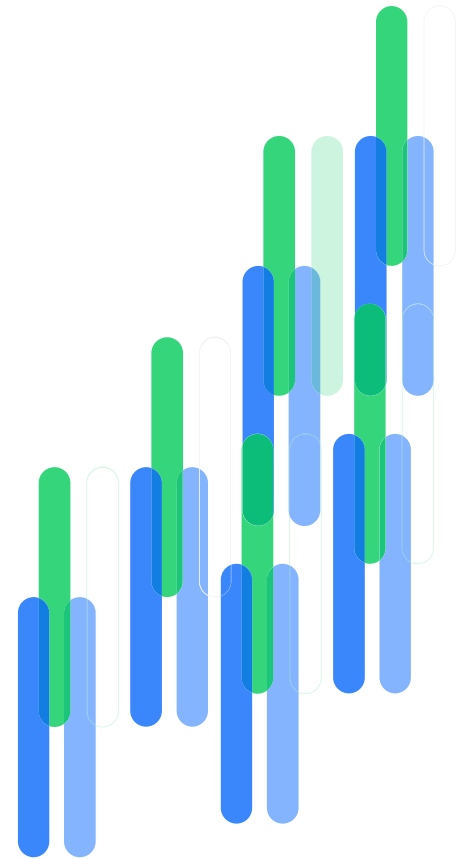




EMPOWERING PEOPLE FOR BETTER HEALTH

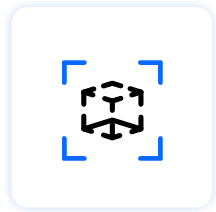
Interactive holograms **in augmented reality.**

Maciej Stanuch – CarnaLife Holo Technology Manager



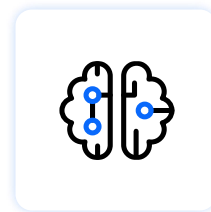
We create the future of medicine.

We are a technology company. We combine the knowledge and experience of researchers, engineers and physicians. Our innovative medical solutions are revolutionizing the way people can be treated and saved.



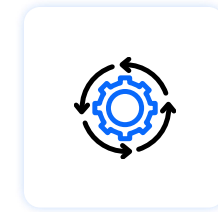
3D IMAGING

Mixed reality (MR) and augmented reality (AR) technologies to improve diagnosis and treatment



ARTIFICIAL INTELLIGENCE

Continuous improvement of the quality of diagnoses and continuous development through the use of modern IT tools



INTEGRATION

Integration with external imaging devices

Three-dimensional hologram.



VIRTUAL REALITY (VR)

- ✓ Fully virtual, closed environment
- ✓ No interaction with the outside world

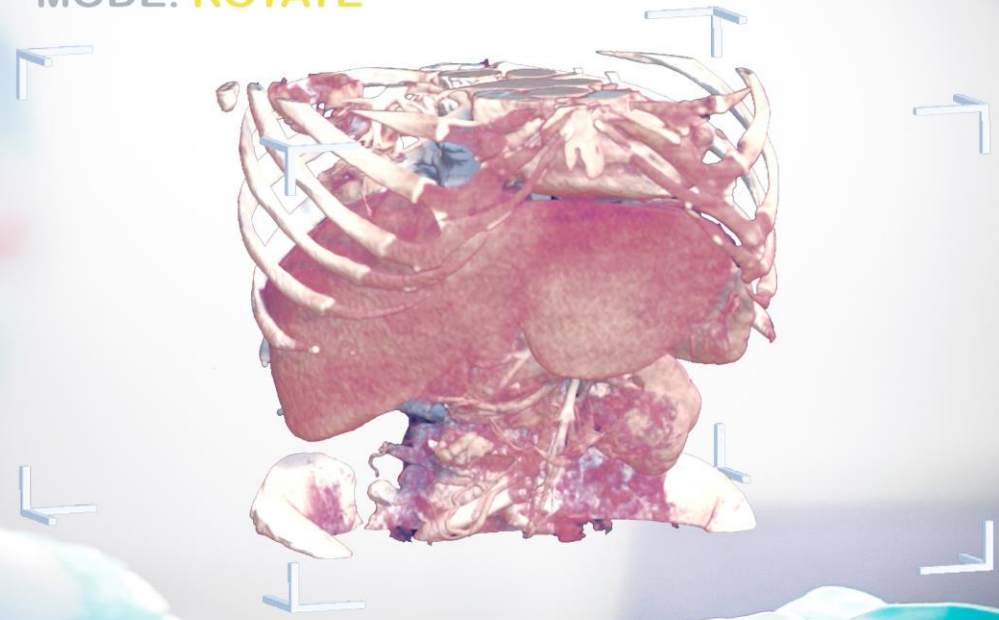


MIXED REALITY (MR)

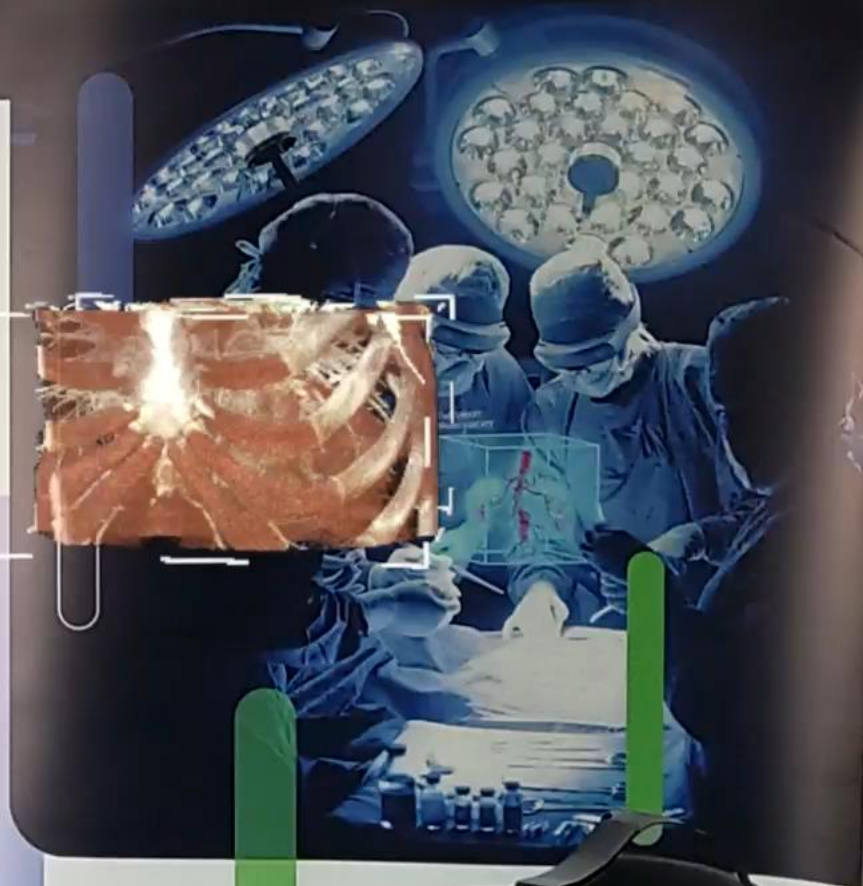
- ✓ Full ability to interact with elements of the real and virtual environment

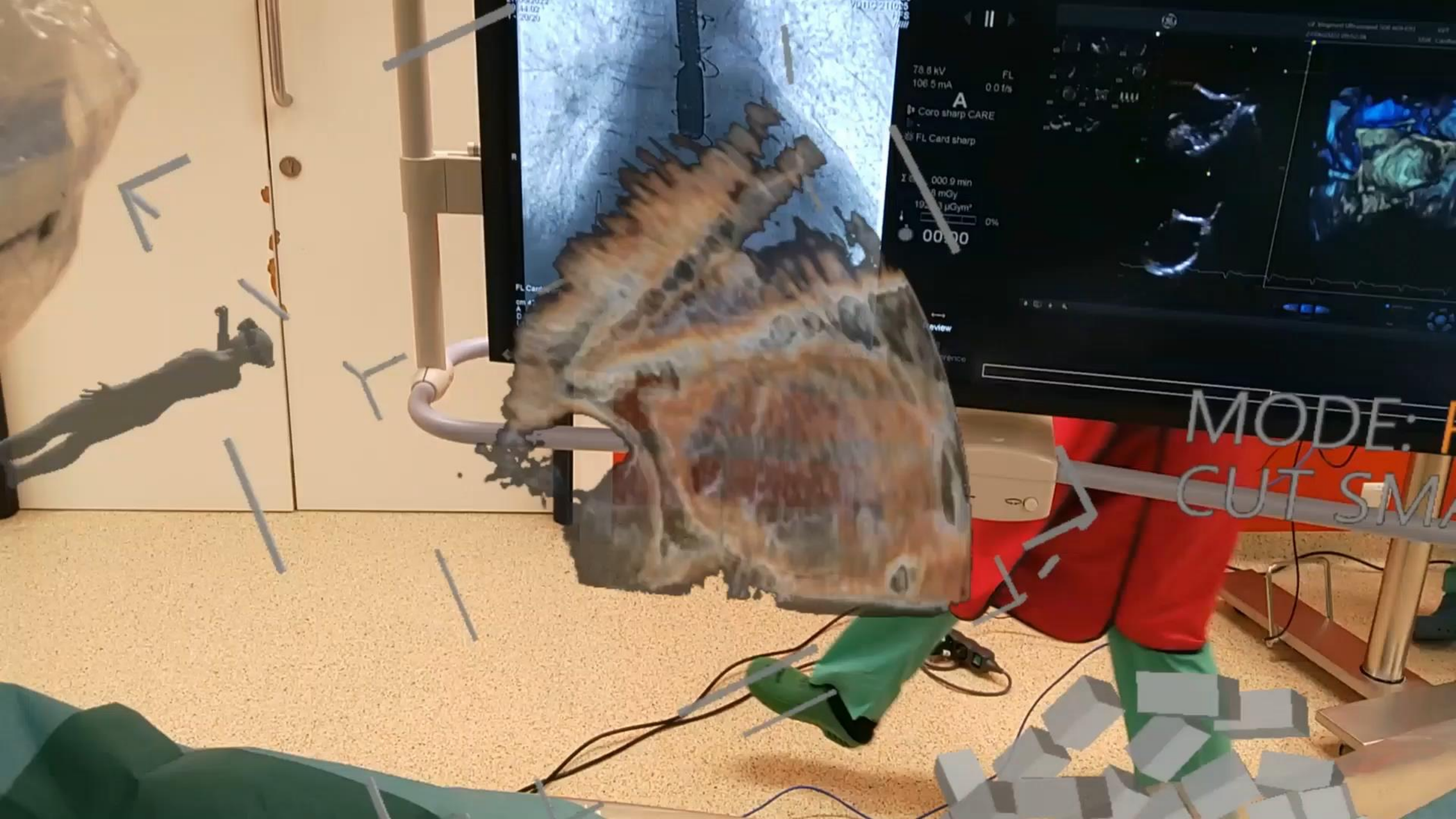


CUT SMART: **OFF**
MODE: **ROTATE**



MedApp





78.8 kV
106.5 mA
0.01%

A

Coro sharp CARE

FL Card sharp

000.9 min

8 mGy

19.3 $\mu\text{Gy}\cdot\text{cm}^2$

0%

00:00

MODE: CUT SMALL

Holographic visualization of image-based patient data.



Microsoft HoloLens

Microsoft Partner | Mixed Reality



PACS >



< synchronization



Dicom 3D data

Image data acquisition e. g. computed tomography, magnetic resonance, PET, echocardiography, rotational angiography

PC Visualisation

Three-dimensional visualisation

Mixed Reality

Holographic visualization



3D holograms in the surgical practice, boosting preoperative planning and intraoperative support



Real-time 3D holograms directly from imaging devices, **on-premise (offline) solution**, PACS integration



Simple and **sterile** interaction



Better **precision**



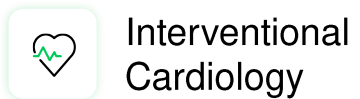
Effectiveness of planning and preparation for surgery **shorten** procedures by **1/3***



Breakthrough technology for 3D visualization.

More than 500 medical treatments performed

in the Operating Rooms registered and assisted by MedApp



Interventional Cardiology



Urology



Orthopedics



Surgical Oncology



Vascular Surgery



Laryngology

Planning
treatments



Support
during treatments



Training of doctors
and students



Pioneering medical treatments.



UNIWERSYTECKI
SZPITAL KLINICZNY
W OPOLU



Certification.



CarnaLife Holo is **certified as a medical device supporting diagnostics in class IIb**



ANVISA (Agencia Nacional de Vigilância Sanitária) certification for the Federative Republic of Brazil.



We also have a NATO Commercial and Government Entity Code (**NCAGE**).



FDA pending for CarnaLife Holo.



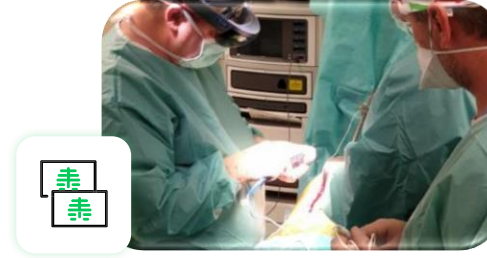
Key benefits.

Technology to support the precision, comfort and safety of medical procedures.



Diagnostics before surgery

- ✓ Accurate, three-dimensional visualization of imaging studies performed before surgery
- ✓ Natural perception of spatial anatomical structures
- ✓ Facilitate planning and preparation for surgery for both doctor and patient
- ✓ The doctor can explain the details of the surgery to the patient in an accessible way, reducing the patient's preoperative anxiety



Intra-operative support

- ✓ Ability to change the location of the hologram display in the operating room
- ✓ Increased precision and possibility to reduce the standard treatment time
- ✓ Maintain complete sterility during interaction with the hologram
- ✓ Hologram access to imaging studies throughout the operation
- ✓ Real-time visualization of medical instruments in GE Vivid E95 echocardiograph data



FAST TRACK
CABG Trial

CABG solely
guided by CCTA,
30-day control

Hologram
mixed reality
live-demo
available



MODE MOVE
CUTSMAR OFF



EMPOWERING PEOPLE FOR BETTER HEALTH

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