Ministry
of Digital Transformation
of Ukraine

UKRAINIAN GLOBAL
INNOVATION STRATEGY

SECTOR STRATEGY: MEDICAL TECHNOLOGIES

(MEDTECH)

UKRAINIAN GLOBAL INNOVATION STRATEGY UNTIL 2030

CONTENTS

STRATEGY SUMMARY: MEDTECH | 4

SECTION 1. SECTOR STRATEGY: MEDTECH | 8

1.1 Global MedTech sector overwiew | 9

1.2 MedTech sector overview in Ukraine | 20

1.3 MedTech sector’s strengths and weaknesses in Ukraine | 26

1.4 Barriers and opportunities to boost MedTech technologies in Ukraine | 29

SECTION 2. KEY PROJECTS: MEDTECH | 33

2.1 Technology priorities: MedTech | 35

2.2 Top projects: MedTech | 40

ABBREVIATIONS AND DEFINITIONS

KEY DEFINITIONS

STRATEGY	Ukrainian Global Innovation Strategy until 2030
MEDTECH	Medical Technologies

ABBREVIATIONS

HRV	Heart rate variability
IDP	Internally displaced person
ASD	Acute stress disorder
DNA	Deoxyribonucleic acid
ECG	Electrocardiography
EBRD	European Bank for Reconstruction and Development
EU	European Union
HEI	Higher education institution
IP	Intellectual property
ICT	Information and communication technologies
CT scan	Computed tomography scan
MRI	Magnetic resonance imaging
SME	Small- and medium-sized enterprises
VR	Virtual Reality
NHSU	National Health Service of Ukraine
PTSD	Post-traumatic stress disorder
USA	United States of America
U/S diagnostics	Ultrasound diagnostics
AI	Artificial Intelligence
VAC	Vacuum-Assisted Closure
AR	Augmented Reality
DTC	Direct-to-consumer testing
VAC	Vacuum-Assisted Closure
FDA	Food and Drug Administration
LOC	Lab-on-a-chip
POC	Point of Care
R&D	Research and development

STRATEGY SUMMARY
MEDTECH IN UKRAINE

UKRAINE AS A GLOBAL MEDTECH LEADER: INNOVATIVE SOLUTIONS FOR PSYCHOLOGICAL AND PHYSICAL RECOVERY

The Ukrainian Global Innovation Strategy until 2030 identifies medical technologies as one of the key areas that will help strengthen the innovation ecosystem and unlock Ukraine's innovation potential

UKRAINE'S FUTURE ROLE IN THE GLOBAL MEDTECH SECTOR

SUPPLIER OF MODERN PROSTHESES

With successful bionic prosthetics startups and prosthetic and orthopaedic companies with experience in the development and production of functional and mechanical prostheses and rehabilitation aids and appliances, Ukraine has all the prerequisites to scale up the production of high-tech prosthetics and rehabilitation solutions

LADING DEVELOPER OF SOLUTIONS FOR SUPPORT MENTAL HEALTH AND PTSD

Ukraine has a unique experience in treating post-traumatic disorders (PTSD, ASD) among military personnel and civilians affected by the consequences of war. The development of digital platforms, VR/AR therapy, self-help mobile apps, and AI for mental health monitoring will increase the effectiveness of psychotherapy and make it accessible to a wide range of patients

MODDERN REHABILITATION CENTRES

The development of innovative rehabilitation centres with multidisciplinary teams in Ukraine will ensure a comprehensive approach to the physical and psychological recovery of patients. These centres will become not only a treatment facility, but also a platform for international exchange of experience, integration of advanced technologies and improvement of rehabilitation techniques

INTEGRATED DIAGNOSTICS PLATFORM

Thanks to the strong IT sector, Ukraine can develop a system to support clinical decisions, personalized medicine, telemedicine, and artificial intelligence within eHealth, which will combine data from various sources - laboratory tests, medical images, wearable devices, etc. - and improve the quality of medical services

UKRAINE DEMONSTRATES SUCCESSFUL MEDTECH DEVELOPMENTS, BUT NEEDS REGULATORY REFORMS FOR MEDTECH RE-REGISTRATION AND CERTIFICATION

STRENGTHS

- The developed IT infrastructure and functioning E-Health system[1] allow rapid integration of the advanced technology into the healthcare system
- Dynamic startup market: Ukrainian MedTech startups are actively creating innovative solutions that are implemented both in Ukraine and abroad
- Local medical technology production: Ukraine has great potential for expanding domestic production of prostheses, including bioprostheses, endoprostheses, and rehabilitation appliances

WEAKNESSES

- The current regulatory framework does not take into account modern MedTech standards for clinical trials and certification of new products
- Limited funding: Lack of investment and undifferentiated funding in the healthcare system slows down innovation
- Lack of high-tech production: low competitiveness of the industry due to the lack of technological capacities for the development and production of medical devices

OPPORTUNITIES

- AI application in healthcare: the introduction of AI for screening, diagnostics, diagnosis verification, and automatic medical data entry will significantly improve the quality and speed of medical services
- International partnership in research: expanding cooperation with international scientific institutions and companies will allow conducting joint clinical trials, which will accelerate the integration of Ukrainian solutions into the global MedTech ecosystem
- Development and implementation of MedTech solutions for remote patient monitoring

CHALLENGES

- The absence of a separate budget for MedTech development
- Strong competition from international manufacturers: Ukrainian developers face competition from large global companies that already have certificates of conformity and access to international markets
- Legislation has limited recognition of international quality certificates for MedTech

[1]Electronic healthcare of Ukraine for automation of medical services record keeping and medical data management

HARMONISATION OF LEGISLATION, INCREASED STATE FUNDING AND STRENGTHENING OF R&D ARE NECESSARY TO BUILD UP UKRAINE'S MEDTECH POTENTIAL

IMPLEMENTING THE MEDTECH STRATEGY INVOLVES A NUMBER OF TASKS:

REGULATORY TASKS

- Harmonize and adapt Ukrainian legislation to the EU for regulatory support of the MedTechsector
- Optimize the processes of registration and certification of medical devices and technologies, as well as improve procedures for clinical trials
- Introducing effective IP protection mechanisms for MedTech startups and innovations, as well as incorporating MedTech companies into Diia.City

ECONOMIC TASKS

- Introducing mechanisms for public funding of R&D in the field of MedTech and developing public-private partnerships
- Establishing grant programmes to support and provide preferential loans for MedTech SMEs and startups, as well as introducing tax incentives for businesses investing in MedTech
- Facilitating the development of international partnerships with businesses, HEIs and science parks to attract investment and implement joint R&D projects in the field of MedTech

INFRASTRUCTURE TASKS

- Enhancing and modernising an innovative infrastructure for R&D activities in the field of MedTech
- Strengthening cooperation between HEIs, the state and businesses within the existing science parks and stimulating the creation of a MedTech sandbox and cluster
- Putting in place R&D centres at leading medical universities for research and commercialisation of MedTech innovations

1

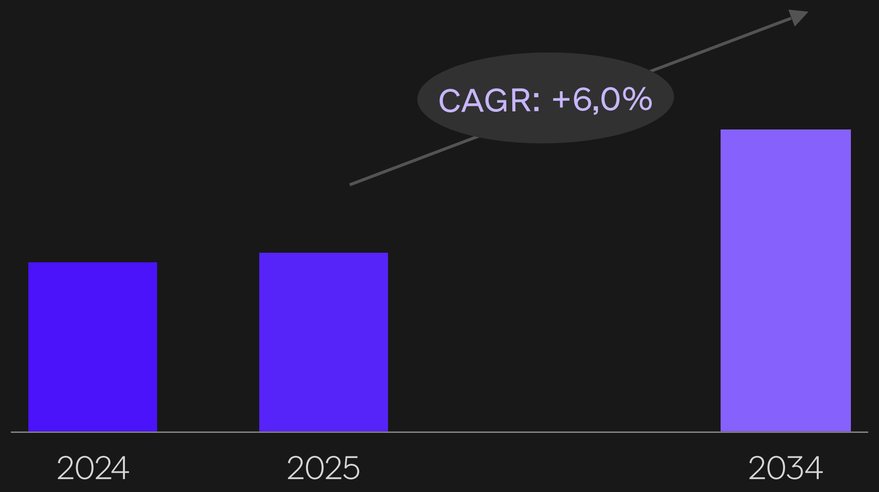
SECTOR STRATEGY: MEDTECH

1.1 GLOBAL MEDTECH SECTOR OVERVIEW

THE NEED FOR THE USE OF TECHNOLOGIES FOR MORE EFFECTIVE DIAGNOSIS AND TREATMENT OF DISEASES WILL STIMULATE THE GROWTH OF THE GLOBAL MEDTECH MARKET

The MedTech sector encompasses a wide range of technologies, including diagnostics and treatment, disease prevention and prognosis, patient care and rehabilitation. Innovative solutions in this area increase the efficiency of the healthcare system by providing more accurate and timely diagnostics, less invasive treatment methods and improved patient care

MEDTECH MARKET SIZE, USD BN



MEDTECH USERS

- Hospitals
- Outpatient surgery centres

- Diagnostic centres
- Research labs
- Pharmaceutical companies

XXX Largest MedTech user segment in 2024

CURRENT STATE OF THE INDUSTRY

The combination of advanced technologies and the growing demand for quality healthcare services. The use of artificial intelligence (AI), big data, telemedicine, 3D printing and biotechnology in MedTech is creating new opportunities for efficient healthcare services.

Changing priorities in healthcare systems. Increased emphasis on preventive medicine and early detection of diseases is driving the development of health monitoring technologies, personalised medicine and risk analysis tools.

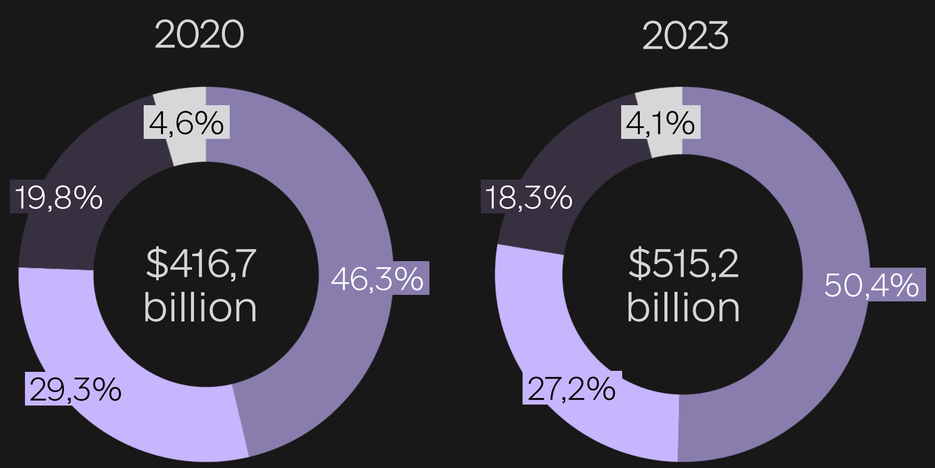
Growing demand for care and rehabilitation solutions. An ageing population and a rise in chronic diseases are driving demand for innovative technologies such as bionic prosthetics, robotic rehabilitation systems, exoskeletons and smart medical devices.

FUTURE DEVELOPMENT OF THE GLOBAL MEDTECH

The rapid development of innovative technologies to improve the diagnosing and treatment of diseases, the growing number of patients suffering from chronic diseases, and increasing public awareness of the possibilities of treatment with MedTech solutions will boost further growth of the global MedTech market

MEDTECH MARKET IS CONCENTRATED IN THREE LEADING COUNTRIES THAT ARE SIGNIFICANTLY AHEAD OF OTHER COUNTRIES WITHIN THEIR REGIONS

SALES ON THE GLOBAL MEDTECH MARKET BY REGION[1]



In 2023, North America began to dominate the global MedTech market. The US accounts for 93.1% of the market's sales in North America driven by a strong R&D base, the concentration of numerous leading companies and startups, and a high level of public and private investment in the healthcare sector.

In general, the leading countries in each region, in particular, the US, Germany and China, account for 68.9% of the total sales on the global MedTech market. This demonstrates the intense competition among these three countries and their influence in less sophisticated technology markets.

LEADING COUNTRIES IN THE WORLD, 2023

🇺🇸 $241,9 BN
46,9%

🇩🇪 $35,6 BN
6,9%

🇨🇳 $33,3 BN
6,5%

🇯🇵 $25,6 BN
5,0%

🇫🇷 $18,7 BN
3,6%

x,x – sales volume
x,x% – global market share

[1]Source: Fitch Solutions Group Limited, based on 65 countries

RAPID DEVELOPMENT OF ADVANCED TECHNOLOGIES AND INCREASED INVESTMENT IN R&D HAVE CONTRIBUTED TO THE TRANSFORMATION OF THE MEDTECH MARKET

KEY GLOBAL MEDTECH MARKET TRENDS

IN VITRO DIAGNOSTIC DEVICES

The increasing incidence of infectious, endocrine, oncological and metabolic diseases is driving demand for accurate and efficient in vitro diagnostic devices for timely detection and treatment of diseases

GROWING INVESTMENT IN R&D

Global MedTech market players are increasing their investment in R&D to develop the new and improve the existing medical devices and equipment. Simplified regulatory approval procedures for MedTech solutions will help them speed up the time to the market

USING GENERATIVE AI

Global healthcare leaders are implementing AI to increase efficiency and optimise workflows. This includes automating medical image analysis, processing large volumes of medical data, and individualising treatment approaches

CARDIOVASCULAR DISEASES DEVICES

The growing demand for minimally invasive procedures and the increasing prevalence of cardiovascular diseases worldwide are driving the development and improvement of devices for the treatment of cardiac diseases

3D PRINTING IN HEALTHCARE

The 3D printing technology for medical devices, which allows for the creation of personalised prostheses, implants, hearing aids and orthoses tailored to the physical characteristics of each patient, is becoming increasingly widespread

INTEGRATED DIAGNOSTICS

The combination of various diagnostic methods and advanced technologies into a single integrated system enables more accurate, fast and comprehensive diagnostics, which increases the efficiency of treatment

MEDICAL TECHNOLOGIES ENCOMPASS A WIDE RANGE OF INNOVATIVE SOLUTIONS THAT IMPROVE DIAGNOSTICS, TREATMENT AND MONITORING OF HEALTH CONDITIONS

KEY TYPES OF MEDTECH

MEDICAL EQUIPMENT

Tools and appliances used to detect, diagnose, monitor and treat diseases and disorders of the body

- Diagnostic devices and medical scanners for CT scan, MRI, U/S diagnostics, ECG
- Endoscopic systems for visual examination of internal organs
- Mammography systems, digital colposcopes for gynaecological diagnostics
- Laser systems for dermatological, ophthalmological and dental procedures
- Stationary equipment for monitoring patients' vital signs
- MV breathing support devices
- Minimally invasive surgery devices, such as robotic surgical systems, laparoscopes, surgical lasers and cryo tools

MEDICAL DEVICES

Help to restore body functions, replace or modify the structure of organs, tissues or physiological processes

- A bionic prosthesis that partially or fully replaces a lost organ and performs its functions, endoprostheses to replace a damaged or diseased joint with an artificial one
- Hearing correction and restoration devices, such as cochlear implants, hearing aids
- Medical exoskeletons for rehabilitation and mobility support
- Pacemakers for restoration and normalisation of heart rhythm disorders
- Electronic devices for monitoring neural activity and stimulation of nervous system structures
- Pre-filled syringes, insulin pens, insulin pumps, etc. allow patients to self-administer regular injections or a dose of the drug in an emergency

MEDTECH ENABLE MORE ACCURATE DETECTION OF DISEASES AND DEVELOPMENT OF MORE PERSONALISED TREATMENT PLANS, WHICH IMPROVES THEIR EFFICIENCY

KEY TYPES OF MEDTECH

REMOTE MONITORING DEVICES AND TELEMEDICINE

Remote medical services and remote patient monitoring technologies

- Virtual consultations with doctors facilitating access to healthcare services, especially for people with limited mobility or those living in remote areas
- Portable wearable smart devices such as smartwatches, fitness bracelets, T-shirts, non-invasive glucometers for continuous monitoring of patient's health, measuring blood pressure, heart rate, saturation, sugar and glucose levels, etc.
- IoT devices for remote patient monitoring or self-monitoring, such as glucose and blood pressure monitors, fall detectors, etc.
- Virtual consultation platforms
- Digital apps and platforms for tracking symptoms, medication reminders

ADVANCED TECHNOLOGY INTEGRATION

Helps improve the accuracy of diagnosing diseases or body function disorders and provide personalised healthcare services

- 3D printing and bioprinters allow creating personalised implants for surgery, as well as mechanical and training 3D prostheses for orthopaedic treatment
- AI is effectively used to analyse medical images and select individual treatment
- AI and BigData are able to process large volumes of data and quickly recognise patterns, which helps to speed up the process of treatment and prediction of diseases
- VR/AR technologies are used to treat psychological disorders and improve mental health, as well as help doctors safely hone their skills in a controlled environment and simulate surgical interventions

PROGRESS IN BIOMEDICAL AND DIGITAL TECHNOLOGIES ENABLES THE IMPLEMENTATION OF MEDTECH SOLUTIONS TO IMPROVE THE EFFICIENCY OF HEALTHCARE SERVICES

KEY TYPES OF MEDTECH

DIGITALISATION OF MEDICAL INSTITUTIONS

MedTech solutions for efficiency improvement and optimisation of medical institutions

- Cloud data centres allow medical institutions to efficiently and securely process large amounts of data and maintain electronic medical records
- Apps and web platforms that improve the interaction between patients and healthcare facilities (online appointment to a doctor, patient access to medical records and electronic health records, automatic reminders for visits, tests, etc.)
- Apps and AI doctors' assistants that use speech recognition technologies to automatically create medical records during a visit

IN VITRO (IVD) DIAGNOSTICS

Disease detection, drug sensitivity testing, general health monitoring

- Automated biochemical analysers and PCR tests for diagnosing diseases, hereditary diseases, infections, mutations, etc. in the laboratory
- Point-of-care (POC) testing with compact devices for testing right next to the patient
- Lab-on-a-chip (LOC) are mini devices that allow multiple analyses to be performed simultaneously
- Direct-to-consumer (DTC) tests - diagnostic or genetic tests offered directly to consumers without the need to visit a doctor

THERE IS A SIGNIFICANT NUMBER OF MEDTECH PLAYERS IN THE WORLD WHOSE TECHNOLOGICAL SOLUTIONS IMPROVE THE EFFICIENCY OF THE HEALTHCARE SECTOR

KEY PLAYERS ON THE GLOBAL MEDTECH MARKET

🇺🇸 ETHICON

A subsidiary of Johnson & Johnson. Manufacturer of surgical equipment, including HARMONIC, an electrosurgical ultrasonic coagulator and ECHELON, a stapler for endoscopic surgery

🇮🇪 MEDTRONIC

Manufacturer of innovative medical equipment and devices, including Micra, the world's smallest pacemaker that is implanted into the heart through a catheter, and Reveal LINQ, a subcutaneous heart monitor

🇺🇸 GE HEALTHCARE

Manufacturer of diagnostic equipment for MRI, CT scan, U/S diagnostics. Developer of Edison intelligent AI platform for medical data analysis

🇳🇱 PHILIPS

Manufacturer of equipment for MRI, U/S diagnostics, CT, radiography, as well as MV devices and patient monitors. Developer of Philips HealthSuite, a cloud-based digital platform for secure clinical data storage and sharing

🇩🇪 SIEMENS HEALTHINEERS

Manufacturer of diagnostic equipment, including the SOMATOM Force CT scanner and epoc blood analyzer, and the developer of AI-Rad Companion, an AI assistant for radiologists that analyses images and generates reports

🇺🇸 INTUITIVE SURGICAL

Manufacturer of robotic equipment for minimally invasive surgery, including the Da Vinci 5 robotic surgical system consisting of a surgical console, control panel and optical system

TECHNOLOGY TYPE

- Medical equipment
- Medical devices
- Remote monitoring devices and telemedicine
- Advanced technology integration
- Digitalisation of healthcare institutions
- In vitro diagnostics (IVD)

THE LEADING GLOBAL COMPANIES OFFER A WIDE RANGE OF MEDTECH SOLUTIONS THAT MEET THE NEEDS OF USERS AND MEDICAL INSTITUTIONS

KEY PLAYERS ON THE GLOBAL MEDTECH MARKET

🇺🇸 STRYKER

Manufacturer of equipment for neurosurgery and spine treatment, as well as orthopaedics (endoprostheses and hip implants). Developer of the Connected OR digital integration system, which connects all devices and images in the operating room

🇯🇵 FUJIFILM GROUP

Manufacturer of diagnostic equipment for MRI, U/S diagnostics and radiography, AI-based diagnostic and interventional endoscopy devices, and POC testing systems

🇺🇸 ABBOTT

Manufacturer of equipment for blood and DNA analysis, pathogen detection, etc., as well as cardiac devices for the treatment of cardiovascular diseases, such as cardiac occluders, stents, artificial heart valves, etc.

🇨🇭 ROCHE

A pharmaceutical company producing remote diabetes self-monitoring devices, such as glucometers, Accu-Chek insulin pumps, and equipment for medical laboratories, including haematological, biochemical and PCR tests, etc.

🇺🇸 TELADOC HEALTH

Offers virtual consultations with doctors, psychotherapists, and other specialists, and provides AI-based health monitoring platforms for people with chronic diseases, such as Livongo and myStrength

🇮🇸 ÖSSUR

Leading supplier of prosthetic and orthopaedic technologies, manufacturer of bionic prostheses for upper and lower extremities, as well as orthoses and supports

TECHNOLOGY TYPE

- Medical equipment
- Medical devices
- Remote monitoring devices and telemedicine
- Advanced technology integration
- Digitalisation of healthcare institutions
- In vitro diagnostics (IVD)

THE LAUNCH OF NEW MEDTECH SOLUTIONS, STRATEGIC AGREEMENTS BETWEEN MEDTECH COMPANIES SHOW THE RAPID DEVELOPMENT OF THE INDUSTRY

LATEST PRODUCT LAUNCHES

February 2024

Edwards Lifesciences Corporation, a US-based MedTech company, announced that its EVOQUE heart valve replacement system has become the first transcatheter therapy to receive FDA approval for the treatment of tricuspid regurgitation, a severe heart disease

January 2024

Medtronic, an Irish MedTech company, developed and received FDA approval for the Percept RC deep brain stimulation system with advanced BrainSense technology for personalised treatment of patients suffering from Parkinson's disease and epilepsy

April 2024

Zimmer Biomet, a US-based medical device manufacturer, announced the completion of the first-ever robotic shoulder arthroplasty surgery using the ROSA Shoulder System. The device is designed to provide surgeons with the flexibility to perform total shoulder arthroplasty using anatomical or reverse techniques

STRATEGIC INITIATIVES

January 2024 🇺🇸 🇺🇸

GE Healthcare, a US-based medical equipment manufacturer, acquired MIM Software, one of the leading providers of AI-assisted medical image analysis software. The company specialises in radiation oncology, molecular radiation therapy, diagnostic imaging, and urology

January 2024 🇺🇸 🇺🇸

BD, a US-based MedTech company, has announced a collaboration with Techcyte, a leading US provider of AI-based digital diagnostics, to offer an AI-based digital gynaecological cytology system for Pap testing

December 2024 🇳🇱 🇫🇷

Philips, a leading Dutch MedTech company, announced the expansion of its strategic partnership with Sim&Cure, a French provider of advanced digital solutions for neurovascular therapy. The agreement is aimed at strengthening Philips' position in interventional neurology by integrating Sim&Size software into Philips' Azurion visualised therapy platform

GOVERNMENTS SUPPORT THE DEVELOPMENT AND IMPLEMENTATION OF MEDTECH SOLUTIONS BY INVESTING HEAVILY IN R&D AND PATENTING MEDICAL TECHNOLOGIES

SOME EXAMPLES OF MEDTECH IMPLEMENTATION AROUND THE GLOBE

🇺🇸 USA

- $241,9 bn
- 1 050
- 3 670
- 500 000

In 2022, the US government spent $5.4bn on global healthcare R&D, accounting for over 55% of total global funding

🇩🇪 GERMANY

- $35,6 bn
- 1 443
- 856
- 250 000

Europe's largest MedTech market producing up to 500,000 various medical devices

In 2023, there were more than 48 MedTech clusters in operation. In 2022, the government spent $228mn on healthcare R&D

🇬🇧 GREAT BRITAIN

- $9,1 bn
- 500
- 280
- 154 000

Investment in the healthcare sector increased from £345m in 2016 to £3.13bn in 2021

Birmingham and West Midlands form the country's largest MedTech cluster[1] employing 24,000 professionals

MedTech market sales volume | Number of companies | Number of patents | Number of scientific experts

[1] The region hosts 35 centres of excellence in clinical research, 2 data centres and the UK's largest genomics laboratory centre

1.2 MEDTECH SECTOR OVERVIEW IN UKRAINE

UKRAINE'S HEALTHCARE SECTOR IS IN URGENT NEED FOR INNOVATIVE SOLUTIONS TO OVERCOME THE LONG-TERM CHALLENGES OF WAR

Ukraine's healthcare sector is facing a new wave of challenges with the outbreak of a full-scale war, which reinforces the need to introduce technology to improve the medical system. However, there is a shortage of medical technology manufacturers in Ukraine, as more than half of medical devices were imported in 2022, while Ukrainian manufacturers supply mostly injectables

MEDICAL PRODUCTS MARKET SIZE IN UKRAINE IN 2022

₴10.5 bn

MEDICAL PRODUCTS MARKET SIZE IN UKRAINE IN 2024

₴16.2 bn

ORTHOPEDIC IMPLANTATION MARKET IN UKRAINE IN 2024

₴2.5 bn

KEY CHALLENGES IN UKRAINE'S HEALTHCARE SECTOR THAT DRIVE THE NEED FOR TECHNOLOGY

LOSS OF MEDICAL INFRASTRUCTURE

As a result of rusian armed aggression, more than 2,000 medical facilities were damaged and destroyed in 2022-2025. Telemedicine solutions can expand access to healthcare services in areas with a lack of infrastructure

INCREASED NUMBER OF LIMB INJURIES

The age of amputees has decreased from elderly to younger people, which emphasises the need for innovation in the functionality of prostheses and wheelchairs to meet the needs of the younger generation

INCREASED ATTENTION TO MENTAL HEALTH

Around 40-50% of Ukrainians are in need of psychological assistance[1] as a result of the challenges of full-scale war. Digital solutions for mental health are essential to overcome this challenge

SPREAD OF CHRONIC DISEASES

The number of people in Ukraine with chronic diseases increases by 1% annually, with the highest prevalence of cardiovascular diseases, which prompts the development of digital solutions for monitoring patients' condition

[1]Source: National Institute for Strategic Studies, 2024; [2]Source: National Health Service of Ukraine, 2024; [3]According to the SMD company

MATURE COMPANIES IN THE UKRAINIAN MEDTECH MARKET ARE MOSTLY FOCUSED ON THE DEVELOPMENT AND PRODUCTION OF DIAGNOSTIC MEDICAL EQUIPMENT

CERTAIN PLAYERS ON THE UKRAINIAN MEDTECH MARKET

MATURE COMPANIES

UTAS

Manufacturer of medical equipment in the areas of patient monitoring (patient monitors), respiratory support (MV devices), ECG and telemedicine (telemetry complex)

RADMIR

Manufacturer of medical equipment, including mammography systems, ultrasound diagnostic instruments, short-wave magneto-thermy devices, and a range of physiotherapy apparatuses

HELSI UA[1]

Developer of the Helsi medical information system for Ukrainian healthcare institutions and an online healthcare service portal

KRAS

Manufacturer of X-ray diagnostic equipment, including the Medix X-ray diagnostic complex and X-ray protective clothing

TITAN-MED

Ukrainian manufacturer of hip replacements. The basis of the endoprosthesis is titanium or a cobalt-chromium alloy with titanium coating

GLOBAL LOGIC UKRAINE

The company offers software for smart defibrillators, blood donation and automated drug administration equipment, and develops applications for health tracking and analysis

IN GENERAL, THE MARKET IS REPRESENTED BY 30+ MEDICAL (AND LABORATORY) INFORMATION SYSTEMS FROM VARIOUS VENDORS

TECHNOLOGY TYPE

- Medical equipment
- Medical devices
- Remote monitoring devices and telemedicine
- Advanced technology integration
- Digitalisation of healthcare institutions
- In vitro diagnostics (IVD)

[1] As of 2024, part of the Kyivstar group

A SIGNIFICANT NUMBER OF MEDTECH STARTUPS WITH THEIR INNOVATIVE SOLUTIONS CONTRIBUTE TO THE DIGITALISATION OF HEALTHCARE FACILITIES IN UKRAINE

CERTAIN PLAYERS ON THE UKRAINIAN MEDTECH MARKET

STARTUPS

MARK.HEALTH

Developer of an AI-powered mobile application for automated medical data recording and monitoring of health indicators with subsequent referral to the appropriate specialist

ANIMA

A neuroscientific mental state tracker that uses eye tracking[1] and AI technologies to analyse attention biomarkers and help find solutions to improve psycho-emotional state

LIKI24 TA TERRALAB

Launched the Lab24 service, where users can register for extraordinary visits to laboratories or order a home test service

POLY DIAGNOSTICS

Developer of a diagnostic kit for the simultaneous detection of 26 bacterial and viral respiratory pathogens using the in vitro method

DRUGCARD

A platform for automatic monitoring of medical literature to optimise the routine processes of pharmaceutical companies and healthcare institutions

TAYRA.AI

An AI-powered doctor's assistant that takes notes and enters all medical information into the doctor's existing program during patient visits, which reduces paperwork

TECHNOLOGY TYPE

- Medical equipment
- Medical devices
- Remote monitoring devices and telemedicine
- Advanced technology integration
- Digitalisation of healthcare institutions
- In vitro diagnostics (IVD)

[1]Eye-tracking is a technology for tracking the position of the eyes, which allows you to observe, record the eye motion trajectory and identify subconscious reactions to visual elements

THE DEVELOPMENT OF THE SOFTWARE SOLUTIONS FOR TELEMEDICINE AND THE PRODUCTION OF BIONIC PROSTHESES ARE THE FOCUSES FOR UKRAINE;S MEDTECH

CERTAIN PLAYERS ON THE UKRAINIAN MEDTECH MARKET

STARTUPS

CARDIOLYSE

A cloud-based ECG and HRV analytics platform that enables remote real-time monitoring of heart health, as well as detection and prediction of dangerous heart diseases

HEARTIN

Developer of a smart T-shirt with built-in sensors that takes a real-time electrocardiogram and allows to track heart abnormalities

ESPER BIONICS

Developer and manufacturer of the Esper Hand robotic arm. The bionic prosthesis has 24 sensors that detect and process muscle activity and brain impulses to enable action in the arm

CHECKEYE

Developer of a cloud-based solution for detecting diabetic retinopathy using AI and ML-based fundus photographs

EXTRA VISION

A holographic 3D visualisation for planning surgical operations on the spine, brain and spinal cord based on scanned patient data

VERSI BIONICS

Developer of a bionic prosthetic arm with its own SW and neural network and a unique biaxial automatic rotating wrist

TECHNOLOGY TYPE

- Medical equipment
- Medical devices
- Remote monitoring devices and telemedicine
- Advanced technology integration
- Digitalisation of healthcare institutions
- In vitro diagnostics (IVD)

THE MEDTECH MARKET IN UKRAINE IS ACTIVELY EVOLVING, WITH MEDTECH STARTUPS ATTRACTING SIGNIFICANT INVESTMENT AND ENTERING NEW MARKETS

CERTAIN EXAMPLES OF MEDTECH ACTIVITY IN UKRAINE

2023

MedTech startup Whirl develops solutions to improve breathing. The Whirl Nasal Booster widens the nasal passages, making breathing easier, reducing snoring and improving oxygenation during physical activity. The device is made of flexible material, easy to insert and comfortable to wear.

Liki24.com, a healthcare service startup, launched Nasnaga, a subscription service for medical check-ups to enable regular health checks

All medical data is stored in the system, so users and their doctors can see the dynamics of changes in indicators

Founded in 2021, Mark Health, a Ukrainian MedTech startup, announced a $200,000 investment raised in 2023. The startup's product is a smartphone application that manages a patient's medical information, analyses health indicators, and provides early warnings of diseases

2024

Esper Bionics, a Ukrainian manufacturer of bionic prostheses, raised $5 million in investment from YZR Capital, EBRD and U.Ventures

The MedTech startup plans to increase production to 500 prostheses per year and, after a successful launch in the US, enter the global market

IP Office[1] is launching Lab2Market MedTech, a free acceleration programme for medical developments that will start on 17 February 2025. The programme for the commercialisation of scientific developments in MedTech is aimed at supporting and developing both teams that are just developing their idea and already established MedTech startups

Aspichi, a Ukrainian developer of a VR therapist assistant for mental health support, announced a partnership with Rocky Mountain Care, a US-based company that provides care services to patients in post-acute conditions

[1]Ukrainian National Office for Intellectual Property and Innovations (UANIPIO)– a state organisation subordinate to the Ministry of Economy of Ukraine

1.3

MEDTECH SECTOR'S STRENGTHS AND WEAKNESSES IN UKRAINE

UKRAINE'S MEDTECH INDUSTRY RECEIVES SUPPORT FROM THE STATE AND DEMONSTRATES POTENTIAL IN THE DIGITALISATION OF THE HEALTHCARE SECTOR

UKRAINE’S STRENGTHS IN THE DEVELOPMENT OF THE TECHNOLOGY SECTOR

- Active development in the direction of digitalization of the healthcare system, starting with the introduction of the eHealth ecosystem in 2017, which aims to automate the recording of medical services and management of medical information. The system stores data of 35 million patients (as of 2025)
- Government support to the MedTech sector and the availability of incentive mechanisms, such as the Diia.City legal regime. In particular, manufacturers of bionic prostheses in Ukraine can become residents of Diia.City, enjoying favourable tax conditions and access to investment attraction tools
- Ukraine has adopted the Healthcare System Development Strategy until 2030, which sets strategic goals for the implementation of AI, Big Data, telemedicine and other MedTech solutions in the healthcare system
- Developed private healthcare sector that is able to effectively implement innovative technologies. In 2020-2022, 2,143 new healthcare enterprises/institutions were registered in Ukraine
- Ukraine's developed IT market enables the development of digital solutions for the healthcare sector, including applications for disease monitoring and prevention, as well as mental health support
- In January 2025, the Ukrainian National Office of Intellectual Property and Innovations launched a free programme for medical developments, Lab2Market MedTech, aimed at supporting scientists and startups in commercialising innovations

MEDTECH SOLUTIONS FROM UKRAINIAN DEVELOPERS DEPEND HEAVILY ON IMPORTS AND ARE LESS COMPETITIVE DUE TO REGULATORY DIFFERENCES

UKRAINE'S WEEKNESSES IN THE DEVELOPMENT OF THE TECHNOLOGY SECTOR

- Ukraine is heavily dependent on imports of components for medical devices. For example, in 2024, about 80% of developers of individual prostheses in Ukraine used foreign components
- A significant number of MedTech do not reach the implementation stage due to a lack of skills and competencies among developers to commercialise research and insufficient resources to scale innovations
- The need to use the best international practices for standardization and certification of medical technologies in Ukraine to increase the export capabilities of Ukrainian MedTech developers and their access to international markets
- Lack of funding in the state budget for technology implementation reduces the ability to implement MedTech solutions
- The weak culture of disease prevention among the population of Ukraine leads to the overload of medical institutions due to the large number of patients with acute emergencies and the challenges of wartime. This reduces the ability of institutions to innovate
- The lack of high-tech production of medical equipment and devices in Ukraine reduces the competitiveness of Ukrainian manufacturers compared to international companies

1.4

BARRIERS AND OPPORTUNITIES TO BOOST MEDTECH TECHNOLOGIES IN UKRAINE

LOW SOLVENCY OF THE POPULATION AND MEDICAL INSTITUTIONS IS HOLDING BACK THE DEVELOPMENT OF THE MEDTECH MARKET, DESPITE THE OVERALL POSITIVE PROGRESS

BARRIERS TO THE DEVELOPMENT OF THE TECHNOLOGY SECTOR IN UKRAINE

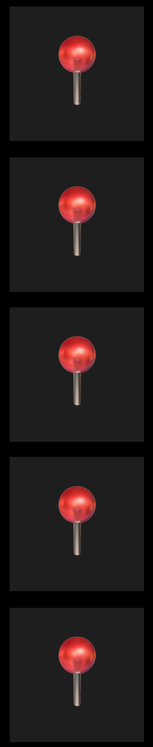
LACK OF TRUST IN PERSONAL DATA PROTECTION

Users in Ukraine are not ready to share personal data through digital MedTech solutions and/or do not enter it into digital platforms, which significantly limits their functionality

LOW SOLVENCY OF THE POPULATION

Innovative medical devices and services of medical institutions implementing MedTech solutions are quite expensive and remain unaffordable for the majority of the Ukrainian population

COMPLICATED PROCESS OF CERTIFICATION OF MEDICAL DEVICES



LIMITED SCIENTIFIC CAPACITY FOR MEDTECH DEVELOPMENT

The lack of educational programs that improve skills in developing MedTech solutions, as well as the lack of research infrastructure for the development, hinder the continuous progress of MedTech solutions in Ukraine

INSUFFICIENT FUNDING FOR TECHNOLOGY IMPLEMENTATION

International investors demonstrate a low level of confidence in the Ukrainian healthcare market due to regulatory differences and economic instability, which reduces the ability of healthcare facilities to find the budget for technology implementation

REGULATORY AND FINANCIAL SUPPORT FOR MEDTECH DEVELOPERS CAN ENHANCE UKRAINE'S INNOVATION AND EXPORT POTENTIAL

KEY OPPORTUNITIES TO PROMOTE THE DEVELOPMENT OF THE SECTOR

01

CREATING FAVOURABLE LEGAL CONDITIONS

- Creating a regulatory sandbox for testing innovative MedTech solutions in real market conditions, which will facilitate their scaling and accelerate their implementation
- Improving the procedures for certification and registration of medical devices, as well as procedures for conducting clinical trials of innovative MedTech solutions

DEVELOPING INTERNATIONAL COOPERATION

DIGITALISING THE HEALTHCARE SECTOR

02

DEVELOPING MEDTECH PRODUCTION FACILITIES

- Facilitating the launch of Ukrainian production of bionic prostheses and their components, as well as skin regeneration materials by providing grants and tax benefits, attracting international funding
- Introducing preferential conditions for international companies in the bionic prostheses area (with a focus on sensors and microprocessors) to facilitate the localisation of their production in Ukraine
- Launching grant programs and providing financial support through acceleration programs for MedTech startups in the areas of prosthetics, skin repair materials, and mental health solutions

INTERNATIONAL COOPERATION WILL BOOST THE CAPABILITIES OF THE UKRAINIAN MEDTECH INDUSTRY, WHILE DIGITALIZATION WILL INCREASE PUBLIC ACCESS TO MEDICAL SERVICES

KEY OPPORTUNITIES TO PROMOTE THE DEVELOPMENT OF THE SECTOR

CREATING FAVOURABLE LEGAL CONDITIONS

- Establishing partnerships with universities and research parks to launch joint R&D projects in the MedTech industry and educational programs for medical engineering and technology specialists
- Forming a MedTech cluster for MedTech startups, manufacturers and research institutions to facilitate knowledge exchange, as well as commercialization and technology transfer

DEVELOPING MEDTECH PRODUCTION FACILITIES

- Development of a national telemedicine platform and promotion of remote monitoring services in the healthcare sector
- Integrating AI solutions into state medical programs for disease diagnostics and administration of healthcare facilities. Implementing VR/AR for the rehabilitation of patients with motor disorders

DEVELOPING INTERNATIONAL COOPERATION

- Integrating Ukrainian MedTech specialists into European research networks and ensuring their participation in international clinical trials

DIGITALISING THE HEALTHCARE SECTOR

03

04

2

SECTION 2. KEY PROJECTS: MEDTECH

MEDTECH INDUSTRY STRATEGY ENVISAGES EIGHT PRIORITY AREAS AND IDENTIFIES THREE TOP PROJECTS FOR IMMEDIATE IMPLEMENTATION IN UKRAINE

PRIORITY AREAS

- DEVELOPMENT OF REHABILITATION CENTRES
- MEDTECH REGULATORY SANDBOX
- INTEGRATION OF AR/VR INTO MEDICAL SOLUTIONS
- SOLUTIONS FOR REMOTE PATIENT MONITORING
- WINWIN MEDTECH CENTRE OF EXCELLENCE
- MEDTECH CLUSTER
- NATIONAL TELEMEDICINE PLATFORM
- DEVELOPMENT OF EDUCATIONAL PROGRAMS IN MEDTECH

TOP PROJECTS

LOCAL PRODUCTION OF PROSTHESES

NATIONAL TELEMEDICINE PLATFORM

MEDTECH FOR SKIN REGENERATION

2.1 TECHNOLOGY PRIORITIES: MEDTECH

REGULATORY SANDBOX WILL ENABLE TESTING OF NEW MEDTECH SOLUTIONS THAT CAN BE USED FOR THE EFFECTIVE OPERATION OF REHABILITATION CENTERS

TECHNOLOGY DEVELOPMENT PRIORITIES

01 DEVELOPMENT OF REHABILITATION CENTRES

BUILDING A NETWORK OF MODERN HIGH-TECH REHABILITATION CENTRES SPECIALISED IN PHYSICAL, PSYCHOLOGICAL, NEUROLOGICAL AND SOCIAL REHABILITATION

ADVANTAGES

- Reducing the time required to restore the functional capabilities of military and civilians after injuries and wounds, accelerating adaptation to everyday life through the use of innovative technologies
- Providing an integrated approach to treatment and personalized rehabilitation programs
- Ensuring equal access to modern rehabilitation technologies in different regions of Ukraine

KEY MEASURES

- Attracting public and private funding
- Equipping the centres with advanced medical equipment, including robotic systems, exoskeletons, VR/AR solutions, telemedicine tools, etc.
- Preparing multidisciplinary rehabilitation teams[1] with the involvement of international experts to adopt practical approaches from the leaders of rehabilitation services

02 MEDTECH REGULATORY SANDBOX

CREATING A REGULATORY SANDBOX FOR PILOT TESTING OF MEDTECH SOLUTIONS FOR COMPLIANCE WITH NATIONAL LEGISLATION AND INTERNATIONAL STANDARDS IN A CONTROLLED ENVIRONMENT

ADVANTAGES

- Companies will have the opportunity to test their products in cooperation with medical institutions and laboratories, and the regulator will be able to improve the regulatory framework through an open dialogue with developers
- Pilot testing will identify potential problems and make adjustments before market introduction, increasing efficiency and safety
- With a better understanding of regulatory requirements and simplified certification procedures, Ukrainian companies will be able to obtain the necessary permits faster, both in Ukraine and abroad

KEY MEASURES

- Developing a legislative framework for creating a MedTech sandbox and testing requirements
- Attracting state funding and international grants for infrastructure and support of the MedTech sandbox
- Establishing partnerships with medical institutions and laboratories for effective testing and approbation of technologies

[1] Including physical and rehabilitation medicine physicians, physical therapists, occupational therapists, speech and language therapists, prosthetists, orthotists, psychologists and psychotherapists, and assistants

VR/AR TECHNOLOGIES AND TELEMEDICINE SOLUTIONS IMPROVE THE TREATMENT PROCESS AND SPEED UP THE RECOVERY OF PATIENTS

TECHNOLOGY DEVELOPMENT PRIORITIES

03 INTEGRATION OF AR/VR INTO MEDICAL SOLUTIONS

VR/AR TECHNOLOGIES FOR NON-PHARMACOLOGICAL TREATMENT, AS WELL AS IMPROVING THE EFFICIENCY OF PHYSICAL AND PSYCHOLOGICAL REHABILITATION OF PATIENTS

ADVANTAGES

- Reducing the number of patients with PTSD, ASD and other mental disorders and improving mental health through VR/AR therapy
- Accelerating recovery in physical therapy using VR applications with gamification elements
- Improvement of memory, cognitive and motor functions of elderly people with mild cognitive impairment or dementia

KEY MEASURES

- Supporting MedTech startups working on VR/AR solutions for medicine by providing grants and tax benefits
- Providing medical institutions with the necessary equipment and software to implement VR/AR solutions
- Integrating VR/AR technologies into the curricula of medical universities and colleges

04 SOLUTIONS FOR REMOTE PATIENT MONITORING

MOBILE APPLICATION DEVELOPMENT THAT ALLOWS TRACKING PATIENTS HEALTH METRICS IN REAL TIME AND PROVIDES ACCESS TO CLINICAL DATA, PATIENT HISTORY, LABORATORY TESTS, ETC

ADVANTAGES

- Due to constant monitoring of patients health, doctors can detect deviations in a timely manner and adjust the treatment plan
- It allows users to independently monitor health indicators and receive recommendations without the need for frequent visits to medical facilities
- It reducies the burden on medical institutions and staff through online consultations with doctors

KEY MEASURES

- Developing intuitive and easy-to-use mobile applications that take into account the needs of both patients and medical staff
- Ensuring compatibility of applications with healthcare information systems of Ukraine
- Implementing cybersecurity measures to protect patient data and comply with privacy standards

INFRASTRUCTURE SOLUTIONS FOR THE IMPROVEMENT OF COOPERATION WILL INCREASE THE NUMBER OF MEDTECH SOLUTIONS IN UKRAINE AND FACILITATE THEIR MARKETING

TECHNOLOGY DEVELOPMENT PRIORITIES

05 WINWIN MEDTECH CENTRE OF EXCELLENCE (COE)

CENTRE OF EXCELLENCE IN MEDICAL TECHNOLOGY FOR R&D, CERTIFICATION AND SCALING OF INNOVATIVE SOLUTIONS

ADVANTAGES

- Increasing in the number of MedTech developments due to more efficient R&D based on CoE laboratories
- Accelerating time-to-market by helping MedTech startups with certification and training within the CoE
- Creating a space for testing MedTech developments, which will optimize the process of their implementation in the healthcare sector, avoiding possible risks

KEY MEASURES

- Searching for a location for the construction of a CoE and forming a MedTech team for the first year of operation
- Attracing private funding for the development of R&D laboratories and testing infrastructure
- Developing partnerships with international MedTech companies and investment funds to attract investment

06 MEDTECH CLUSTER

CREATE A CLUSTER FOR THE INTEGRATION OF STARTUPS, MANUFACTURERS AND RESEARCH INSTITUTIONS IN THE MEDTECH INDUSTRY TO FACILITATE KNOWLEDGE SHARING, TECHNOLOGY TRANSFER AND EXPORT

ADVANTAGES

- Strengthening cooperation between business, science and government to increase the number of innovative MedTech solutions
- Increasing the capacity of Ukrainian MedTech companies to attract international investment
- Increasing the international presence of Ukrainian companies and products on the global market, contributing to the strengthening of Ukraine's innovation potential

KEY MEASURES

- Developing an interactive portal for communication and cooperation between representatives of the MedTech industry
- Conducting information campaigns to attract MedTech industry players to the cluster
- Conducting events to find investors and attracting funding for startups based on the MedTech cluster

TELEMEDICINE SOLUTIONS WILL IMPROVE ACCESS TO HEALTHCARE SERVICES, WHILE LAUNCHING EDUCATIONAL PROGRAMS WILL HELP TO UPSKILL PROFESSIONALS

TECHNOLOGY DEVELOPMENT PRIORITIES

07 NATIONAL TELEMEDICINE PLATFORM

CREATE A NATIONAL-LEVEL PLATFORM FOR THE REMOTE DELIVERY OF MEDICAL SERVICES, INCLUDING VIRTUAL CONSULTATIONS AND PATIENT MONITORING

ADVANTAGES

- Increase accessibility of medical services, in particular for people with limited mobility and IDPs
- Improving the care of patients with chronic diseases through remote monitoring services and solutions
- Creating a culture of disease prevention by facilitating access to consultations with doctors

KEY MEASURES

- Development and implementation of technical solutions for teleconsultation, telemetry and teleradiology with the involvement of IT and medical specialists
- Integrating MedTech telemedicine solutions for remote patient monitoring

08 DEVELOPMENT OF EDUCATIONAL PROGRAMS IN MEDTECH

LAUNCH OF EDUCATIONAL PROGRAMS TO TRAIN AND UPGRADE THE QUALIFICATIONS OF SPECIALISTS NEEDED FOR THE DEVELOPMENT OF THE MEDTECH SECTOR, SPECIFICALLY, PROFESSIONALS IN MEDICAL ENGINEERING AND MEDICAL TECHNOLOGIES

ADVANTAGES

- Formation of qualified personnel in the field of MedTech, capable of creating and working with innovative healthcare solutions
- Strengthening the development of scientific and innovative research in the field of MedTech
- Updating knowledge and mastering modern medical technologies by healthcare professionals

KEY MEASURES

- Establish cooperation with Ukrainian universities to develop and launch educational MedTech programs
- Creating a platform for advanced training of medical professionals in the field of medical technologies
- Establish partnerships with international medical universities to share experience

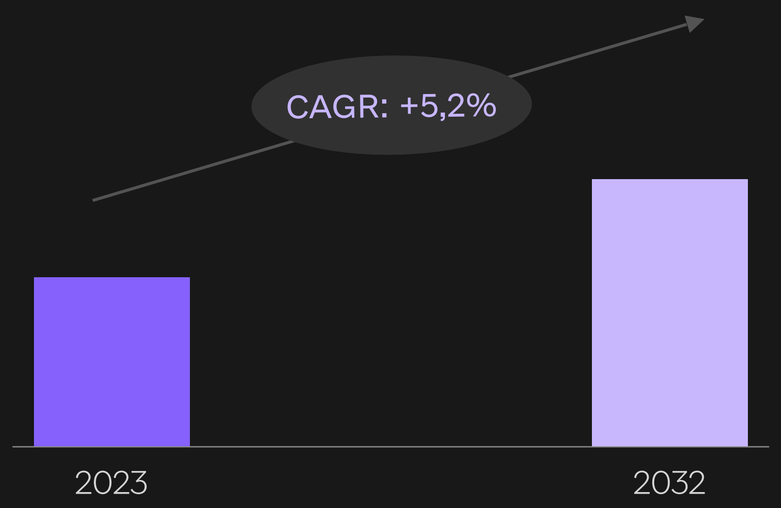
2.2

TOP PROJECTS: MEDTECH

TOPPROJECT 1 — LOCAL PRODUCTION OF PROSTHESES

DEVELOPMENT OF THE LIMB PROSTHETICS SECTOR AROUND THE WORLD

SIZE OF THE LIMB PROSTHETICS MARKET IN THE WORLD, USD BN



LARGEST REGION

37,9% In 2023

North America

LARGEST COMPONENT

41,1% In 2023

Prosthetic sleeve[1]

A prosthesis is a medical device used to replace a missing body part or improve the functionality of a damaged organ. There are mechanical (traction), bionic (myoelectric), hybrid, and special prostheses that help restore mobility and adapt to everyday life. Each of them performs different functions, depending on which part of the body is missing or damaged

In 2023, lower limb prostheses accounted for 62.40% of the market, while upper limb prostheses are considered a promising area of market development. Traditional prosthetics dominated the global market with a share of 63.23% in 2023, while electric prosthetics and joint replacement will grow the fastest during 2024-2032

EXAMPLES OF MANUFACTURERS

🇮🇸 ÖSSUR

is a manufacturer of bionic prostheses, including the Power Knee prosthesis with an active microprocessor for the lower extremities

🇬🇧 BLATCHFORD

is the world's lightest and most compact waterproof ElanIC microprocessor-based hydraulic joint

🇩🇪 OTTOBOCK

is a manufacturer of mechatronic knee joints, prostheses for upper and lower extremities

🇺🇸 TRS PROSTHETICS

is a manufacturer of special attachments and prostheses for sports and various hobbies

[1] The prosthetic receiving sleeve is the primary element of the connection between the patient's stem and the rest of the prosthesis, which ensures stability, balance, maximum comfort of the prosthesis to the stem and better coordination of movements.

TOPPROJECT 1

TOPPROJECT 2

TOPPROJECT 1 — LOCAL PRODUCTION OF PROSTHESES

GROWTH DRIVERS FOR LIMB PROSTHETICS AROUND THE WORLD

TRAUMATIC AMPUTATIONS

Traumatic amputations are most often caused by car accidents. Severe bone injuries and limb amputation surgeries as a result of road accidents drive demand for orthopaedic products and prostheses worldwide. According to the WHO, about 50 million people are injured in road accidents every year

POPULATION AGING

According to the UN, by 2050, the number of people aged 60 and over will increase to 2.1 billion, accounting for 21.6% of the world's population. Older people are more susceptible to diseases like osteoporosis and osteoarthritis, which increases the demand for orthopaedic solutions and hip prosthetics

GROWTH DRIVERS IN THE WORLD

TECHNOLOGICAL INNOVATIONS

The use of technological advances in prosthetics, such as 3D printing, sensor and VR technologies, neural interfaces, adaptive learning, and AI, are significantly improving the mobility, comfort, and functionality of prosthetics, thus significantly improving the lives of people with amputations

INCREASE IN THE NUMBER OF AMPUTATIONS

More than 1 million limb amputations are performed annually in the world. The prevalence of chronic, cardiovascular, and oncological diseases among the population will lead to an increase in the number of amputation operations

TOPPROJECT 1 — LOCAL PRODUCTION OF PROSTHESES

ENABLING AND CONSTRAINING FACTORS FOR THE DEVELOPMENT IN UKRAINE

ENABLING FACTORS FOR THE DEVELOPMENT IN UKRAINE

- As of 2024, there are 112 companies in Ukraine that provide rehabilitation aids. Of these, 64 are manufacturers of prostheses
- State support for the industry with a program of free-of-charge prosthetics, which will stimulate the growth of demand for Ukrainian prostheses
- Successful experience of using 3D printing technologies for manufacturing prostheses for the Ukrainian military

CONSTRAINING FACTORS FOR THE DEVELOPMENT IN UKRAINE

👉 DEPENDENCE ON IMPORTED COMPONENTS

Companies in Ukraine mostly manufacture prostheses from components from foreign manufacturers. The lack of local production of components makes the process of manufacturing prostheses dependent on the logistics and currency fluctuations, which makes it difficult to secure the necessary materials in a timely manner and increases the final cost of prostheses

👉 LACK OF STAFFING

The shortage of qualified specialists, such as engineers and prosthetists, makes it difficult to develop modern prostheses and customize them, and also hinders the scaling of high-tech production. In Ukraine, it was only in 2023 when the profession of prosthetist-orthotist was registered in the register of qualifications

👉 INSUFFICIENT LEVEL OF FUNDING

The lack of public and private investment limits the ability of manufacturers to purchase high-tech equipment, high-quality components, and carry out R&D. Innovations in prosthetics, such as bionic prostheses and adaptive systems, require significant investments, and without funding, these developments remain unavailable to domestic manufacturers

👉 LIMITED ACCESS TO SALES MARKETS

Insufficient presence and popularization of Ukrainian prosthesis manufacturers in the international market, high competition and lack of state support for export promotion. In addition, the complexity of product certification according to quality and safety standards, such as CE Mark and FDA, limits the export potential of domestic prosthetic and orthopaedic products

TOPPROJECT 1 — LOCAL PRODUCTION OF PROSTHESES

ASSESSMENT OF THE POSSIBILITY TO IMPLEMENT THE TOPPROJECT IN UKRAINE

MEASURES REQUIRED

HARMONISATION OF LEGISLATION

- Updating the regulatory framework in accordance with the EU classification of medical devices, including 3D printed products
- Introduce a funding mechanism including the CED[1] of clinical results

RAISING FUNDS

- Attracting investment in R&D and scaling up the production of high-tech prostheses, including through 3D printing
- Introduction of a reimbursement mechanism that will allow partial or full compensation for the cost of manufacturing prostheses

INFRASTRUCTURE AND STAFFING SUPPORT

- Acquisition of patents and necessary equipment for the innovative production of prostheses and rehabilitation devices
- Professional development of prosthetists and orthotists through international training programs

EXPECTED TIMELINE OF THE TOPPROJECT

Medium-term

2-3 YEARS

EXPECTED EFFECT

- ✓ We launched high-tech production of prostheses, including bionic prostheses and endoprostheses, their components and subassemblies, as well as care and rehabilitation products for people with disabilities
- ✓ National prosthetic production is integrated into the medical process and rehabilitation
- ✓ A medical technology assessment (MTA) tool was introduced to ensure the rational use of budget funds for the introduction of innovative and expensive medical devices

[1] A mechanism for applying a coverage with evidence development (CED) financing instrument to a specific patient population that is monitored over a period of time to further generate evidence, where the level or continuation of reimbursement is based on the clinical and economic outcomes achieved

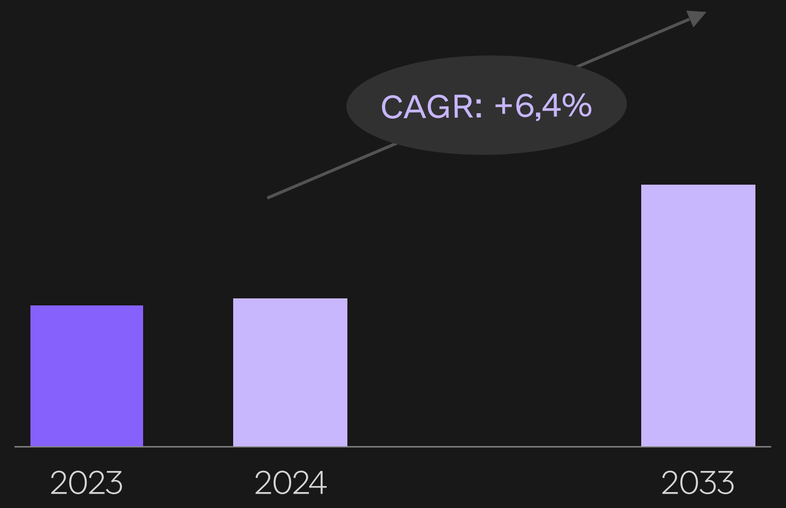
TOPPROJECT 1

TOPPROJECT 2

TOPPROJECT 2 — MEDTECH FOR SKIN REGENERATION

DEVELOPMENT OF THE SKIN REGENERATION SEGMENT AROUND THE WORLD

SIZE OF THE MARKET FOR SKIN REGENERATION PRODUCTS IN THE WORLD, USD BLN



LARGEST REGION

38,7% In 2023

North America

LARGEST SEGMENT BY PRODUCT TYPE

28,8% In 2023

Topical-use creams and ointments

- The market for skin regeneration products includes creams and ointments for topical use, hydrogel and hydrocolloid bandages, ointment mesh bandages, cohesive bandages, as well as VAC devices and laser equipment for skin regeneration and treatment of burns, wounds, scars, diabetic foot ulcers, pressure sores, surgical and traumatic injuries
- By application, the diabetic foot ulcer treatment segment had the largest market share of 23.77% in 2023. In terms of distribution channels, hospital pharmacies were the leaders in terms of market share of 32.2% in 2023, while hospitals and clinics dominated the end-users, accounting for 52.38% in 2023

EXAMPLES OF MANUFACTURERS

SOLTA MEDICAL

laser, radio and ultrasonic devices such as Fraxel, VASER, Thermage for skin regeneration

3M

V.A.C. Therapy negative pressure system for the treatment of chronic wounds, burns, injuries and stimulation of tissue regeneration

LUTRONIC

Healite II device for stimulating tissue regeneration, pain relief and accelerating wound healing

SMITH+NEPHEW

ACTICOAT silver nanocrystal dressing for healing burns and wounds and RENASYS system for VAC therapy

TOPPROJECT 2 — MEDTECH FOR SKIN REGENERATION

GROWTH DRIVERS FOR SKIN REGENERATION PRODUCTS AROUND THE WORLD

GROWTH DRIVERS IN THE WORLD

INCREASED PREVALENCE OF CHRONIC WOUNDS

Chronic diseases such as diabetes, psoriasis, obesity, and vascular disorders lead to deep wounds and ulcers that require special treatment and therapy to avoid complications and promote healing. As a result, MedTech manufacturers have focused on creating advanced products designed specifically for chronic wounds

EXPANSION OF DISTRIBUTION CHANNELS

Diversification of medical equipment distribution channels allows MedTech companies to reach new foreign markets and populations, which leads to market growth. These channels include retail and hospital pharmacies, specialised skin care stores, and online platforms

DEVELOPMENT OF REGENERATIVE MEDICINE

The field of tissue engineering and regenerative medicine is developing rapidly, offering advanced solutions for the repair and regeneration of damaged tissues and opening up new opportunities for the treatment of various wounds, burns and other skin injuries

GOVERNMENT INITIATIVES AND FUNDING

Governments around the world recognize the importance of and actively support R&D in this area. Funding for research and clinical trials is growing, which helps accelerate the development of new innovative skin regeneration technologies

TOPPROJECT 2 — MEDTECH FOR SKIN REGENERATION

ENABLING AND CONSTRAINING FACTORS FOR THE DEVELOPMENT IN UKRAINE

ENABLING FACTORS FOR THE DEVELOPMENT IN UKRAINE

- Availability of experts in the fields of bioengineering and regenerative medicine
- High demand for modern methods of treating skin injuries and restoring it among the military, veterans and civilians
- State support for restoring the health of victims of hostilities and the possibility of attracting international grants

CONSTRAINING FACTORS FOR THE DEVELOPMENT IN UKRAINE

👉 LIMITED PROCUREMENT BY THE PUBLIC SECTOR

The high cost of medical technologies and products for skin regeneration and treatment of burns and wounds reduces the potential for procurement of MedTech solutions from Ukrainian manufacturers at the expense of the state budget compared to manufacturers of traditional wound care products

👉 INSUFFICIENT INFRASTRUCTURE

Limited number of laboratories and medical centres equipped with modern equipment for R&D and clinical trials. Uneven access to innovative equipment in regional medical institutions

👉 LIMITED EXPORT POTENTIAL

High competition from foreign manufacturers, the established global MedTech market, and the inconsistency of Ukrainian medical device legislation with EU and US standards make it difficult for Ukrainian MedTech solutions for skin regeneration to enter the international market

👉 IMPERFECT REGULATORY FRAMEWORK

Lack of clear laws and regulations for registration and certification of innovative skin regeneration technologies. The process of approving new technologies takes a long time due to a number of complex bureaucratic procedures

TOPPROJECT 2 — MEDTECH FOR SKIN REGENERATION

ASSESSMENT OF THE POSSIBILITY TO IMPLEMENT THE TOP PROJECT IN UKRAINE

MEASURES REQUIRED

REGULATORY SUPPORT

- Harmonising the legislation with EU standards for clinical trials

INFRASTRUCTURE DEVELOPMENT

- Establishing MedTech regeneration centres on the basis of leading hospitals or institutes
- Attracting investors, grants from international organizations to equip laboratories with equipment for R&D and technology implementation

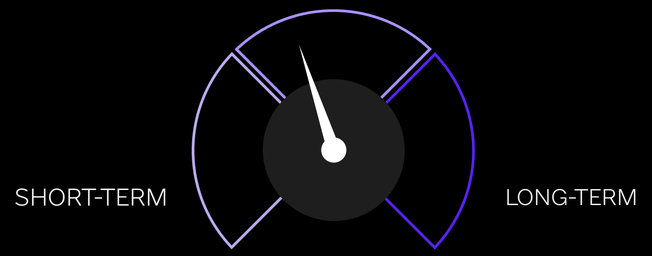
DEVELOPMENT OF R&D ACTIVITIES

- Promoting R&D and its initiation by the National Research Foundation for MedTech
- Developing international partnerships with companies, HEI and research parks to implement joint R&D and clinical trials in the field of skin regeneration

EXPECTED TIMELINE OF THE TOPPROJECT

Medium-term

2-3 YEARS



EXPECTED EFFECT

- ✓ Reducing barriers to care through the digitalization of mental health
- ✓ Increasing the effectiveness of treatment of mental disorders through the possibility of continuous monitoring of users' condition and progress in therapy
- ✓ Improving the quality of life and productivity of the Ukrainian population by reducing anxiety, depression and other mental disorders