



**XTPL**

shaping global nanofuture

INVESTORS' PRESENTATION FOR 2018

XTPL S.A.  
2019, April 30th



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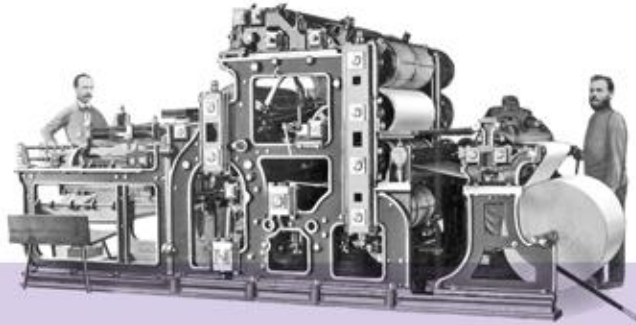
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# REVOLUTION OF PRINT

X T P L



# 1450

# 2019

Although books existed for almost 3 000 years, until Gutenberg invented the printing press in the 15th century they were rare, hard to manufacture and very expensive. Text and illustrations were done by hand, an extremely time-consuming process. However, within a few decades, Gutenberg's innovation spread which allowed literacy to flourish. That led to cultural revolution in Europe.

Today, the advantages of print - such as scalability, lower cost, simplicity and speed - can also be used in the production of advanced electronics. This sector faces strong megatrend to produce high-tech devices using cost-effective and scalable methods. XTPL developed the technology that will enable that advance.

## PRINTED ELECTRONICS

- Market value in 2017 - approx. USD 9.3 billion
- Estimated market value in 2027 - USD 73.4 billion
- CAGR 2017-2027 - 10%

## STRONG MEGATREND IN ELECTRONICS

- Production of high-tech devices with cost effective and scalable methods.

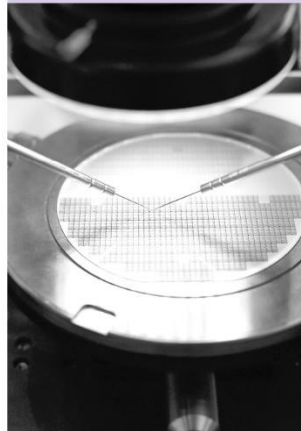
SMART GLASS



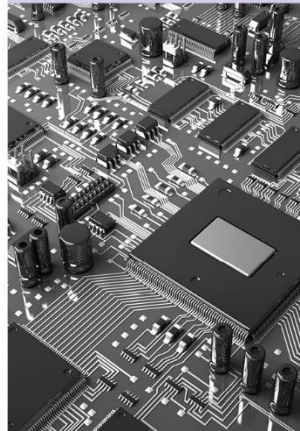
DISPLAYS



SEMICONDUCTORS



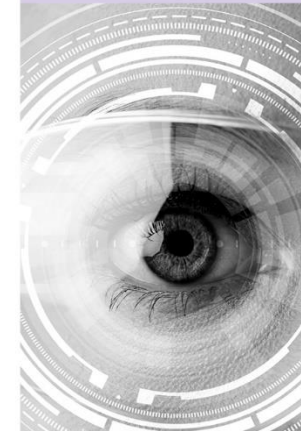
ADVANCED PCB'S



ANTICOUNTERFEITING



BIOSENSORS



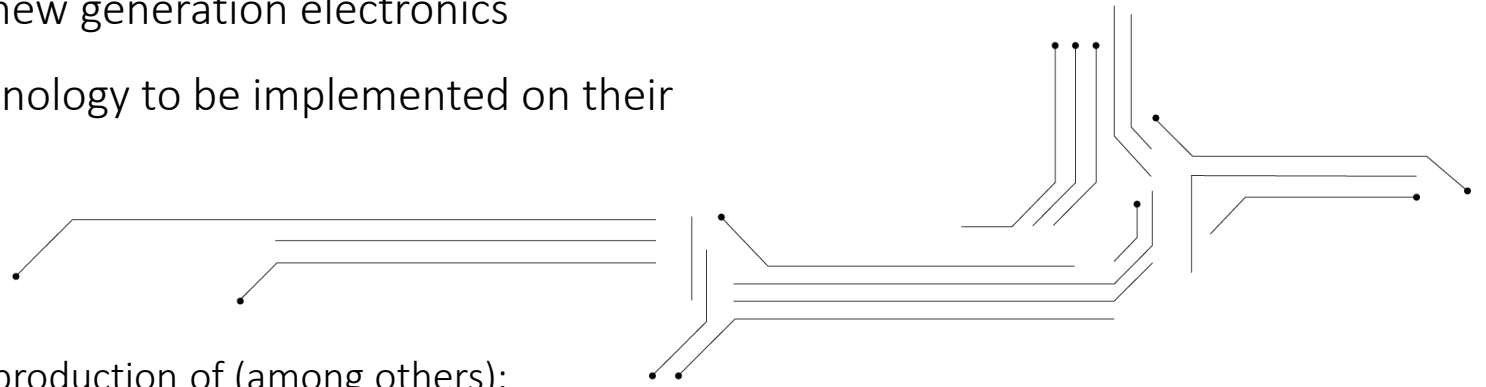
PHOTOVOLTAIC CELLS



# SOLUTION



XTPL enables global manufacturers of new generation electronics by providing ultra-precise printing technology to be implemented on their production lines.



XTPL platform technology will facilitate the production of (among others):

new generation displays

smart glass with advanced functionalities

innovative anticounterfeiting solutions

photovoltaic cells with increased efficiency

Base principal the same as Intel Inside – Unique technology empowering the global electronics manufacturers

# BREAKTHROUGH TECHNOLOGY



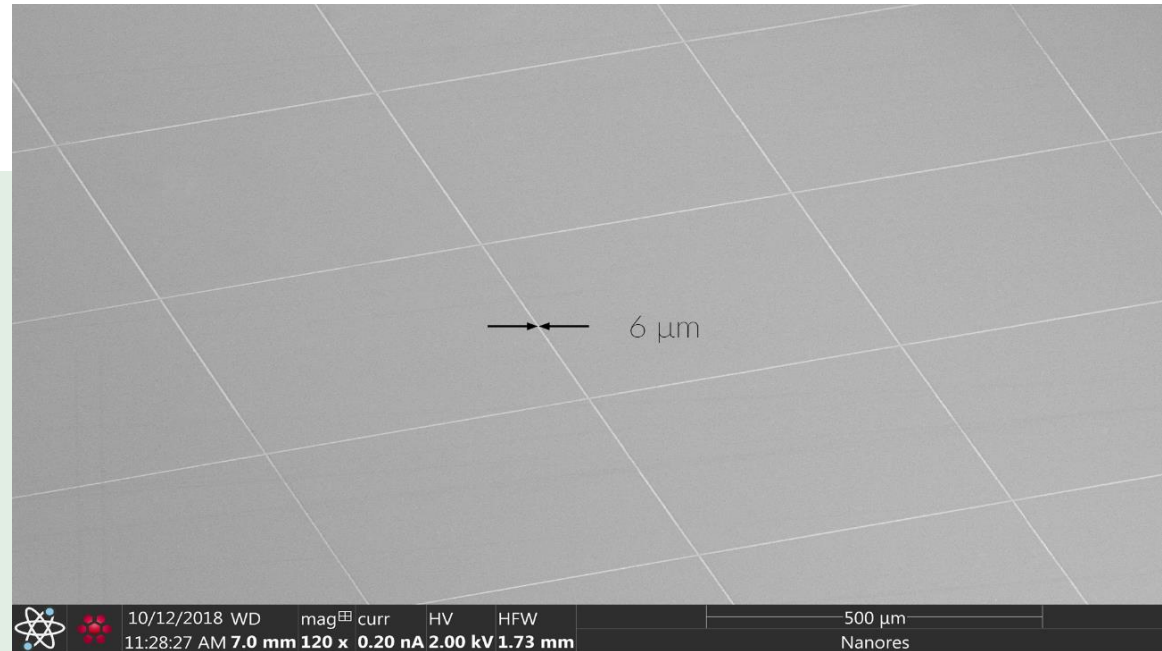
The company aims to provide:

- Unique **printing heads** - designed & dedicated for specific application field



- Compatible, precisely adjusted **nanoinks**

This comprehensive solution allows for obtaining ultra-thin structures for various applications



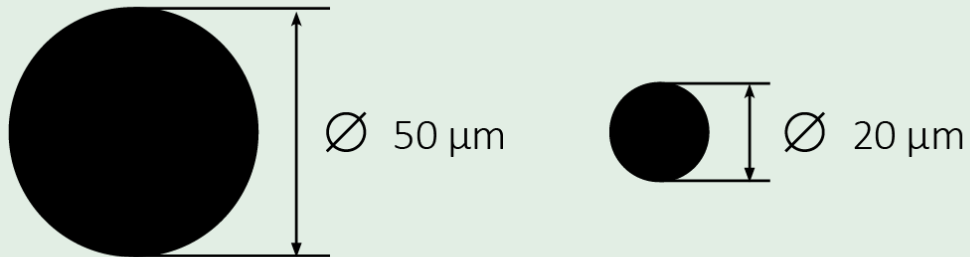
# UNPARALLELED PRECISION



## CURRENT STANDARD

Minimal structure size 20  $\mu\text{m}$

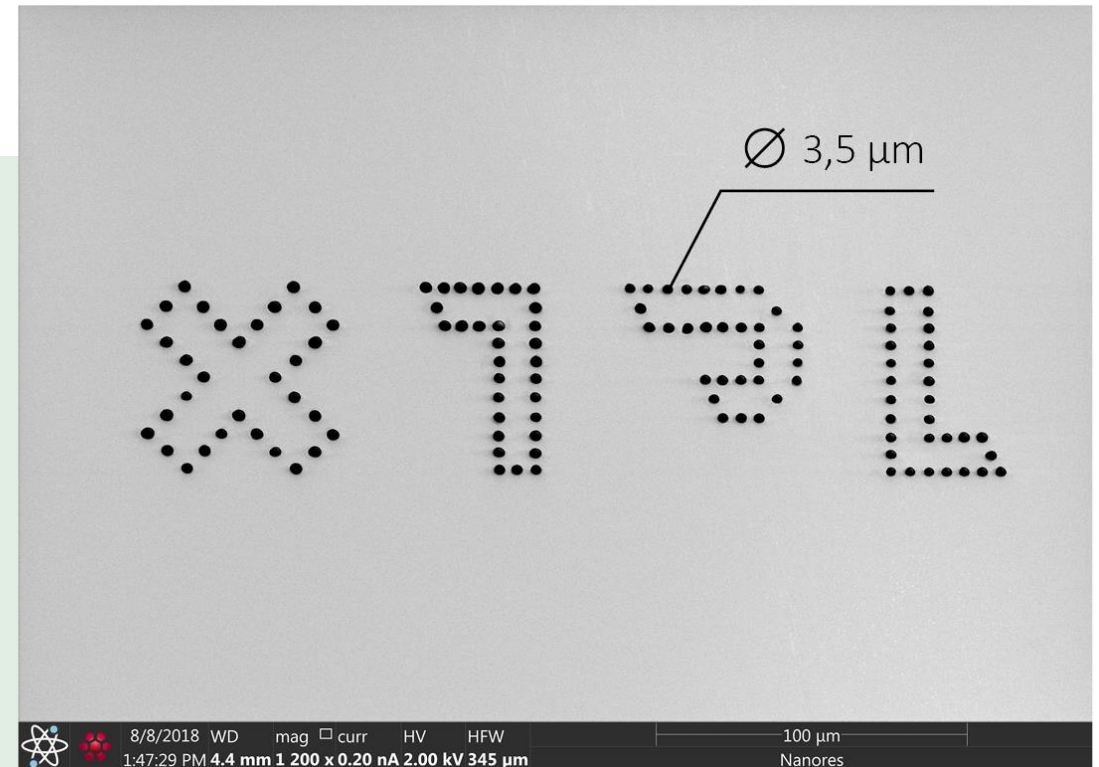
The main competitive advantage of XTPL additive solution for ultraprecise deposition is unprecedented precision that cannot be replicated by any other printing method in the world.



For example microdots currently obtained on the market usually have about 50  $\mu\text{m}$ , the minimum is 20  $\mu\text{m}$  – while XTPL currently achieves dots with diameter of 1  $\mu\text{m}$ , and plans to go even below this limit.

## XTPL METHOD

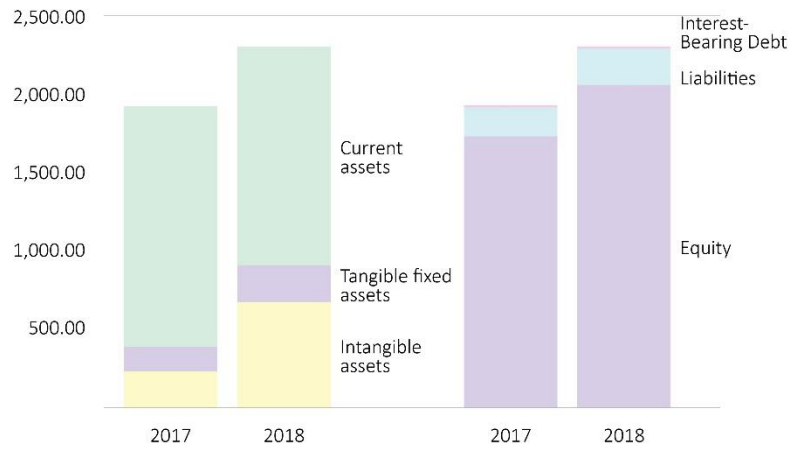
Minimal current structure size 1  $\mu\text{m}$



# SELECTED FINANCIAL DATA



## STRUCTURE OF BALANCE SHEET

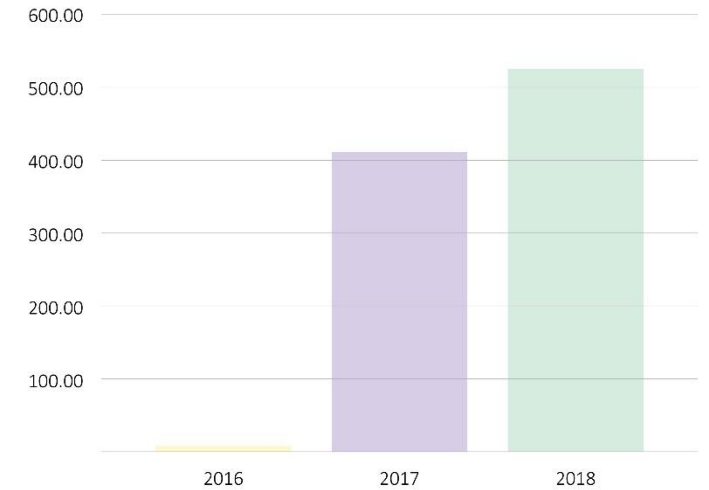


## CASH FLOW



- Net cash flows from investing activities
- Net cash flows from operating activities
- Net cash flows from financial activities

## NET REVENUE FROM SALES



\* all data in kEUR

# SHAREHOLDING STRUCTURE



L.P.	SHAREHOLDER	NUMBER OF SHARES HELD	% SHARE
1.	Filip Granek	303,288	17.00
2.	Sebastian Młodziński	299,852	16.81
3.	Leonarto Sp. z o.o.*	298,015	16.71
4.	Heidelberger Beteiligungsholding AG	192,371	10.79
5.	TPL Sp. z o.o. **	140,020	7.85
6.	ACATIS Investment Kapitalverwaltungsgesellschaft mbH on behalf of ACATIS Datini Valueflex Fonds	127,000	7.12
7.	Stefan Twardak	103,081	5.78
8.	Konrad Pankiewicz*	2,573	0.14
9.	Others	317,420	17.80
	<b>TOTAL</b>	<b>1,783,620</b>	<b>100.00</b>

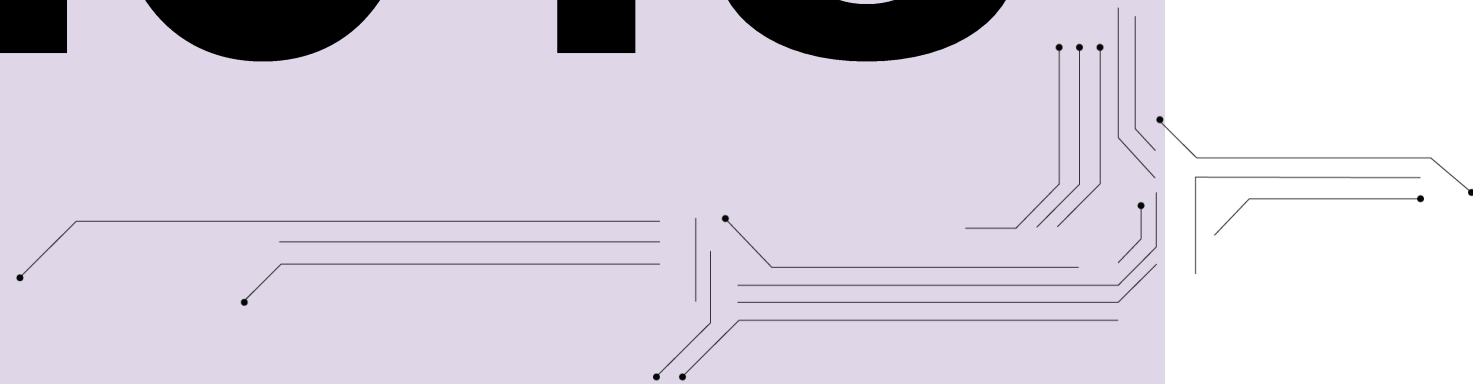
XTPL's founders, **Filip Granek** and **Sebastian Młodziński**, as well as the investor **Konrad Pankiewicz** (who finances the company through the company Leonarto) control **more than 50% of votes at the General Meeting.**

\* Konrad Pankiewicz, Member of the Supervisory Board, is the only one shareholder and the Chairman of the Board of Leonarto Sp. z o.o. Konrad Pankiewicz together with his affiliated entity own 300 223 shares of the company and 17,23% of the equity

\*\* TPL Sp. z o.o. possess Series L shares, issued for employees shares option program, that are not listed on New Connect market. Shareholders of TPL Sp. z o.o. are: Filip Granek, Chairman of the Board of the Issuer (34% of shares), Sebastian Młodziński, Member of the Board of the Issuer (33% of shares) and Adriana Pankiewicz who is Konrad Pankiewicz's wife (33 % of shares)

Number of shares = Number of votes  
% of shares = % of votes

# 2018

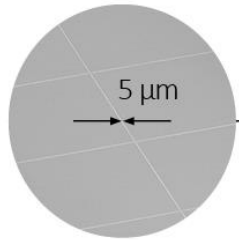


# SELECTION OF STRATEGIC APPLICATION FIELDS



## SMART GLASS

XTPL printed,  
conductive lines

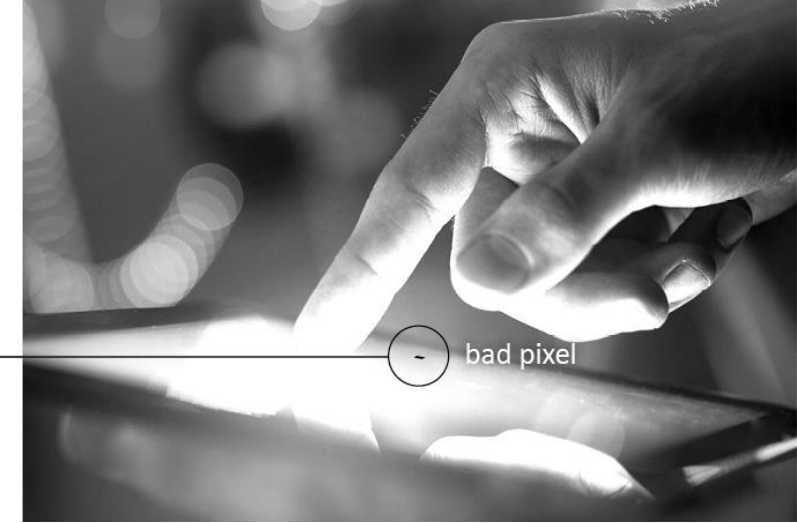
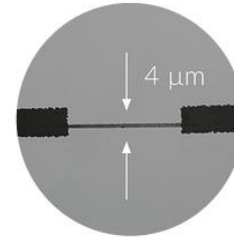


### USPs:

- faster conversion of glass from light to dark and vice versa
- fast, simple & versatile method, lower production cost
- extremely high transparency

## DISPLAYS

XTPL printed,  
conductive lines



### USPs:

- improvement of production yield in the advanced manufacturing lines
- ultraprecise additive technology – saving costs, material & time
- ideal for ever increasing display resolution technologies

# FOCUS ON THE SMART GLASS SECTOR



- technological specification
- advanced, multi-stage proof-of-concept project
- internal tests in the potential partner's laboratory
- assessment of the degree of requirements' fulfillment and possibility of implementing XTPL solutions to the smart glass technological process
- positive result opens the way to start the negotiations on a project to develop a dedicated multi printing head and compatible nanoink
- the real prospect of introducing nanoprinting technology to the smart glass market

## SMART GLASS



Application: **smart glass**

### Go to market strategy:

Market readiness: advanced PoC

Market partner: yes (US)

- partnering with the sector leader (joint technological development)
- final stage - industrial implementation

### Defined competition: direct printed metal mesh transparent conductive film

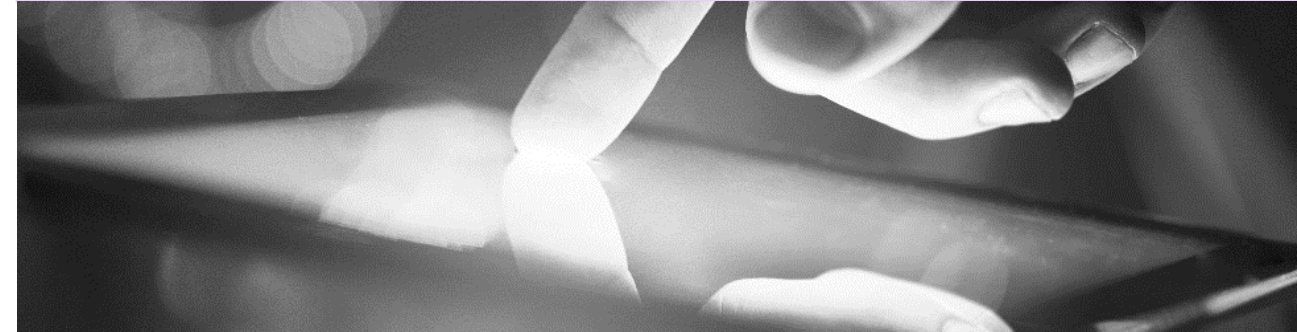
- DNP
- Goss International
- Gunze
- Komori

# FOCUS ON THE DISPLAY SECTOR (ODR)



- technological specification
- multi-stage proof-of concept project
- invitation to negotiate terms of potential cooperation
- visit of potential partner representatives at the XTPL headquarters
- implementation of XTPL technology as a component of devices for flat panel displays production lines as the long-term goal of negotiated cooperation
- defining the final cooperation model and intermediate stages allowing for its commencement

## DISPLAYS



Application: **open defects repair (ODR)**

### Go to market strategy:

Market readiness: all industrial requirements met

Market partner: yes (Southeast Asia)

- integration with partner's devices
- final stage - industrial implementation

### Defined competition:

- Orbotech (KLA-Tencor)
- V Technology
- Micronics Japan Co. Ltd
- Charm Engineering

## ADVISORY BOARD/ US BOARD OF DIRECTORS



### HAROLD HUGHES

- developing high-tech projects in **Silicon Valley for the past 40 years**
- for many years involved at the board level in **Intel and Intel Capital**
- former **CEO of Rambus (semiconductors, USD 4.5 billion CAP at NASDAQ)**
- participates in boards of companies such as: - **Quantenna Communications (Wi-Fi chips, USD 0.6 billion CAP at NASDAQ)** - **View Inc. (smart glass sector, estimated valuation of USD 1.1 billion);** advising also the company **Kateeva**



### AMIR NAYYERHABIBI

- partner at **Benhamou Global Ventures, a Silicon Valley VC fund**
- **WFJ** referred to him as **“serial entrepreneur”**
- experience gained at **Intel and Cisco**
- co-founded and managed **several companies that dynamically increased their value**
- founded **StratumOne and AuroraNetics, companies sold to Cisco for a total of over USD 0.5 billion**

## ACATIS

1st round 2017  
(XTPL CAP EUR 25 M)

2nd round 2018  
(XTPL CAP EUR 37.6 M)

- investment fund managed privately by Dr. Hendrik Leber
- EUR 5 billion worth of assets under management
- trend-setter, both in terms of quality and selective approach to investments
- **7.12% share** in XTPL shareholding structure

## HEIDELBERGER

BETEILIGUNGSHOLDING AG

1st round 2017  
(XTPL CAP EUR 25 M)

2nd round 2018  
(XTPL CAP EUR 44.8 M)

- subsidiary of a well-known investment group Deutsche Balaton Group AG
  - equity in the amount of EUR 288 million, capitalization of EUR 182 million
- well-known for it's ability to find unique companies in early phase of their growth
- strong, rising tech companies in its portfolio e.g. Einhell Germany AG, Prodware Group (France) or GK Software AG
- **10.79% share** in XTPL shareholding structure

## CHANGES IN THE SUPERVISORY BOARD



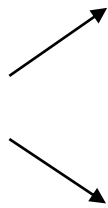
On April 16, 2018, the Extraordinary General Meeting of Shareholders of the Company appointed Mr. Wiesław Rozłucki, former President and co-founder of the Warsaw Stock Exchange, a member of the Supervisory Board. Mr. Rozłucki was then elected as the Chairman of the XTPL Supervisory Board. Using his knowledge and experience, he actively supports the Company in activities related to capital markets and the broadly understood corporate governance.



# EXPANSION OF THE PATENT PORTFOLIO



**2018**

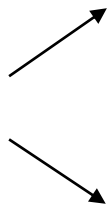


The protection obtained from the first patent application will cover the printing method of conductive lines with higher current and mechanical endurance. The solution has already been implemented in XTPL laboratory printers.

By means of the second patent application, XTPL will acquire the right to an invention that allows the adaptation of the substrate on which the prints are made in such a way to facilitate the printing of long lines with arbitrary shapes.

Gill Jennings & Every LLP, London, UK

**2019**



The first two patent applications relate to the ultra-precise deposition process (UPD). Included in the PCT procedure.

The third patent application concerns the ink used in the UPD process. Included in the PCT procedure.

K&L Gates, Palo Alto, CA, USA

# SELECTED AWARDS



## I-ZONE HONORARY AWARD AT DISPLAY WEEK

XTPL with an award for one of the most promising technologies among the participants of the I-Zone (Innovation Zone) organized as a part of the Display Week, the most important conference for the display sector in the world.



## EY ENTREPRENEUR OF THE YEAR

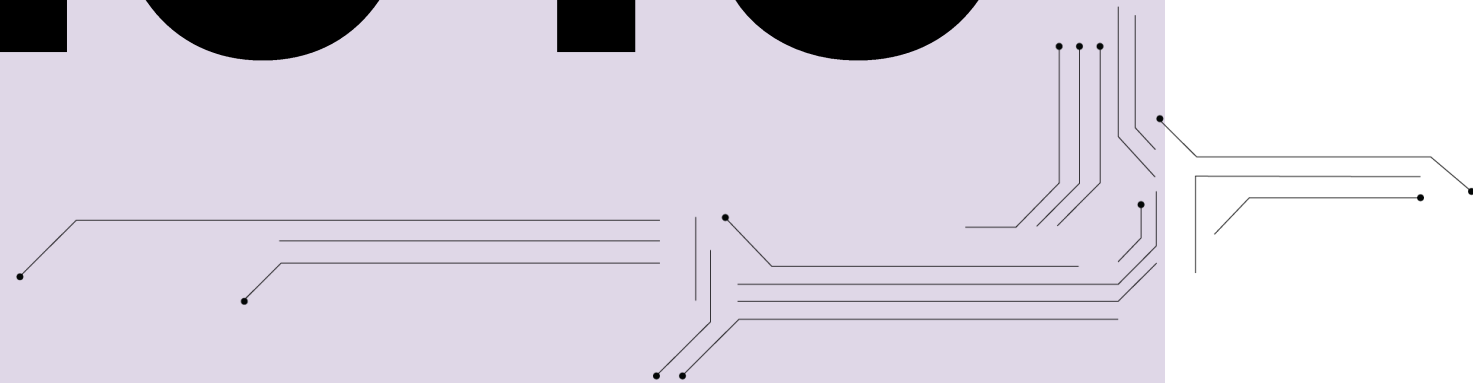
Filip Granek - founder and CEO of XTPL - won Poland's most prestigious entrepreneur award. He received the award for his work on a breakthrough technology, which has a serious chance to change the world for the better.



## XTPL IN THE TOP 100 MOST INNOVATIVE PROJECTS IN THE WORLD

Our nanoprinting solutions were among the winners of the R&D 100 competition alongside companies such as MIT Lincoln Laboratory, NASA Glenn Research Centre and Los Alamos National Laboratory.

# 2019



In February 2019, the Issuer launched its subsidiary XTPL Inc. in Sunnyvale, in Silicon Valley. In the board of directors of the new entity: Filip Granek, Harold Hughes and Amir Nayerhabibi. The direction of Silicon Valley is natural for XTPL due to the concentration in this area of companies that are leaders of the most interesting areas of the industry for the Company. It is a market with a unique business infrastructure and vast experience in implementing high technologies. The opening of a company in the USA increases the credibility of XTPL in the eyes of potential US contractors.



## XTPL DEBUTS ON WSE



20 February 2019 is the date of the first listing of XTPL on the main market of the WSE. Several months earlier, XTPL debuted on the New Connect market with a capitalization of just over PLN 100 million. The company moved to the WSE main floor with a capitalization of over PLN 300 million. XTPL decided to transfer to the main market of the Warsaw Stock Exchange in order to find interest of new institutional investors, both international and domestic, those who invest in groundbreaking global innovations.



# COMPANY



## STRONG INTERDISCIPLINARY TEAM



Currently over 40 people in Poland and United States

### TECHNOLOGY

interdisciplinary, well-balanced team, with **vast knowledge & experience** in:

- chemistry
- physics
- electronics
- mechanics
- material science
- numerical simulations

10 PhDs in the team

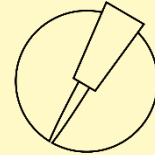
### BUSINESS

business leaders & highly skilled professionals who possess **know-how & experience** in:

- product development
- marketing & communication
- implementing innovation
- finance
- B2B sales
- capital market

... with proven successes, acquired on international markets

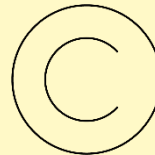
# BUSINESS MODEL



printing heads are to be designed by XTPL, manufactured by external contractors and assembled finally by XTPL (**direct sales**)



nanoinks – basing on patented formulas - will be manufactured by a subcontractor (**direct sales**)



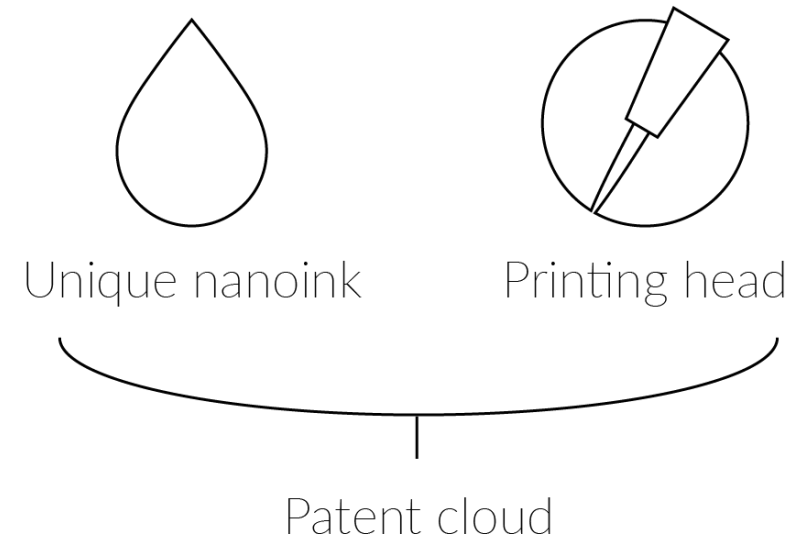
the option of **partial licensing** of the technology for specific applications

# PROTECTED INTELLECTUAL PROPERTY



XTPL offers complete solution for printing electrically conductive & nonconductive structures on the micron scale. This includes proprietary technology, innovative printing heads and dedicated nanoinks.

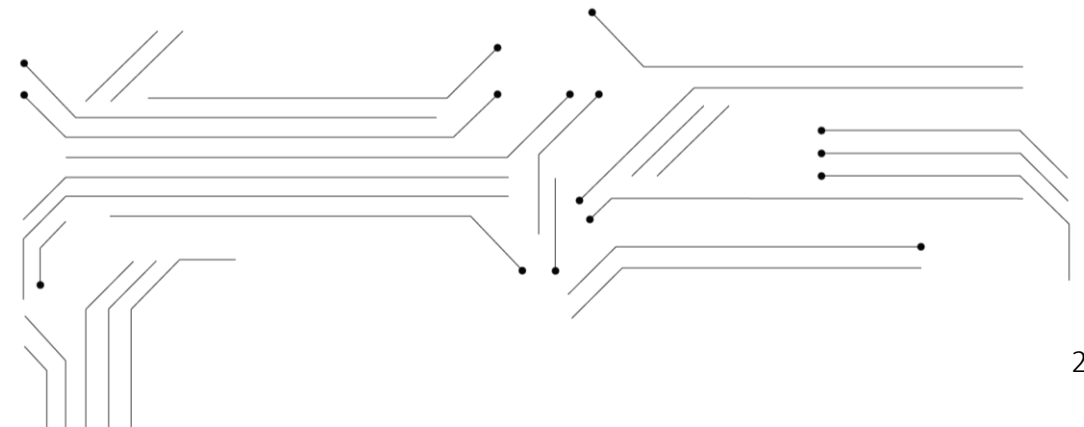
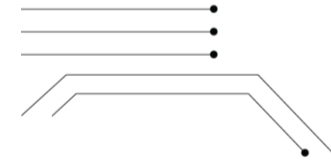
Patent applications are submitted in collaboration with the British law firm, Gill Jennings & Every LLP as well as Silicon Valley based law firm K&L Gates.



Gill Jennings & Every LLP, London UK

K&L Gates, Palo Alto, CA, USA

- advanced **platform** technology to be **implemented on production lines**
- solution providing **technological and competitive advantages for the producers**
- enabling technology that will allow manufacturers **to outperform their competition**
- XTPL Inside – as a remake of a well-known Intel principle – stands for a breakthrough technology with the potential to become one of the **base technologies in production of electronics**



1

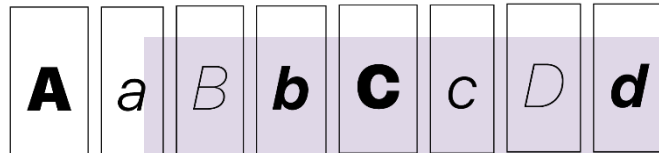
We deliver platform technology aimed to large and fast growing electronics market

2

We enable quantum technological progress in several sectors

3

We have vast growth potential, appreciated by potential partners and investors – e.g. two well-known German investment funds



The same way we inexpensively, easily and quickly print books and newspapers today, we will be able to print displays, solar cells, processors, biosensors and other advanced elements in the future.

This is not just a vision anymore.

This is fast approaching reality!



**X T P L**

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THANK YOU

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