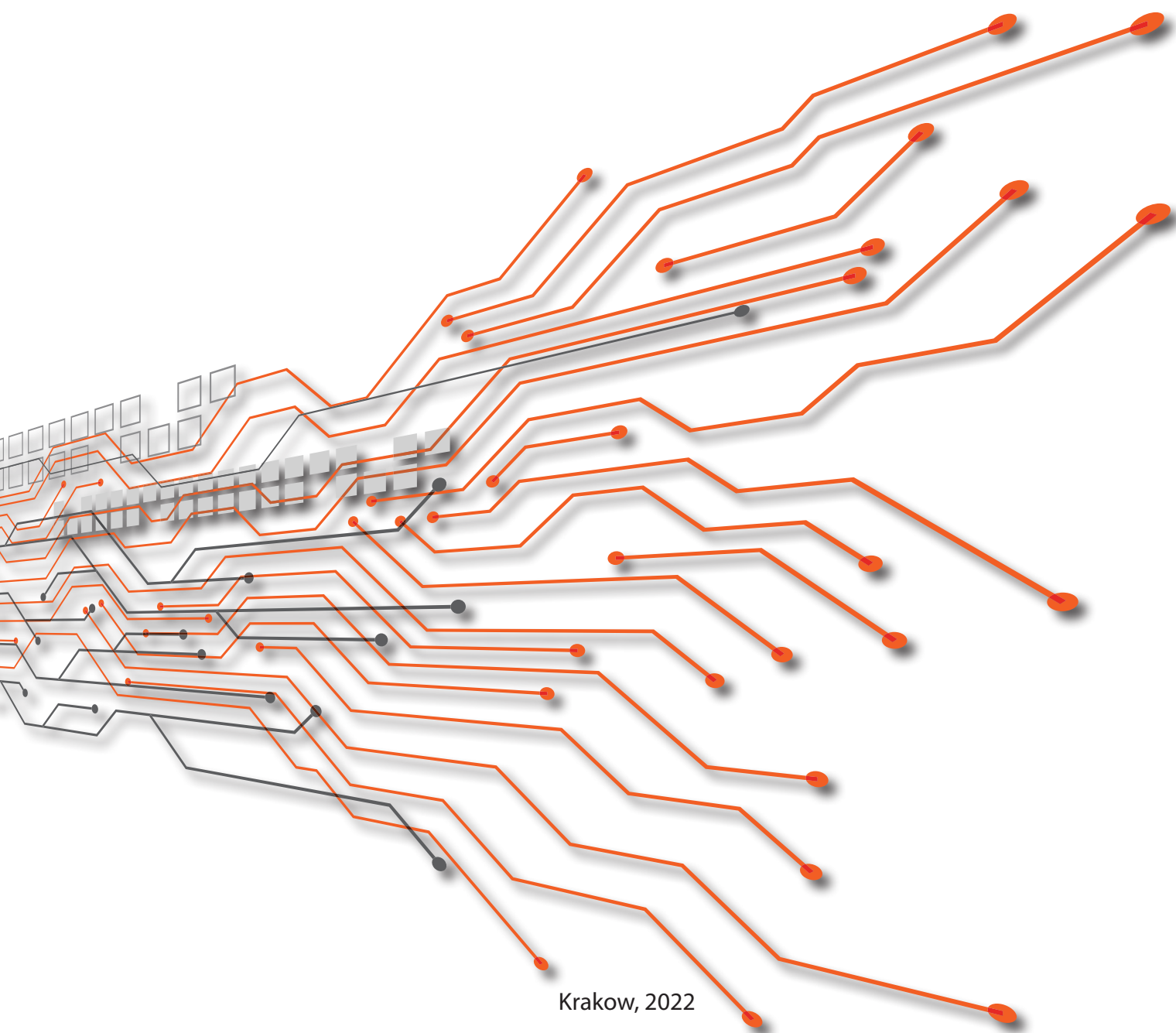


ECONOMIC POTENTIAL OF MAŁOPOLSKA

NEW TECHNOLOGIES, INNOVATION, AND R&D SECTOR
POWER UP YOUR BUSINESS IN MAŁOPOLSKA 3



Krakow, 2022



INTRODUCTION

The Małopolska Region is one of the most interesting and best-developed areas in Central Europe. It is the historical cradle of the Polish state. The royal city of Kraków, with its numerous monuments, is known throughout the world. Małopolska is also the Tatra Mountains, the highest Polish mountains, a thriving academic centre and home to meetings, exhibitions, theatre performances, concerts, and sport events.

Since 1989, when Poland again found itself among free democratic states, Małopolska has been consistently building its economic, social and cultural potential. European Union funds, available since 2004, rational planning through successive Development Strategies for the Małopolska Region and the traditional values of the regional community such as industriousness, taking on new challenges, searching for the best methods of action, and openness to international cooperation – have all made a significant contribution to the development of this region.

As part of the Regional Innovation Strategy, the most important and prospective branches of the economy in Małopolska were defined as follows:

- Life science
- Sustainable energy
- Information and communication technologies
- Chemistry
- Manufacture of metals and metal products and non-metallic mineral products
- Electrical and mechanical engineering
- Creative and leisure industries

In our publications, we would like to introduce you to the best developing sectors of the Małopolska economy.

Welcome to Małopolska.

The team of the project "POWER UP YOUR BUSINESS IN MAŁOPOLSKA 3"
WWW.POWERUP3.PL

The publication was prepared as part of the project : "Power Up Your Business in Malopolska 3",
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Free publication



www.powerup3.pl



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Małopolska's economic potential

MAŁOPOLSKA BASIC DATA (Q4 2021)

• Population	3,413,900
• Unemployment rate	4,8%
• Population by economic age groups: 15-64	67%
• Average monthly gross salary	PLN 5,554.4 (approx. EUR 1,240.00)
• Average employment in the enterprise sector	516,500
• Domestic enterprises	425,547
• Foreign enterprises	2057 (78% in Krakow)

KRAKÓW <https://krakow.stat.gov.pl/>

• Unemployment rate	3,1%
• Average monthly gross salary	6,258.80 PLN (approx. 1,390.00 EURO)

DEVELOPMENT OF AREA

• Agricultural lands	60,7 %
• Forest lands	30,3%
• Built-up and urbanised areas	6,6%
• Wastelands	0,7%

INVESTMENT AND EXPORT

Value of Foreign Direct Investment: USD 21.9 billion (1989-2016)

Countries of FDI origin: European Union member states, USA

FDI sectors: industry, construction, services, automotive,

Largest foreign investors: MAN Trucks, VALEO, Motorola, Linde, Arcelor Mittal

Export value EUR 10.34 billion / PLN 44.56 billion /2019

Main export destinations: Western Europe (EU), Russia, China, USA

Exported products: automotive, machinery, furniture, food products, chemicals

Largest export companies: Grupa AZOTY S.A. Grupa KĘTY S.A. MASPEX, Comarch,

PROJECT “POWER UP YOUR BUSINESS IN MAŁOPOLSKA 3”

PROJECT GOALS

- Promoting Małopolska's export and investment range,
- Participating in economic missions and fairs,
- Providing comprehensive information for Małopolska's exporters (Małopolska Exporters' Club),
- Participating in the Vanguard Initiative,
- Building Małopolska's economic brand.

ACTIONS

As part of the Małopolska Exporters' Club, we prepare Małopolska's companies for expansion onto international markets.

We conduct training sessions aimed at integrating Małopolska exporters' environment, exchanging experiences and undertaking joint export initiatives.

Participation in the Vanguard Initiative events enables entrepreneurs to compete more effectively on European markets by improving production efficiency, acquiring new professional knowledge and reducing resource consumption.

We run a series of workshops and working events for Małopolska's companies and invite people to participate in these events and conferences organized by the Vanguard Initiative.

We organise foreign economic missions (B2B) to Małopolska

We participate in trade fairs abroad – Germany, Spain, UAE, Kazakhstan

ABOUT THE PROJECT

The project is implemented under Priority axis 3. Entrepreneurial Małopolska, Measure 3.3 Internationalisation of the Małopolska Economy, Sub-measure 3.3.1 Promotion of the Małopolska Economy, the Regional Operational Program for Małopolska 2014–2020.

Project budget: PLN 4,101,814.57

Project implementation date: September 2020 – June 2023.

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www.powerup3.pl

New Technologies Sector in Małopolska

The dynamic growth of the new technology companies sector in Małopolska has been influenced primarily by three factors:

- Powerful academic centre (29 universities), world-class computer science faculties:
 - University of Science & Technology <https://www.agh.edu.pl/en/>
 - Cracow University of Technology <https://www.pk.edu.pl/>
 - University of Economics <http://archiwumuek.uek.krakow.pl/en/>
 - Jagiellonian University <https://en.uj.edu.pl/en>
- Sustained growth of foreign investments using advanced information technologies, such as Cisco, Google, IBM, Motorola, Delphi, Capgemini, HCL
- Establishment of domestic IT companies such as Comarch, Silver Media, CanPack, Interia, Diskus, Onet, etc.

In Małopolska, primarily in Kraków, there are currently around 230 foreign companies from the BPO, SSC and IT sectors. Together, they give employment to approx. 80 thousand people from all over the world.

The industries of new technologies, life science, computer games, new energy technologies, modern building materials or software development use a wide base of research and development institutions located in the Małopolska Region. Małopolska is ranked third in terms of inventions submitted and

patents granted in Poland. Additionally, it has the highest share of R&D centres among the 8 largest centres in the world, amounting to 17% (2019). Almost 600 entities conducting R&D operate here.

In Małopolska, there are 106 accredited testing laboratories and 11 calibration laboratories. In addition, 3100 ordinary laboratories operate in the region. 807 of them are located within Małopolska's scientific institutions (universities, institutes of the Polish Academy of Sciences and research institutes). Krakow Technology Park (www.kpt.krakow.pl) has the status of a Digital Innovation Hub.

Małopolska is home to almost 30% (20 out of 70) of all projects included in the Polish Map of Research Infrastructure (2020). These undertakings represent: technical sciences and energy, biological-medical and agricultural sciences, physical sciences and engineering, digital research infrastructures.

In Małopolska region there are approx. 15 cluster projects, including:

- LifeScience Cluster Kraków www.klasterzi.pl/
- Sustainable Infrastructure Cluster www.klasterzi.pl/
- South Poland Cleantech Cluster www.spcleantech.pl/
- Cluster of Information Technologies in Building Industry www.bimklaster.org.pl/
- MedCluster www.medcluster.pl
- Modern Cast Cluster www.moderncast.pl

INNOVATION INDICATORS (Q1 2020):

- Poland's highest GERD (expenditure on R&D) and second highest BERD (business expenditure on R&D in relation to GDP): 1.85 and 1.17 respectively.
- Average regional share of business expenditure on R&D outlay: 63.4%.
- Second among Polish regions in terms of the total amount of internal outlay for R&D activity: PLN 3 billion.
- Second in terms of total R&D personnel (34,500) and personnel with a PhD degree (7,300).
- Second region in terms of share of revenue from sales of innovative products in the total sales revenue of industrial enterprises: 12,1%.
- Fifth in terms of share of revenue from sales of products of entities classified as high and medium-high technology: 39,1%.



The following projects are being implemented within both the Regional Operational Programme for the Małopolska Region 2014-2020 and EU programmes

Cross-border Ecosystem for Industry 4.0
– ECOS4IN (INTERREG CENTRAL EUROPE)
The Project supports close cooperation

between stakeholders, who are involved in smart specialisation strategies (RIS3) for the implementation of Industry 4.0. The Project aims to develop and implement tools and services to strengthen linkages within innovation systems in partner regions.

Supporting knowledge capacity in ICT among SME to engage growth and innovation - SKILLS + (INTERREG EUROPE)
The Project aims to support public policies by promoting information and communication technologies (ICT) skills among SMEs in rural areas so as to help in making full use of the opportunities offered by a digital single market and the benefits of digital economy.

Research and development infrastructure for enterprises - the support covers investments in research equipment and other types of infrastructure necessary for conducting R&D activities that are designed to launch or expand the activities of laboratories or research and development departments of enterprises or create or develop research and development centers in enterprises etc.

Innovation vouchers - for SMEs wishing to purchase: industrial research and/ or experimental development services, design services or consulting services.

Małopolska Innovation Centers
- funds for supplementing the
infrastructural potential of business
environment institutions - innovation
centers, research and development
infrastructure and/ or pro-innovation
services for technological enterprises.

Sources:

- 1) <https://www.malopolska.pl/biznes/innowacje/profil-innowacyjny-regionu>
- 2) <https://www.mcp.malopolska.pl/realizowane-dzialania/rpo-wm-2014-2020>
- 3) <https://businessinmalopolska.pl/o-regionie/malopolska>
- 4) <https://www.malopolska.pl/biznes/bizneswmalopolsce/instytucje-wspierajace-biznes/klastry-w-malopolsce>
- 5) <https://krakow.stat.gov.pl/en/>

Largest ICT companies in Małopolska Region

Akamai Technologies, International AG – is the leading content delivery network (CDN) services provider for media and software delivery, and cloud security solutions.

www.akamai.com

Comarch – a producer of IT solutions and an integrator for the largest of Polish and global brands.

www.comarch.co.uk

CD PROJEKT RED – world leader in video games.

www.en.cdprojektred.com

Ericsson – a leader on the Polish market in the field of solutions for 5G technology implementation.

www.ericsson.com

ESET – one of the most innovative companies in the IT security industry.

www.eset.com

IBM BTO Business Consulting Services – one of the leading international companies providing professional services in the field of business process support.

www.ibm.com

Novomatic technologies – one of the biggest international manufacturers and operators of gaming equipment and employing more than 25,000 staff members.

www.novomatic-tech.com

Luxoft – a DXC Technology Company, is a digital transformation services and software engineering firm providing bespoke IT solutions that drive business change for customers globally.

www.luxoft.com

Ailleron – an expert in introducing efficient and innovative technological solutions that allow for gaining market advantage through increasing sales potential.

www.ailleron.com

Motorola Solutions Poland – a leader in the telecommunications industry.

www.motorolasolutions.com

Nokia Networks Technology Center – develop and deliver the industry's only end-to-end portfolio of network equipment, software, services and licensing that is available globally.

www.nokiakrakow.pl/en

Sabre Polska – Sabre's software development centre in Kraków has created an employee friendly work environment where you will work with talented colleagues on interesting and challenging software projects.

www.sabre.com

II.2. Companies (by specialisation):

BUSINESS PROCESS MANAGEMENT / RAPID APPLICATION DEVELOPMENT

WEBCON – a manufacturer of a platform for developing business and applications.

www.webcon.com

IT SOLUTIONS Insoft – a leading manufacturer of software for retail systems.

www.insoft-retail.com

BANKING & FINANCE

Visiona – has supplied the financial sector with IT systems since 2003.

www.visiona.pl

VSoft – a Polish company, which has been designing and implementing proprietary software.

www.vsoft.pl

SYSTEM INTEGRATION & SECURITY

Axence – comprehensive professional solutions for the management and security of IT infrastructure for companies and institutions all over the world for more than 16 years.

www.axence.net/en/

DISKUS Polska – complex solutions for business, ensuring the highest possible level of data security for data storage, deletion and management.

www.diskus.pl

Maxto – a recognized integrator on the Polish market in the field of telecommunications, ICT and software.

www.maxto.pl



DATABASE SOLUTIONS

EBIS – comprehensive services in the field of analytical systems with Business Intelligence..

www.ebisgroup.com

Itcube Software – ITCube Software, initially focused on individual projects for intranet business solutions.

www.itcube.pl

MOBILE DEVICES, ACCESSORIES, COMPONENTS

Landotech Mobile – is a distributor of mobile solutions – mobile phones, tablets and telecommunications devices for business purposes.

www.landotechmobile.pl

CLOUD COMPUTING

Appliscale – is an innovative IT consulting company specialising in Adtech, Cloud and Scalability solutions, headquartered in Kraków and operating globally.

www.appliscale.io

Ceesoft – provide world-class IT managed security services.

www.ceesoft.pl

LBooking Smart Concept Hotels – innovative technological solutions for the hotel industry.

www.lbooking.online

Polcom Data Center – created to guarantee the clients access to security, availability of data and IT equipment.

www.polcom.com.pl

BESPOKE & EMBEDDED APPLICATIONS

Berrylife – specialise in implementing advanced multimedia solutions for advertising, education and entertainment.

www.berrylife.pl

SoftQ – coding both simple and CMS backend websites, and dedicated web applications as well.

www.web.softq.pl

EDUCATION

Brainly – is the world's largest peer-to-peer learning platform for teachers, parents and students to assist them with solving homework, problems and learning.

www.brainly.com



GAMES

Bloober Team – an independent producer of video games, the games are known for their difficulty and challenging gameplay.

www.blooberteam.com

Duckie Deck – a kids company. Company's goal is to support healthy and well-rounded development in the youngest technology users, while also creating opportunities for learning and playing to extend beyond the virtual world.

www.duckiedeck.com

FreeMind – a computer games, entertainment and software developer.

www.freemind.pl

Gamedesire – one of the leading developers of free-to-play social network games in Europe.

www.company.gamedesire.com

ALL IN! GAMES – a team of passionate specialists with extensive knowledge about the video game industry.

www.allingames.com

BECLOSE – BECLOSE mission is to design intelligent, user friendly products to make things easier and more exciting. 'Locator' project allows users to be located in the indoor space and permits you to quickly spot easily any place in the building

www.beclose.eu

Frozen District – an independent publisher and creator of computer games. Support for development teams from all over the world and cooperation in the financial, quality and design fields.

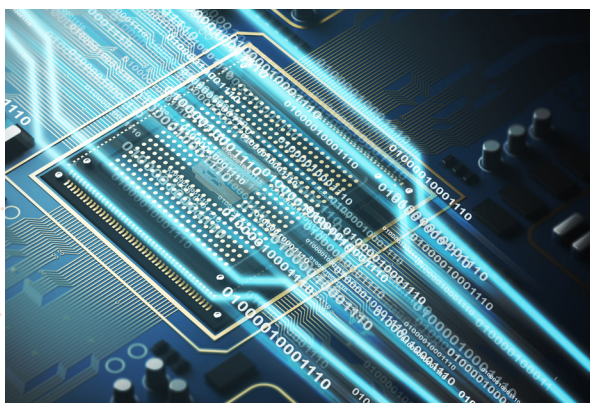
www.frozendistrict.com

In Images Tomasz Chudy – game development studio established in Kraków. Truck, farm, car simulators on PC Windows, iOS, Android.

www.inimages.pl

MOONLIT – an indie games studio combining team talent with experience as a software house – all in order to create games they'd love to play themselves! macOS, iOS, Android.

www.moonlit.games



INTERNET OF THINGS

AVSystem – offers a wide range of products aimed at many other industries.

www.avsystem.com

Husarion – autonomous mobile robots made simple – hardware, software and connectivity solutions which allow you to build your own autonomous systems easily and efficiently.

www.husarion.com

S-Labs – IoT laboratory focused on powering the world with smart energy. Smart Energy Solution consists of hardware and software infrastructure, connecting users with energy and telecom providers.

www.slabs.pl

TRANSPORT & LOGISTICS

DataConsult is a Polish manufacturer of comprehensive IT solutions designed to support the management of internal logistics in companies.

www.dataconsult.pl

HEALTH & TELEMEDICINE

MedApp – an innovative company offering new generation of unique telemedicine solutions.

www.medapp.pl

Silvermedia – an innovative IT company, created pricing models and systems to support management decisions.

www.silvermedia.eu

Prodromus – their main product is Proddobot – automated gait trainer for rehabilitation of the lower limbs for children with a wide spectrum of diseases i.e. cerebral palsy or dystrophy.

www.prodromus.com

T-MedSys – offers the implementation and support of TeleDICOM applications for medical imaging.

www.tmedsys.pl



Findair – control your asthma with FindAir smart inhaler.

findair.eu

Shape.Care – a solution providing continuous training analysis – performance, technique and progress.

www.shape.care

Airly – creates the most innovative and effective tools for measuring the air quality and providing the most reliable, real-time data about pollution to the largest possible number of people.

airly.eu

SOFTWARE DESIGN

OVOO – creation of specialised solutions for Telecommunications Service Providers.

<https://ovoo.pl/>

FELG Software – FELG translates your ideas into a concrete app. Apps should be considered attractive, awesome, smart, easy-to-use, client friendly.

www.felgsoftware.com

MULTIMEDIA, DESIGN & ANIMATION

Printbox – next-gen software for your photo product business – the fastest developing software in the whole photo industry.

www.getprintbox.com

MOBILE APPLICATIONS

Amistad – operates on the market of geolocation, navigation, tourism, and information – mobile applications, websites, maps and guides.

www.amistad.pl

Miquido – delivers digital products based on data science and artificial intelligence.

www.miquido.com

Mobiltek – helps companies reap the benefits of IT and mobile solutions.

www.mobiltek.pl



Softnauts – is a mobile and web development company located in the Polish Silicon Valley – Kraków.

www.softnauts.com

Railwaymen – Turns your amazing ideas into incredible apps. Service includes developing innovative and comprehensive software solutions based on business requirements and its analysis.

www.railwaymen.org

Vasco Electronics – a seller and manufacturer of electronic translators and mobile devices.

www.vasco-electronics.com



SMART CITY & INTELLIGENT BUILDINGS

GRENTON – a manufacturer of a complete intelligent house system.

www.grenton.pl

Eveo – a modern company creating and developing YRVE software, intended for the rapidly developing Digital Signage industry.

www.urve.co.uk

Revotec – specialising in the commissioned production of electronic devices in accordance with the relevant documentation.

www.revotec.pl

Velis – a leader in the PropTech sector.

www.velistech.com

INDUSTRY

Ecrú – a leading interior and furniture design software developer.

www.ecrusoftware.com

Telkom-Telos – a manufacturer of unconventional telephone sets, as well as teletechnical equipment.

www.telos.com.pl

Codibly – focused on harnessing cutting-edge technology, talent, and innovation solutions for the Energy and Utilities industry in particular to make clean energy more cost-effective and available for commercial and residential end-users.

www.codibly.com

Estimote Poland – provides complete SDKs to get you quickly starting building context-aware apps.

www.estimote.com



Miquido – mobile apps which fit into companies' business strategy.

www.miquido.com

SYNERISE – AI-Driven Growth Operating System.

www.synerise.com

OUTSOURCING

Infolet – specialising in outsourcing IT professionals.

www.infolet.pl

SALES

2040 – uses deep learning algorithms and conversational UI to create a new category of software – an AI powered assistant for sales teams.

www.2040.ai

Income – mobile programs working on any type of portable terminals and smartphones, significantly increasing the efficiency of mobile employees.

www.icmobile.pl/en



KS BUSINESS SOLUTIONS – mobile sales systems, integrated systems – ERP, CRM and ECM and large database applications.

www.ksbs.pl

MAMOKO TECHNOLOGIES – The basis of the entire EYESPERT system is eyeCORE – a unique, proprietary algorithm for identifying and searching for similar shapes.

www.mamoko.com

MIDERO – dedicated 3D product configurators as well as CRM and ERP systems to optimize sales processes.

www.midero.pl

NESS SERVICES – InstaGo – direct messages, reaches target group, openability at + 70%, attaching posts, photos, links and graphics.

www.instago.social

IT CONSULTING

INLEO – designing IT solutions like IT architecture and strategy, information audits as well as business mentoring and analysis.

www.inleo.pl

Digital First AI – a startup that creates platforms enabling sales funnels and marketing strategies using Artificial Intelligence.

www.linkedin.com/company/digital-first-ai/



The examples presented in the study do not constitute the complete range of products or services offered by the industry. The information contained in the study serves as an incentive to contact the employees of the MARR S.A. who have access to the complete database of companies from Małopolska in individual industries and offer assistance in establishing trade relations.

Małopolska 2021–2027

Plan: 2,32 bln Euros for implementing strategic objectives:

INTELLIGENT AND COMPETITIVE REGION	(15 %)
ENERGY AND ENVIRONMENT	(27,8 %)
MOBILE MAŁOPOLSKA	(8,7 %)
MAŁOPOLSKA SOCIAL INFRASTRUCTURE	(12,9 %)
SOCIAL MAŁOPOLSKA	(24 %)
MAŁOPOLSKA CLOSER TO ITS INHABITANTS	(7,6 %)

CHALLENGES:

- Shifting business models towards INDUSTRY 4.0-based economy
- Increase in trade exchange, INTERNATIONALISATION of SMEs, contact with non-European countries
- Increasing the offer of large INVESTMENT AREAS
- Strengthening the ZONES OF ECONOMIC ACTIVITY to attract investors
- ECONOMIC PROMOTION of the region

Regional Development Strategy: „Małopolska 2030” (2020) Priorities

INTELLIGENT AND COMPETITIVE REGION:

- Developing and strengthening of research and innovation capabilities.
- Benefitting from digitalization for citizens, businesses and local government.
- Strengthening the growth and competitiveness of SMEs and job creation through productive investment.
- Developing skills in smart specialisation, industrial transformation and entrepreneurship.

