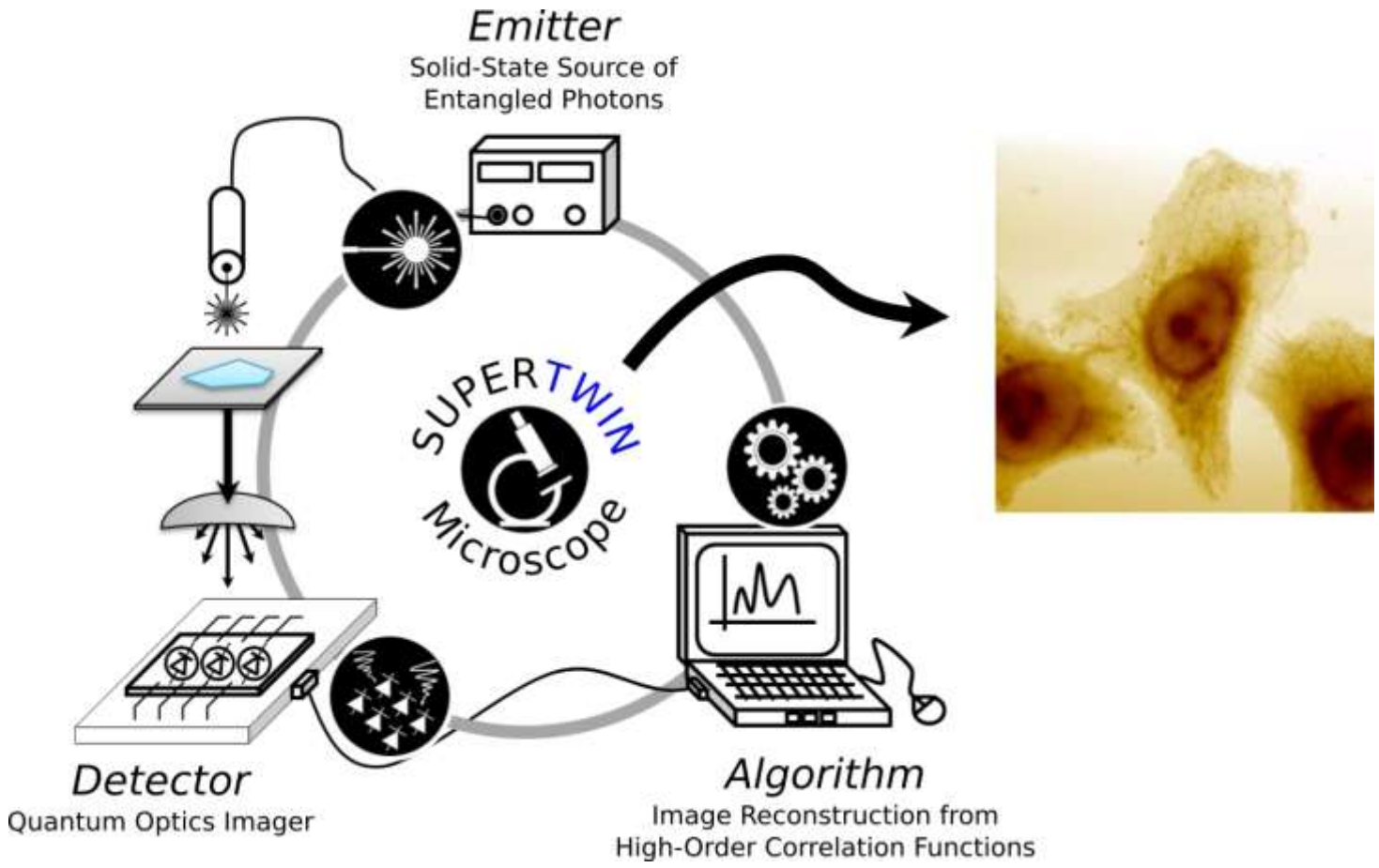
Idea – using quantum light for increasing the resolution of optical imaging beyond the Rayleigh limit
Funded by FET-Open



Innovation launchpad: using the ‘innovation’ to provide sustainable competitive advantage

MEDISS

Optical technique in medical imaging, in contrast to high-energy, ionizing radiation can provide imaging without harming the patient.

However, medical diagnostics with optical tools are limited with current light detectors due to low time resolution, low sensitivity, and high noise level. Our innovation will solve this technical gap.

Progress made towards identifying markets

1- Build a dedicated demonstration setup

2- Visited specialized conferences

3- Visited large industrial exhibitions

4- Planned demos with scientific customers

MEDISS

Major findings & preliminary results achieved

Total market size estimated

Primary market:

€500 million scientific medical imaging market

Secondary market:

€4.1 billion Industrial optical diagnostics market

"Single Quantum's technology has key advantages over current detection technology that are of high interest for my research"

Stefan Hell, Max Planck Institute for Biophysical Chemistry

"Single Quantum's Eos will lead to new medical imaging techniques,
resulting in faster, more efficient and more accurate diagnostics and treatments."

Prof. Sterenborg, AMC Cancer Center Amsterdam, Netherlands

Brainiaqs: EIC pro active transition to innovation activity increase active area and couple to microscope together with user EMBL

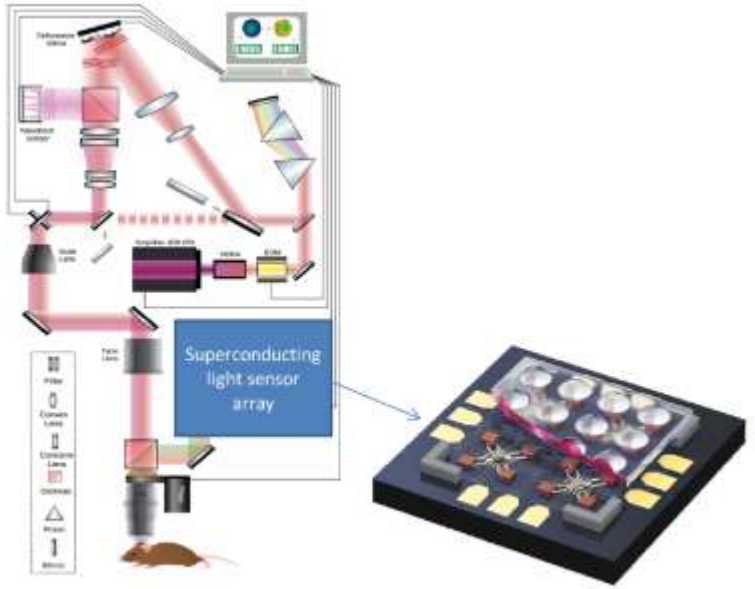
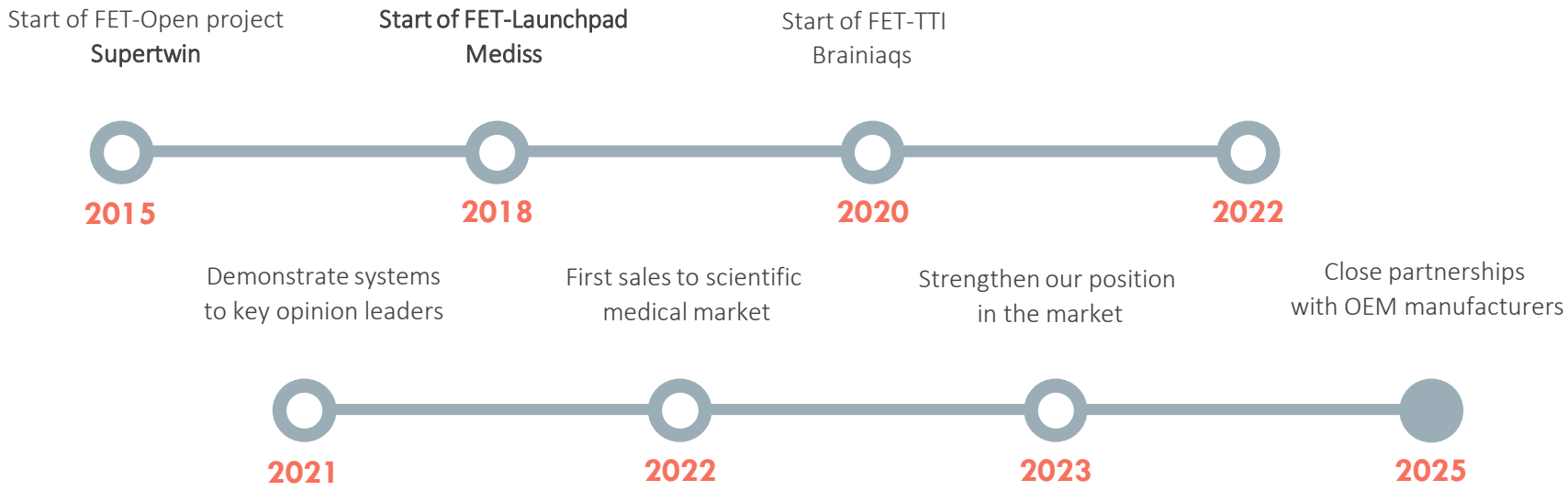


Figure 2 *Schematic of the proposed device. A multi-photon microscope (left) excites and scans a sample (mouse), where the fluorescence is detected by the superconducting light sensor array (right) with 10x10 pixels.*

Timeframe & pathway towards commercialisation of the snspd microscope



Potential OEM partners:

JENOPTIK ZEISS Thermo SCIENTIFIC PHILIPS Nikon HAMAMATSU