



shaping global nanofuture

## FINANCIAL RESULTS OF XTPL FOR Q1 2023

XTPL S.A.

May 18, 2023

## **EQUITY STORY**



XTPL is an international company that develops its operations on the dynamic market of printed electronics and delivers innovative technology to global manufacturers, enabling the effective fabrication of next generation devices, with plans for continued strong growth



Groundbreaking platform technology in the large and growing market\*



A rich pipeline of talks with global players of printed electronics - 9 projects in total, including 3 at advanced stages



Revenues planned to grow 10-fold to PLN 100 million by 2026 - entering a large-scale production, increasing DPS sales and recurring nanoink and printing modules sales in industrial projects



PLN 60 million investment program to be launched to strengthen sales achieve a 3-4-fold increase in production capacity and approx. 100 modules and R&D



## AGENDA



1.
FINANCIAL RESULTS
FOR Q1 2023

Z.
TECHNOLOGY
AND BUSINESS

3. OUTLOOK

4.
SUMMARY



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FINANCIAL RESULTS FOR Q1 2023

## **EXECUTIVE SUMMARY Q1 2023**





**PLN 3.0** million in revenues from the sale of products and services in Q1 2022

A **3-fold increase YoY** (+PLN 2.0 million YoY)



PLN 0.1 million in EBITDA for Q1 2023,

+ PLN 2.5 million YoY



PLN -0.3 million in net result for Q1 2023

+PLN 2.3 million YoY



PLN 1.2 million in CAPEX for Q1 2023,

+PLN **+0.6** million YoY

- continuation of advanced work with international industrial partners in the areas of: displays, semiconductors and PCBs
- completing 9 technology evaluations in total in terms of industrial implementations with global players of the printed electronics sector
- completing the key elements of the **4th stage of development** as part of the **technological phase** with Nano Dimension relating to the next generation conductive nanoink, and receipt of the fourth payment tranche
- 4 orders for the Delta Printing System
- 7 completed nanoink sales transactions in the EMEA region
- obtaining further patent protections in Malaysia, Germany, China, USA and Japan
- participation in **5 international industry events** supporting the recognition of XTPL's brand and solutions worldwide

# STRONG GROWTH OF REVENUES FROM THE SALE OF PRODUCTS - Q1 2023 SUMMARY





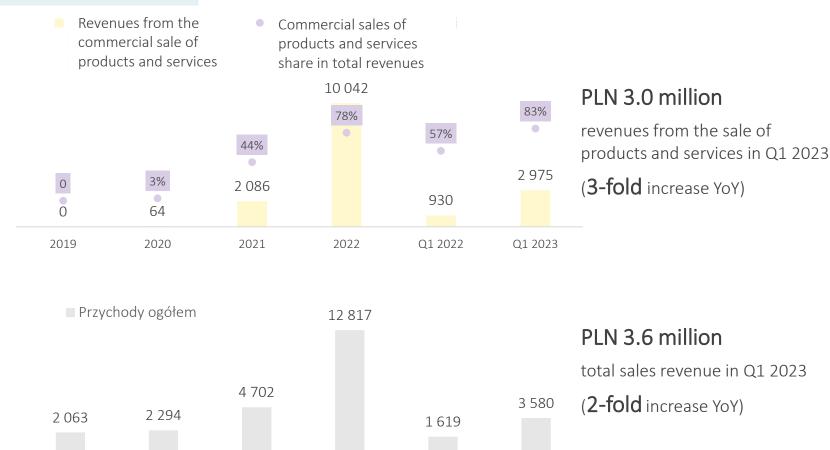
2019

xtpl.com

2020

2021

2022



Q1 2022

Q1 2023

• Transition from an R&D-focused firm into a business that successfully commercializes its

product and technology

- An upward trend in revenue from the sale of products and services triggered by the commercialization of the first two business lines DPS printing devices and nanoinks
- A pronounced acceleration of revenues in 2022, commercialization of the third key business line: industrial implementations
- 83% share of revenues from the sale of products and services in Q1 2023 in total revenues - efficient business development
- a good foundation for further revenue growth in subsequent periods

## FINANCIAL PERFORMANCE - Q1 2022 SUMMARY



#### \* figures in PLN thousand

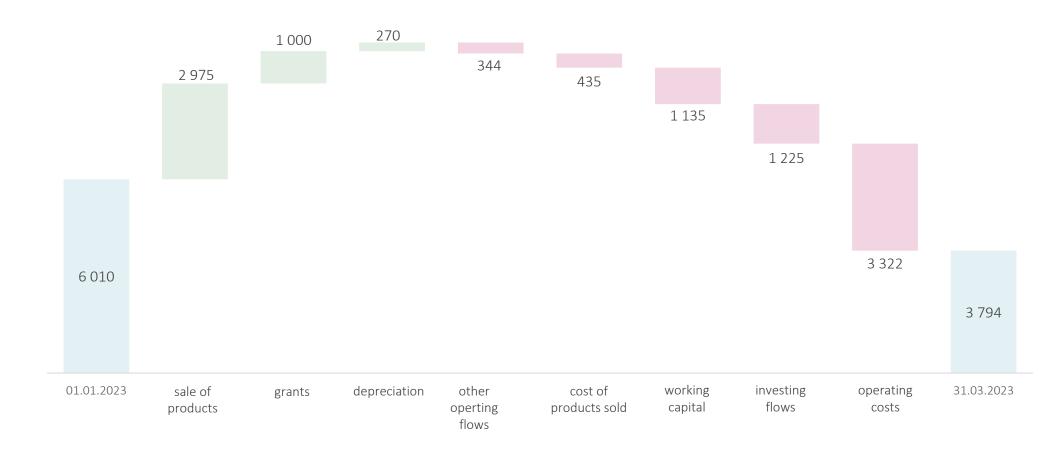
	Q1 2023	Q1 2022	
Total revenues	3,580	1,619	
Revenues from the sale of products and services	2,975	930	PLN <b>+2.0</b> m YoY
Grants (reimbursements and advances)*	1,000	1,085	
Operating costs	3,322	2,929	
EBITDA	92	-2,396	PLN <b>+2.5</b> m YoY
EBITDA adjusted for the incentive program	92	-1,247	
Cash flows from operating activities	-659	-189	
CAPEX	1,225	666	
Net cash flows	-2,209	-889	
	31.03.2023	31.12.2022	
Cash balance at the end of the period	3,794	6,010	

- 3-fold increase in revenues from the sale of products and services (+PLN 2 million YoY), including DPS and nanoink sales, and proceeds from completed stages of industrial projects
- Reducing the share of grants in total revenues to 17% coupled with their effective acquisition
- Higher operating costs commensurate with the growing business volumes
- positive EBITDA and an increase of PLN 2.5 million YoY
- negative net cash flows (PLN -2.2 million) an increase in receivables with a positive impact on the next quarter
- higher CAPEX driven by continued business growth
- comfortable cash position

## CASH FLOWS - SUMMARY Q1 2023



\* figures in PLN thousand







TECHNOLOGY AND BUSINESS

### MEGATRENDS DRIVING THE PRINTED ELECTRONICS MARKET





**Miniaturization** of the size and weight of electronic devices while increasing efficiency and speed of operation



**Changing the forms and properties** of consumer electronics:

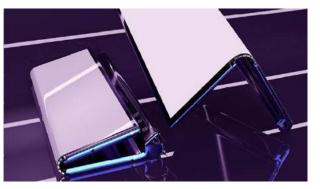
- flexibility
- new shapes, including three-dimensional forms



#### Ecology:

- saving materials and energy during production processes
- reducing the amount of waste by using additive technology







## THE GROWING DEMAND OF MANY INDUSTRIES FOR HIGH-TECH SOLUTIONS, PLATFORM CHARACTER OF XTPL'S TECHNOLOGY



#### **ADVANCED ELECTRONICS**

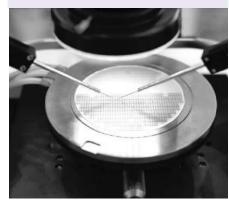
- USD 51 bn value of the global market of printed, flexible and organic electronics in 2022, up 8% YoY
- USD 66 bn estimated value of this market in 2026, with USD 74 bn estimated in 2030
- **7%** CAGR 2022-2026

#### **OLED DISPLAYS**



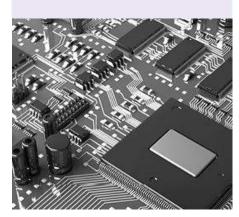
USD 48.8 billion (2022) CAGR 2023-2030 22.6%

#### ADVANCED INTEGRATED CIRCUITS



USD 14.1 billion (2022) CAGR 2023-2027 8.5%

#### ADVANCED PCBs



USD 8.2 billion (2022) CAGR 2023-2028 5.5%

#### SMART GLASS

USD 5.6 billion (2022) CAGR 2023-2028 11.2%

#### **SECURITY PRINTING**

USD 117.2 billion (2021) CAGR 2021-2026 12.5%

#### **BIOSENSORS**

USD 27.8 billion (2021) CAGR 2023-2028 9.1%

PHOTOVOLTAIC PANELS

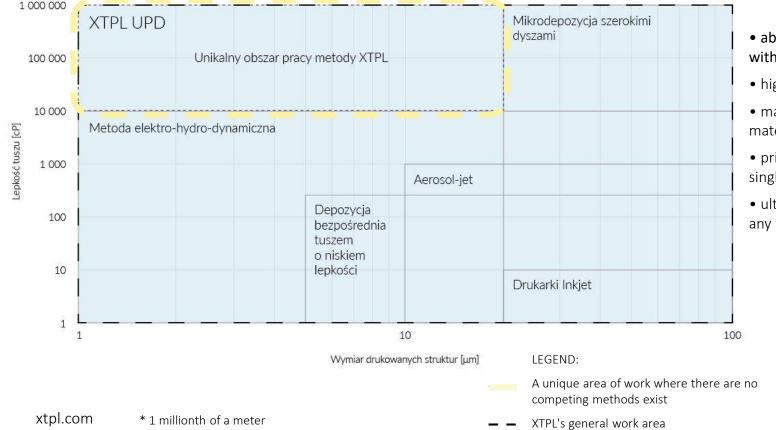
USD 96.5 billion (2023) CAGR 2023-2028 10.0%

#### PLATFORM CHARACTER OF XTPL TECHNOLOGY

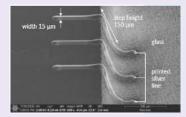
Strong development of this market is due to the growing number of new applications of printed, flexible and organic electronics in various fields. XTPL technology is used in many existing areas of the printed electronics industry or - thanks to the unprecedented precision of printing - will lead to the emergence of new areas (platform character)

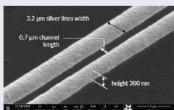
## GLOBALLY UNIQUE XTPL TECHNOLOGY

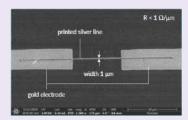
The XTPL technology provides solutions unattainable by any other methods available in the market and is unrivaled in terms of viscosity and size of conductive structures up to 1 um\*



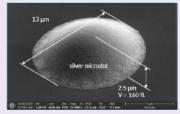
- ability to print high viscous materials along with small feature sizes
- high aspect ratios just after a single pass
- matchless variety of printing different materials
- printing on complex topographies with a single conductive path
- ultra high resolution printing on practically any kind of substrate

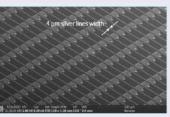












#### INTELLECTUAL PROPERTY PROTECTION



XTPL's global solutions are being systematically secured by expansion of the patent cloud. Intellectual property is a product and a competitive advantage, while the size and development of the patent cloud have a major impact on the Company's value - the size and proper protection of the cloud are key to the market position

XTPL solutions are protected as of patent submission with the relevant patent authority

#### PATENT GROUPS OF SUBMITTED APPLICATIONS

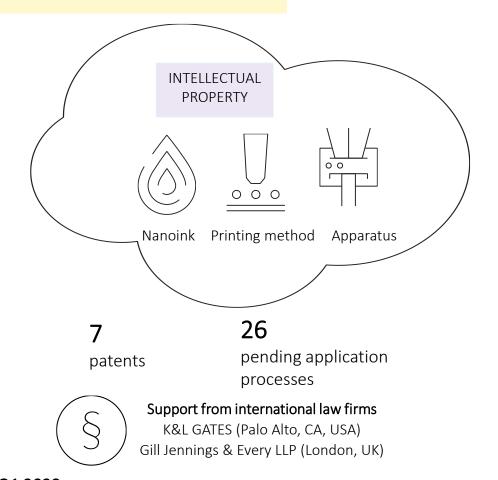
**UPD process** - patents describing the UPD process or a device used for the process

Nanoink - patents protecting various nanoink formulations

**Software** - patents protecting the solutions implemented in the software that controls the printing device

**Application fields** - patents describing solutions to specific technological problems using the UPD method

**Characterization and quality control** - patents related to the characterization and quality control of selected components of the printing head



Q1 2023: patent protection obtained from: Malaysian Patent Office, German Patent and Trademark Office, China Patent Office, United States Patent and Trademark Office, Japan Patent Office; new subsequent protections in Q2 2023 in the USA

## **GLOBAL OPERATIONS**





XTPL successfully commercializes its products in **18 countries** (DPS and nanoinks) and conducts technology evaluations at global players in the printed electronics sector.

The Company has **5 international distributors** of its solutions in South Korea,
China, the British Isles, Germany and India.

Siedziby XTPL

Sprzedaż produktów XTPL



Dystrybutorzy XTPL

### COMPLEMENTARY BUSINESS LINES AND PRODUCTS



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- standalone R&D and prototyping system, XTPL technology demonstrator
  - current geographic locations of the Delta Printing System: Germany, Poland, Great Britain, Italy, China, USA, South Korea



- silver nanoinks with a high silver content and excellent stability for use in various printing
- silver products sold globally to academic and industrial partners from EMEA, USA and Asia

- printing module for integration with industrial equipment
- can be used in many areas of production; current advanced evaluations in FPD (flat panel display), semiconductor and PCB areas

techniques

## ADVANCED INDUSTRIAL PROJECT PIPELINE



(only projects in Stage 2 and above are show				STAGE 0	STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
	PROJECT NAME	INDUSTRY AND GEOGRAPHY	PARTNER / END-USER	Base-technology development at XTPL	Initial contact and identification of the problem-solution fit	Technology Evaluation / Development at XTPL site	Technology Validation at Partner site	Industrial Prototype Tool	Industrial "Roll-out"
	1.0 μm OLED ODR repair	FPD Korea	Leading consumer electronic manufacturer						
	TE-OLED	FPD China	Electronic components producer				Initial discussions		
	Open defect repair in microLED displays	FPD China	Provider of ICT infrastructure and smart devices						
	Interconnect Depo	FPD USA	International technology company				Initial discussions		
	microLED CCL	FPD USA	Leading semiconductor chip manufacturer						
	WLP Precision Via Fill	Semicon Taiwan	Global semiconductor foundry						
	High resolution RDL printing	Semicon China	Provider of ICT infrastructure and smart devices						
	Prototyping of integrated circuit connections	Semicon USA	Microcontroller and integrated circuits manufacturer						
	Metalic ink	PCBs EMEA	Nano Dimension Ltd.						

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**SEMICONDUCTORS** 

#### MAJOR ACHIEVEMENTS IN INDUSTRIAL PROJECTS





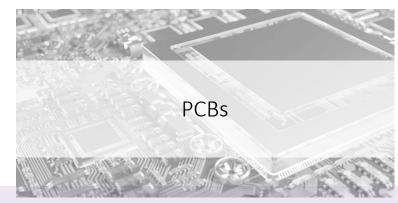
Since the end of 2022, continuation of work with HB Technology on the use of XTPL technology at the end customer for use in **next generation ultra high resolution displays**, including micro OLED displays

- the end customer is a leading manufacturer of FPD displays in the world (Flat Panel Display) from South Korea
- partner's decision preceded by an approx 24 month period of validation of the XTPL solution
- the next step is to deliver the XTPL device for technology validation at the R&D level to HB Technology in H1 2023 and adapt the solution to the needs of the end customer



Since H2 2022, execution of the order in the form of a printing module to build an industrial prototype of a device for applications in the area of advanced packaging in the **semiconductor industry** 

- The partner is a global manufacturer of specialized equipment for the production of semiconductor components from Taiwan
- partner's decision preceded by an 18 month process as part of the 3 stages of evaluation of XTPL's technological solutions in cooperation with a partner in Taiwan (equipment manufacturer) and an end customer in Taiwan a leading semiconductor manufacturer in the world



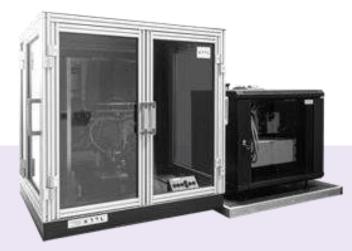
From the beginning of 2022 cooperation with Nano Dimension Ltd to develop a special formula of conductive ink for additive manufacturing electronics (AME) applications for devices manufactured and supplied by an industrial partner

- special formula of conductive nanoink based on metallic nanoparticles
- solutions will provide high conductivity to Nano Dimension products focused on AME markets
- 3 stages of the technological phase completed and 3 tranches of payments launched in 2022 at the end of March 2023 the implementation of the key elements of the 4th stage and the next payment tranche

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# ACCELERATED SALES OF DELTA PRINTING SYSTEM - COMMERCIALIZATION Q1 2023





- 17 Delta Printing System (DPS) devices sold in total\*
- **5** DPS orders in 2023
- continued commercialization of DPS in China a total of 9 prototyping devices sold in the local market
- other sales to the USA, South Korea, Germany, Great Britain, Italy and Poland
- development of the device and software for DPS control
- constantly developed functionality and comfort of use
- ~EUR 170-200 thousand price of the DPS device
- estimated market size: global annual sales of equipment for R&D, prototyping and small-lot production: approx. 250-500 units/year

#### Selected users of the Delta Printing System:



















## **University of Stuttgart**







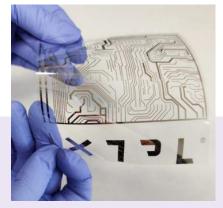




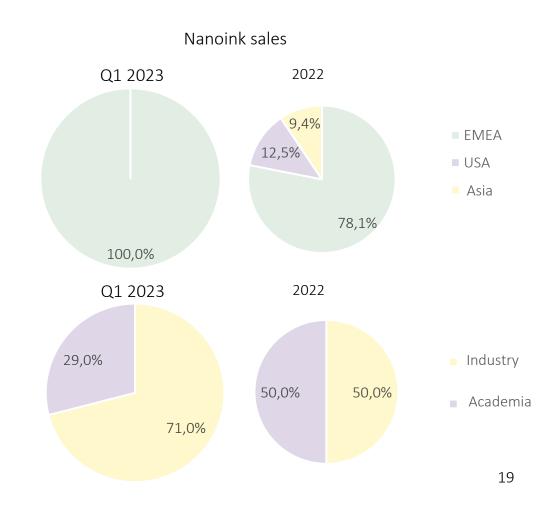
# SIGNIFICANT MILESTONES IN NANOINKS - COMMERCIALIZATION Q1 2023







- 65 orders since the beginning of ink commercialization
- 12 returning clients since the beginning of ink commercialization
- orders completed for 18 countries
- 7 completed sales transactions with the EMEA region in Q1 2023
- completing the key elements of the 4th stage of development as part of the technological phase with Nano Dimension relating to the next generation conductive nanoink
- continued cooperation with nScrypt for the distribution of the conductive nanopaste CL85 - the product added to the client's product range
- Development of copper and gold inks





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### XTPL TRANSFORMATION AND TRANSITION TO BUSINESS SCALING



## → PRESENT PHASE

TECHNOLOGY DEVELOPMENT PHASE

- development of the underlying technology
- technology evaluation by industrial clients and academic R&D centers

- R&D continuation
- rapid prototyping
- commercialization of Delta Printing System devices and nanoinks: 5-fold increase in commercial sales YoY (PLN 10 million YoY)
- introducing and establishing commercial and strategic cooperation
   technology development with global printed electronics players in order to integrate the XTPL technology to industrial equipment







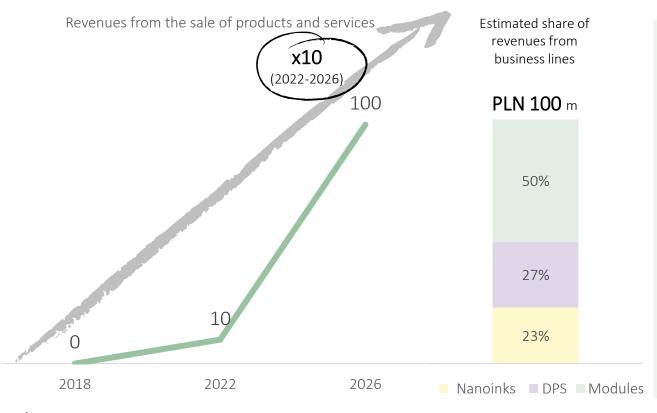
- NEXT PHASE
- integration of XTPL printing modules to industrial equipment
- further sales development in key global technological destinations and continuous supply: inks, nozzles, cartridges
- increase in production capacity in all business lines
- **continuation of R&D** maintaining competitive advantages



## EXPECTED 10-FOLD INCREASE IN PRODUCT SALES



10-fold increase in revenues from product sales by 2026 helped by the scaling of three complementary yet independent business lines



#### Key revenue growth drivers:

- Modules for industrial implementations: approx. 100 units sold - transition to industrial implementations with 3-4 business partners
- Delta Printing System:
   3-fold increase in sales numerous sales opportunities in the sales funnel
- Nanoinks:
  4-fold increase in production capacity for industrial clients, consumables for modules and DPSs

Sales strengthened by a larger sales and marketing department, as well as distributors + new sales centers in the following years.

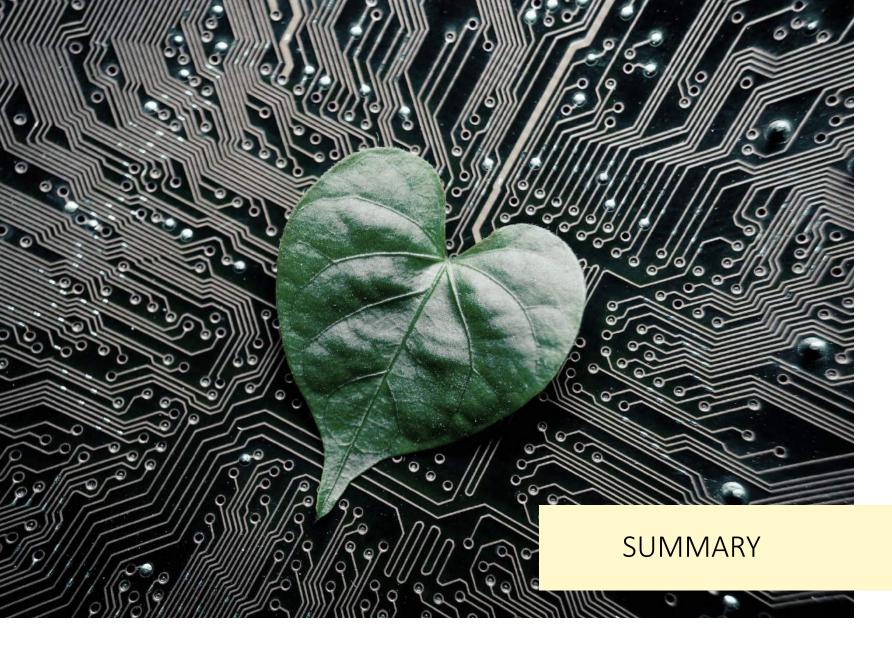
### PLANNED INVESTMENTS TO SUPPORT FURTHER STRONG GROWTH



PLN 60 million worth of investments planned in 2023-2026 for development and support of a 10-fold increase in revenues from the sale of products by 2026



More than a half to be obtained from a new issue of shares, the rest from debt financing, grants and equity over 12 months





#### **SUMMARY**



XTPL is a global player in the rapidly growing printed electronics market, with a disruptive technology, an interdisciplinary team of experts, support from stable shareholders and the ambition to increase commercial sales 10 times.

#### **MARKET**

- Activity in the growing electronics market, which is expected to grow to USD 66 million in 2026 (7% CAGR 2022-2026)
- The growing demand of many industries for XTPL's high-tech solutions
- Numerous megatrends supporting market and business growth

#### **BUSINESS**

- The disruptive, platform technology provides solutions unattainable by other methods, ensuring competitive advantages for customers
- Three business lines with the potential for further growth: advanced stages achieved in modules, strong DPS sales and recurring orders in nanoinks
- R&D helps sustain competitive edge and IP significantly affects the value and determines the company's market position

#### FURTHER DEVELOPMENT

- Planned 10-fold increase in product sales by 2026 - rescaling of three complementary business lines
- The constantly growing product sales as a solid foundation for further strong business growth
- Advanced technology evaluation pipeline for industrial implementations with global players

## Contact for investors: <a href="mailto:investors@xtpl.com">investors@xtpl.com</a>

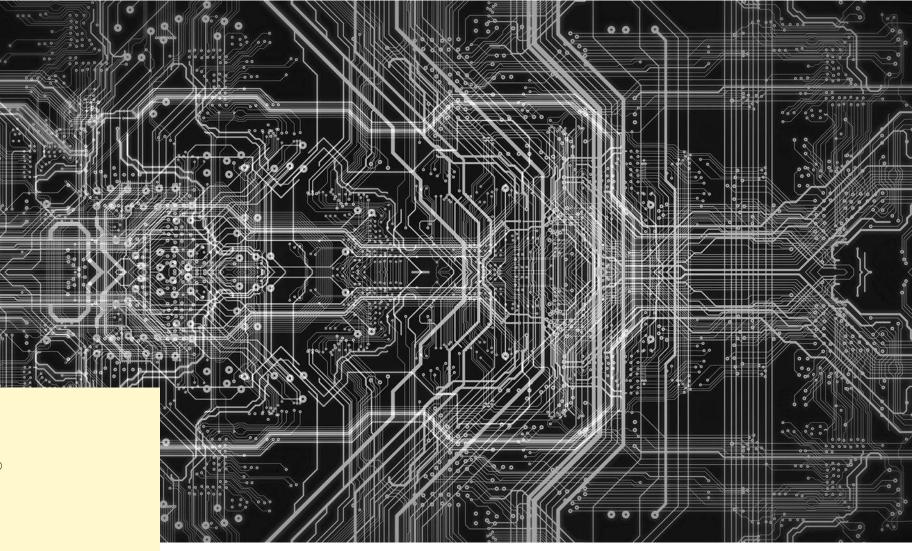
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THANK YOU

## APPENDIX 1: XTPL PRESENCE ON WSE AND SHAREHOLDING STRUCTURE





listed on the Main Market of the Warsaw Stock Exchange since February 2019



listed on the Open Market at Deutsche Börse in Frankfurt since March 2020

#### SELECTED MARKET INFORMATION

WSE Ticker XTP

FRA Ticker 5C8

ISIN PLXTPL000018

Reuters Code XTP.WA

Indexes WIG-Poland, WIGtech,

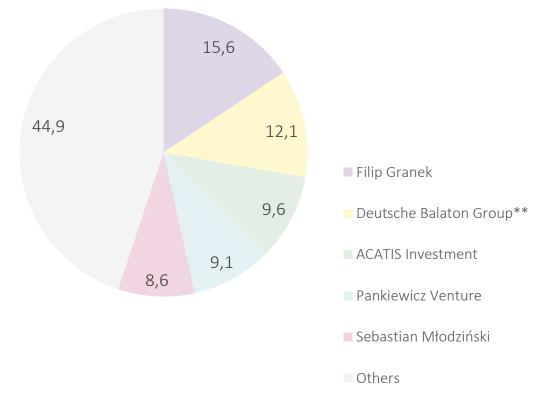
WIGtech Total Return, INNOVATOR

Number of shares 2,029,222

Market capitalization\* PLN 284 million

Free float 44.9%

#### SHAREHOLDING STRUCTURE OF XTPL S.A. (March 2023)



<sup>\*</sup>as at 10.05.2023May 10, 2023

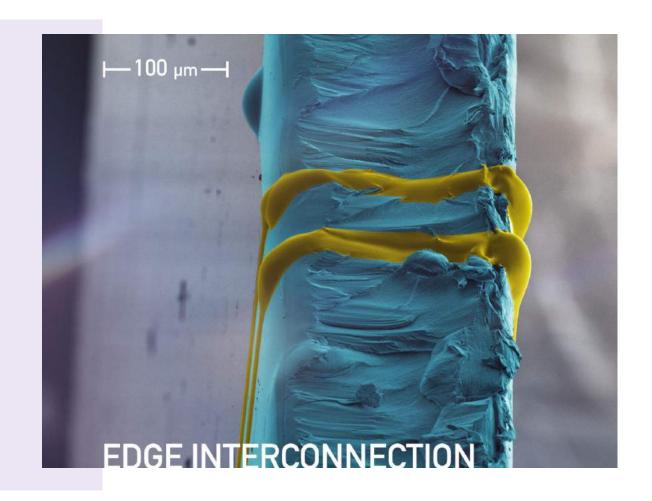
<sup>\*\*</sup> Deutsche Balaton AG i Heidelberger Beteiligungsholding AG

### APPENDIX 2: TECHNOLOGY AND R&D - Q1 SUMMARY



Key achievements and progress in research & development in Q1 2023:

- Development of a paste based on copper nanoparticles and the XTPL printing technology of copper paths on 3D substrates, with steps of approx.
   10 μm, along with the development of a copper sintering technology to obtain a conductivity of more than 35% of undoped copper;
- Development of a technique for printing silver conductive structures with widths below 20  $\mu$ m on the edges of flexible and rigid substrates
- Completing the key elements of the 4th stage of development as part of the technological phase of the activities specified in the agreement with Nano Dimension relating to development of a special formulation of conductive nanoink for industrial applications in the client's products



## APPENDIX 3: INDUSTRY EVENTS - SUMMARY Q1 2023



In Q1 2023, XTPL actively participated in **5 international industry events** in order to increase its visibility on the global electronics market, including:

- MEMS 2023 Germany
- LOPEC 2023, February 28 Germany
- THE ISRAELI CONFERENCE ON ADDITIVE MANUFACTURING:
   Research To Applications ICAM 2023 Israel
- TechBlick Additive Electronics in Semiconductor Packaging and PCBs - online
- Smart Systems Integration (SSI) Belgium

In 2022, XTPL participated in over **20 international industry events** 



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