
# THE METAVERSE AND THE DISPLAY INDUSTRY

# Cautionary Note Regarding
# Forward Looking Statements

**This presentation contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 and Private Securities Litigation Reform Act, as amended, including those relating to the Company's product development, market opportunity, competitive position, possible or assumed future results of operations, business strategies, potential growth opportunities and other statements that are predictive in nature. These forward-looking statements are based on current expectations, estimates, forecasts and projections about the industry and markets in which we operate and management's current beliefs and assumptions.**

These statements may be identified by the use of forward-looking expressions, including, but not limited to, "expect," "anticipate," "believe," "estimate," "potential," "predict," "project," "should," "would," and similar expressions and the negatives of those terms. These statements relate to future events or our financial performance and involve known and unknown risks, uncertainties, and other factors which may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include those set forth in the Company's filings with the Securities and Exchange Commission. Prospective investors are cautioned not to place undue reliance on such forward-looking statements, which speak only as of the date of this presentation. The Company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise.

# Reshaping the World of Electronics | OTCQB: SMTK

## Disruptive TRUFLEX® Technology

A revolutionary semiconductor platform for Organic Thin Film Transistors (OTFTs).

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Materials are solution deposited on low-cost plastic and glass at a low temperature (80°C) to make transistor circuits with performance significantly beyond amorphous Silicon (aSi).

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The platform can be used in several applications including AMOLED displays, Quantum Dot displays, mini / microLED displays, and integrated logic circuits.

## World Class Technology Team

42 full time employees with 200+ combined years industrial and R&D pedigree at ICI, Merck, Philips, Kodak, CDT, Motorola.

## Extensive, Broad and Defendable IP Portfolio

137 patents across 16 patent families – 122 granted and 15 pending

37 codified trade secrets

## Collaborations

2021 JDA with RiTdisplay for the production of a full color demonstration AMOLED display.

2022 JDA with Nanosys for new generation solution printed microLED and quantum dot materials for advanced displays.

## Design & Prototyping Capability

Material supply scaled up at toll manufacturers.

EDA design tools available to enable customers to synthesize circuits.

Prototyping available on 4in, 8in, 12in and Gen 2 processes.

# Investor Confidence

## Funding History

In February 2021, SmartKem raised $24.6 million in gross proceeds through a private placement of common stock-only at $2.00 per share.

To date, over $60 million has been invested in SmartKem.

Institutional investors include AIGH, Octopus Ventures, Entrepreneurs Fund LP, and BASF Ventures.

# What is a Display?



**It Depends!**

# But they all have two things in common

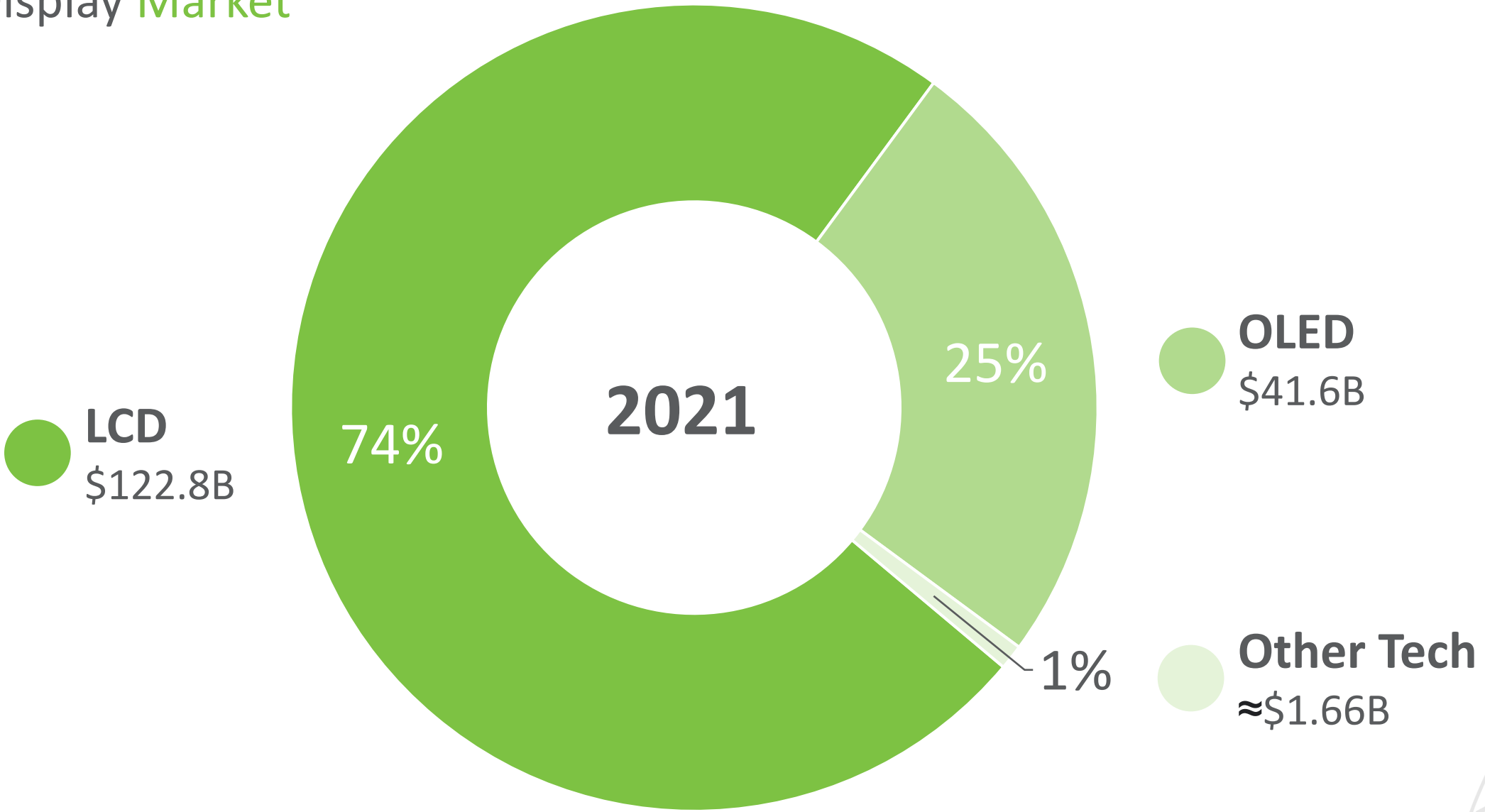
## Backplane, passive or active matrix

**LTPS, IGZO, a-Si, PCBs**

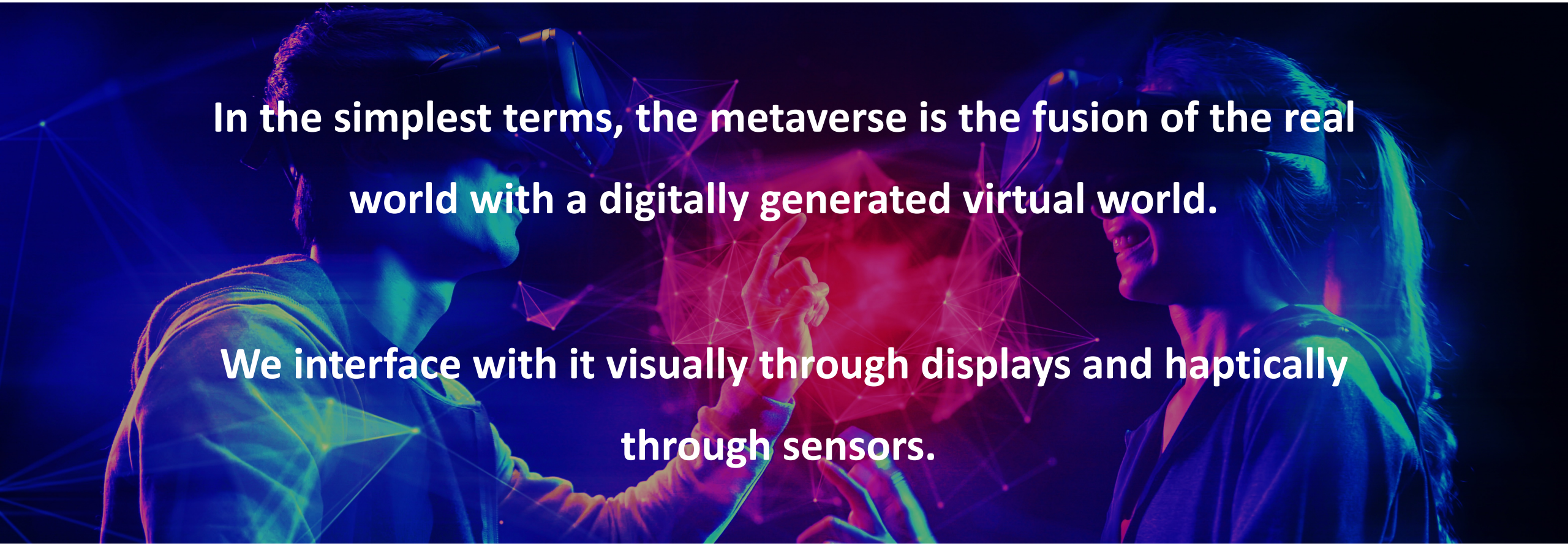
## Electro Optic Conversion

LEDs, MiniLEDs, MicroLEDs, OLEDs, Quantum Dots. (add more pictures)

# The Display Market

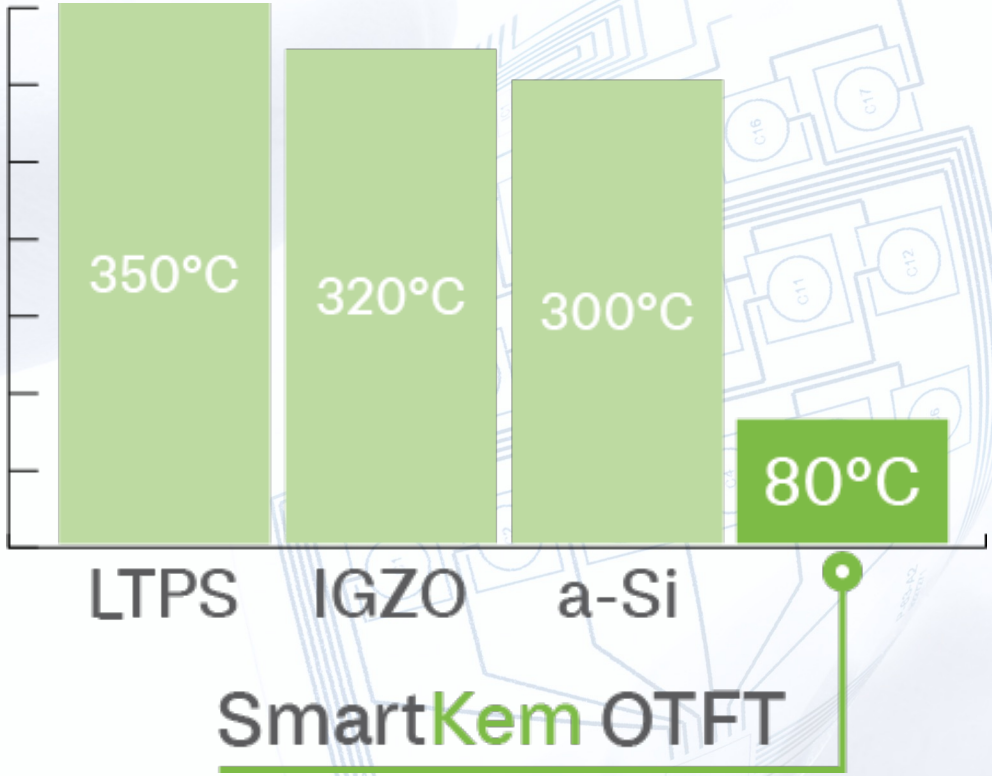


# What is the Metaverse?




**Today, there is no display solution available (large or small), at a low enough cost, to enable the ubiquitous adoption of the metaverse**

# What is needed?




Solution-coated (Printable) **frontplanes**, OLED and EQD

+

Solution-coated (Printable) **backplanes** that are monolithically integrated with solution-coated (Printable) frontplanes.

**(SmartKem)**

+

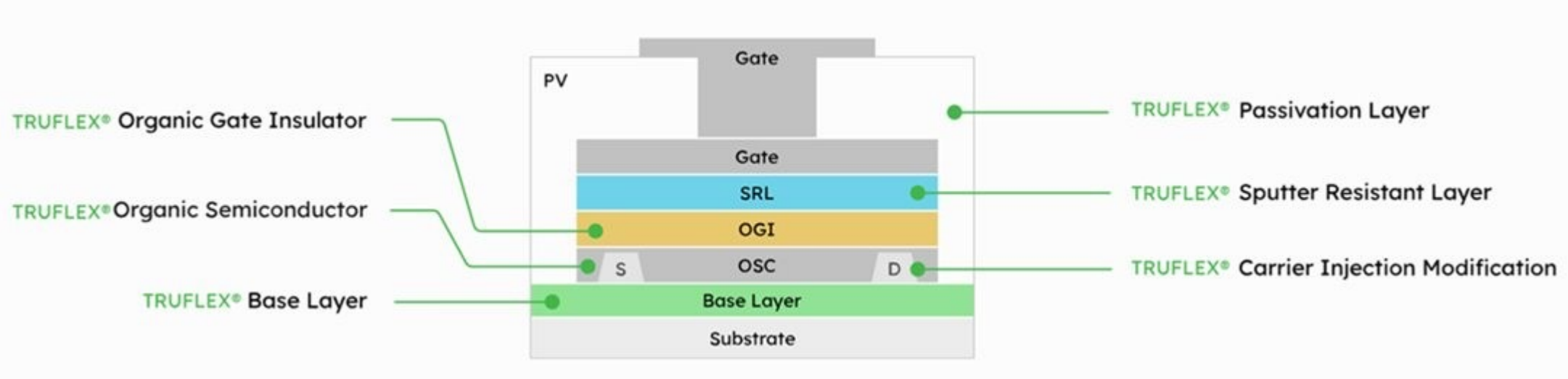
Low temperature processing.

**(SmartKem 80°C)**

# Convergence Plan For Commercialization


**Mass Deployment**

# 1. SmartKem's TRUFLEX® Materials




Ease of **Technology Transfer**

Chemistry, process and stack owned

**World leading electronic performance**

Solution processed **At 80C**

Formed on low-cost glass & plastic

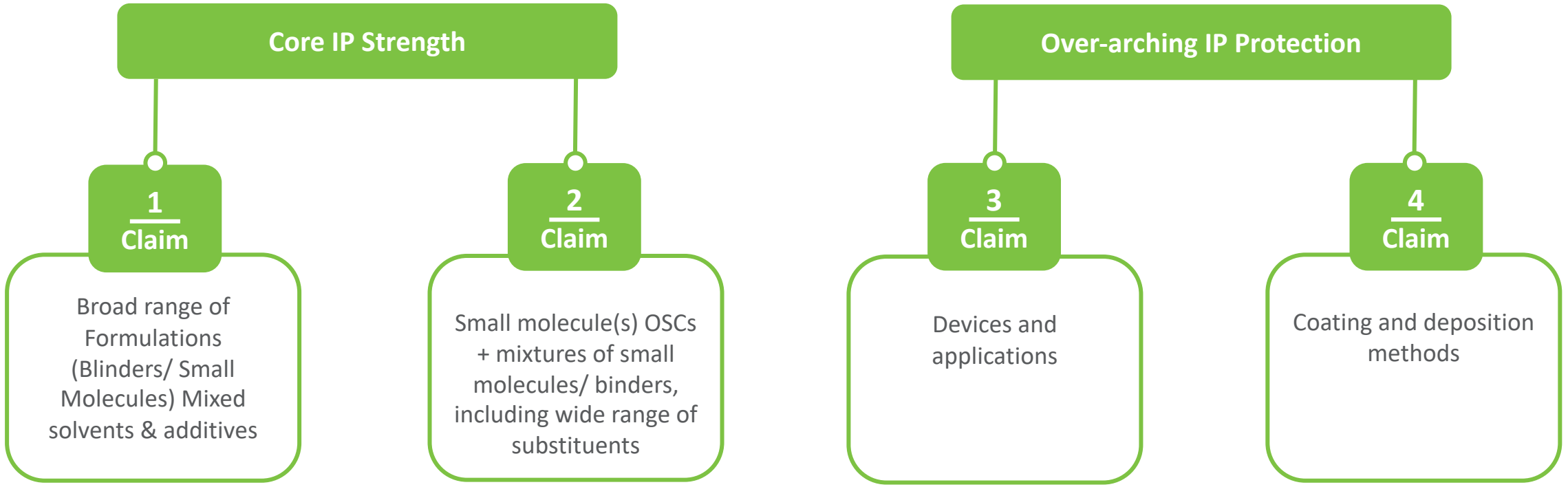
**Meets industry critical test standards**

Drop in technology for **today's fab lines**

(and ready for next gen printing)

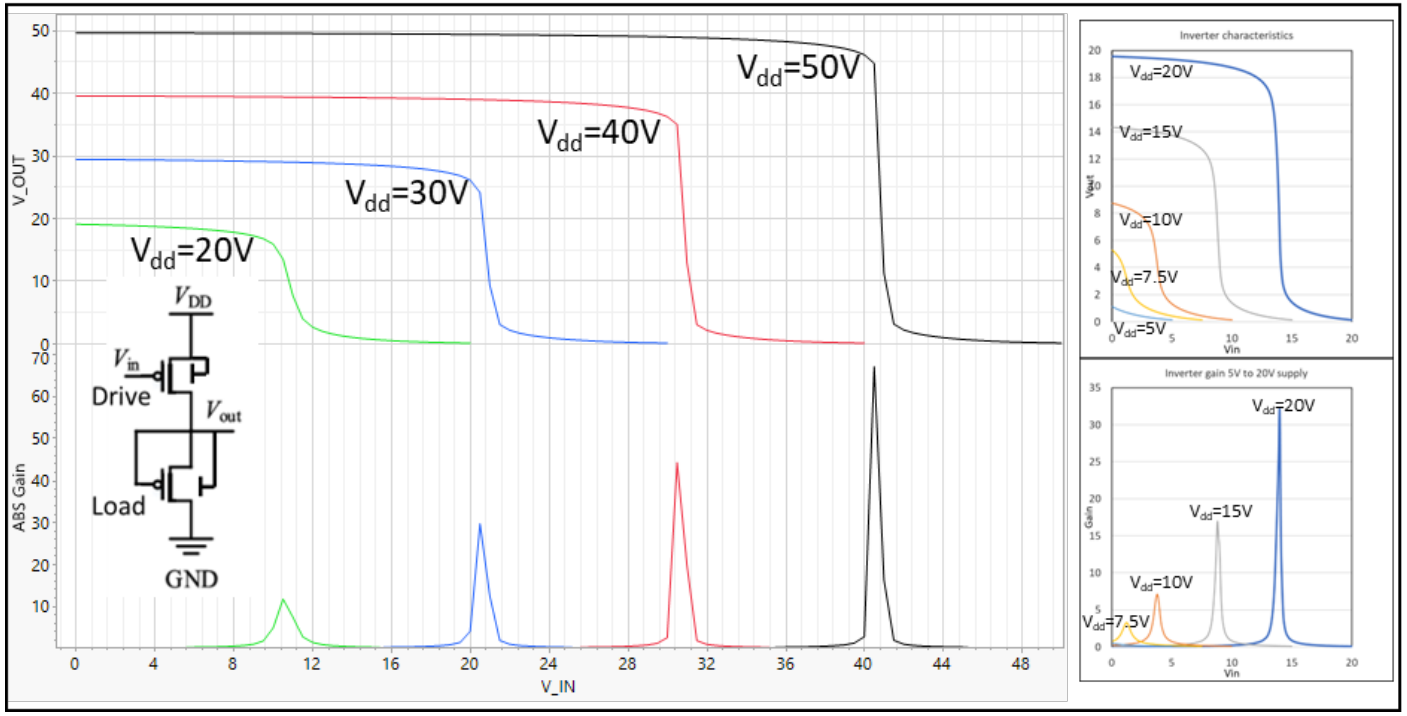
**Outperforms market leader a-Si**

# Outstanding IP and Know-How




- >160 patents across 16 patent families – 104 granted and >55 pending
- 30 codified company trade secrets files and increasing…
- Strong Freedom To Operate position and no 3rd party licenses required

# 2. Electronic Design Tools




## Cadence

Cadence scripting complete for single gate OTFT, circuits can be designed within the Cadence EDA system

Dual gate OTFT logic capable of operating at voltages <7.5V with high noise margin and gain

# 2. TRUFLEX® Foundry Services

## Gen 2.5 Line


### Digital Lithography

Access to tool set at Centre for Process Engineering (CPI) in North-East of UK

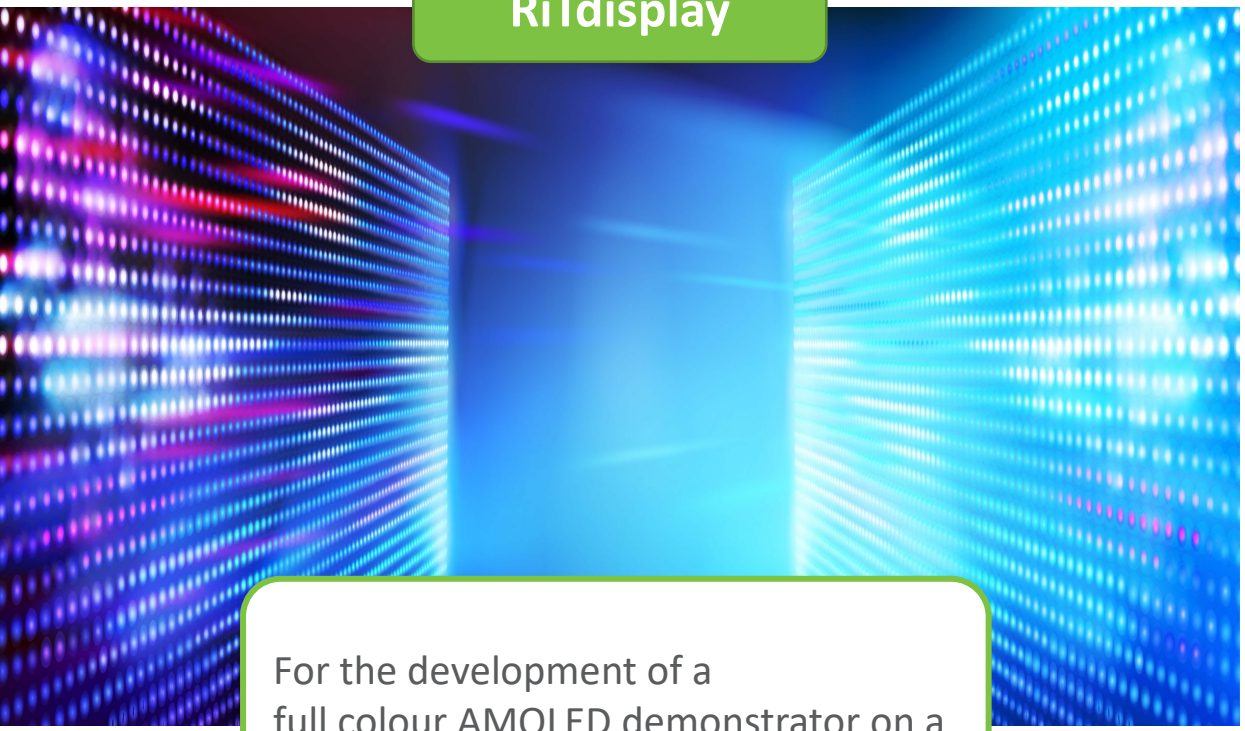
4in, 8in, 12in and Gen2 capability.

Using digital lithography for full-custom circuits – sheet to sheet initially and then roll-to-roll in the future.

# SmartKem's Market Traction

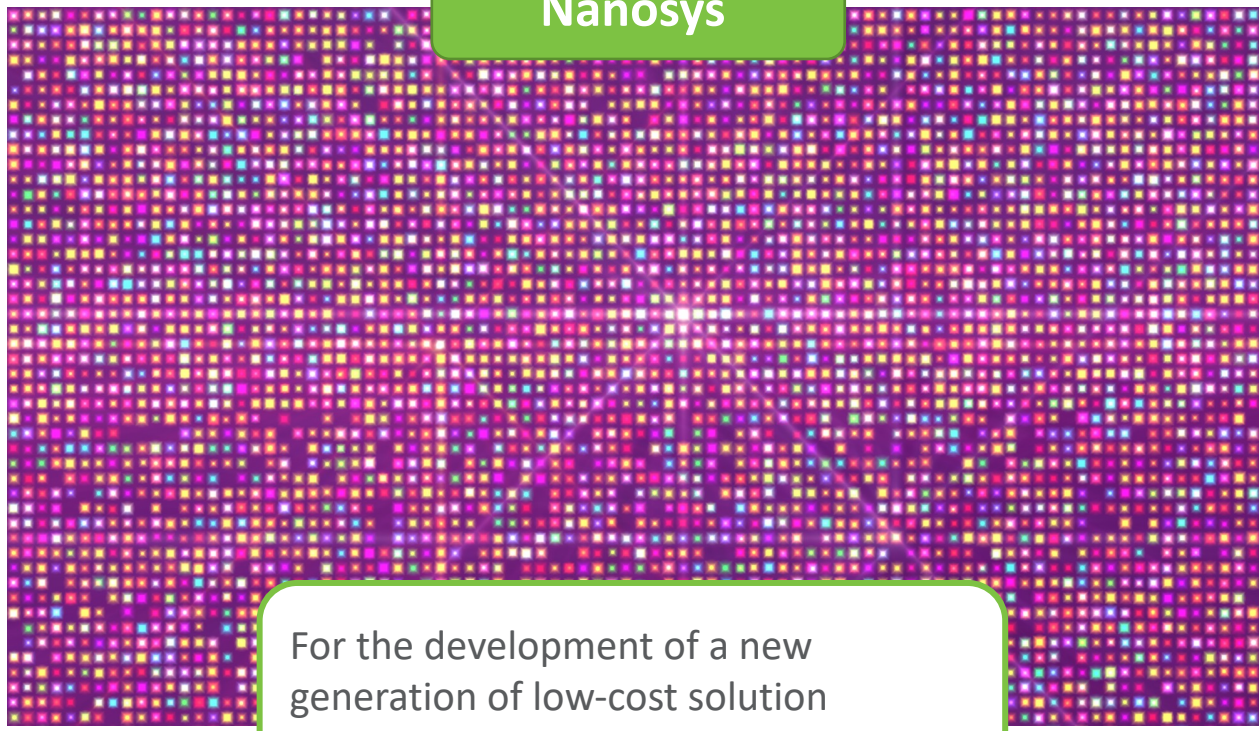
## JOINT DEVELOPMENT AGREEMENTS

### RiTdisplay



For the development of a full colour AMOLED demonstrator on a Gen 2 line

### Nanosys



For the development of a new generation of low-cost solution printed quantum dot materials for advanced displays.

# Market Entry Strategy

1

**TRUFLEX®**
Organic
INKS

Material Sales

2

**TRUFLEX®**
Design
Tools

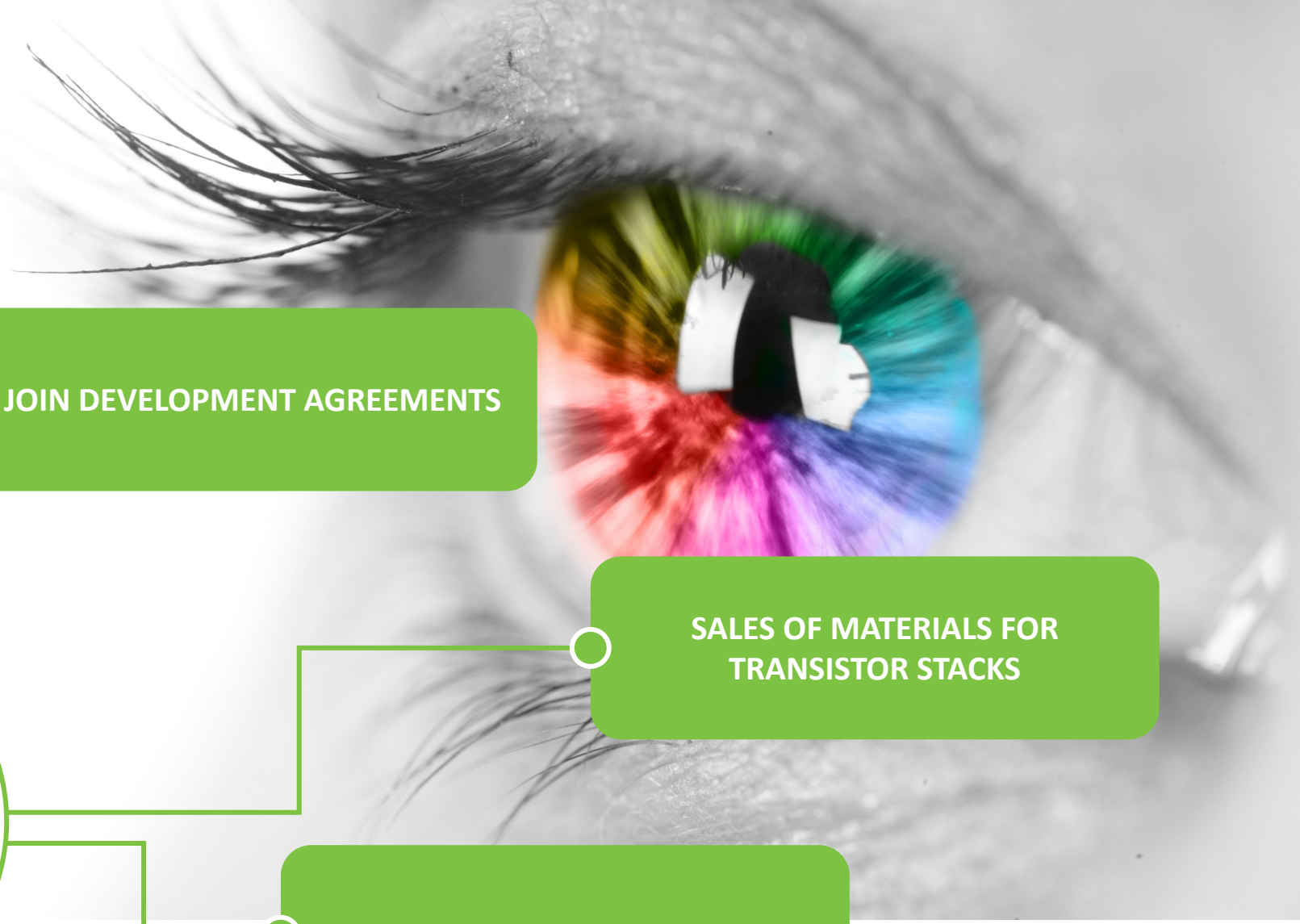
Software Sales

3

**TRUFLEX®**
Foundry
Services

Prototype sales, product sales utilising third party foundries

# Looking forward…



Continued Improvement of Materials and prototyping

- **JOIN DEVELOPMENT AGREEMENTS**

Early Revenues

- **SALES OF MATERIALS FOR TRANSISTOR STACKS**
- **SALES OF SINGLE LAYER MATERIALS**

# SmartKem Officers

**Ian Jenks**
**Chairman and Chief Executive Officer**

Ian was formerly the president of Uniphase Inc, Chairman of Oplink Communications Inc which he took public on the NASDAQ and spent seven years as a partner of Crescendo Ventures llp Ian has been a director of Techstep ASA, Paysafe plc., and Brady plc.

**Robert Bahns**
**Chief Financial Officer and Director**

Robert was previously CFO at WaveOptics, which develops components for AR displays. This company was recently acquired by SNAP for more than $500m. Prior to that, Robert was an investment partner at Imperial Innovations Ltd for fourteen years.

**Beverley Brown**
**Chief Scientist**

Beverley has worked in R&D at Imperial Chemical Industries Ltd. (“ICI”), Zeneca Group PLC and at the Avecia Group PLC. Beverley has worked in the field of organic semiconductor technology and in printable electronics for almost 20 years.

**Simon Ogier**
**Chief Technology Officer**

Simon has previously worked at Avecia, Merck, CPI and more NeuDrive Limited. He currently manages a team of 19 engineers and scientists using the equipment for SmartKem’s process development and prototype fabrication. Simon has co-authored 30 journal articles and has been co-inventor on 16 patent families.

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Smartkem

OUR TRANSISTORS YOUR ADVANTAGE

# THANK YOU

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