



X T P L

shaping global nanofuture

SHAPING GLOBAL NANOFUTURE



C

H

A

N

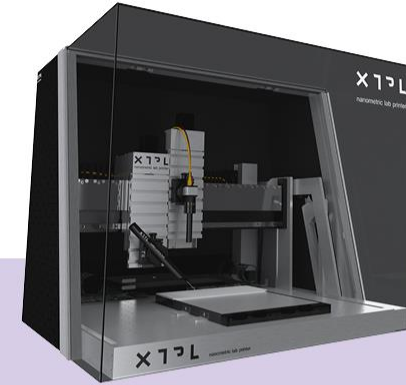
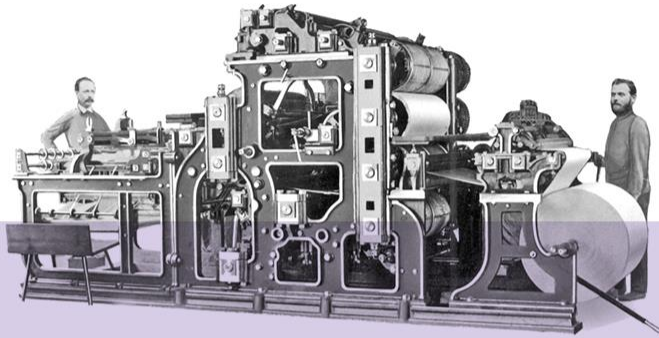
G

C

E

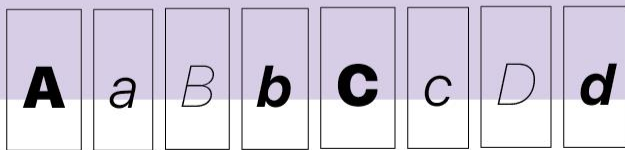
REVOLUTION OF PRINT

X T P L



1450

2019



MARKET SIZE & MEGATREND



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.

XTPL has the **technology** to enable that advance.

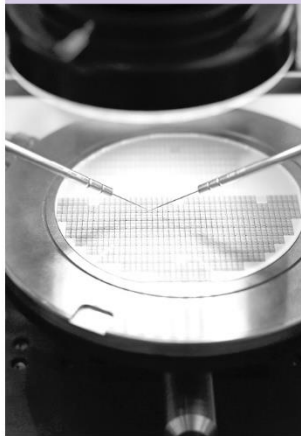
SMART GLASS



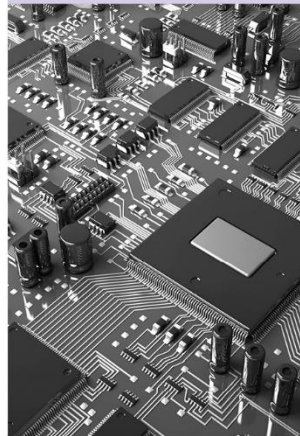
DISPLAYS



SEMICONDUCTORS



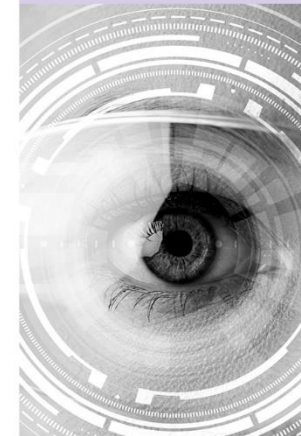
ADVANCED PCB'S



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

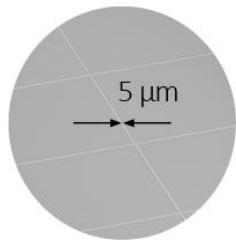
Base principal the same as Intel Inside – Unique technology empowering the global electronics manufacturers

FIRST TARGET MARKETS WITH VAST POTENTIAL



SMART GLASS

XTPL printed,
conductive lines

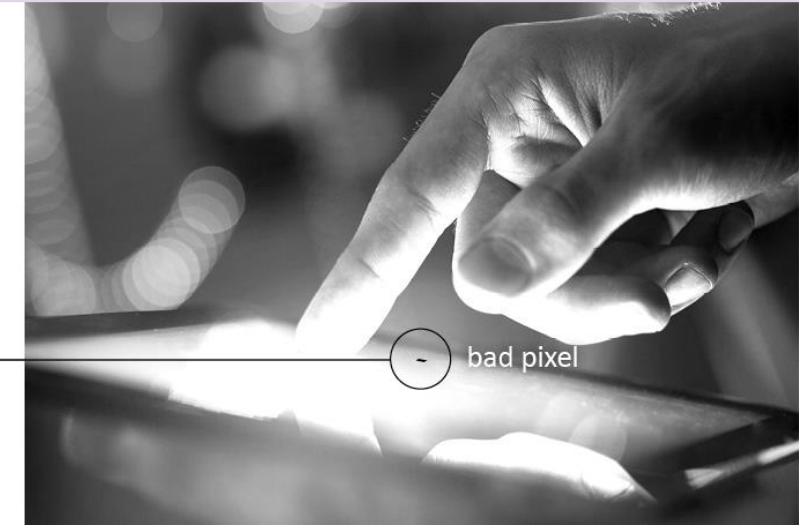
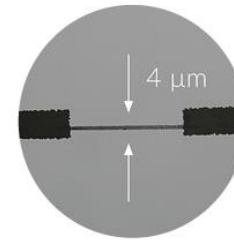


USPs:

- 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

FIRST TARGET MARKETS WITH VAST POTENTIAL



SMART GLASS



Application: **smart glass**

Go to market strategy:

Market readiness: advanced PoC

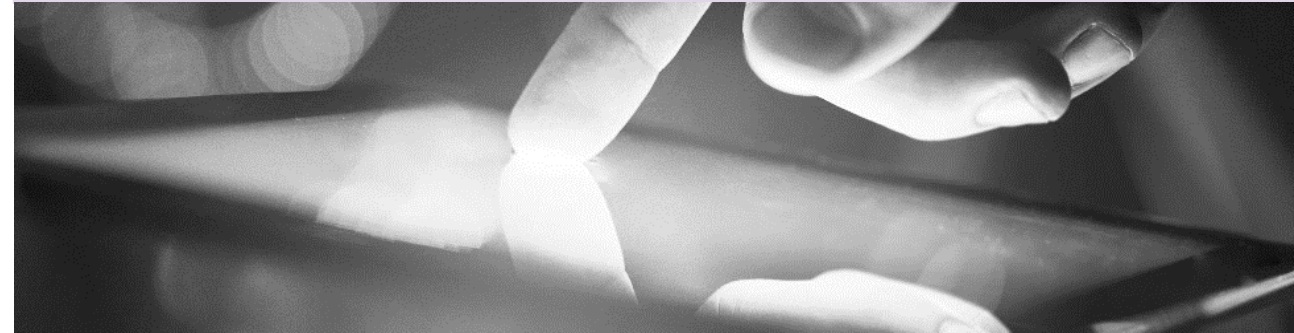
Market partner: yes (US)

- 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

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:

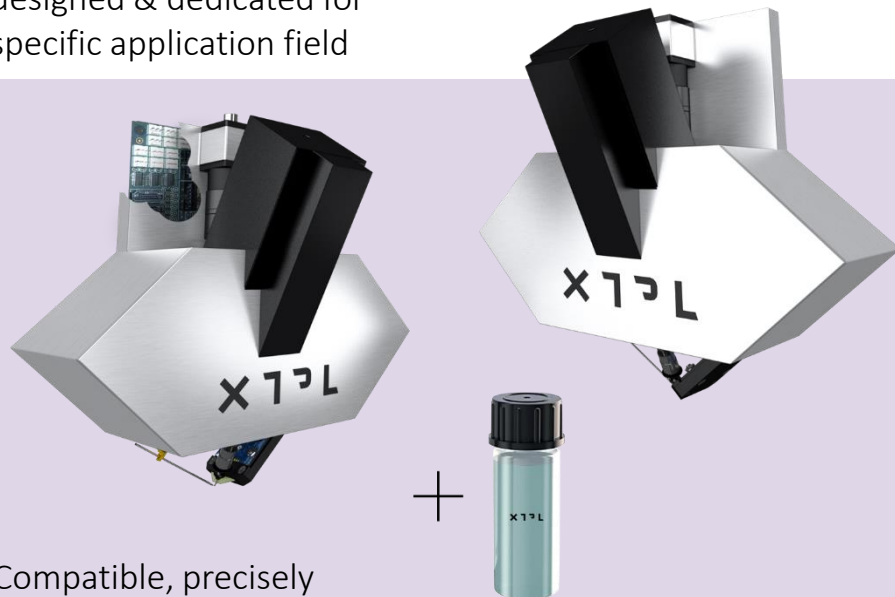
- Orbotech (KLA-Tencor)
- V Technology
- Micronics Japan Co. Ltd
- Charm Engineering

BREAKTHROUGH TECHNOLOGY



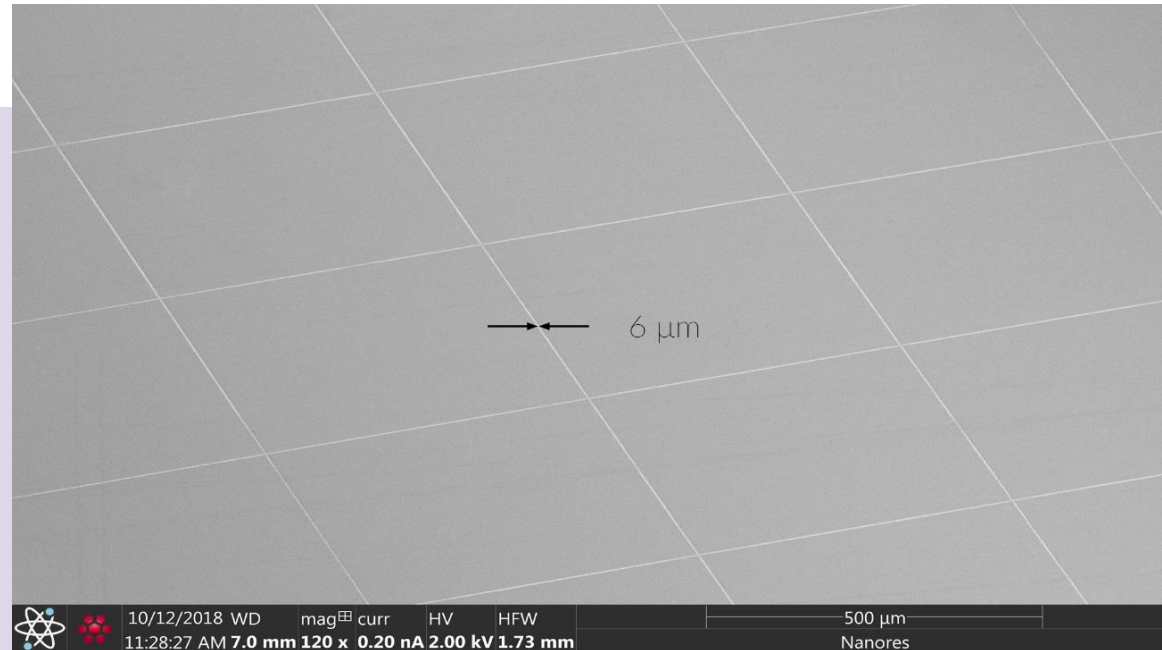
The company aims to provide:

- 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 μm

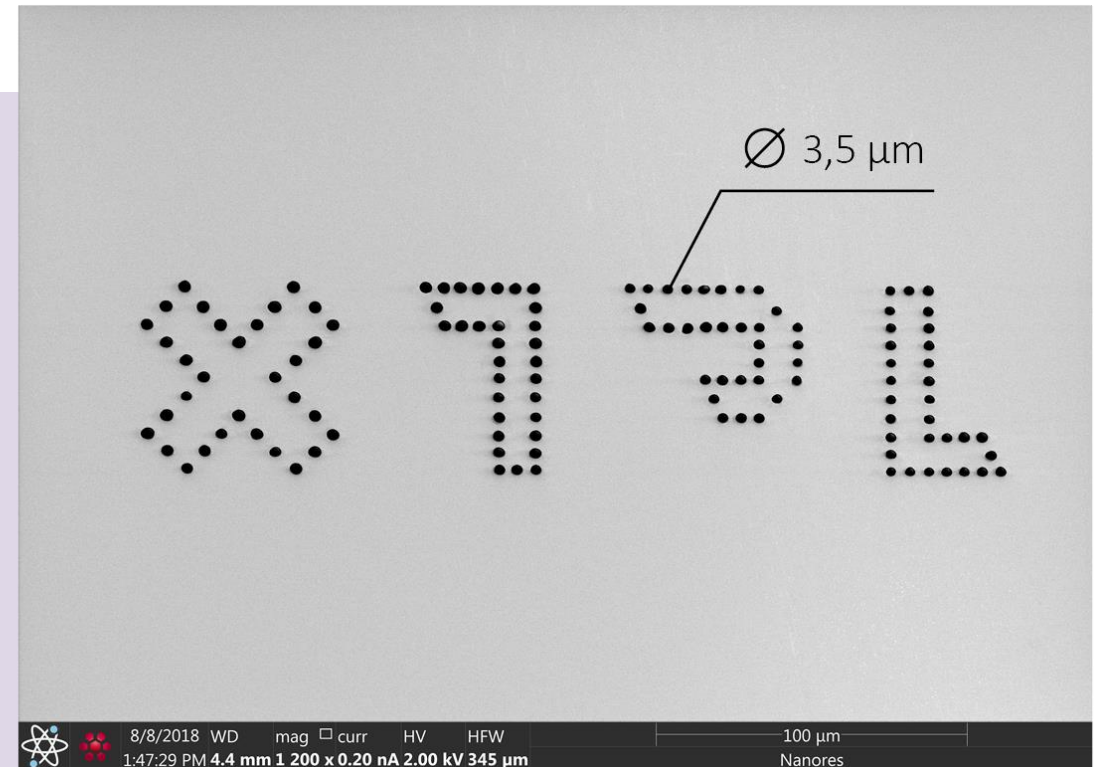
The main competitive advantage of XTPL additive solution for ultraprecise deposition is unprecedented precision that cannot be replicated by any other printing method in the world.



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

XTPL METHOD

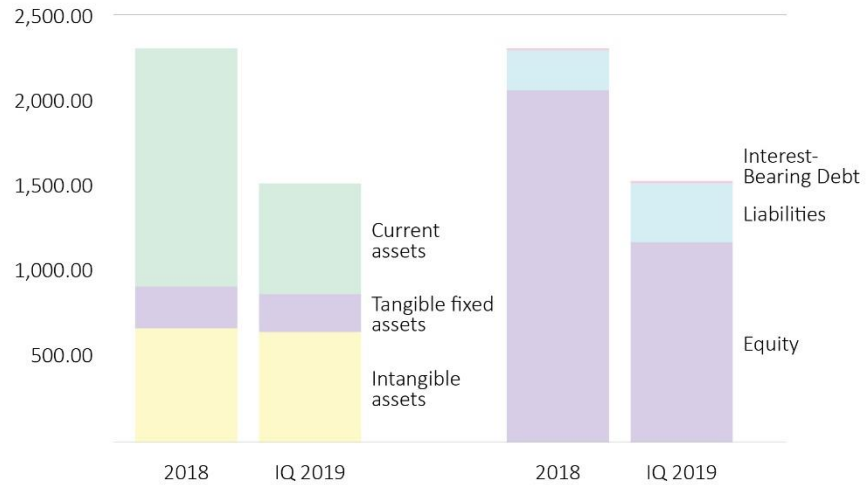
Minimal current structure size 1 μm



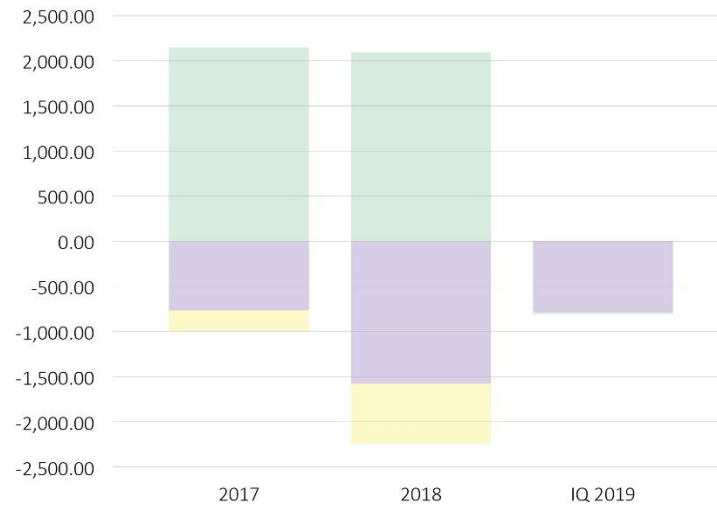
SELECTED FINANCIAL DATA



STRUCTURE OF BALANCE SHEET

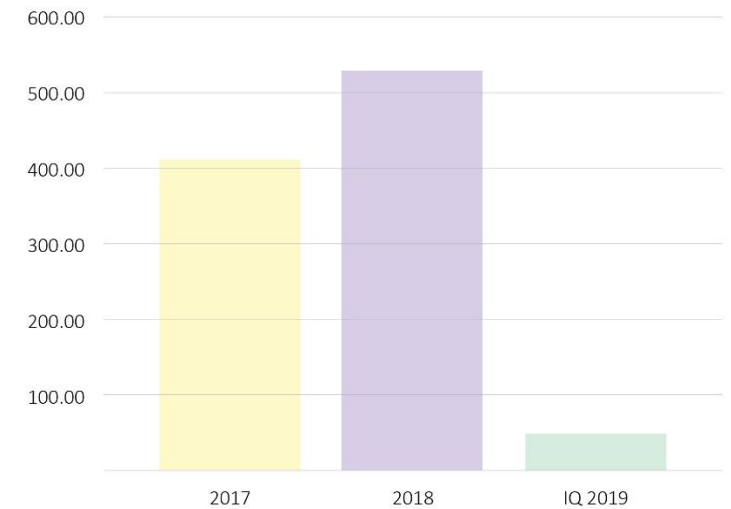


CASH FLOW



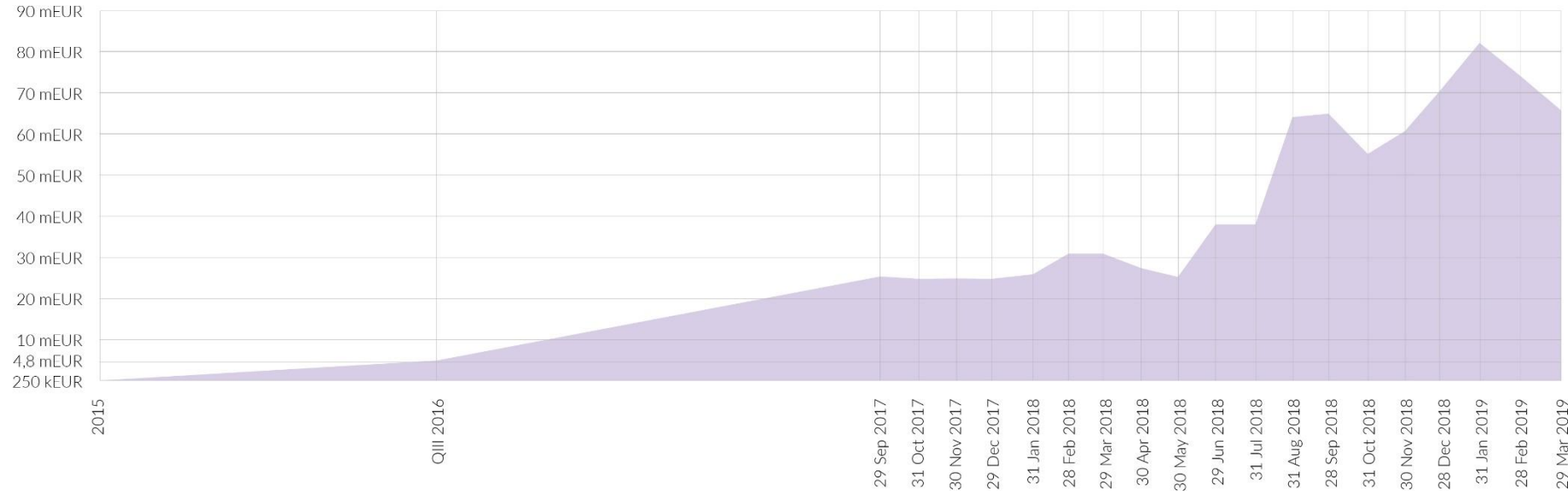
- Net cash flows from investing activities
- Net cash flows from operating activities
- Net cash flows from financial activities

NET REVENUE FROM SALES



* all data in kEUR

CAPITALIZATION & DEVELOPMENT



MILESTONES

2015	2016	2017	2018	2019
<p>XTPL established as a limited liability company</p> <p>QII only silver nanoparticles</p> <p>QIV technology confirmed in laboratory conditions, lines width 400 nm</p> <p>QIV seed financing EUR 100 000 acquired</p>	<p>QI patent application</p> <p>QIII private placement EUR 650 000 acquired</p> <p>QI breaking another technological barrier, lines width below 100 nm</p> <p>QII winning Technical Development Manufacturing Award on IDTechEX Show in Berlin</p>	<p>QIII public offering of Series M shares; gross revenue of EUR 2 500 000 – first international investors: Acatis Investment & Heidelberger Beteiligungsholding AG</p> <p>Sep 14th New Connect debut (parallel market of Warsaw Stock Exchange)</p> <p>QIV new nanoparticles (quantum dots + semiconductors)</p> <p>QIV printing speed 0,2 mm/sec; new surfaces – silicon wafers</p>	<p>QI initial PoC for security printing sector & for quantum dots</p> <p>QI advanced PoC for open defect repair & semiconductors sector</p> <p>QII Wieslaw Rozlucki, co-founder & former president of Warsaw Stock Exchange, appointed as Chairman of the Supervisory Board</p> <p>QII printing speed 20 mm/sec</p> <p>QII most promising technology among I-Zone participants at Display Week in Los Angeles</p> <p>QIII+QIII two further patent applications QII+QIII Advisory Board appointment with Harold Hughes & Amir Nayyerhabibi as first members</p> <p>QIII new surfaces: smart glass and advanced optical</p> <p>QIII new nanoparticles – gold, carbon-based and copper</p> <p>QIII private placements for two German investment funds: 1 million Euro for Acatis Investment & 1,05 million Euro for Heidelberger Beteiligungsholding AG</p> <p>QIV live demo of the solution for open defects repair</p> <p>QIV finalizing I faze of advanced PoC for the smart glass sector</p> <p>QI two further patent applications</p> <p>QI establishing subsidiary XTPL Inc. in Silicon Valley, USA</p> <p>20 February 2019 debut on the main market of teh WSE</p> <p>Q1- Hiroshi Menjo joins the Board of Directors of XTPL Inc.</p>	<p>QI two further patent applications</p> <p>QI establishing subsidiary XTPL Inc. in Silicon Valley, USA</p> <p>20 February 2019 debut on the main market of teh WSE</p> <p>Q1- Hiroshi Menjo joins the Board of Directors of XTPL Inc.</p>

SELECTED AWARDS



TECHNICAL DEVELOPMENT MANUFACTURING AWARD

XTPL won the Technical Development Manufacturing Award – one of the most important printed electronics industry award received during the top international trade fairs of printed electronics in Berlin.



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.



ADVANCED MANUFACTURING AWARD AT SHENZHEN INNOVATION & ENTREPRENEURSHIP COMPETITION

XTPL on the podium of China Innovation & Entrepreneurship competition which attracted numerous high-quality projects and companies from around the world to enter & develop within Chinese hi-tech industry.

SHAREHOLDING STRUCTURE



LP	SHAREHOLDER	NUMBER OF SHARES HELD	% SHARE
1.	Filip Granek	303,288	16.61
2.	Sebastian Młodziński	299,852	16.42
3.	Pankiewicz sp.k. (formerly Leonarto sp. z o.o.)*	229,015	12.54
4.	Heidelberger Beteiligungsholding AG	192,371	10.53
5.	TPL Sp. z o.o. **	182,622	10.00
6.	ACATIS Investment Kapitalverwaltungsgesellschaft mbH on behalf of ACATIS Datini Valueflex Fonds	127,000	6.95
7.	Stefan Twardak	103,081	5.64
8.	Leonarto Funds SCSp *	69,000	3.78
9.	Konrad Pankiewicz *	2,573	0.14
10.	Others	317,420	17.38
	TOTAL	1,826,222	100.00

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

* Konrad Pankiewicz, Member of the Supervisory Board, is the general partner of Pankiewicz sp.k. and he controls Leonarto Funds SCSp (though Leonarto Management S.a r.l). Konrad Pankiewicz together with his subsidiaries own 300 588 shares of XTPL S.A. which equals 16.46% of the total number of votes in XTPL S.A.

** TPL Sp. z o.o. possess Series L shares, issued for employees shares option program. 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 Supervisory Board of the Issuer (33% of shares) and Adriana Pankiewicz who is Konrad Pankiewicz's wife (33 % of shares)

INTERNATIONAL INVESTORS FROM EARLY STAGE



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
- 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



FILIP GRANEK

PRESIDENT OF THE MANAGEMENT BOARD
CEO

Inventor of XTPL's technology & founder of the company, one of the world's leading specialists in nanomaterials.



MACIEJ ADAMCZYK

MEMBER OF THE MANAGEMENT BOARD
COO

Manager with over 16 years of experience in finances, mergers & acquisitions, and the capital market.



WIESŁAW ROZŁUCKI

CHAIRMAN OF THE SUPERVISORY BOARD

Co-founder & former president of the Warsaw Stock Exchange.

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 NAYERHABIBI

- 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**



HIROSHI MENJO

- co-founder & managing partner at **NSV Wolf Capital**, a **Silicon Valley strategic fund**
- career with **Konica**, research at **Massachusetts Institute of Technology** and **MIT Microelectronics Labs**
- active in the **the Boston Consulting Group** in **Tokyo**
- experience gained in **The McKenna Group**, a premier **high-tech business consulting company**
- expert in **implementation of Japan entry strategies**, and **strategic alliances with Japanese companies**

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

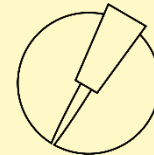
BUSINESS

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

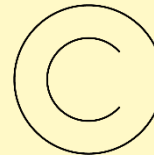
BUSINESS MODEL



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**)



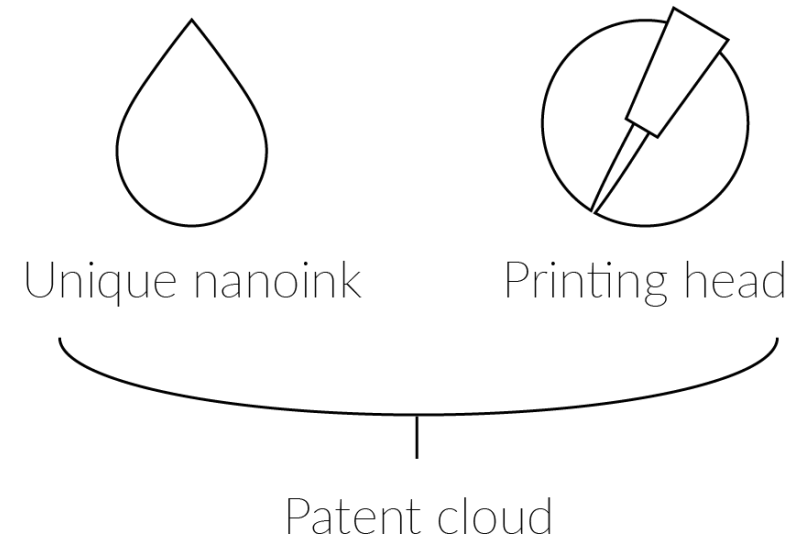
the option of **partial licensing** of the technology for specific applications

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.



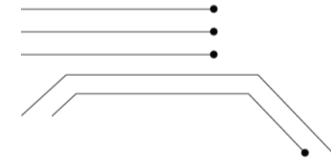
Gill Jennings & Every LLP, London UK

K&L Gates, Palo Alto, CA, USA

VISION & STRATEGY

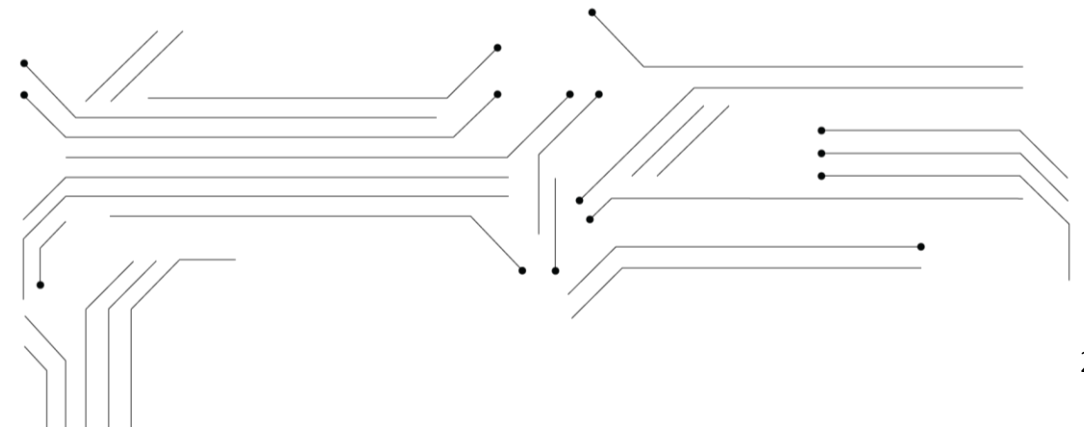
X T P L

- 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



X T P L

INSIDE



ARM
HOLDINGS

DEEPMIND

NOVALED

- examples of companies developing high-tech solutions
- introduced breakthrough solutions with no consumer brand
- implemented „thing big” principle with patience & focus
- prepared for a long run & no initial income

1

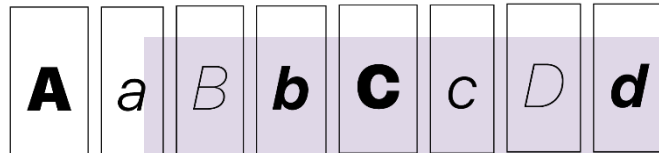
We deliver platform technology aimed to large and fast growing electronics market

2

We enable quantum technological progress in several sectors

3

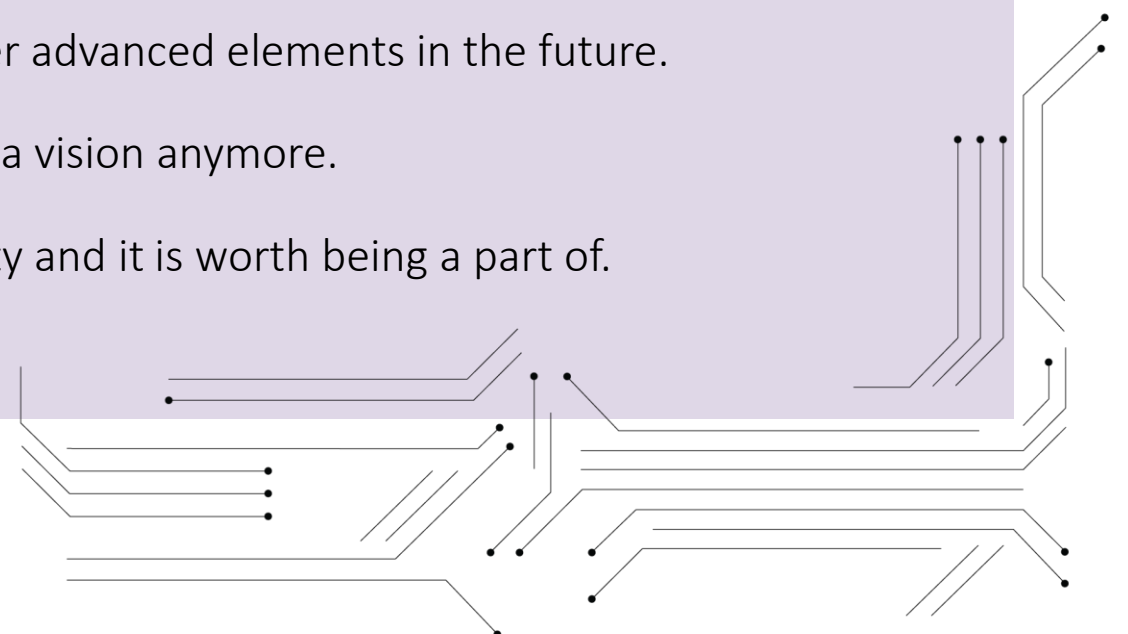
We have vast growth potential, appreciated by potential partners and investors – e.g. two well-known German investment funds



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 and it is worth being a part of.





X T P L

XTPL S.A.
Stabłowicka 147
54-066 Wrocław, Poland
xtpl.com

THANK YOU