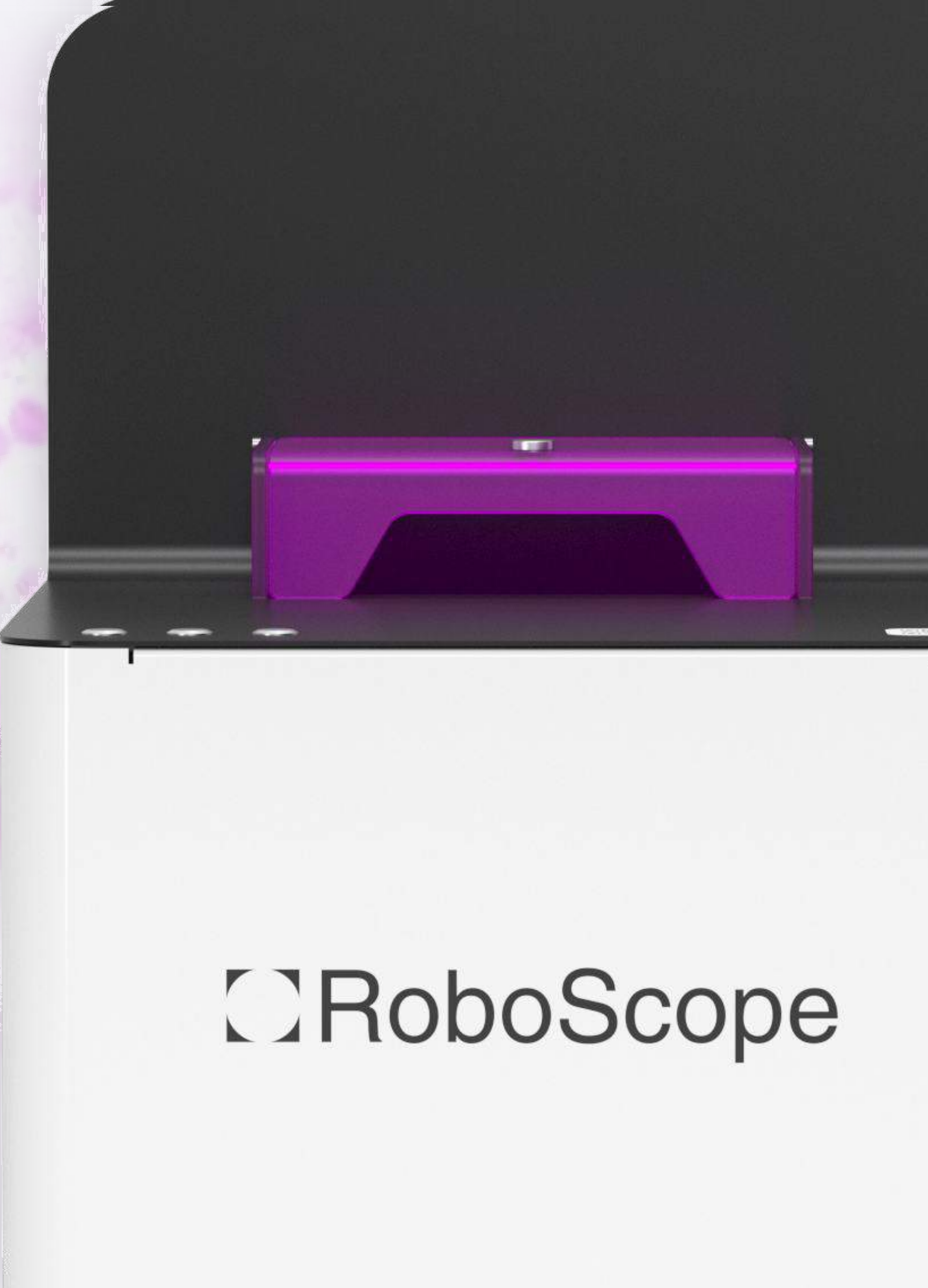




Digital microscopy

Hardware-software complex
for digital pathology

RoboScope Pathology, LLC



 RoboScope



— Problems in the field of microscopy

Problems

Only **5%** of sample
are digitized

*State and main tasks of development of pathology
service of the Russian Federation. Branch statistical study
for 2020. Edited by Frank G.A. and Starodubov V.I.

Transport and storage



And also lack of space and limited
shelf life of samples

Outdated fleet of equipment



And also low rate
of its updating

Acute shortage of personnel



And high rate of concurrently
held positions

Lack of access to the information



For pathologists and clinicians

Shortage of inexpensive Russian solutions



For digitizing of histological samples

Lack of cloud system



For digital data storage and transfer



— Advantages of RoboScope

Specificity



Quality improvement

Digital image allows to conduct a more detailed analysis with expert evaluation and quality control



Resources economy

Cloud stores instead of physical, no need in sample transoprt, increase in productivity



Reducing the burden on a pathologist

Scanning is made by paramedical staff





— Protection strategy

Intellectual property



Know-how for manufacturing

Of robotized platform



Program registration

Software registration for a computer



Patent

For utility model



Patent

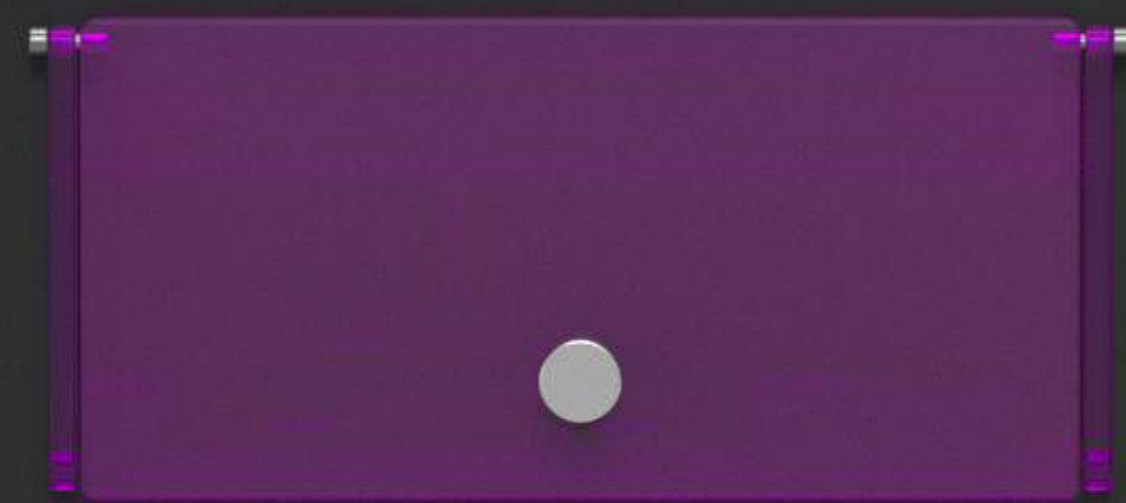
For an industrial design



Trademark

RoboScope

RoboScope





— Market and distribution

Business model

B2B + B2G markets

Private medical centers and clinical and diagnostic laboratories of Ministry of Health

Direct sales

Profit sharing models is possible for scanners realization



₽10 000 000

Average price on the market



Up to 1 500

Departments without equipment in Russia



From ₽2 500 000

Is a selling price



₽500 000

Production cost



— Russian market

Situation on the market



Outflow of foreign manufacturers

Producers from unfriendly countries are increasingly leaving the Russian market



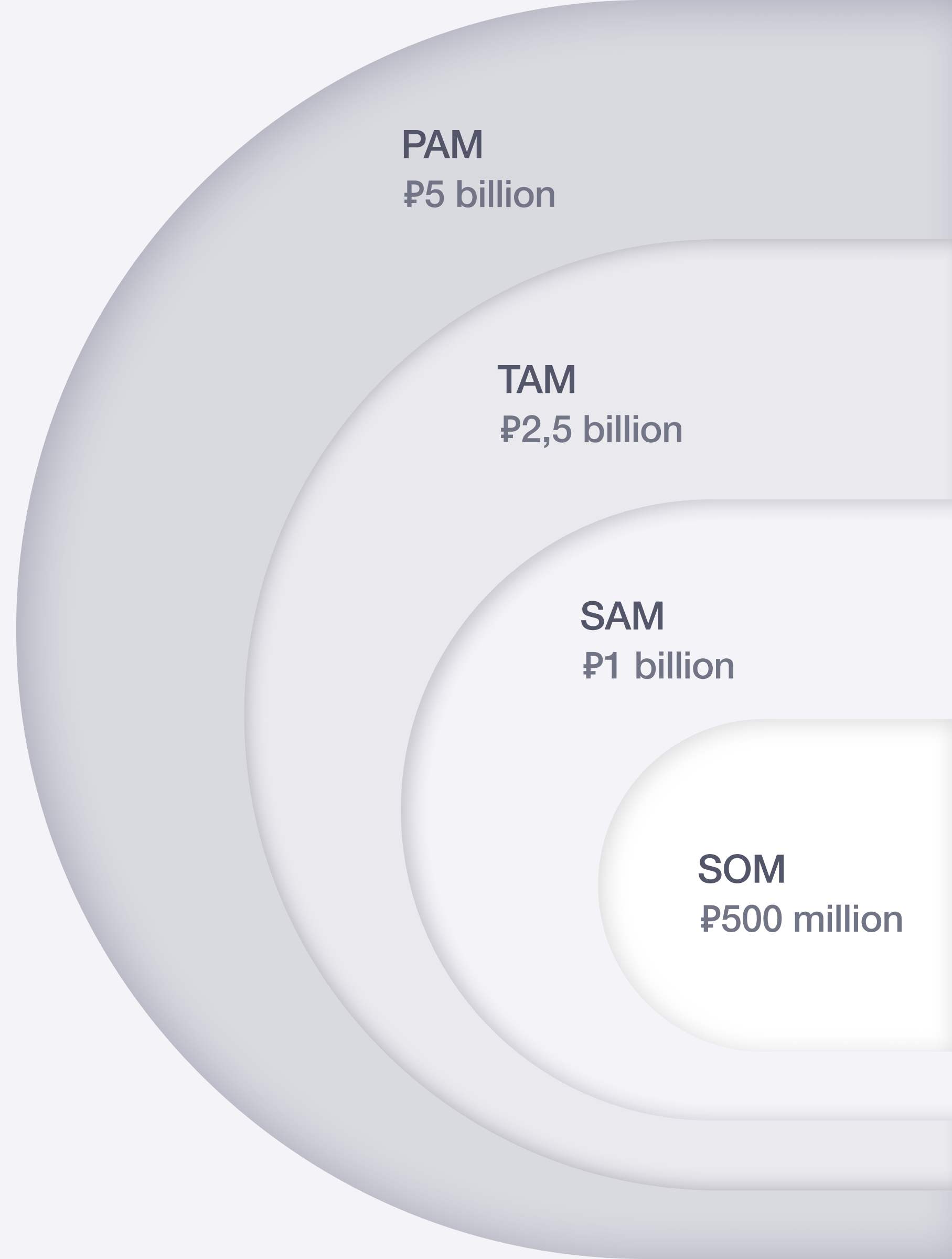
High potential growths of number of studies

The amount of studies year by year is limited by the capacity of the system and due to digitization it may increase significantly



Russian market size is ₺5 billion

Based on the total demand of diagnostic laboratories, as well as data on tenders for histology scanners





— Comparing of technical and economical parameters

Comparing

of technical and economical parameters
of the solution and its competitors

	RoboScope	OneCell.AI	Celly.AI	WestMedica	Leica	Phillips
Image format	open (DICOM, TIFF)	SVS, TIFF	proprietary	proprietary	SVS	proprietary
Own robotized platform	yes	yes	no	no	yes	yes
Costs	from ₺2,5 million	from ₺20 million	from ₺5 million	from ₺8 million	from ₺30 million	from ₺40 million
AI solutions	in process	yes	yes	yes	no	no
Image capture via	camera	camera	smartphone	camera	camera	camera
Country of origin	Russia	Russia	Russia	Austria/Russia	USA/Germany	Netherlands



Key advantages

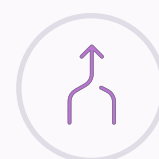
of the solution to a customer

Open DICOM format



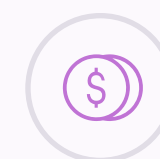
No additional costs to the customer
for software to work with digitized images

Flexibility and integrability



Integration in any telemedical platform
(Nethealth), laboratory or medical information
systems and patients' medical records

Competitive price from ₺2,5 million



At least 2 times cheaper compared
with competitors

Import-substituting products



Hardware and Software are developed
and manufactured in Russia

Automatization of data collection



And initial report writing

Developed ecosystem

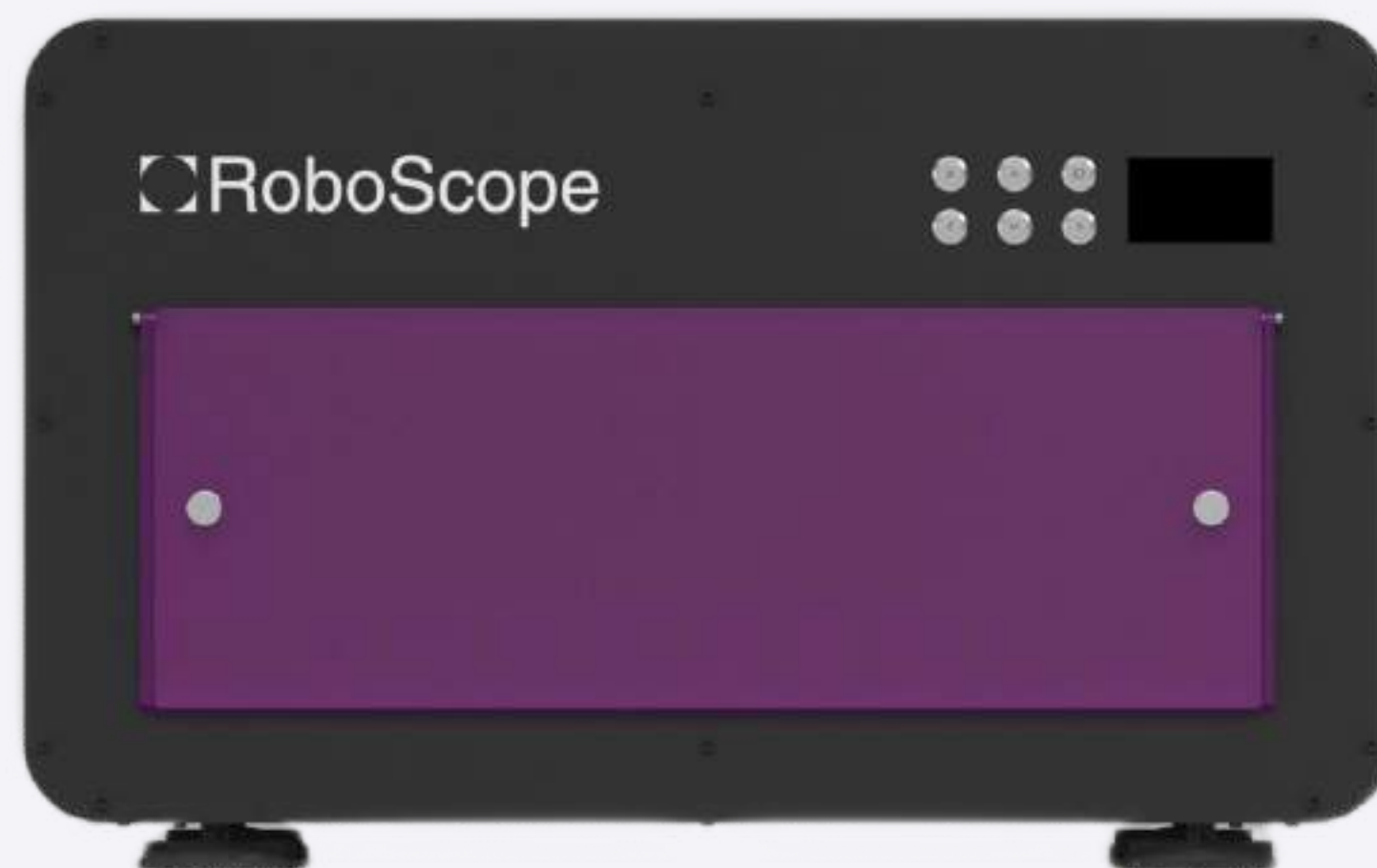


4 components of the RoboScope system:
RS digital scanner, RS Slide Manager,
RS stainer, RS Viewer



— RoboScope

RoboScope Ecosystem





— RoboScope

RoboScope Ecosystem

Digital Scanner



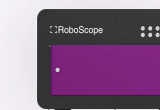
Central component of the system

Slide Manager



Robotized system of glass slides loading in a scanner and their storage which increases throughput of the system

Slide Stainer



Robotized system for staining and dehydration of histological samples

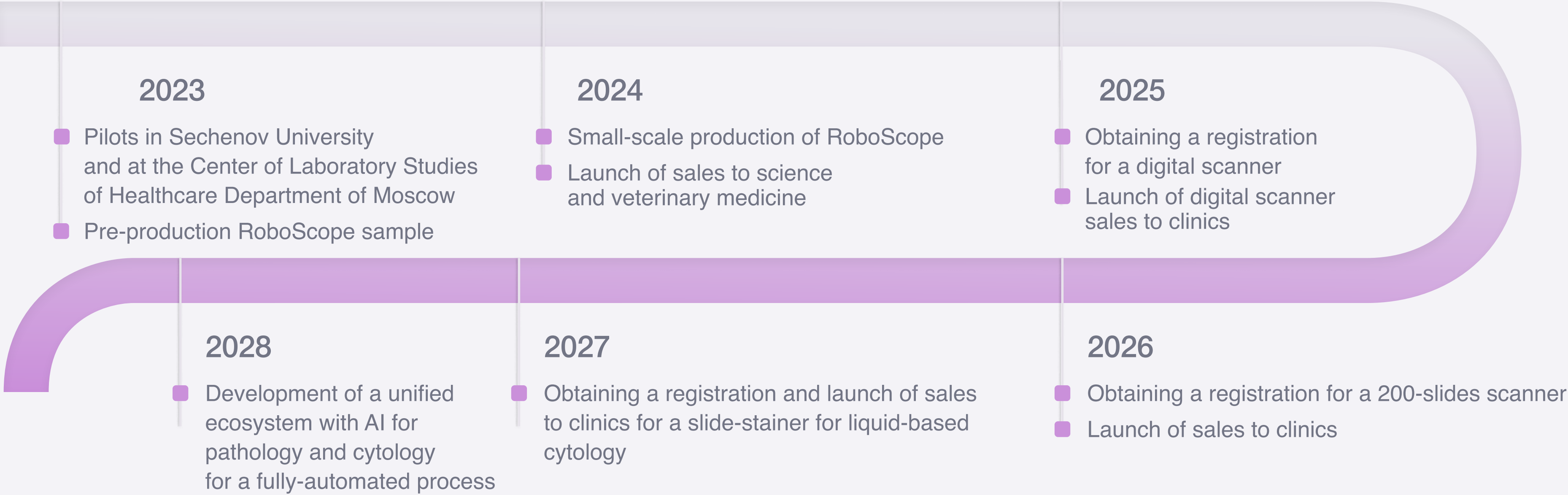
Viewer



Viewing of digital visual medical data and work with digital scans



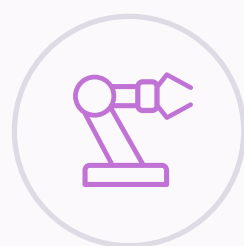
Roadmap





— Prototypes ready for a pilot

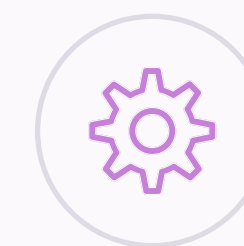
What is already in the project?



Robotized
movable platform



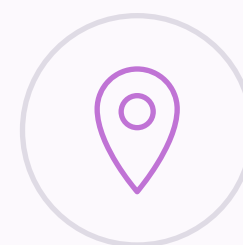
Autofocus and
automated pre-scanning



Software for management
of digitizing process



Loading data
on our DICOM server



Industrial design
and process charts



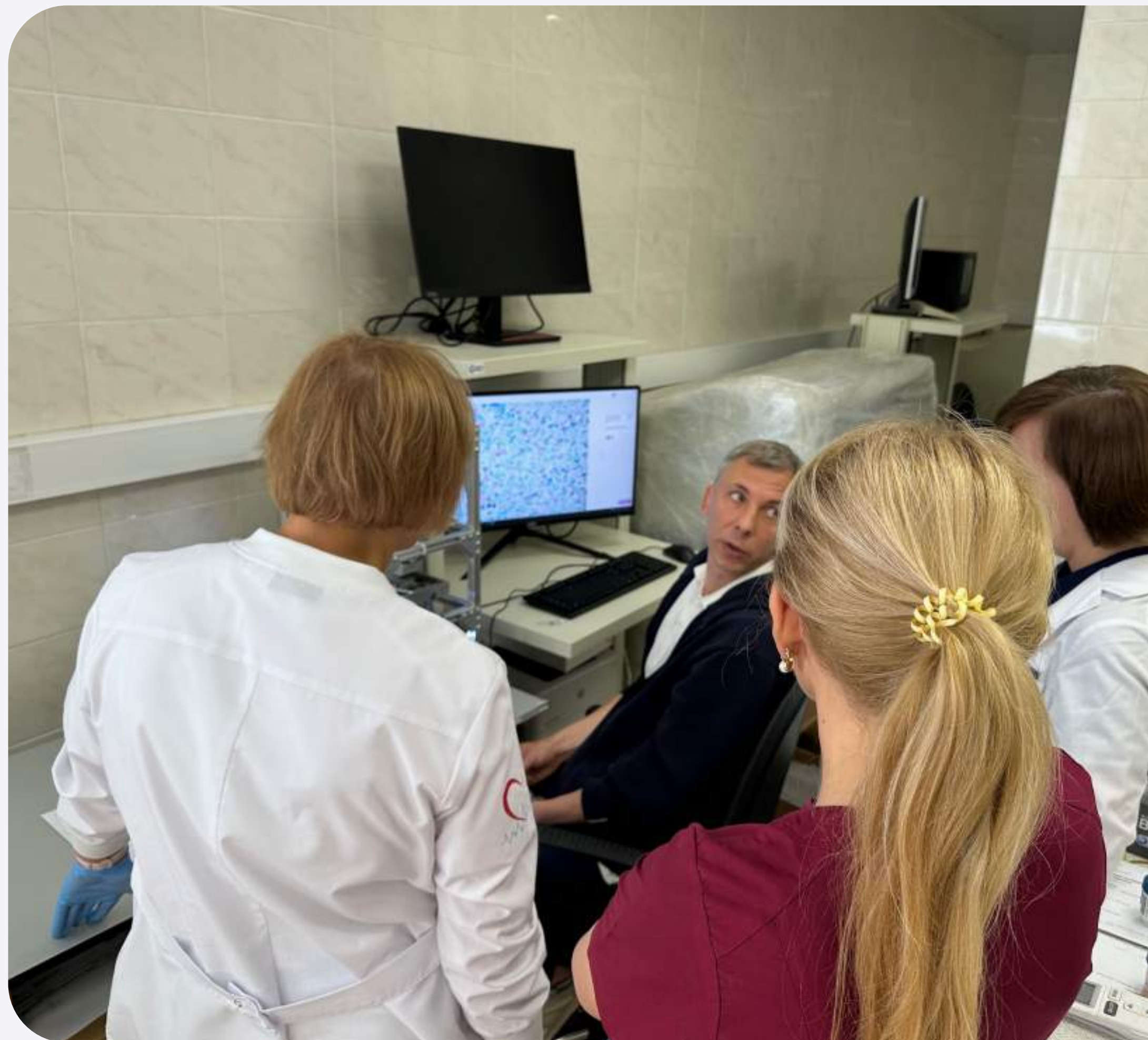
Access to data via
telemedical platform NetHealth



— RoboScope technology

Pilots

In Sechenov University and at the Center of Laboratory Studies
of Healthcare Department of Moscow





— Own production facility

Our manufacture

Already available

CNC milling machine (2 pcs)

3D-printer

Assembly and setting up line

Will be available soon

A CNC lathe machine

Electroerosive CNC machine

Our competences



3D-construction
and design



Development of design
documentation



Prototyping
and tool design

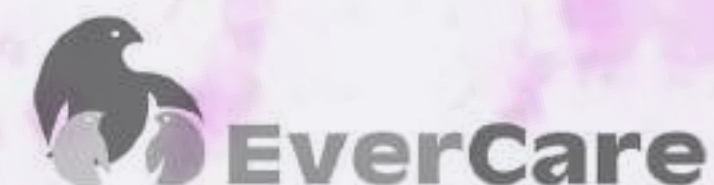
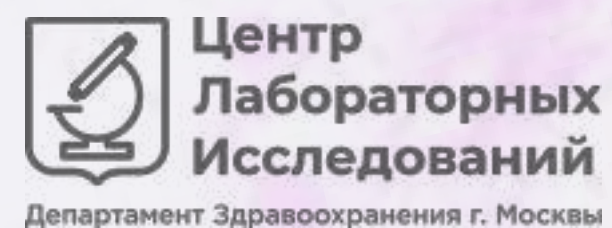
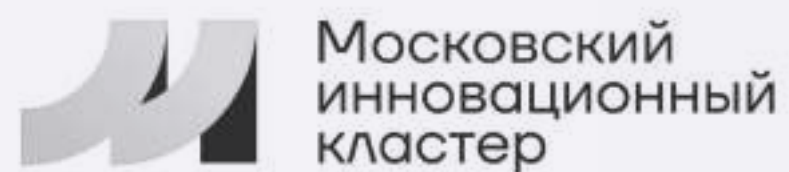


Assembly
and setting up



— RoboScope collaboration

Partners





— RoboScope collaboration

Strategic partner



Manufacturing and distribution holding Delrus
One of the leaders on Russian medical
products market

The company acts as a strategic partner of the project, and its areas of responsibility are: promotion and distribution of the complex.



— Team of the project

RoboScope team



Igor Shaderkin

CEO

Candidate of Medical Sciences, Head of the Laboratory of the Institute of Digital Medicine of the I.M. Sechenov First Moscow State Medical University. Kuban State Medical Academy, Faculty of Medicine, specialty "physician" - 1991-1997. Kuban Technological University, faculty CTAS ("Computer Technologies and Automated Systems"), specialty "Software Engineer" - 2001-2007. Urologist, Health Care and Public Health Organization. Serial entrepreneur - NetHealth.ru, Uroweb.ru, EverCare.ru and a number of other projects in the field of medicine



Nikolay Gonivolk

Software Engineer

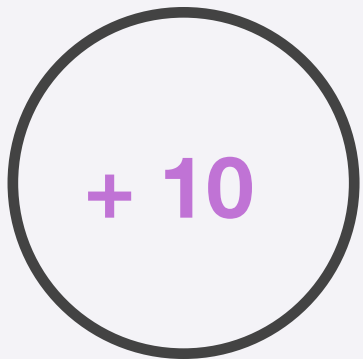
College of the branch of the Maikop State Technological University, faculty of "Software for computing equipment and automated systems", specialty "technician"



Igor Boltov

Technical director

Kuban Technological University, faculty KTAS ("Computer Technologies and Automated Systems"), specialty "Software Engineer" 2001-2007. Head of software development group of NetHealthLab. CTO of telemedicine platformNetHealth.ru



Team of developers, engineers, design engineers and industrial designers



Microscopy on a digital level

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roboscope.pro



RoboScope

