


FINANCIAL RESULTS FOR Q1 2022

9 May 2022

# AGENDA

1. EXECUTIVE SUMMARY
  2. ABOUT VIGO
  3. SUMMARY OF Q1 2022 ACHIEVEMENTS
  4. FINANCIAL RESULTS FOR Q1 2022
  5. PERSPECTIVES
- 



## SUMMARY OF ACHIEVEMENTS IN 2021

- Completion of technology and production facilities expansion, including a cleanroom to enable production of up to 100,000 detectors per year
- Impact of the previously-scheduled commissioning of the new above-mentioned investment on Q1 2022 results: sales revenues PLN 11.7 million, adjusted EBITDA\* PLN 2.8 million, adjusted net profit PLN 0.9 million
- Continuation of new technologies development and commercialisation process of existing and new solutions in line with Initiatives adopted in Strategy 2026
- Commencement of direct sales through the US branch
- Implementation of the new brand VIGO Photonics
- Presentation of VIGO solutions to potential new customers through active participation in international conferences and trade fairs
- Acquisition of a new start-up through the investment incubator VIGO Ventures
- Intensive efforts to qualify alternative suppliers for components manufactured in Russia before the war in Ukraine - planned completion: July 2022



Epitaxial materials



Photon detectors



Detection modules



**VIGO**  
PHOTONICS

ABOUT VIGO

# VIGO IN A NUTSHELL



**35** years of experience  
and operations

**Headquarters in Poland**  
and branch offices in USA and Taiwan

**220** highly qualified  
and experienced experts  
(1 Professor, 14 PhDs and >60 engineers)

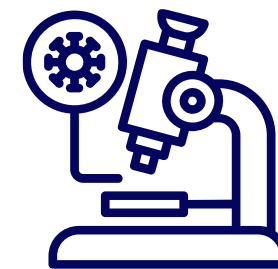
**25** distributors in **18** countries  
supporting sales of solutions

Listed on the WSE since **2014**

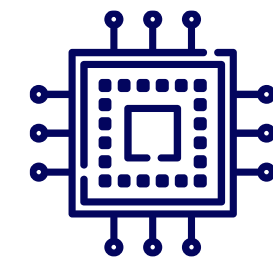
Approx. **PLN 500** million  
capitalisation

Support for stable long-term  
**shareholders**

**VIGO is a world leader in high-tech solutions - the most advanced mid-infrared photonic detectors, detection modules and semiconductor materials**



Operating in a fast-growing infrared market supported by demand and economic-technology trends



Unique technology and innovative, high-end solutions, tailored to customer needs



6,500 m<sup>2</sup> of production space - complete production line for semiconductors



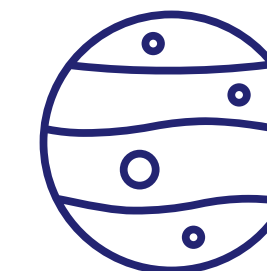
Ambitious development strategy to maintain a 20-30% annual growth rate



Business relationships with global corporations (Safran, Emerson, Caterpillar, TRUMPF, to name a few)



Over 2.5 times growth in revenue and EBITDA over the last 5 years (2017-2021)



6 detectors successfully used in Mars missions



## PHOTONIC PRODUCTS AND INFRARED (IR) MATERIALS

### Semiconductor materials

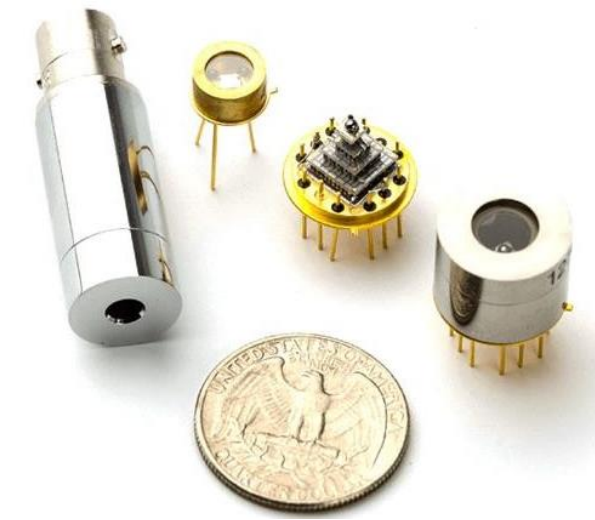


Materials of crystalline structure whose electrical conductivity is between conductors (usually metals) and insulators (most ceramic materials).

Elements for semiconductors: silicon (Si), germanium (Ge), gallium arsenide (GaAs), gallium antimony (GaSb), indium antimony (InSb).

### Infrared detector

An electronic component made up of semiconductors that allows the conversion of infrared radiation energy into electrical energy.



### Infrared module

An integrated system containing an infrared photodetector, signal processing electronics, optics, heat dissipation systems and other components.



## VALUE CHAIN IN THE SEMICONDUCTOR INDUSTRY - VIGO'S COMPLETE LINE FOR SEMICONDUCTORS AND PHOTONIC DEVICES

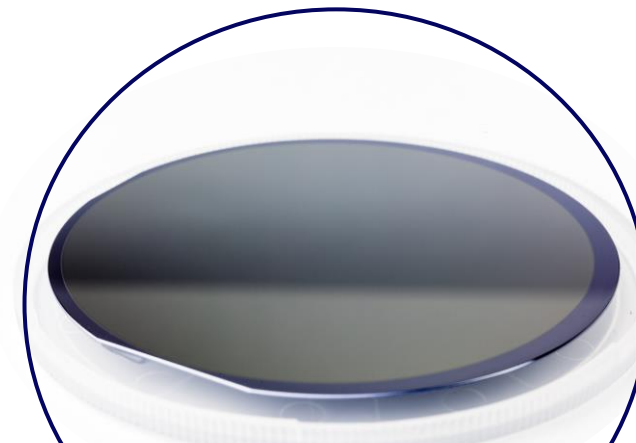
Semiconductor layers as one of the key intermediates in the value chain of VIGO's semiconductor-based products (e.g. wireless communication systems or optoelectronic systems)



**1**

### Culture of GaAs, InP substrates

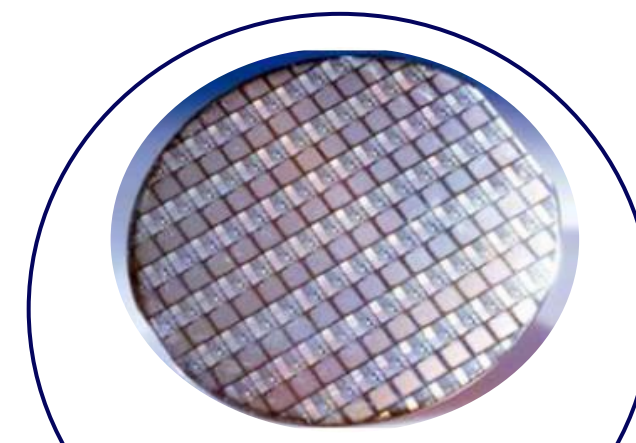
A suitable crystalline structure on which the proper layers are then grown. III-V compound semiconductors are grown on monocrystalline substrates of gallium arsenide (GaAs) or indium phosphide (InP).



**2**

### Epitaxy

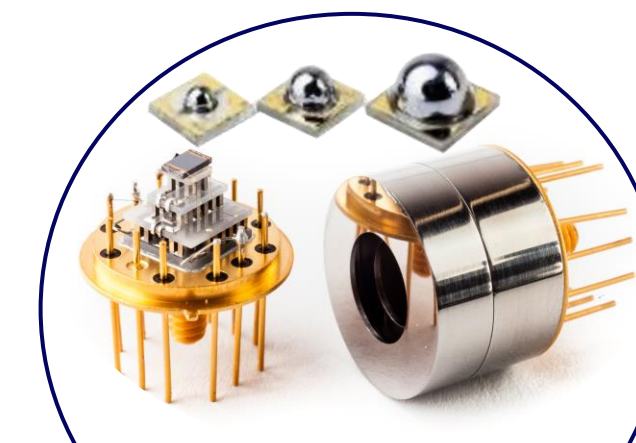
Deposition of the required semiconductor layers with the target parameters. The number of layers can be up to several hundred.



**3**

### Processing

of epitaxial layers and fabrication of detector and laser chips through a range of physical and chemical processes.



**4**

### Packaging

Automated assembly of chips on suitable substrates and in housings. Components (detector, laser) capable of processing an optical/electrical signal are created at the end of this stage.



**5**

### Integration with electronics

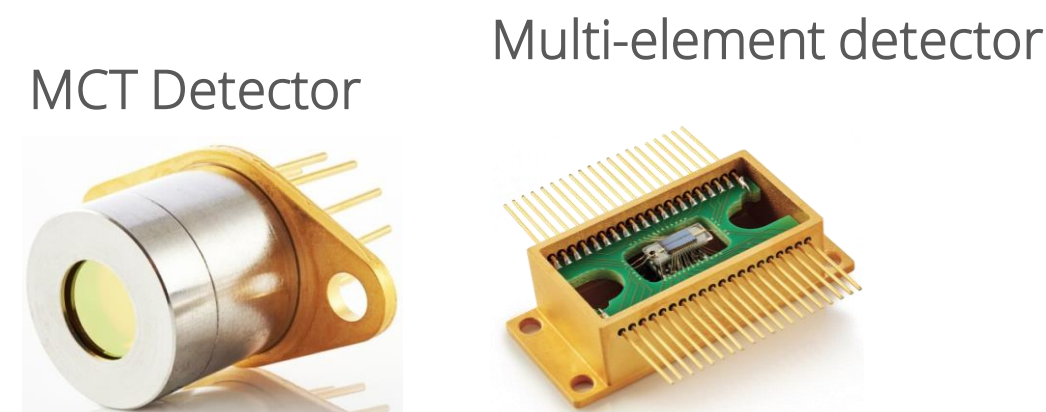
Complete detection modules - Electronics integrated in the infrared detector. Production by specialised companies assembling electronic or optoelectronic modules..



## SIGNIFICANT DIVERSIFICATION OF VIGO'S OFFER THANKS TO INVESTMENTS IN INFRASTRUCTURE BETWEEN 2014 AND 2020 (MBE LAB, EFFICIENT MOCVD IN THE III-V EPITAXY DEPARTMENT)

- Manufacture of MCT, InAs, InAsSb and InGaAs detectors, dedicated electronics, detection modules, accessories and semiconductor materials.
- Devices with high sensitivity over a wide spectral range from 1 to 16  $\mu\text{m}$  and high speed in frequency bands up to 1 GHz.
- 90% Customised\* sales - approx. 10% are sales of standard products.

### MCT



Detectors and detection modules with the semiconductor layer made of MCT/HgCdTe (**mercury cadmium telluride**) materials

- A range of photoconductive (PC) and photovoltaic (PV) detectors used in many market sectors
- Radiation spectrum: MWIR
- Reactor: MOCVD (MCT)

### III-V InAsSb



Detectors and detector modules with the semiconductor layer made of InAs (**indium arsenide**) or InAsSb (**indium arsenide antimonide**) materials.

- A range of photoconductive (PC) and photovoltaic (PV) MWIR and LWIR type II super lattice (T2SL) detectors, operating at room temperature or thermoelectrically cooled
- Radiation spectrum: MWIR and LWIR
- Reactor: MBE (InAs, InAsSb)

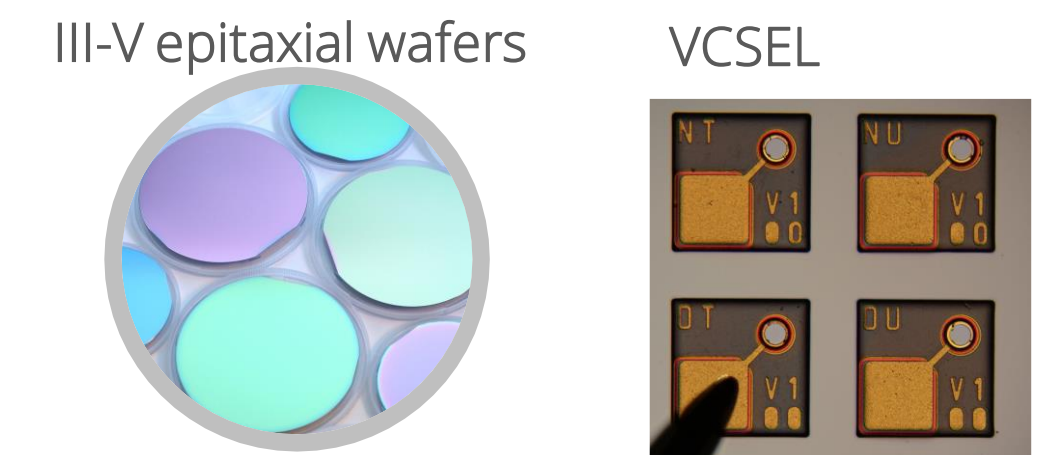
### III-V InGaAs



Detectors and detector modules with the semiconductor layer made of InGaAs (**indium gallium arsenide**) materials.

- A variety of detectors for the SWIR range designed for mass applications
- Radiation range: SWIR (new MOCVD)
- Reactor: MOCVD (III-V)

### III-V\* EPITAXY and VCSEL



High-quality epitaxial structures of III-V semiconductor materials (**InGaAs**, **InAsSb**) offered directly to clients for in-house production of detectors/chips and VCSEL lasers as well as production of SWIR (VCSEL), including VCSEL VIGO lasers.

- A wide range of top quality products: laser layers, detectors, quantum dots, Bragg reflectors. Poland's first VCSEL laser chips.
- Radiation range: MWIR, SWIR
- Reactor: MOCVD (III-V)



# WIDESPREAD APPLICATION OF MEDIUM INFRARED IN A MULTI-SPECIAL INDUSTRY



**EVERY OBJECT WITH A TEMPERATURE ABOVE ABSOLUTE ZERO EMITS INFRARED RADIATION. THE WAVES THAT ARE PRODUCED CAN BE READ AND PROCESSED BY SPECIAL DEVICES DESIGNED FOR THIS PURPOSE - INFRARED RADIATION DETECTORS ARE THEIR MOST IMPORTANT COMPONENT. THEY CAN BE USED IN MANY FIELDS AND INDUSTRIES.**

## INDUSTRY AND TRANSPORT



- Safety systems for alarming the detection of dangerous gases such as methane
- Production quality control
- Gas sensors, exhaust sensors, spectroscopy
- Automotive - driver support and monitoring systems
- Railway - control of the occurrence of rolling stock malfunctions while running
- Power control and laser calibration

## SAFETY AND SECURITY



- Detection of explosive, toxic, chemical substances
- Intelligent munitions
- Tracking early warning systems

## ENVIRONMENTAL PROTECTION



- Air quality monitoring
- Monitoring of water quality in waterworks, sewage treatment plants
- Gas analysis (e.g. CO<sub>2</sub> emission levels)

## MEDICINE



- Non-invasive blood tests
- Respiratory analysers
- Air monitoring in medical facilities
- Early detection of cancer markers

## SPACE INDUSTRY



- Astronomy
- Space missions - detection of gases and substances

## CONSUMERS AND FMCG



- Electronics and wearables e.g. smartwatches with heart rate sensors, iris or face scanners, fingerprint readers
- Internet of Things (IoT)
- Devices for home air quality testing
- Alcohol detection
- Analysis and testing of food products



# VIGO DEVELOPMENT STRATEGY UP TO 2023 AND 2026



## VIGO 2026 STRATEGY - A RANGE OF BUSINESS OPPORTUNITIES TO MEET GROWTH AMBITIONS BY 2026

- New VIGO Strategy for 2021-2026 announced on 16 June 2021
- New business directions based on new technologies (infrared sources, optoelectronic systems and integrated circuits): Phase I and Phase II

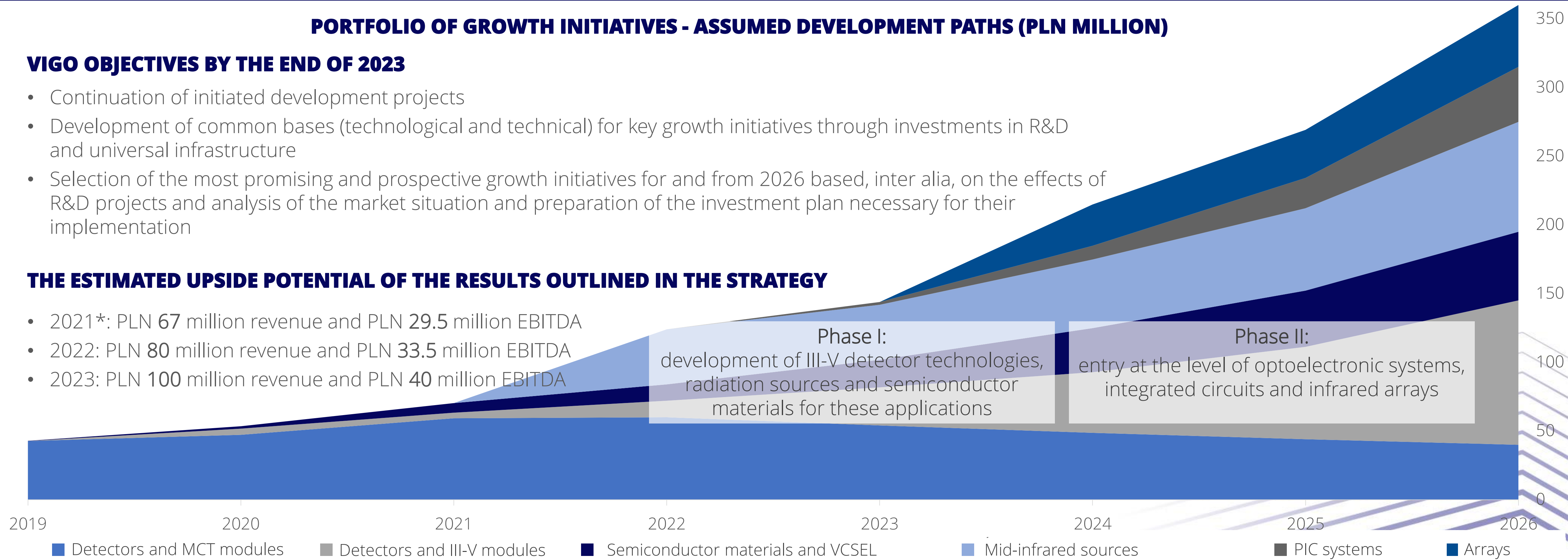
### PORTFOLIO OF GROWTH INITIATIVES - ASSUMED DEVELOPMENT PATHS (PLN MILLION)

#### VIGO OBJECTIVES BY THE END OF 2023

- Continuation of initiated development projects
- Development of common bases (technological and technical) for key growth initiatives through investments in R&D and universal infrastructure
- Selection of the most promising and prospective growth initiatives for and from 2026 based, inter alia, on the effects of R&D projects and analysis of the market situation and preparation of the investment plan necessary for their implementation

#### THE ESTIMATED UPSIDE POTENTIAL OF THE RESULTS OUTLINED IN THE STRATEGY

- 2021\*: PLN 67 million revenue and PLN 29.5 million EBITDA
- 2022: PLN 80 million revenue and PLN 33.5 million EBITDA
- 2023: PLN 100 million revenue and PLN 40 million EBITDA



\*In 2021, the Company achieved sales revenues of PLN 71.5 million, up by PLN 4.5 million compared to the assumptions in the strategy for that year.



# SUMMARY OF Q1 2022 ACHIEVEMENTS



# CLEAN ROOM COMPLETED - SUPPORT FOR 2.0 PROCESSING



## INVESTMENT OBJECTIVES

1. Increase in production repeatability
2. Detector chip manufacturing technology
3. Reduction of production costs
4. Meeting the highest quality requirements (military, space, semiconductor industries)

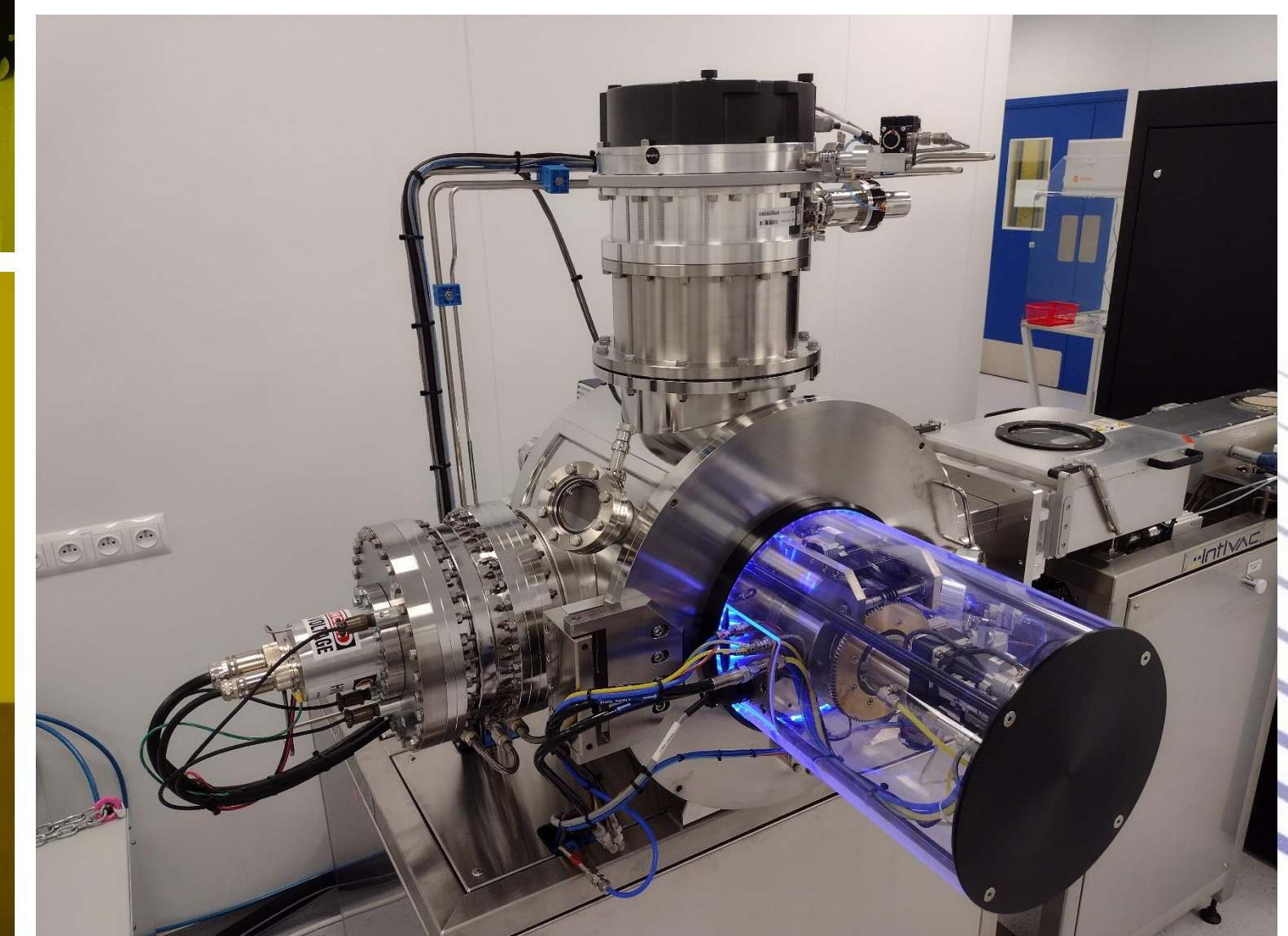
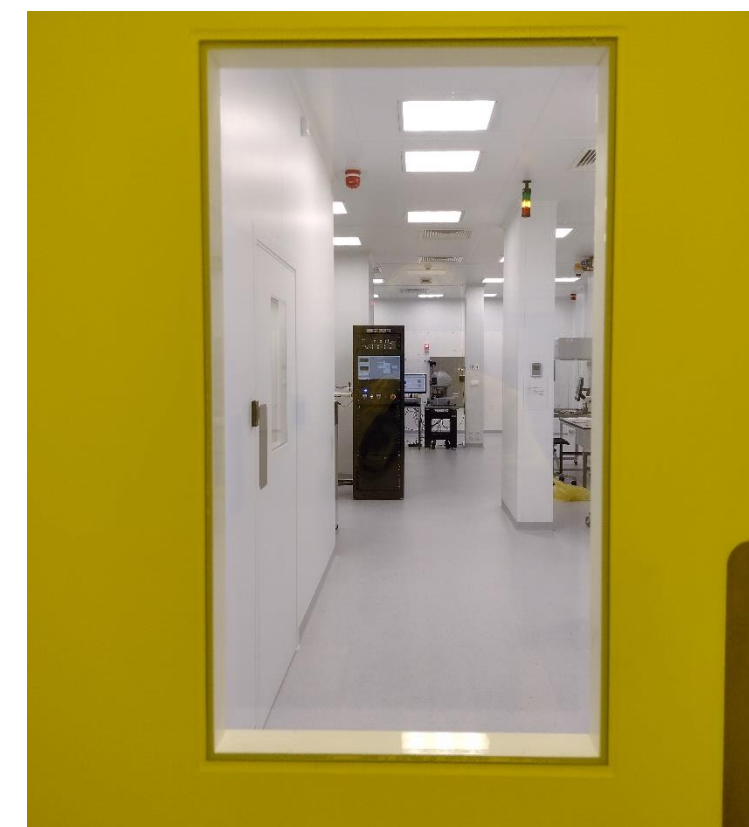
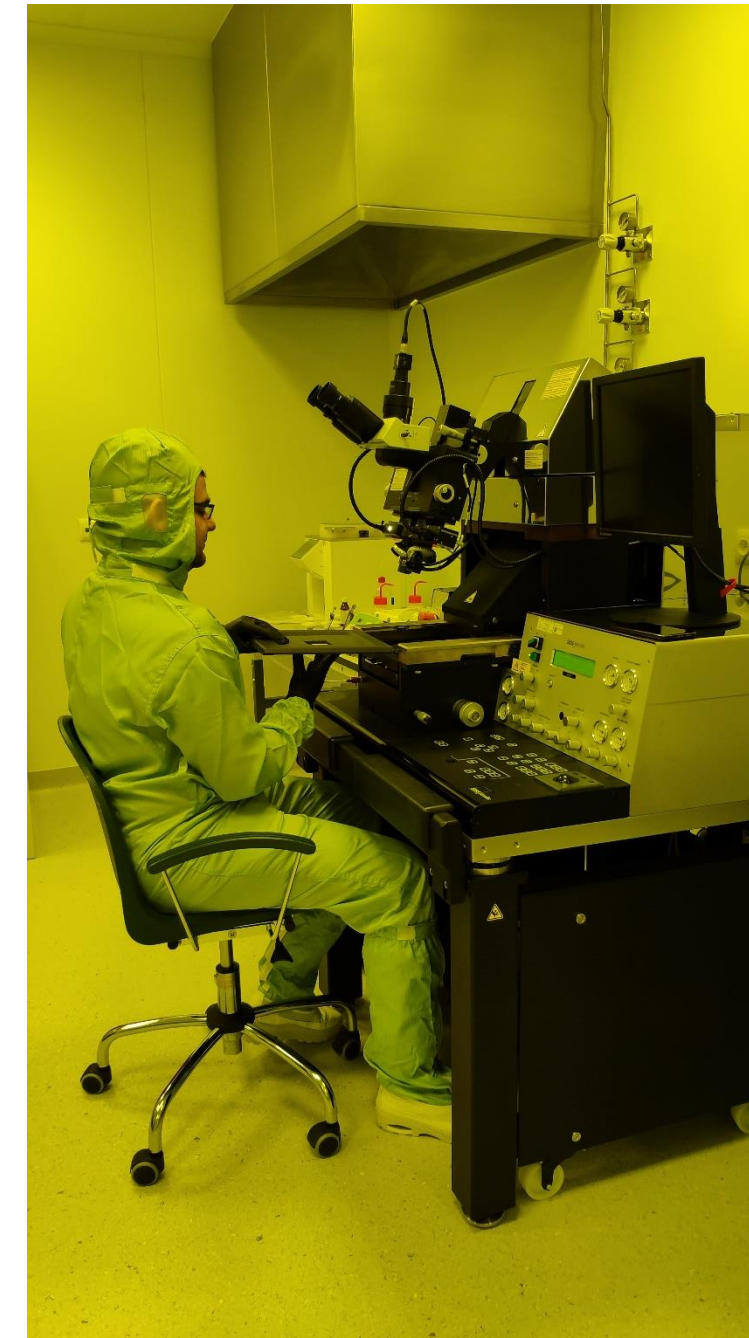
**SCOPE:** modernisation of the existing VIGO technology hall and construction of a cleanroom with additional production equipment

**CAPEX:** PLN 34 million

**FINANCING:** own funds, EUR 2 million credit and co-financing under POIR (PLN 6 million)

## PROGRESS

- April 2021 - completion of technology hall expansion
- June 2021 - signing of the contract with the contractor for cleanroom facilities
- November 2021 - completion of the construction first phase and commissioning of the cleanroom
- December 2021 - production start-up in the cleanroom
- February 2022 - completion of the second phase of the redevelopment and full start-up of production
- March 2022 - settlement of the project





# MCT DETECTORS AND DETECTION MODULES (MCT+) INITIATIVE



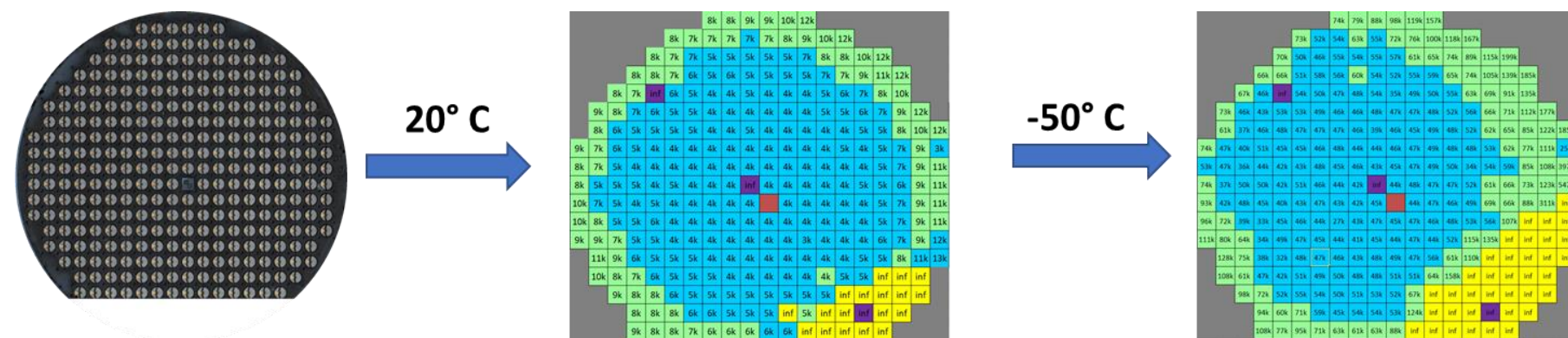
## TECHNOLOGY DEVELOPMENT

Objective of the initiative

- Exploitation of the market in its gradual decline by improving the customisation process and exploring uncovered market niches.
- Stabilisation of multi-element detector technology, implementation of digital solutions, development of products for military and space applications.

Achievements in Q1 2022

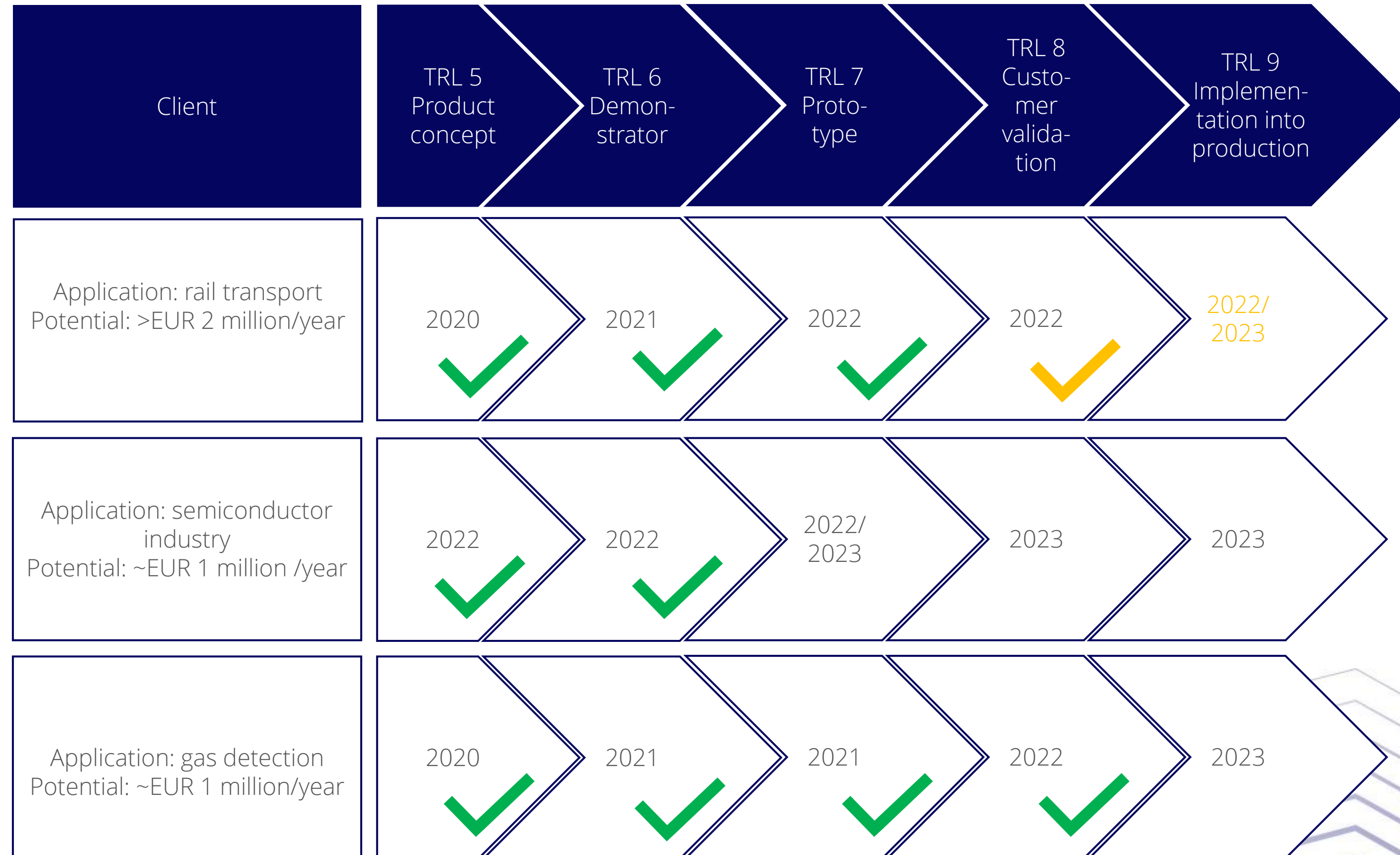
- Implementation of new technologies for characterisation of whole semiconductor layers (probestation), which will reduce unit manufacturing costs.



Plans for 2022

- Optimisation of the existing product range on new processing and assembly technologies.

## COMMERCIALISATION - SAMPLE PROJECTS





# III-V InAsSb DETECTORS AND DETECTION MODULES INITIATIVE



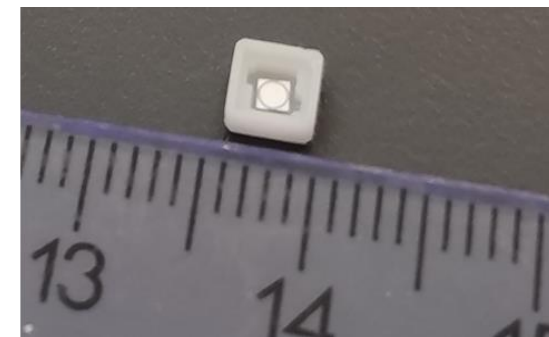
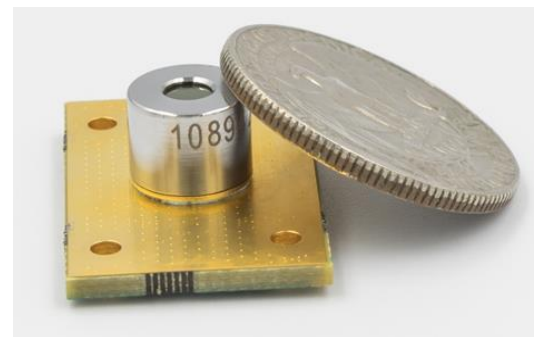
## TECHNOLOGY DEVELOPMENT

Objective of the initiative

- Becoming No. 1 in the market of III-V detector manufacturers in the MidIR range. Implementation of T2SL supergrid technology (matching MCT parameters), achieving technical parameters superior to the competition in the entire MidIR range.

Achievements in Q1 2022

- Development of new versions of the Low-Cost Detection Module - detector adapted to be soldered with electronics developed. Completion of components for the first batch of prototypes started.

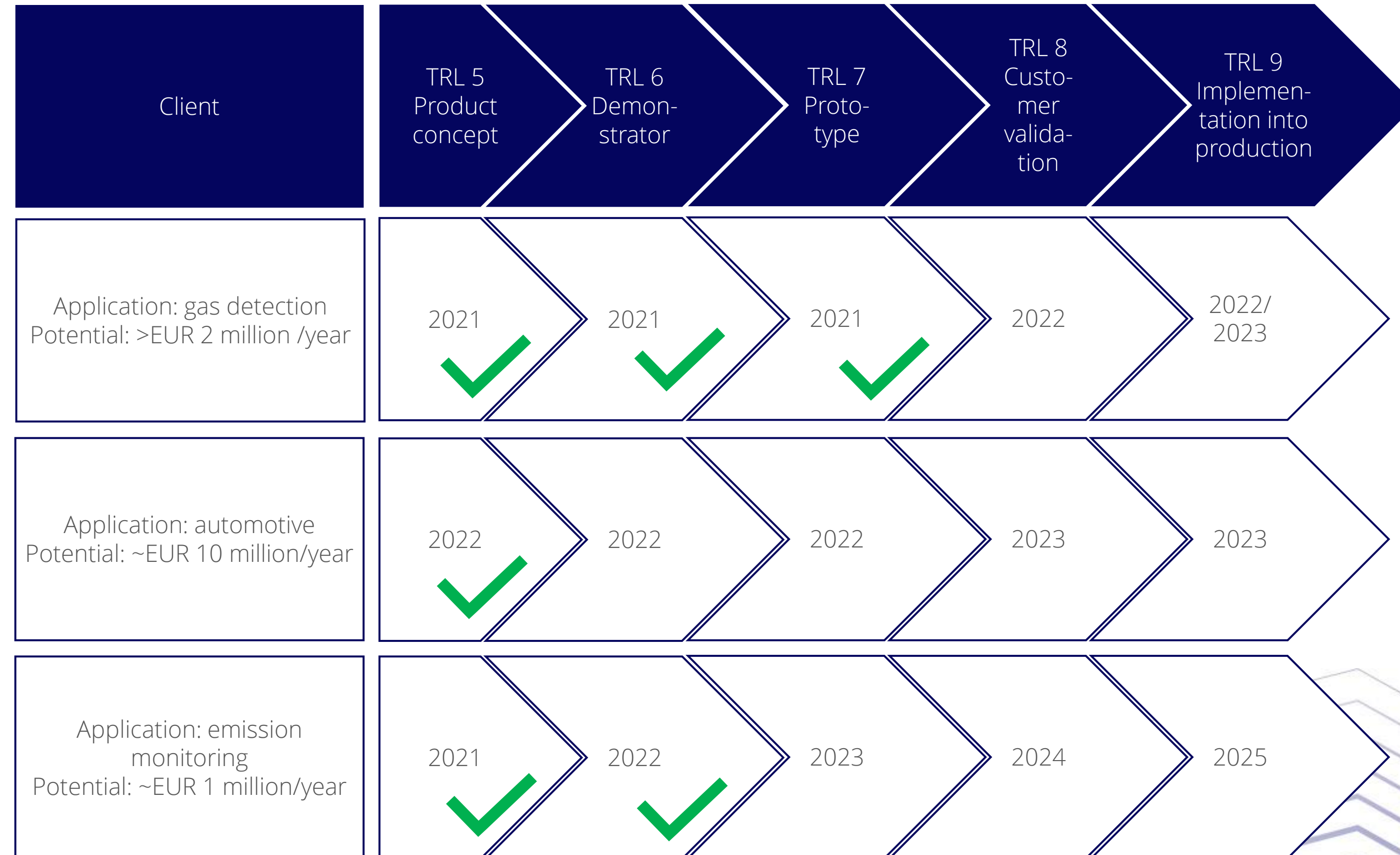


- First orders for TMD (500 units) from the Chinese market.

Plans for the next quarters of 2022

- Expansion of the TMD offer to include more wavelengths and the addition of digital solutions.
- Development of long-wavelength supergrid detectors and anti-fringing solutions.
- Cost optimisation of NDIR gas detection solutions.

## COMMERCIALISATION - SAMPLE PROJECTS



# III-V InGaAs DETECTORS AND DETECTION MODULES INITIATIVE



## TECHNOLOGY DEVELOPMENT

Objective of the initiative

- Entering the market for III-V InGaAs detectors

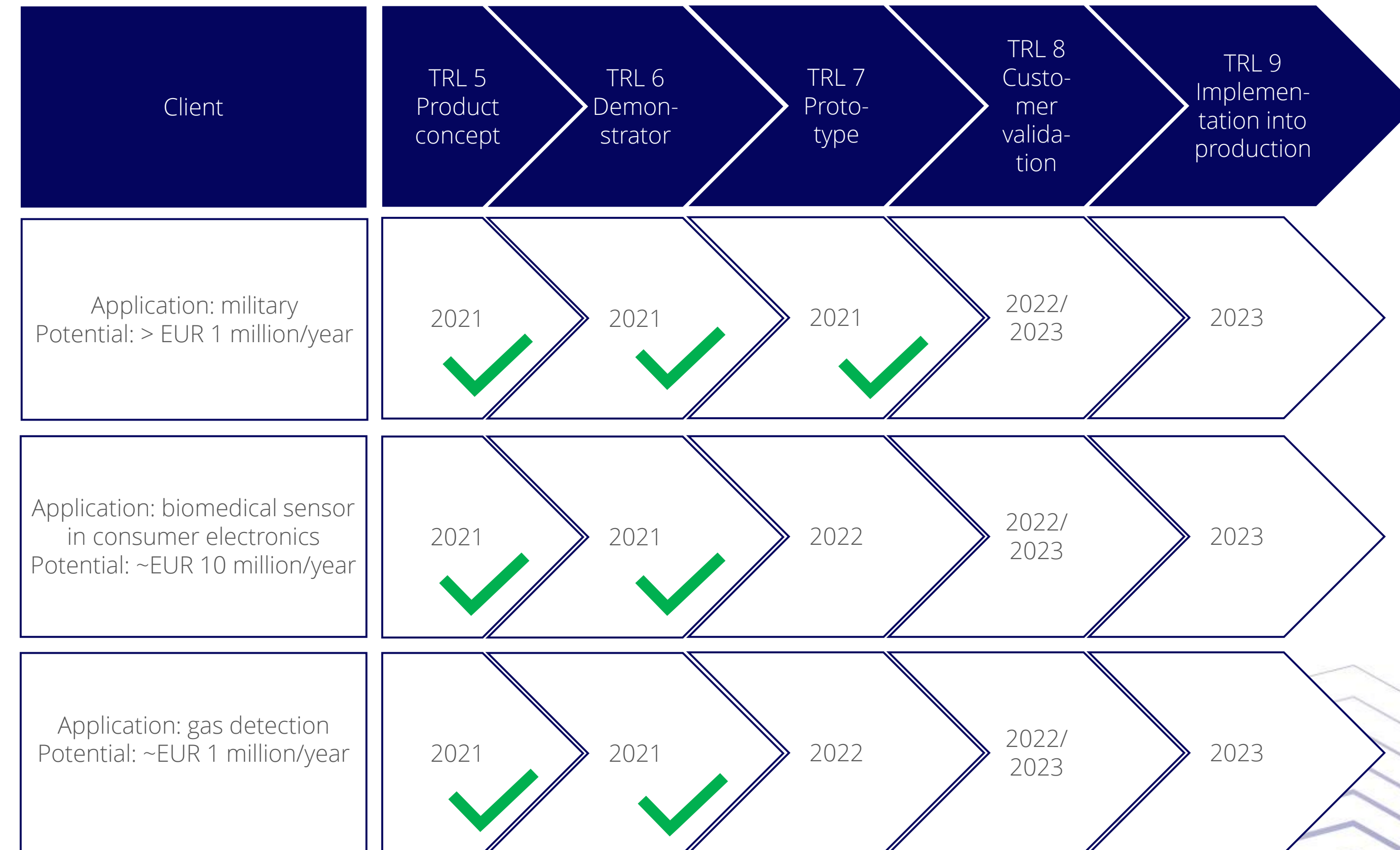
Achievements in Q1 2022

- Contract has been signed to develop planar technology for InGaAs detectors.
- Application has been submitted to the prestigious M2Tech project (240kEUR) for funding eInGaAs (multi Messenger astrophysics) work.
- Execution of the first order for InGaAs/InGaAsP/InP chips.
- Optimization of InGaAs 1.7 um technology for military applications.

Plans for 2022

- Implementation of planar technology (which will enable entry into the large telecommunications market).
- Validation of eInGaAs and 1.7um prototypes with clients.

## COMMERCIALISATION - SAMPLE PROJECTS





# EPITAXY III-V INITIATIVE - SEMICONDUCTOR MATERIALS AND NEAR-INFRARED SOURCES (VCSEL)



## TECHNOLOGY DEVELOPMENT

### Objective of the initiative

- Gain visibility in the epitaxy services market, explore market niches for photonic devices (new VCSELs, unusual solutions). Refinement of the VCSEL production and characterisation technology..

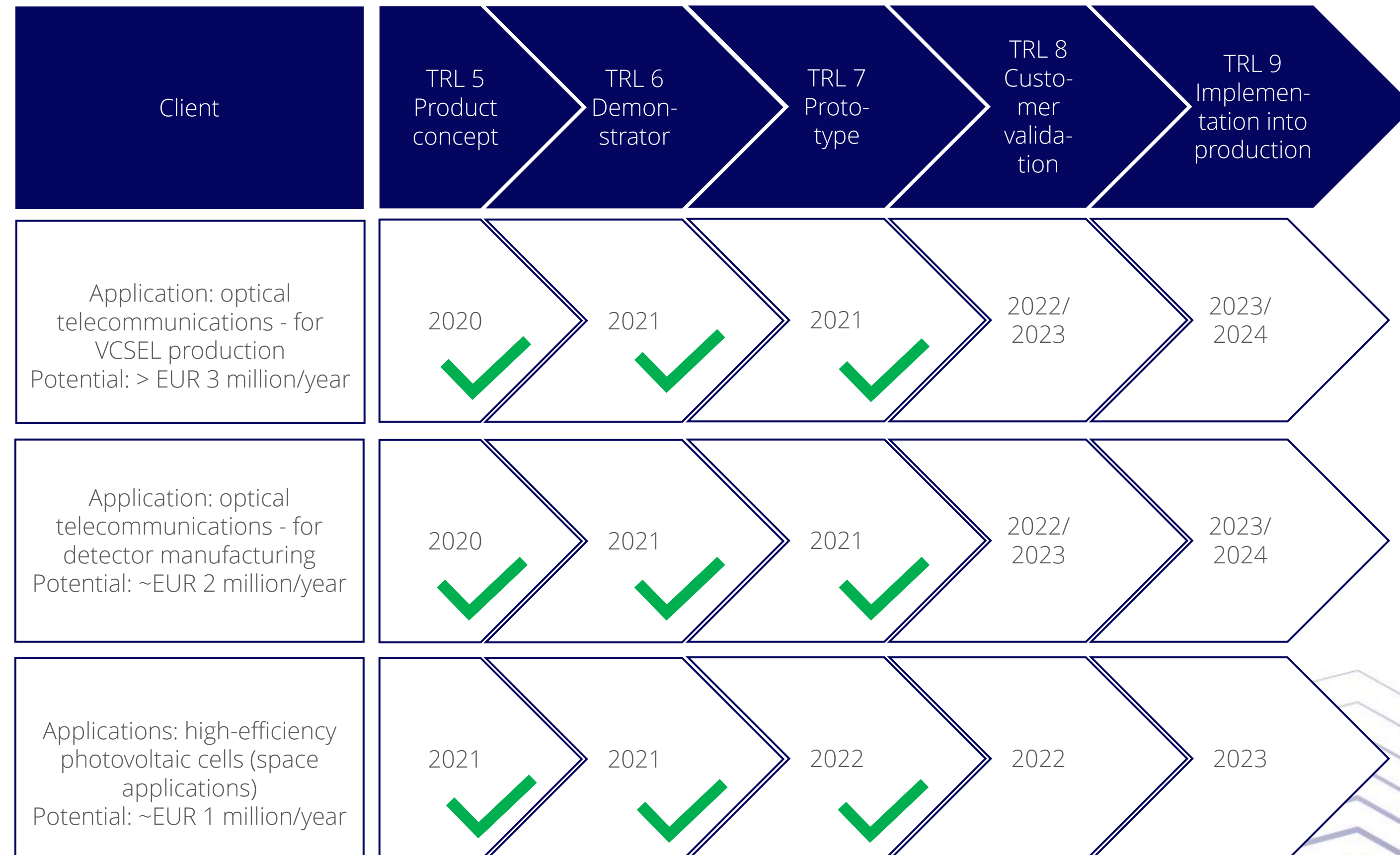
### Achievements in Q1 2022

- Quantum Cascade Lasers (QCLs)* - first confirmation of high power lasers obtained in collaboration with a client.
- Optical Wireless Power Transmitters (OPWTs)* - delivery of first test batch of wafers with final structures.
- Solar Cells (SCs)* - delivery of first batch of wafers with final structures with confirmed parameters.
- Laser Diodes (LDs)* - first delivery of standard product (off-the-shelf).

### Plans for 2022

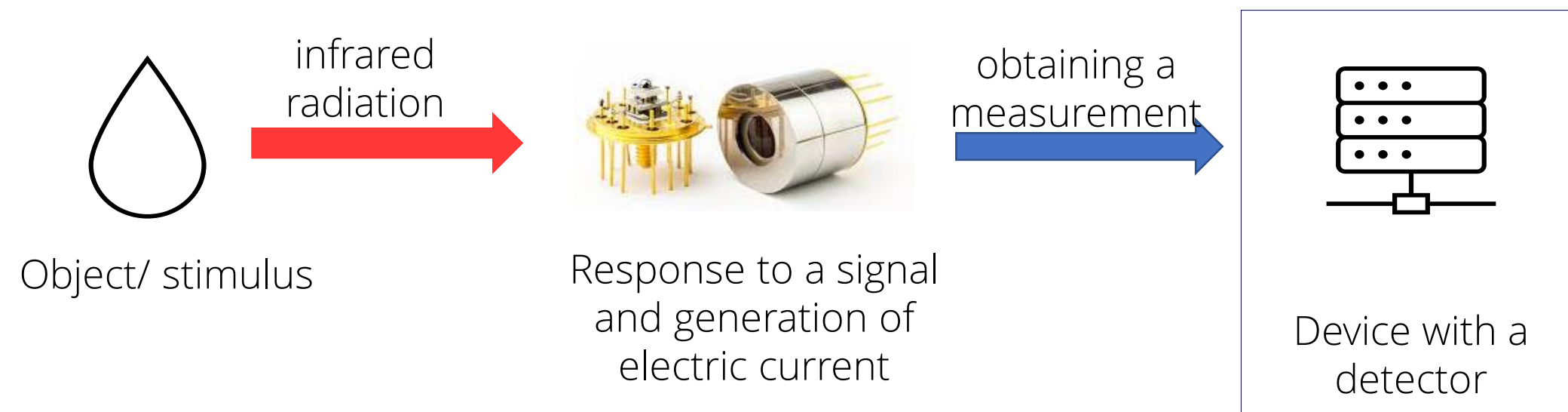
- Initiate commercial technology collaboration for bringing QCLs into mass production.
- Finalise the development of OPWTs technology and commence implementation into production.
- Commence strategic project to develop PDs PIN technology with a key foreign client.

## COMMERCIALISATION - SAMPLE PROJECTS





## SIMPLIFIED GENERAL OPERATING DIAGRAM OF THE INFRARED (IR) SENSOR



## PHOTONIC INTEGRATED CIRCUITS (PIC) - GENERAL INFORMATION

- A miniaturised circuit consisting of multiple optical and electronic components with different functionalities integrated on a common, usually semiconductor, substrate, a single chip.
- A photonic integrated circuit can replace the full functionality of an infrared sensor.

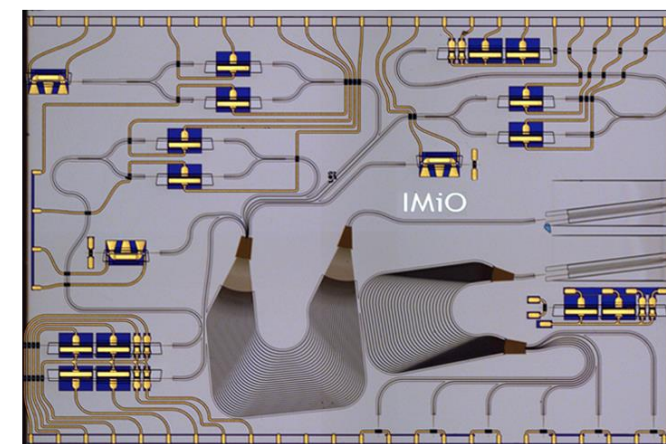
## R&D MIRPIC PROJECT

- Goal: Development of the first mid-infrared photonic integrated circuit (MIRPIC) on the market
- Cooperation: technology project carried out with Warsaw University of Technology and the Institute of Microelectronics and Photonics,
- Launch: April 2021, lead time: 3 years
- Budget: PLN 29.3 million, Co-financing: PLN 26.6 million.
- Potential applications: miniature gas sensors (smart cities, intelligent household appliances, automotive); advanced medical devices; wearables (high end)

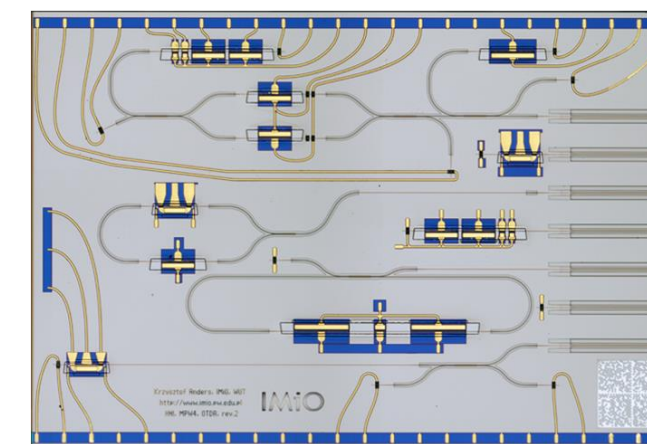
**Łukasiewicz**  
Instytut Mikroelektroniki i Fotoniki

**Politechnika  
Warszawska**

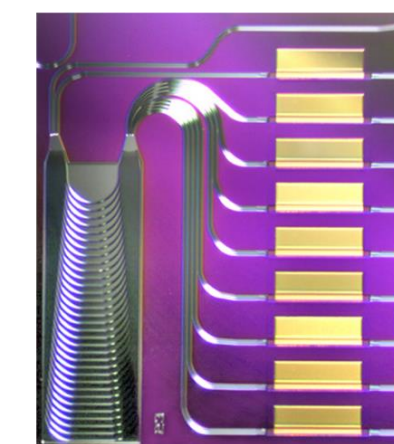
Over **10** years experience of the new Vigo team in photonic integrated circuit design – over **80** completed PIC projects



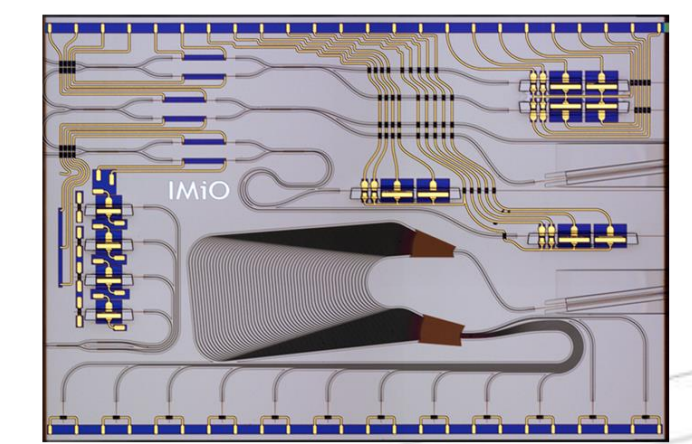
Multi-channel transceiver for free space optics



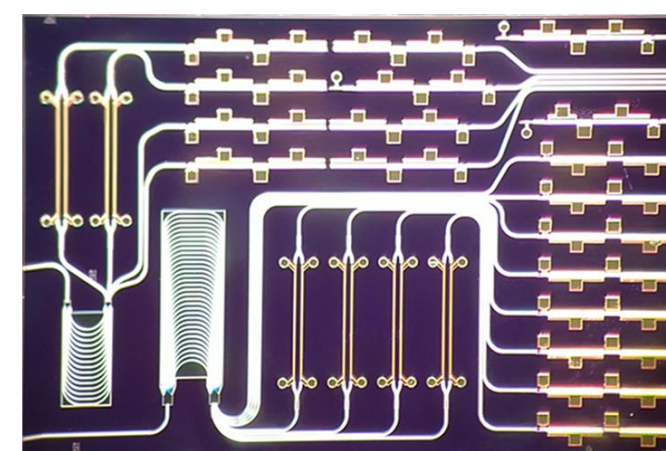
Optical time domain reflectometer



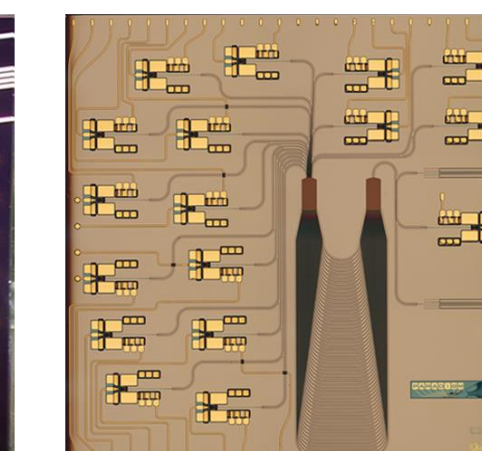
Multi-wavelength laser



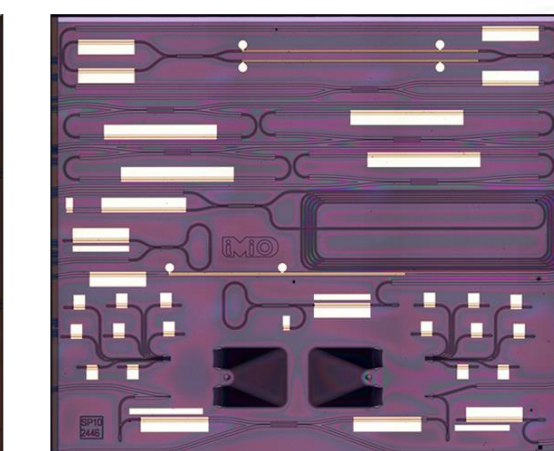
FBG interrogator unit



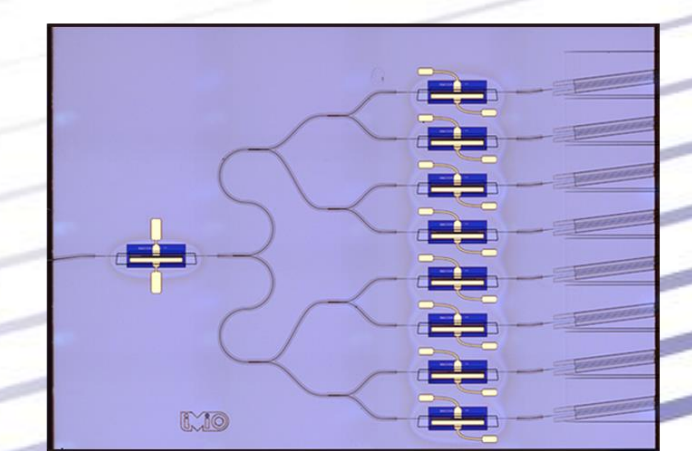
Multi-channel transmitter for FTTH networks



Spectrometer for FBG sensor interrogator



Discretely tunable laser



Lossless power splitter



# OPTOELECTRONIC SYSTEMS AND PHOTONIC INTEGRATED CIRCUITS (PIC) INITIATIVE

## TECHNOLOGY DEVELOPMENT

### Objective of the initiative

- To be the world's first manufacturer of mid-infrared integrated circuits.
- Complete production line (world's first) for PICs in the MIR range (MIRPIC), complete supply chain for MIRPICs.

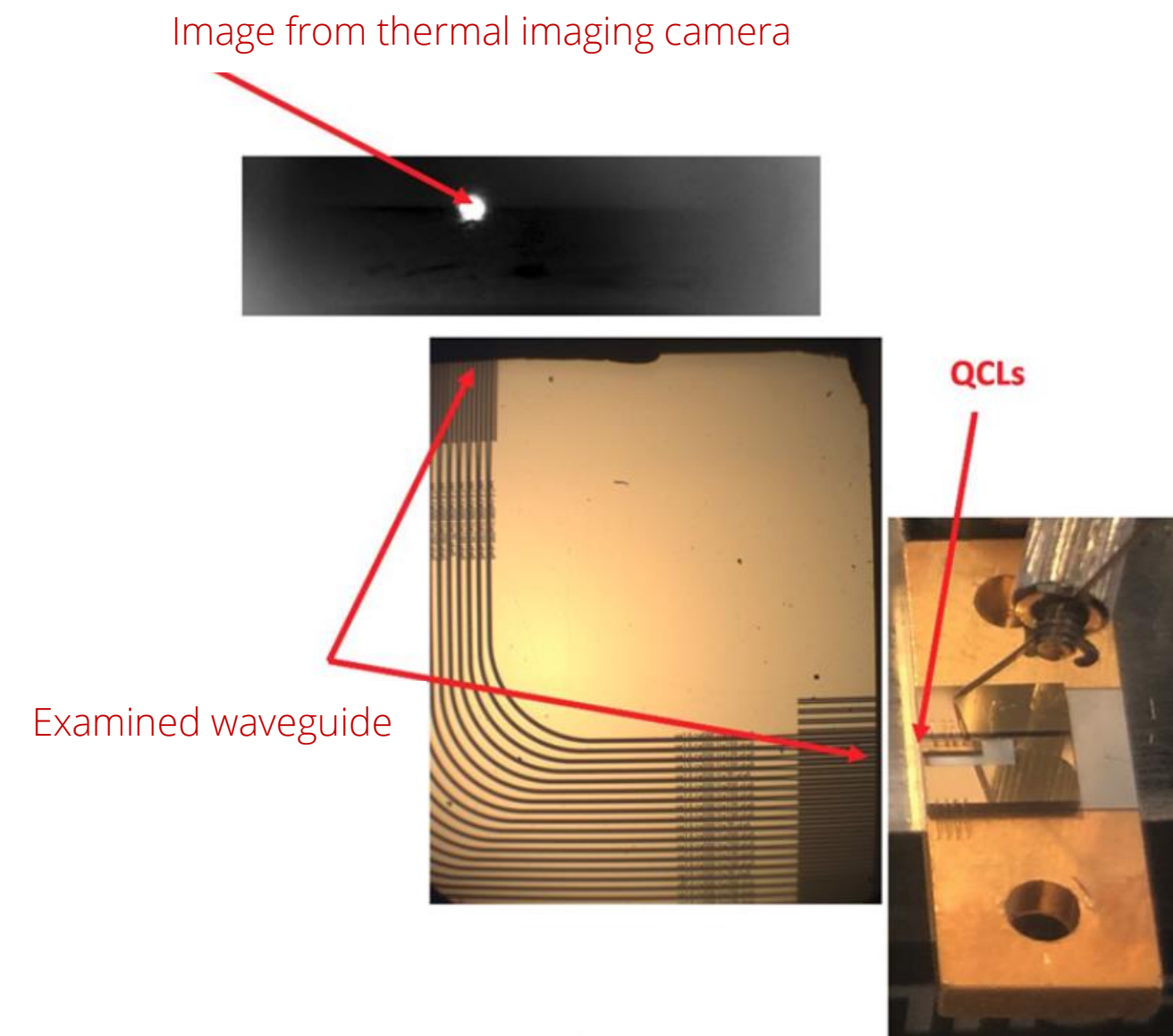
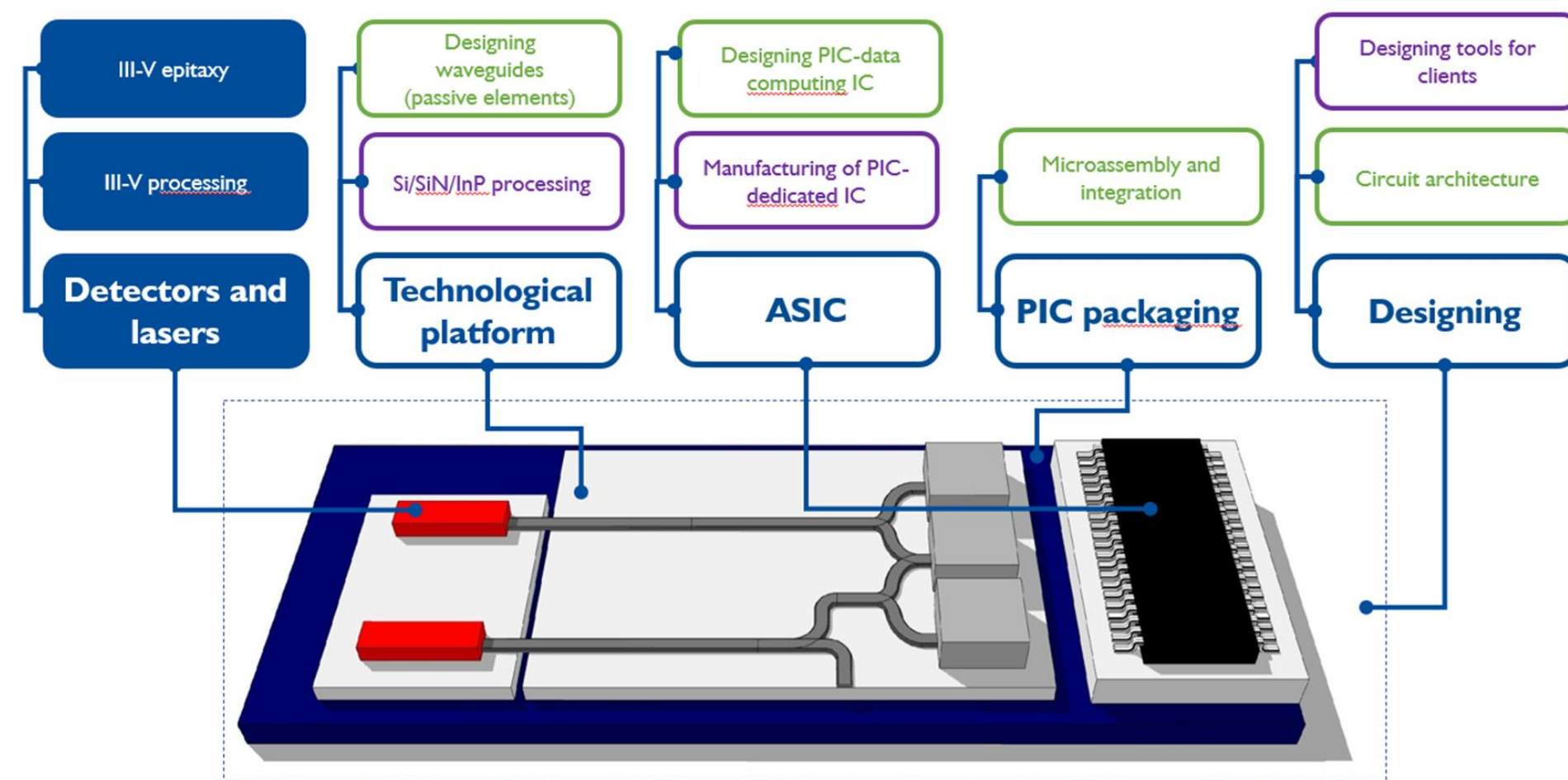
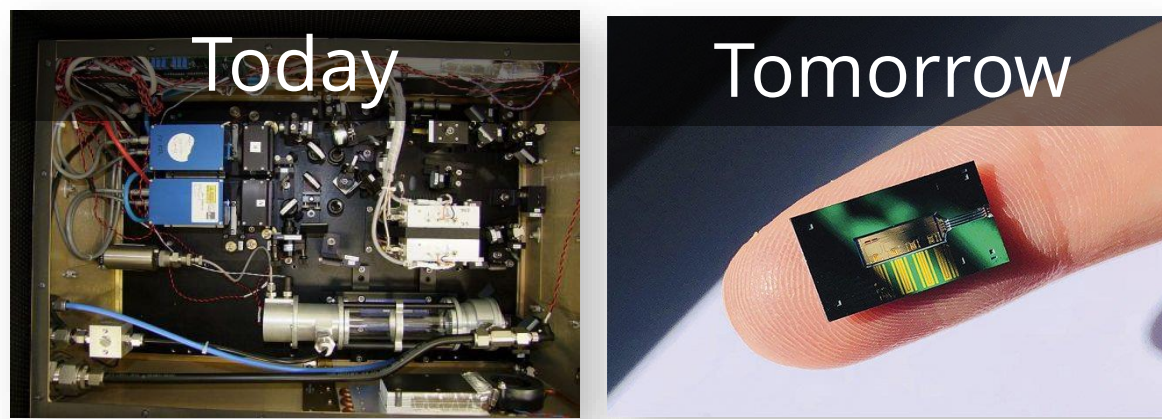
### Achievements in Q1 2022

- The first successful experiments have been carried out confirming the successful insertion and radiation propagation of QCL lasers (4.5  $\mu\text{m}$ , 5.2  $\mu\text{m}$ ) in germanium waveguides fabricated under the MIRPIC funded project

### Plans for 2022

- Preparation of first prototypes of the device
- Finding partners for technology development

Gas detectors





# INFRARED ARRAY INITIATIVE



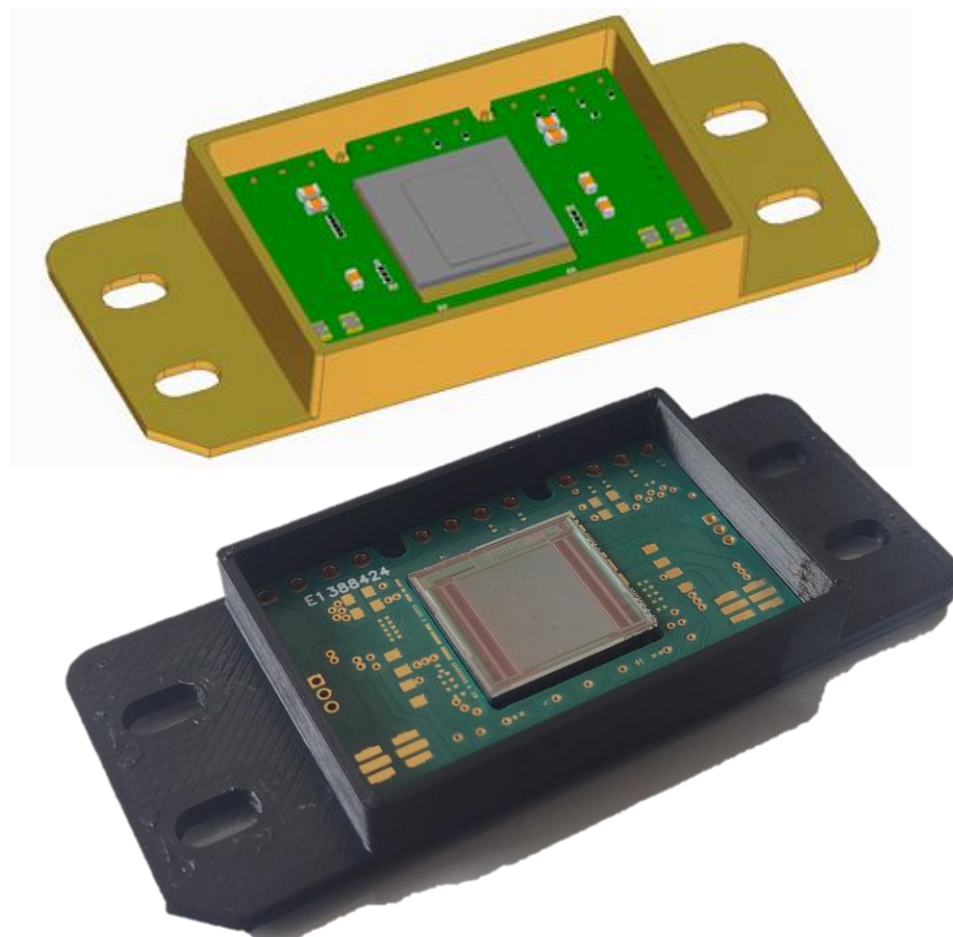
## TECHNOLOGY DEVELOPMENT

Objective of the initiative

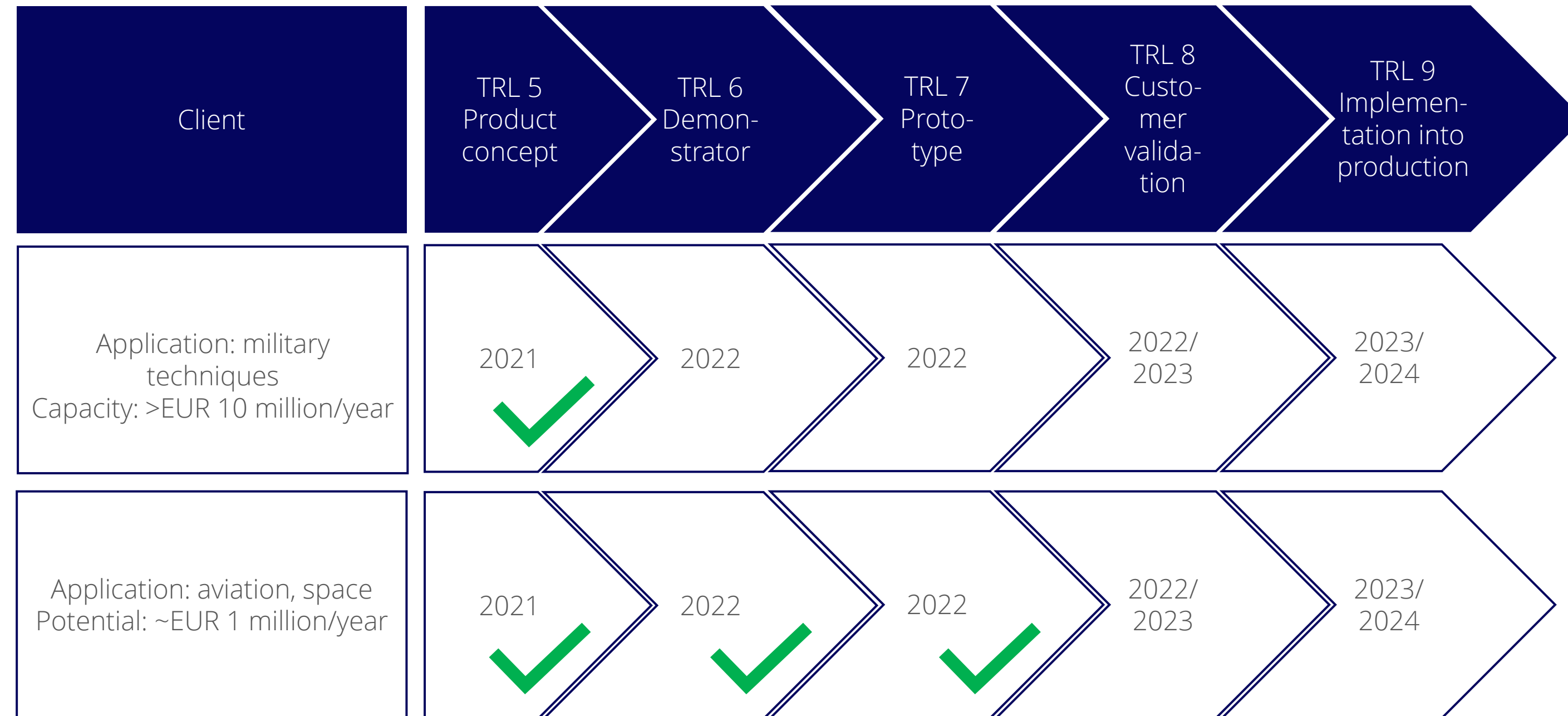
- Becoming a major supplier of detectors for the Polish army/armament industry, winning customers outside Poland (industry, space).
- Development of the technology for manufacturing cooled matrices.

Achievements in Q1 2022

- Optimisation of the architecture of T2SL structures for array applications, work on process stabilisation.
- Design and prototype of housing for commercial InGaAs array



## COMMERCIALISATION - SAMPLE PROJECTS





# START OF DIRECT SALES FROM THE USA BRANCH

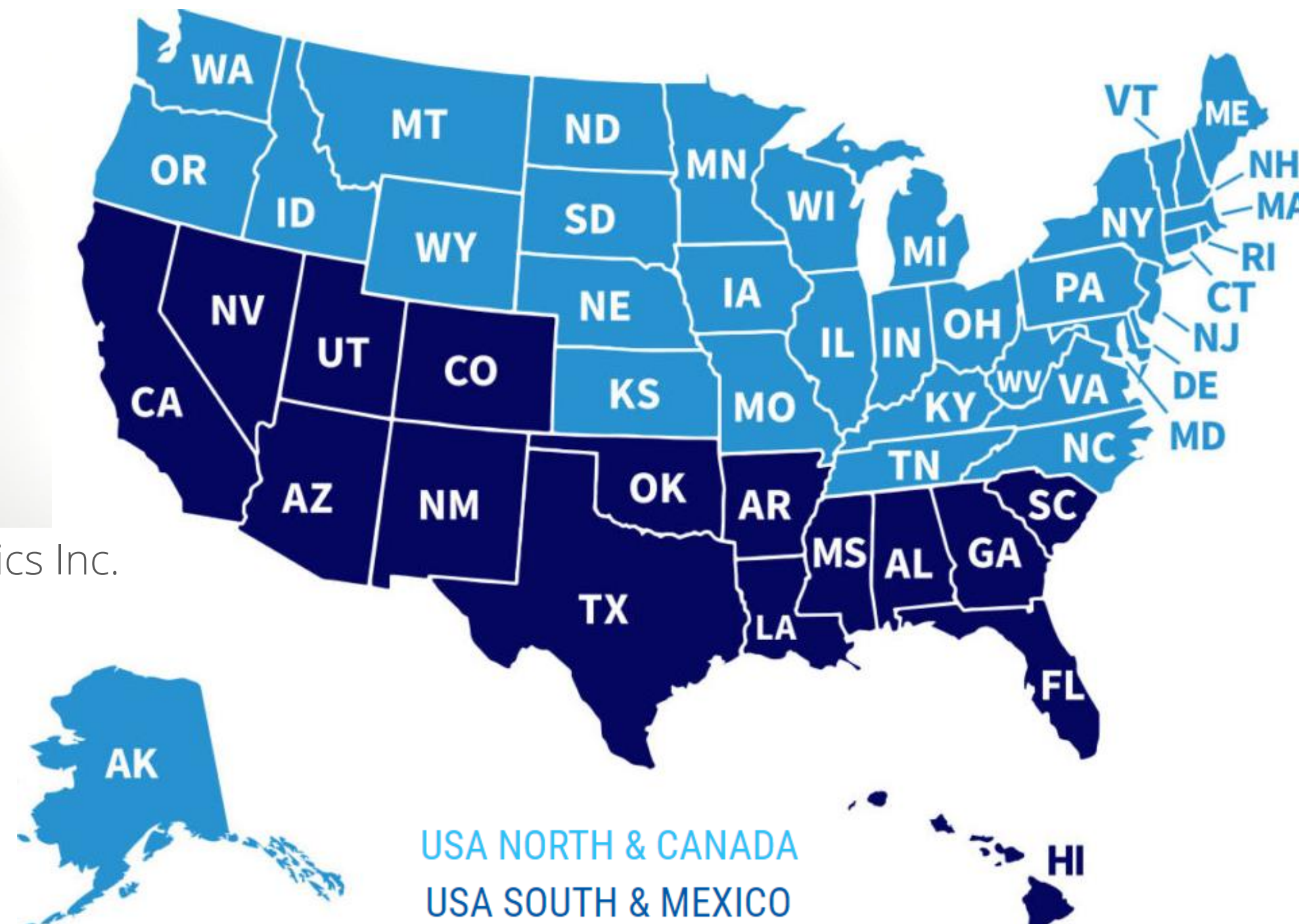


## EXPANSION IN THE USA MARKET - INCREASE OF VIGO'S SHARE

- Q3 2021 – establishment of VIGO Photonics US: hiring a CEO, team building, recruitment
- Q4 2021 – implementation of sales, distribution and marketing strategy
- Q1 2022 – opening an office and starting direct sales to customers



Scott Riggi, CEO VIGO Photonics Inc.



## BUSINESS ASSUMPTIONS FOR THE EXPANSION INTO THE US AND ASIAN MARKETS

- VIGO Photonics USA: accelerated growth of VIGO in the US market, deeper exploration of the US public procurement market
- VIGO Photonics Taiwan: accelerated growth in Asian markets, acquisition of key customers for epitaxy products and services

## INITIATIVES TO EXPLORE NEW APPLICATION MARKETS

- Better identification of new mass markets for infrared sensors
- Acquiring partners and key customers for new technology development
- Building a portfolio for new applications

# IMPLEMENTATION OF A NEW BRAND: VIGO PHOTONICS



**THE DYNAMIC DEVELOPMENT OF THE COMPANY, OPENING UP TO NEW TECHNOLOGIES AND THE ESTABLISHMENT OF THE FIRST VIGO SYSTEM BRANCHES IN ASIA AND NORTH AMERICA HAVE LED TO THE CREATION OF ONE GLOBAL BRAND - VIGO PHOTONICS**

Steps taken:

- Creation of a new brand combining VIGO System, VIGO Photonics Taiwan, VIGO Photonics Corp.
- Creation of a new logotype and visual identity system
- Patenting the word mark and logo of VIGO Photonics
- Implementation of new visual identity in internal and external communication
- Planned change of company name from VIGO System S.A. to VIGO Photonics S.A. in June 2022

NEW  
BRAND



PREVIOUS  
BRAND





# MARKETING: PARTICIPATION AT TRADE FAIRS AND SALES SUPPORT



## ACTIVE PARTICIPATION IN CONFERENCES AND TRADE FAIRS

- SPIE Photonics West (US)
- CEM Emission Monitoring (Online)
- SPIE Defense and Commercial Sensing (US)
- EPIC OTM on MID-IR – present and future (Online)

Industry trade fairs and conferences are an excellent opportunity to present VIGO's range of innovative solutions and products to representatives of numerous sectors and sciences from all over the world.



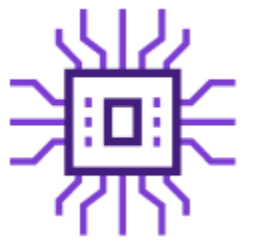
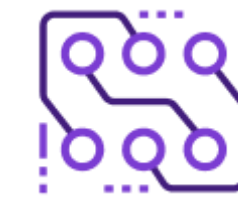
## PRODUCTS COMMERCIALIZATION SUPPORT

- Launch of a campaign promoting a miniature detection module (detector integrated with electronics) – AMS 3140-1.
- Focus on supporting the commercialization of multi-element detectors (32E) and the Multiband Module.





## VIGO VENTURES



### VIGO VENTURES - VIGO WE INNOVATION (VWI)

Investment incubator created by VIGO System and Warsaw Equity Group (50:50 joint venture) in 2017

#### MANAGEMENT BOARD

Wojciech Smoliński

Managing Partner, President of the Management Board

Marek Kotelnicki

Managing Partner, Member of the Management Board

#### SUPERVISORY BOARD

Adam Markiel, WEG Chief Investment Officer

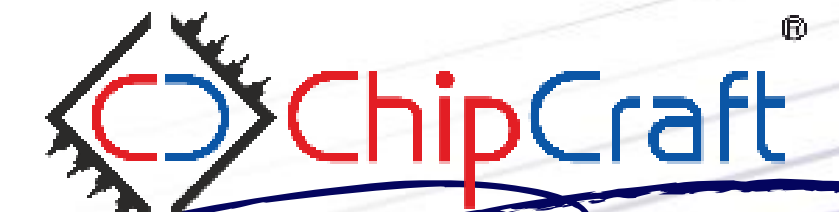
Adam Piotrowski, President of VIGO Management Board

Łukasz Piekarski, Member of VIGO Management Board

### INVESTMENT ASSUMPTIONS

- investments and development of technological projects (start-ups, spin-offs) with global potential in the production of high-tech devices and components
- areas: photonics, semiconductors, quantum technologies
- solutions already pre-verified and/or with a working prototype
- projects generating independent profits and/or potential support for VIGO Photonics
- single investment project up to EUR 1 million

### PORTFOLIO





## WAR IN UKRAINE

### Potential opportunities:

- Increasing awareness and importance of security of countries, Europe in particular, as an opportunity for growth potential with regard to solutions for defence partners

### New risks:

- Significant deliveries of components from the Russian market (approx. PLN 7 million in 2021)
- Risk of extended delivery times and/or reduced availability of components
- Discussions with suppliers on possible relocation of production have been initiated; qualification of alternative suppliers in progress

### Impact on performance:

- Marginal sales to the Russian market (approx. PLN 250 thousand in 2021; 0.3% share in total revenues)
- Sales of infrared detectors are not subject to sanctions, although end-user verification would be required (ban on sales to aerospace applications)
- No sales to the Ukrainian market

## COVID-19 PANDEMIC

### Operating environment:

- No problems on the customer side
- Extended delivery times and rising component prices
- The company manages supplies effectively

### Internal situation:

- Difficult start to 2021 and again Q4 2021
- Relatively high levels of inoculation among staff, which effectively reduced employee absenteeism in H2 2021
- Currently a marginal risk to the Company's operations
- In H1 2021, shift work was implemented to maintain continuity and timeliness of production; from Q4 onwards, normal operating mode, with no major downtime





FINANCIAL RESULTS FOR Q1 2022



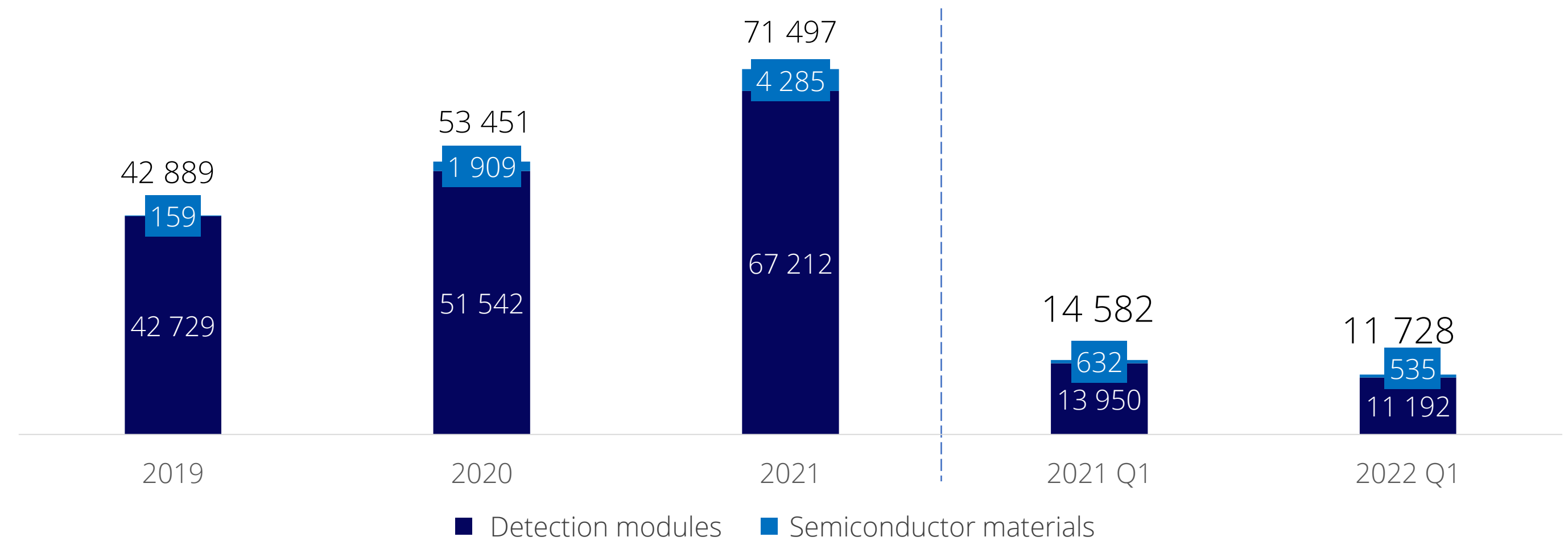
# SALES REVENUES



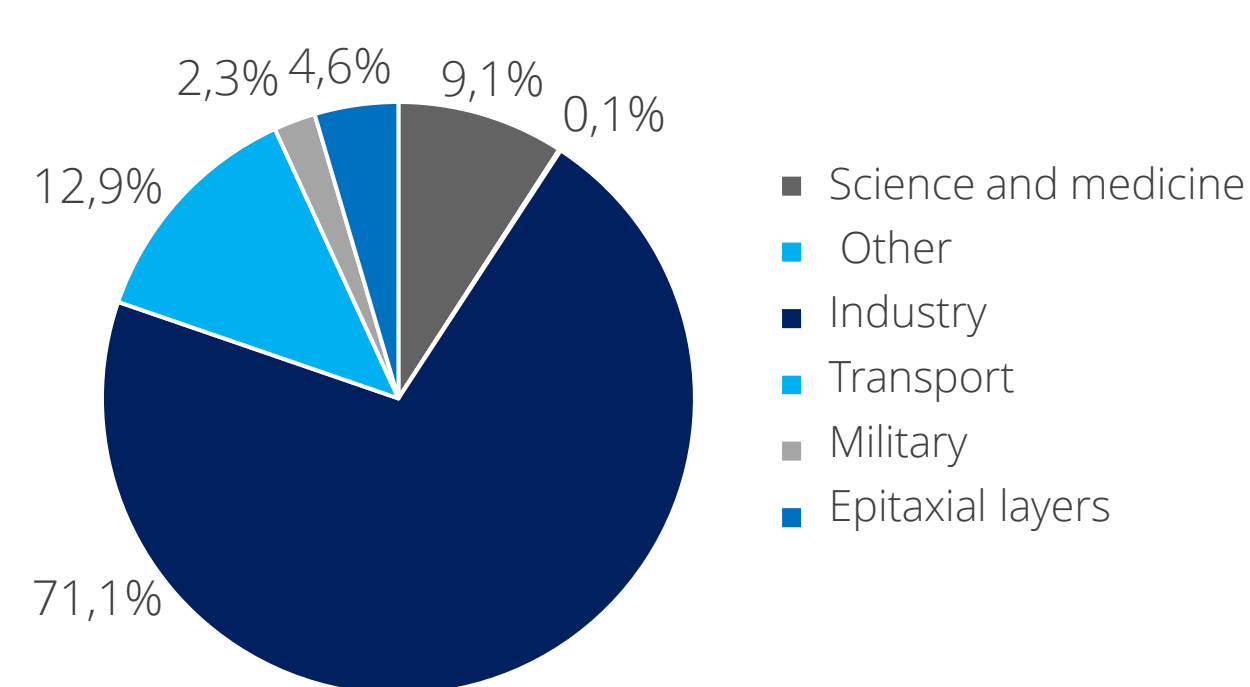
## SALES REVENUES IN Q1 2022

- Lower revenues in Q1 2022 by 19.6% (PLN 11.7m) mainly due to the one-off impact of the previously scheduled commissioning of the new technological facilities and cleanroom investment.
- Sales of detectors and detection modules at PLN 11.19m, and semiconductor materials at PLN 0.54m.
- The greatest increases:
  - Industry +53% YOY
  - Science and medicine +14% YOY
- By geography, significant growth in the Asian market of 96.1% YOY; decline in the US market (-41.6%) related to lower orders from a client for whom a detector for biomedical applications was being developed and in the European market (-30.2%) mainly due to lower orders from a client in the security sector.

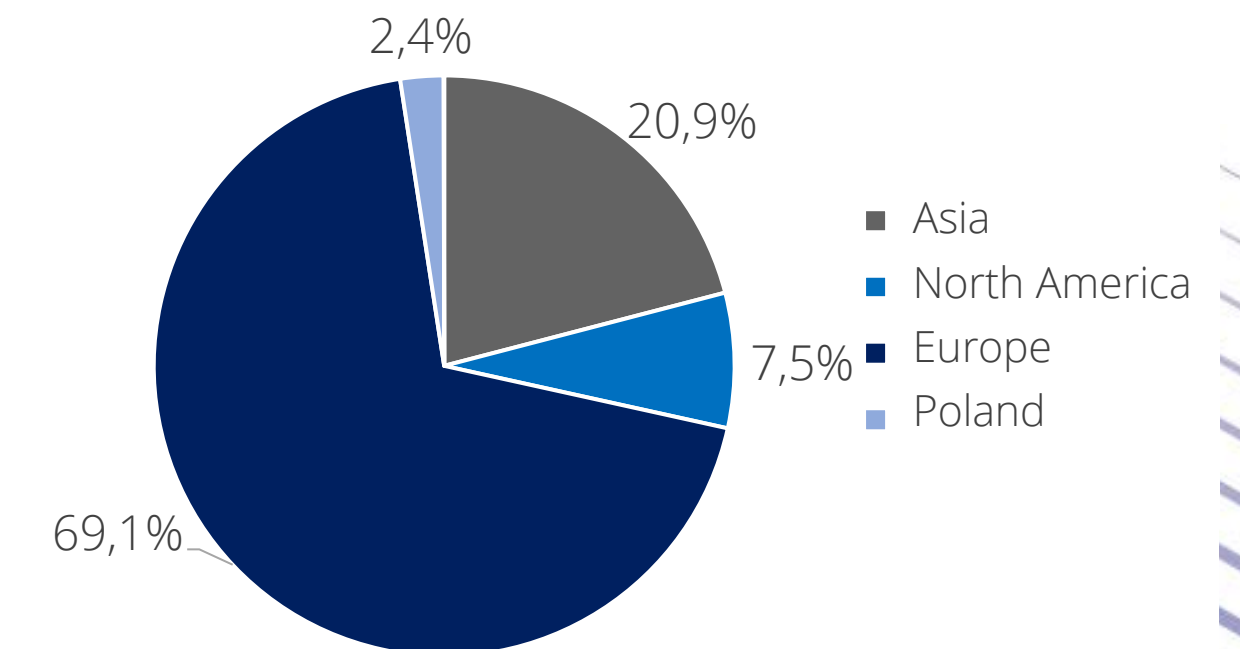
## SALES REVENUES PER YEAR (PLN THOUSAND)



## SALES REVENUES BY APPLICATION IN Q1 2022



## SALES REVENUES BY REGION IN Q1 2022

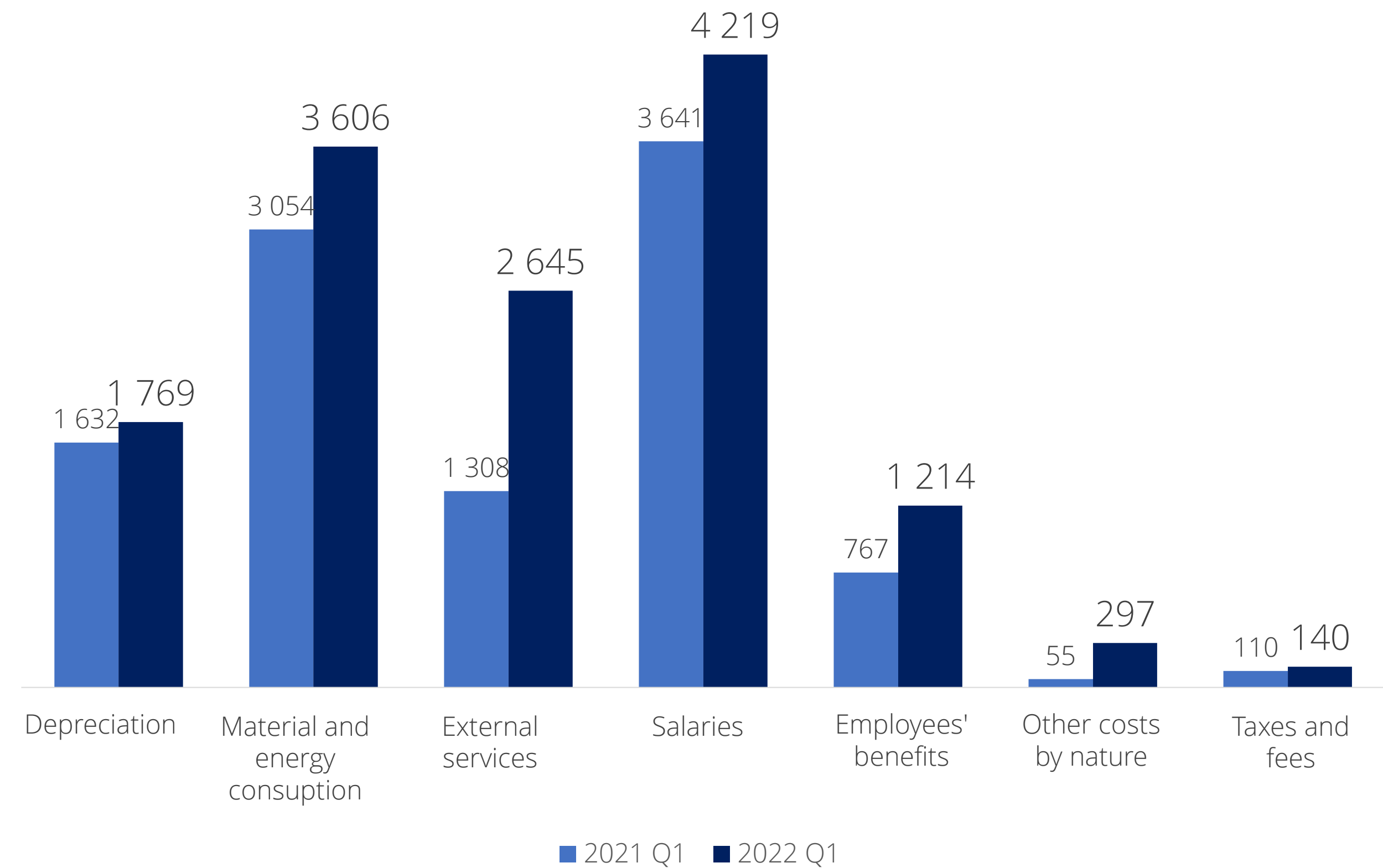




## OPERATING COSTS IN Q1 2022

- Core operating expenses in Q1 2022 increased by 31% YOY.
- The following had the greatest impact on the increase in costs:
  - costs of external services increased by 102% YOY, including IT services, financial services, consulting services, maintenance/ renovations – due to the variety of functions of the new building, its maintenance costs were included in general and administrative expenses
  - employee benefits increased by 58% and salaries by 16% YOY
  - costs related to the consumption of materials and energy increased by 18%.

## OPERATING COSTS IN Q1 2021 AND Q1 2022 (PLN THOUSAND)

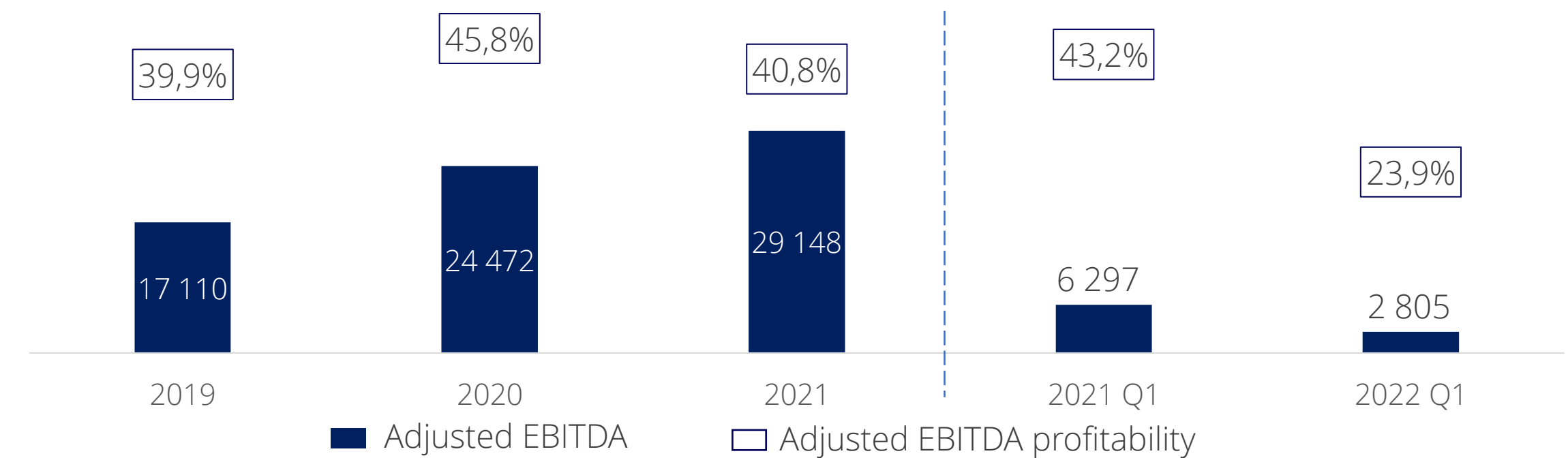




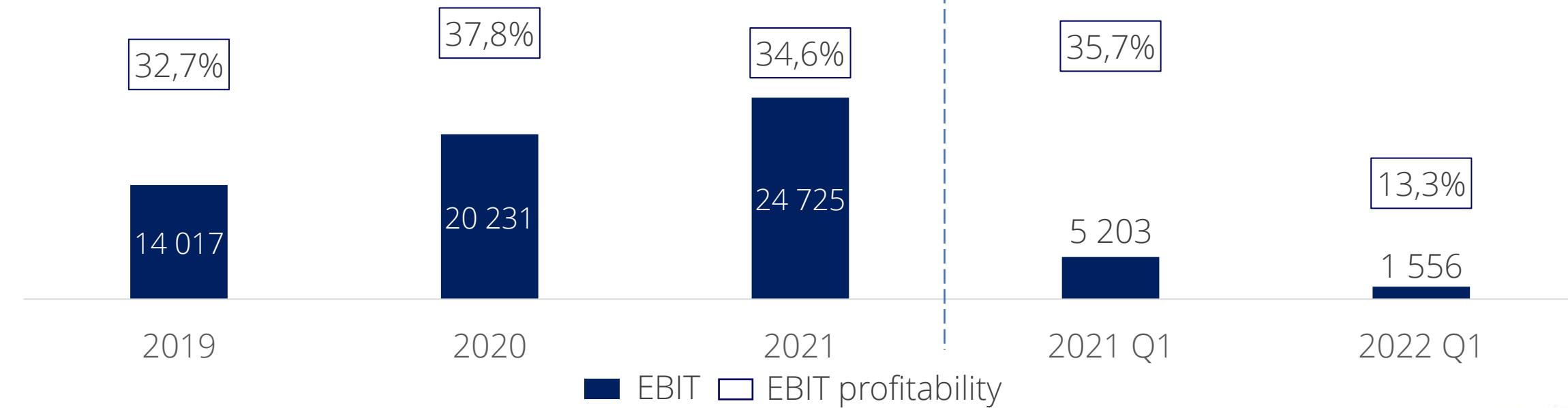
## FINANCIAL PERFORMANCE IN Q1 2022

- Adjusted EBITDA: PLN 2.8 million (-51% YOY).
- Operating profit (EBIT): PLN 1.6 million (-70% YOY).
- Net profit adjusted for deferred tax: PLN 0.9m (-89% YOY).
- The following items had a significant impact on the net result:
  - a drop in sales revenue by PLN 2.8 million,
  - exchange rate differences, including valuation of foreign currency loans taken for investments,
  - settlement of subsidies to grants and fixed assets,
  - write-down on loans granted.

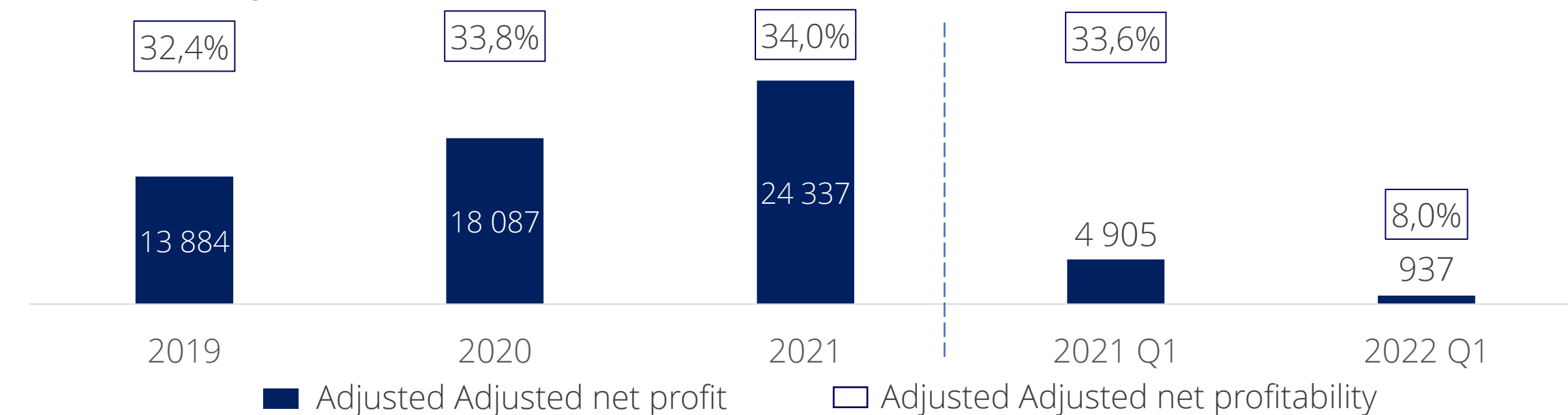
### ADJUSTED EBITDA (PLN THOUSAND) AND EBITDA MARGIN



### EBIT (PLN THOUSAND) AND EBIT MARGIN



### ADJUSTED NET PROFIT (PLN THOUSAND) AND NET MARGIN





## CASH FLOW IN Q1 2022

- Cash flows from operating activities: increased inventory levels and decreased receivables
- Cash flows from investing activities: lower proceeds from subsidies received (PLN 2.8m) and lower capital expenditure (PLN 18.5m)
- Cash flows from financing activities: PLN 6.8m received and PLN 2.1m repaid in capital instalments and PLN 0.2m in interest

Cash Flow Statement [PLN thousand]	01.01.2022 - 31.03.2022	01.01.2021 - 31.12.2021
<b>Total adjustments:</b>	<b>6 343</b>	<b>-282</b>
Amortisation and/or depreciation	1 776	6 753
Change in provisions	-646	354
Change in inventories	-2 887	2 325
Change in receivables	8 939	-7 981
Change in liabilities, excluding loans and borrowings	-536	2 469
Other	-301	-4 202
<b>A. Net cash flows from operating activities</b>	<b>7 356</b>	<b>24 131</b>
<b>Inflows</b>	<b>2 772</b>	<b>15 055</b>
Funding received	2 771	15 053
Proceeds from the sale of fixed assets	1	2
<b>Outflows</b>	<b>-18 528</b>	<b>-49 616</b>
Purchase of intangible assets and tangible fixed assets	-10 723	-29 394
Expenditure on acquisition of shares	-670	-3 523
Expenditure on investment funds	0	3 033
Outlays on development work in progress	-5 924	-18 298
Loans granted	-1 211	-1 433
<b>B. Net cash flows from investment activities</b>	<b>-15 756</b>	<b>-34 561</b>
<b>Inflows</b>	<b>6 782</b>	<b>11 469</b>
Credits and loans	6 782	11 469
<b>Outflows</b>	<b>-2 449</b>	<b>-8 404</b>
Repayment of credits and loans	-2 232	-8 092
Interest and commissions	-218	-312
<b>C. Cash flows from financial activities</b>	<b>4 333</b>	<b>3 065</b>
<b>D. Total net cash flows</b>	<b>-4 067</b>	<b>-7 365</b>
<b>G. Cash at the end of period</b>	<b>1 591</b>	<b>5 658</b>



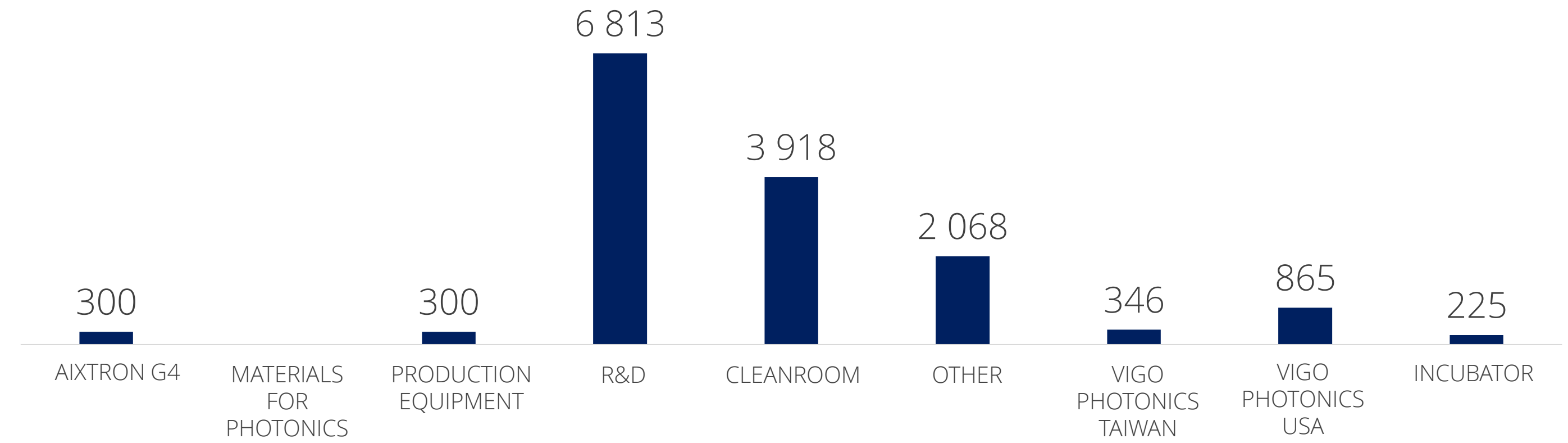
# CAPITAL EXPENDITURE



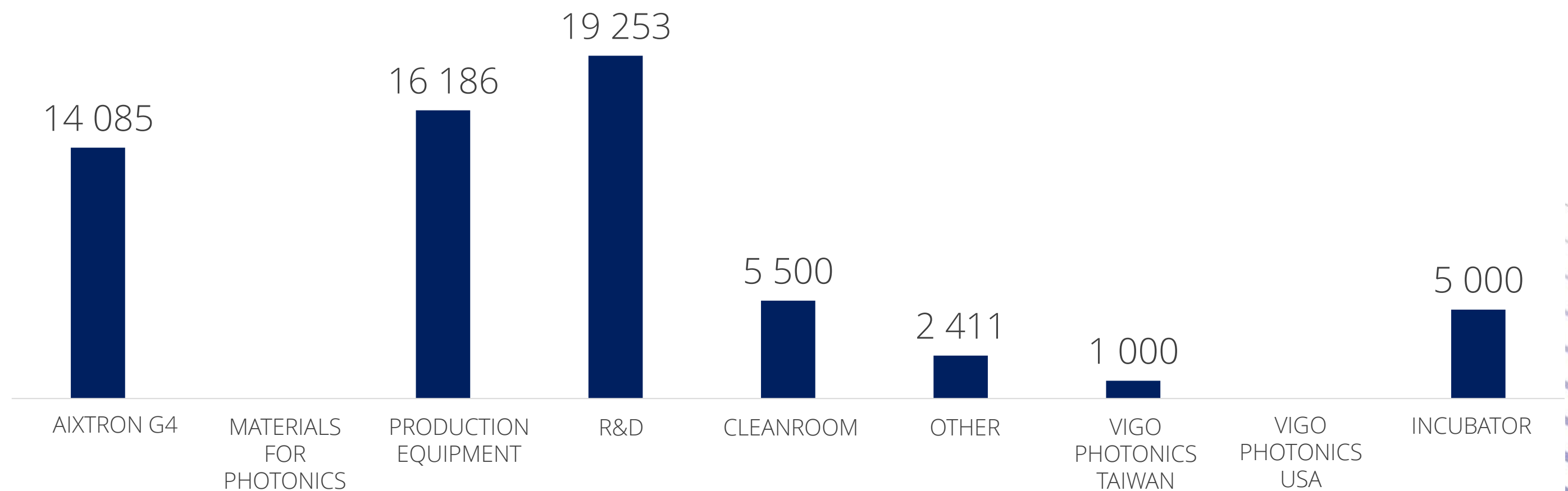
## CAPITAL EXPENDITURE / CAPEX IN Q1 2022

- Expenditure in Q1 2022 amounted to PLN 15.4 million (accrual), of which the most significant expenditure related to:
  - R&D expenses (PLN 6.7 million)
  - Cleanroom reconstruction and commissioning (PLN 3.9m)
  - Other (PLN 2.1m)
- The plan for 2022 assumes PLN 63.4 million of investments, including:
  - Completion of cleanroom redevelopment: PLN 5.5m (mostly completed in Q1 2022)
  - Implementation of new MOCVD: PLN 14.1 million
  - R&D expenses: PLN 19.2 million
  - Expenditure on purchase of production equipment: PLN 16.2 million
  - Investments through VIGO Ventures: 5 million PLN

## CAPITAL EXPENDITURES INCURRED IN Q1 2022 (PLN THOUSAND)



## CAPITAL EXPENDITURES PLANNED FOR 2022 (PLN THOUSAND)







PERSPECTIVES



# PERSPECTIVES

## SHORT-TERM OUTLOOK

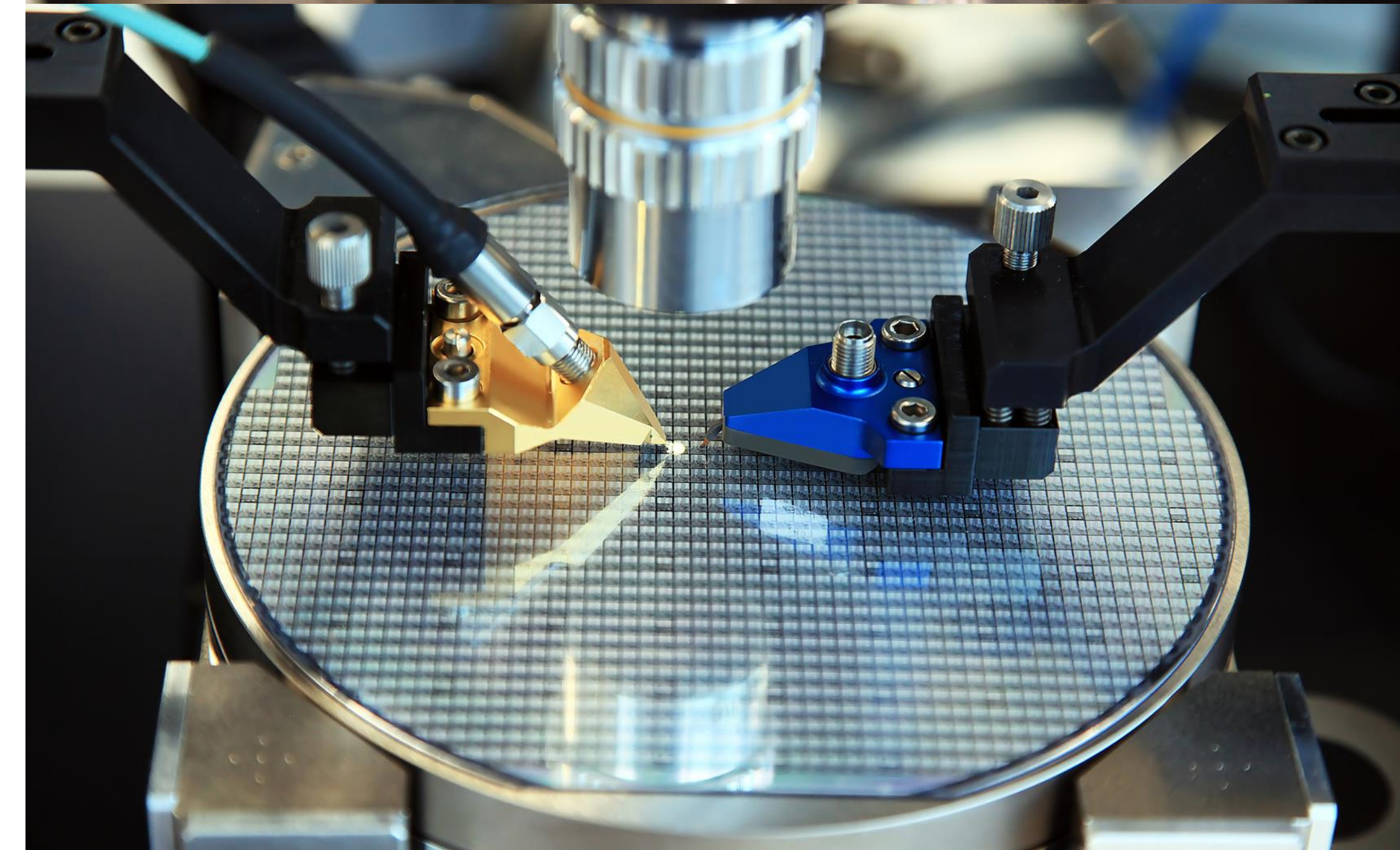
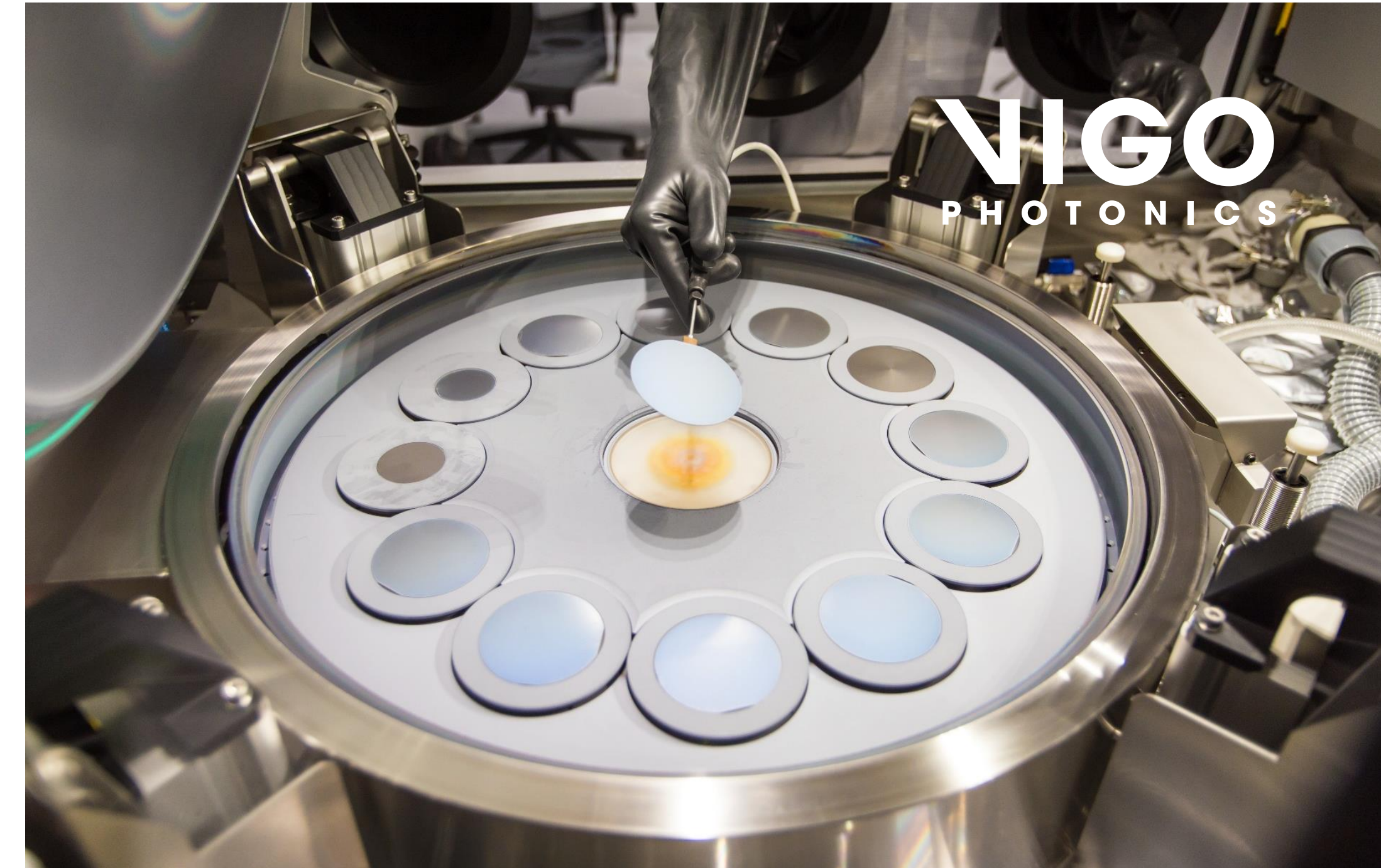
Plan for 2022

PLN 80 million revenue, including:

- **Industry** - growth by 20-30%, especially on the US market, in environmental applications, semiconductor industry, possible higher growth in case of positive validation of new products by customers
- **Transportation** - growth of approx. 10% (Caterpillar + Chinese market)
- **Military technologies** - in 2022 smaller orders expected from Safran; total revenue approx. PLN 10 million
- **Science and medicine** - revenues at a similar level as in 2021
- **Materials for photonics** - EUR 1.5-2 million (awaiting the delivery of the purchased epitaxial reactor to significantly increase contract execution in this segment)

RoHS Directive\* (Restriction of Hazardous Substances)

- Pending decision on early 2020 application (together with other MCT manufacturers) to extend transition periods
- Report\*\* of EC advisor published recommending extension of transition periods and possibility to use MCT solutions until 21 July 2028



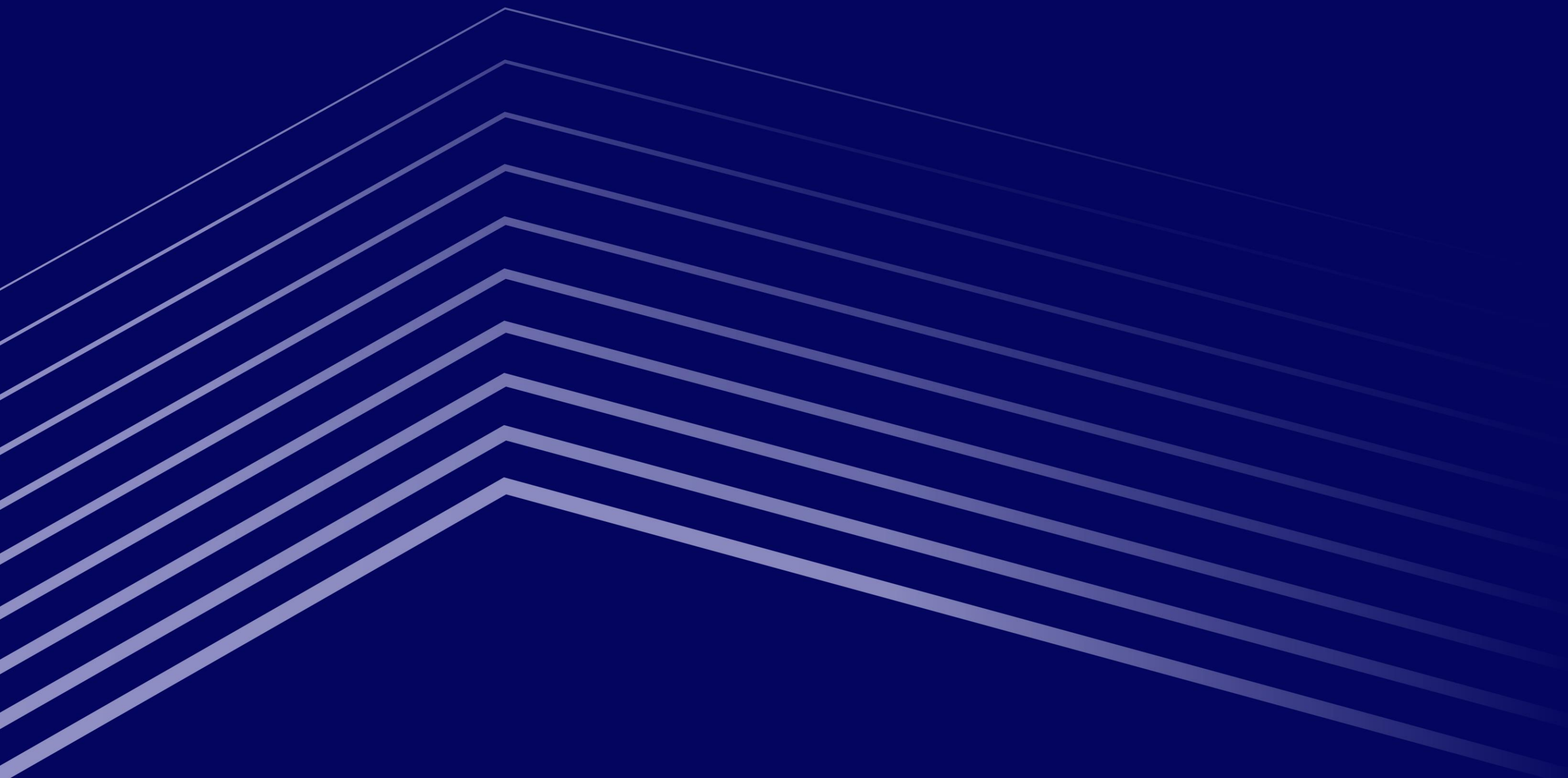


## **CONTINUE TO EXECUTE THE 2023 AND 2026 STRATEGY WITH A FOCUS ON PRODUCTION EFFICIENCY AND STRATEGIC INITIATIVES BASED ON VIGO'S UNIQUE TECHNOLOGIES AND ACCELERATE COMMERCIALISATION OF NEW SOLUTIONS IN A FAST-GROWING AND FORWARD-LOOKING MARKET**

<p>MARKET ENVIRONMENT</p>	<ul style="list-style-type: none"> <li>• Operating in the fast-growing mid-infrared market</li> <li>• Market megatrends: miniaturisation of devices, RoHS directive and ecology, semiconductor deficit in EU</li> <li>• New industries gaining importance: internet of things, wearable-lab-on-chip consumer electronics, environmental protection, automotive, defence and security</li> </ul>
<p>INVESTMENTS</p>	<ul style="list-style-type: none"> <li>• Development of common bases (technological and technical) for key pro-growth initiatives by 2023 through investments in R&amp;D and universal infrastructure</li> <li>• Preparation of the investment plan necessary for the implementation of the 2026 strategy plans</li> </ul>
<p>TECHNOLOGY</p>	<ul style="list-style-type: none"> <li>• Continuation of development work on initiatives from the Company's strategy</li> <li>• Implementation of new initiatives from the 2026 strategy - entering the level of optoelectronic systems, integrated circuits and infrared matrices</li> <li>• Continued work with and for global partners on new VIGO solutions</li> </ul>
<p>COMMERCIALISATION</p>	<ul style="list-style-type: none"> <li>• Focus on commercialisation of current and new VIGO products with emphasis on semiconductor materials</li> <li>• Continuation of sales to customers with the potential for the highest growth in industrial, security and military applications as well as transportation - about 20-30% growth in 2022</li> <li>• Active development of sales and acquisition of new customers for solutions - priority market in Asia, active operations in the European and American markets, pilot programs in the Polish market</li> </ul>
<p>FINANCIAL RESULTS</p>	<ul style="list-style-type: none"> <li>• Maintain annual growth rate in the range of 20-30%</li> <li>• Sales revenues - 2022: ~PLN 80.0 million, 2023: ~ PLN 100.0 million</li> <li>• Adjusted EBITDA - 2022: ~ PLN 33.5 million, 2023: ~ PLN 40 million</li> <li>• Maintain high i.e. over 40% normalised EBITDA margin</li> </ul>



# Q&A SESSION





THANK YOU FOR YOUR ATTENTION

Contact:

Małgorzata Młynarska

Investor Relations Manager, cc group

e: [malgorzata.mlynarska@ccgroup.pl](mailto:malgorzata.mlynarska@ccgroup.pl)

m: +48 697 613 709



This study has been prepared for information purposes only, contains only summary information and is not exhaustive in nature, nor is it intended to be the sole basis for any analysis or evaluation. VIGO System S.A. makes no representations (express or implied) about the information presented in this study and no reliance should be placed on any information contained herein, including any forecasts, estimates or opinions. VIGO System S.A. does not assume any responsibility for possible errors, omissions or inaccuracies contained in this document. The sources of information used herein are considered reliable and accurate by VIGO System S.A., however, there is no guarantee that they are exhaustive and fully reflect the facts. This study does not constitute an advertisement or an offer of securities in public trading. The study may contain forward-looking statements that constitute an investment risk or a source of uncertainty and may differ materially from actual results. VIGO System S.A. is not liable for the results of decisions, which were taken on the basis of this study. The responsibility rests solely with the user of the study. The study is subject to protection under the Act on Copyright and Related Rights. Duplication, publication or distribution requires written consent of VIGO System S.A.