

### Japan Display Inc.

Capital Injection to Dramatically Strengthen Financial Position & Accelerate METAGROWTH 2026 Growth Strategy

February 10, 2023

#### **Summary**



- With the global display industry facing an extremely difficult market environment, it is critical that JDI fundamentally rethinks and reworks its business model to drive a radical improvement in its core profitability
- The capital increase announced today significantly strengthens JDI's financial position in order to accelerate its METAGROWTH 2026 growth strategy
- JDI's weak earnings are rooted in a lack of product differentiation & overparticipation in commodity display businesses. In short, JDI has failed to sufficiently deliver unique customer value
- METAGROWTH 2026's proprietary Global No.1 technologies are recognized as game changers by the world's top technology companies
- METAGROWTH 2026 is the foundation for a new JDI, delivering unique value to customers globally & dramatically strengthening its profitability



#### **Capital Increase Overview**



Action	Purpose/Outcome
Ichigo lends JDI JPY 20B to repay JPY 20B short-term INCJ loan	Finance JDI (Total Ichigo loans to JDI: JPY 48B)
2 Ichigo buys JPY 53.7B of JDI debt from INCJ	Eliminate all JDI debt to INCJ
3 Ichigo forgives JPY 15B of JDI debt	Finance JDI, reduce JDI debt, strengthen JDI financial position
INCJ returns Class A preferred shares to JDI at zero-cost. JDI to cancel shares.	Reduce JDI share dilution (preferred shares are convertible to common shares)
Ichigo & JDI do JPY 86.7B debt equity swap at 2023/2/9 closing share price (JPY 45) on Ichigo loans to JDI to eliminate all of JDI's debt	Finance JDI, eliminate JDI debt, strengthen JDI financial position
JDI issues JPY 173.6B warrants to Ichigo struck at 2023/2/9 closing share price (JPY 45)	Finance JDI & METAGROWTH 2026 growth investments, strengthen JDI financial position

#### **Use of Warrant Proceeds**



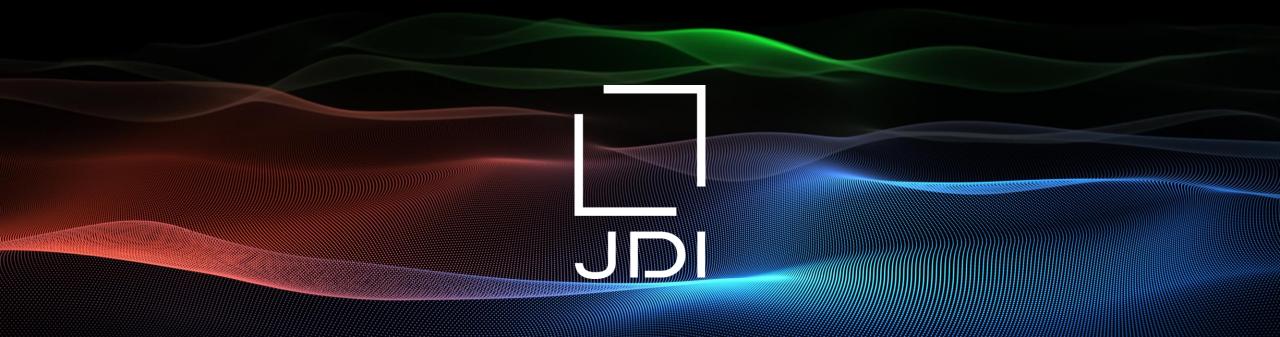
June 2023 - March 2028  R&D to Fund Continued Creation of Global No.1 Technologies	
June 2023 - March 2028  Further Build Out JDI Proprietary IP	JPY 20B
June 2023 – March 2028  Targeted M&A in Synergistic Businesses	JPY 10B
June 2023 - March 2028  Launch Rælclear, LumiFree, Life Science, & Other	er New Businesses JPY 15B
PersonalTech For A Better World  5  June 2023 - March 2028 DX (Digital Transformation) Investments	JPY 10B
June 2023 - March 2026  Bring eLEAP, HMO, HUD, Metaverse, and Other JDI Pro Technologies to Mass Production in Scale & Fund Sust	· · · · 1DV 20D
June 2023 – March 2025  Bolster Working Capital	JPY 37B



#### **Core Strategy**

Global No. 1 Technology Leadership to Best Serve Customers and Deliver PersonalTech For A Better World

METAGROWTH in Value Creation





# **META**

# "Comprehensive, Overarching" Underscores JDI's Commitment to Transformational Growth

**Metaverse Also a JDI Growth Driver** 



#### **Core Strategy**



# Displays are a foundational technology for modern society JDI has unmatched technological capabilities to deliver customer and social value and improve people's lives



#### Core Strategy | Global No.1 Technology Leadership





- JDI has regained technology leadership in the global display industry with its <u>Global</u> <u>No. 1</u> proprietary technologies, including eLEAP (NextGen OLED), HMO (High Mobility Oxide), Metaverse (Ultra High Resolution), & Rælclear (Transparent Displays)
- JDI will further expand its technology leadership to dramatically increase customer & shareholder value

Note: Rælclear is a trademark of JDI. eLEAP is a provisional name, pending registration.

#### Core Strategy | Leading Technology, Transformational Growth





- The global display business is a technology industry. JDI is a technology company. So are its customers. Customers' needs are superior technology & high cost performance
- Support JDI's customers' value creation & competitive advantage by delivering proprietary <u>Global No.1</u> technologies such as eLEAP, which has unparalleled cost performance
- End participation in commodity competition, leverage JDI's one-of-a-kind, innovative technology to generate radical improvements in profitability & growth

#### **Core Strategy | GreenTech & Sustainability**





- Address deeply important global environmental issues via JDI environment positive GreenTech such as eLEAP & HMO, which deliver significant value to JDI's socially conscious customers
- Companies exist to serve society. JDI will always run its business to contribute to a sustainable world
- JDI is committed to an open corporate culture and supports the growth of each & every employee and their pursuit of <u>Global</u> No. 1 excellence





JDI's Six Proprietary Growth Drivers

#### JDI's Six Proprietary Growth Drivers



#### JDI's six proprietary growth drivers are all Global No.1 technologies that provide significant customer value & drastically improve JDI's profitability

#### **eLEAP** (NextGen OLED)

- High brightness, long life, & high resolution while supporting a wide range of shapes & sizes
- Environment positive GreenTech with superior cost performance



#### **HMO** (High Mobility Oxide)

- Backplane technology with ultra-low power consumption, high resolution, & large display size capability
- Foundational technology for G8 & G10 fabs



#### Metaverse (Ultra High Resolution)

- Unparalleled sense of reality & immersion
- High yields & outstanding quality



Value

#### **JDI's Six Proprietary Growth Drivers**



### JDI's six proprietary growth drivers are all <u>Global No.1</u> technologies that provide significant customer value & drastically improve JDI's profitability

#### AutoTech

- EV-focused, best-in-class integrated cockpit development
- HUD development driving safety improvements



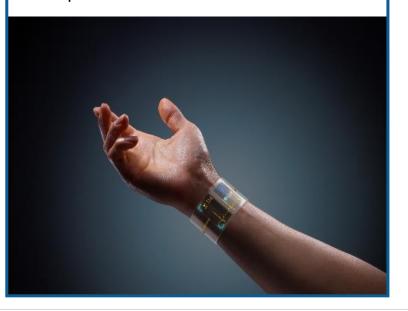
#### Rælclear (Transparent Displays)

- World's highest transparency
- Social contribution by enabling more interactive & inclusive communication



### 6 New Tech, Products, & Businesses

- Expand applications of JDI proprietary technologies
- New businesses that address important social needs



#### **eLEAP** | What is **eLEAP**?



### **eLEAP**

- environment positive
- <u>L</u>ithography with maskless deposition
- Extreme long life, low power, & high luminance
- Any shape Patterning



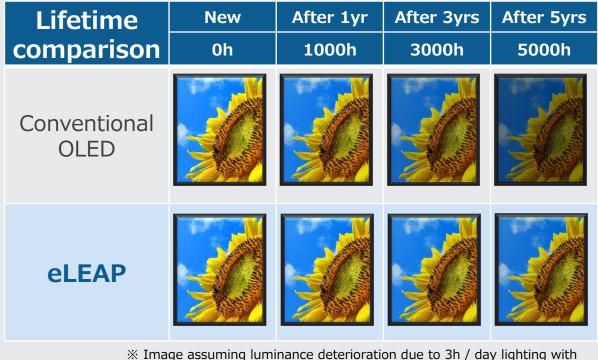
#### eLEAP | World's First Maskless Deposition – Revolutionary Tech



# 2X peak brightness, 3X lifetime with brighter & clearer images, & free shape flexible designs

#### **High Brightness (2X)** Conventional **eLEAP** OI FD 60% 28% **eLEAP** Brightness, vividness, & free shapes unimaginable with existing technology

#### Long Lifetime (3X)



\* Image assuming luminance deterioration due to 3h / day lighting with brightness equivalent to 600nit

eLEAP

Metaverse

#### **eLEAP** | Good for Water, Air, & Earth – Environment Positive



eLEAP's maskless OLED deposition is a breakthrough, environment positive production process that eliminates mask cleaning chemicals & will generate 150k tons p.a. of CO2 emissions reduction via deployment at JDI Mobara fab





#### 150k tons of yearly CO2 emissions =

CO2
Absorption
Volume
of 900k
cedar trees



Cedar forest the size of 3.7k Tokyo Domes



CO2 emissions are JDI's calculations based on G6 Mobara production of 30 k sheets/month

Metaverse

eLEAP

#### **HMO** | World's First High Mobility Oxide – Unparalleled Performance



# 4X mobility (higher resolution, speed, & performance) with 40% lower power consumption

	<b>Conventional Oxide</b>	НМО	UHMO
Mobility	12cm2/Vs	36cm2/Vs (Over x2 conventional)	52cm2/Vs (Over x4 conventional)



Conventional oxide, low resolution, small-& medium-sized screens



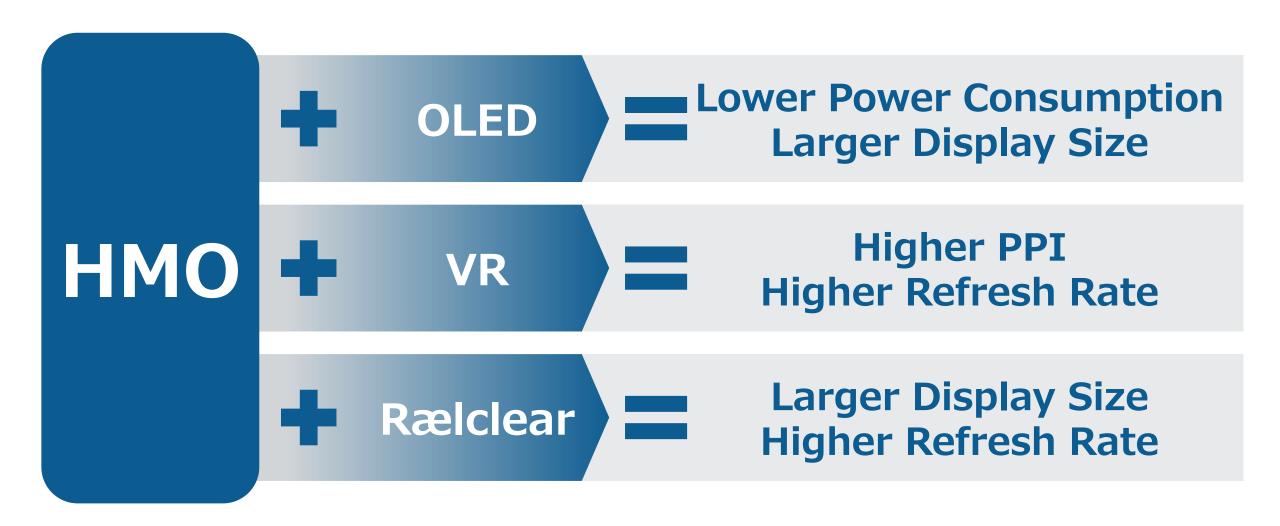
HMO, high resolution, can do large screens

eLEAP

#### **HMO** | Broad Application & Significant Technology Synergies



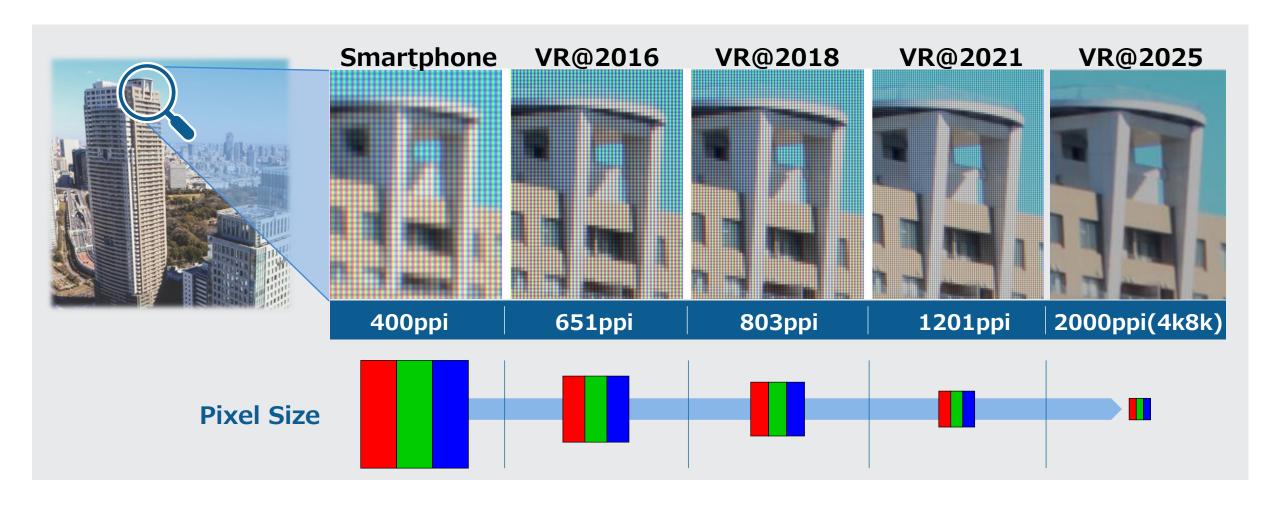
#### Can combine HMO with different frontplane technologies to drive further value



#### Metaverse | World No. 1 Tech & Market Share



#### **Global No. 1** image quality via JDI ultra high resolution panels

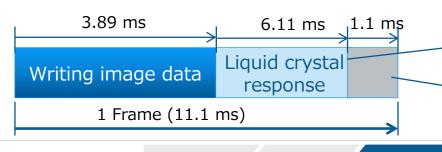


#### Metaverse | JDI's Best-in-Class Image Quality



#### Fast response liquid crystal + high-speed backlight switching for clear image

Fast Response Liquid Crystal	-	<b>✓</b>	-	<b>✓</b>
High-Speed Backlight Switching	-	-	<b>\</b>	<b>✓</b>
Display Image				
Problem	Blurring, Distortion	Blurring, Distortion	Ghost Image	Clear Image



Fast Response Liquid Crystal (5X response speed vs. prev. IPS)

High-Speed Backlight Switching

#### **Metaverse** | The Future of VR – JDI Inside



#### Resolution

4k x 4k per eye PPD\*1 >30 FOV\*2 130 degrees

#### **Optimal Screen Size**

Diagonal 2.x inches
Wide FOV within optimized eye-box
size

#### **HDR Compatibility**

Contrast: >100k

Color Gamut: >DCI-P3 95%

## 1700~2500ppi w/ Local Dimming



#### **Brightness**

1,000cd/m<sup>2</sup>
Tailored to pancake lens optical systems

# Display Time (Impulse)

<0.5 ms (BL lighting ratio 6% @ 120Hz)

#### **Refresh Rate**

>120Hz

High refresh rate that can smoothly process pass-through video

\*1) PPD: Pixels per degree, no. of Pixels per 1 degree of viewing angle \*2) FOV: Field of view

**eLEAP** 

HMO

AutoTech

Rælclear

New Tech

**Metaverse** 

#### AutoTech | World No.1 Head-Up Display (HUD) to Protect Lives



#### **HUD's higher image quality & functionality supports** safer & more comfortable driving



Because HUD projects information to the front window, drivers have little eye movement which is safer & more convenient. Demand for HUD technology continues to grow



#### **Better Visibility**

#### **Advanced Image** Quality

- Higher resolution
- Superior brightness
- Larger screen sizes

#### **More Realistic**

**Advanced Functionality** 

- AR HUD
- 3D HUD

#### **Sharp image**

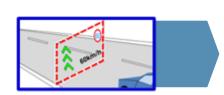




High resolution, high aperture ratio LTPS High-efficiency liquid crystal technology

#### **AR (Augmented Reality) HUD**





**AutoTech** 



Liquid crystal lenses & light field technology

**eLEAP** 

HMO

Metaverse

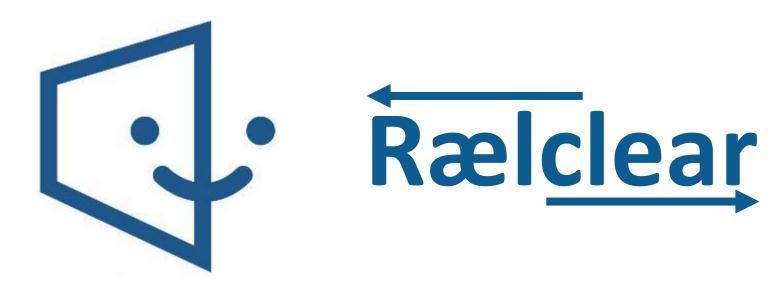
Rælclear

New Tech

#### Rælclear | World's First Fully Transparent Display



Rælclear's name was born from its unique two-way transparency: starting from the letter "c", Rælclear reads as "clear" in both directions. With the world's highest display transparency, Rælclear enables brand-new display applications with unprecedented two-way communication.



#### Rælclear | Unrivalled Performance

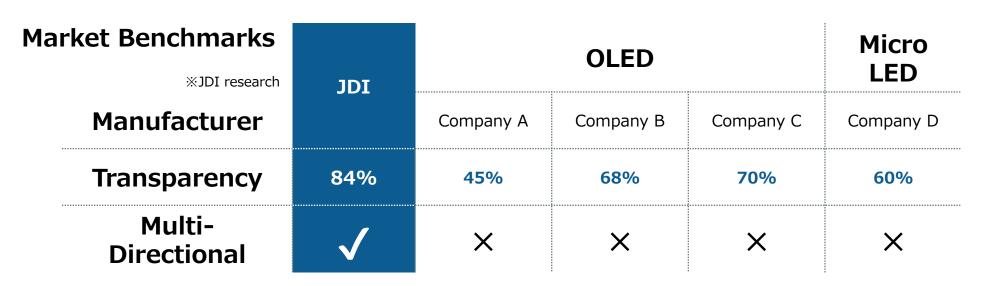


### **Glass-Like Transparency**

JDI's proprietary liquid crystal materials generate 84% transparency, far superior to other companies'

### Multi-Directional, Full Visibility

Competitors' transparent displays are degraded and blurred when viewed from the back, whereas JDI's transparency technology provides crystal clear images with zero degradation

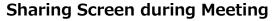


**HMO** 

Rælclear

#### Rælclear | Barrier-Free Across the World







**Supporting Communication for Hard of Hearing** 













**Unobtrusive Interior Design** 

**Accessing Recipes in the Kitchen** 

**Reading Picture Books to Children** 

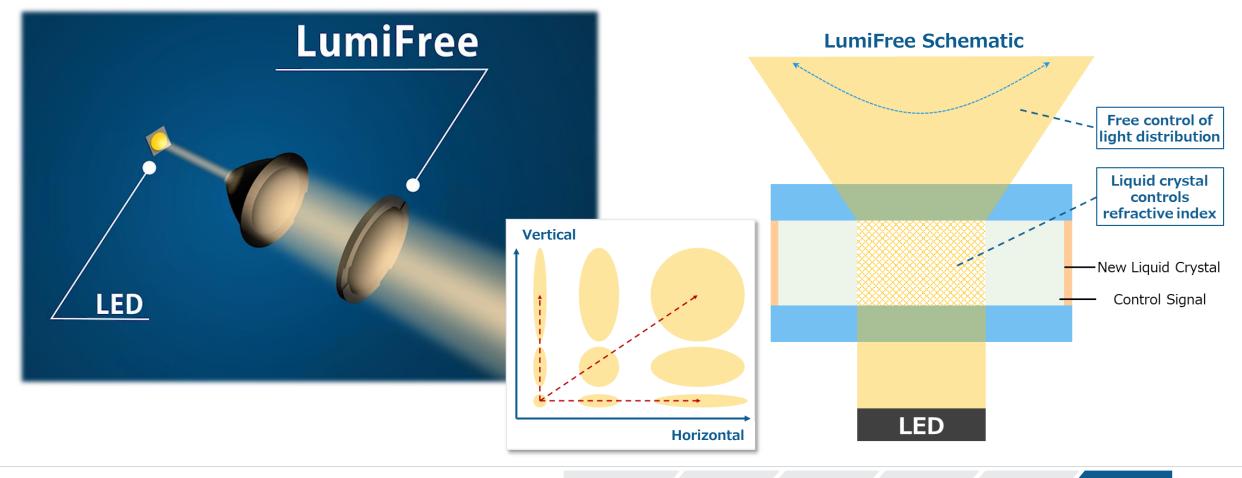
AutoTech

#### New Tech, Products, & Businesses | World's First LumiFree



JDI developed LumiFree to address important societal & user needs

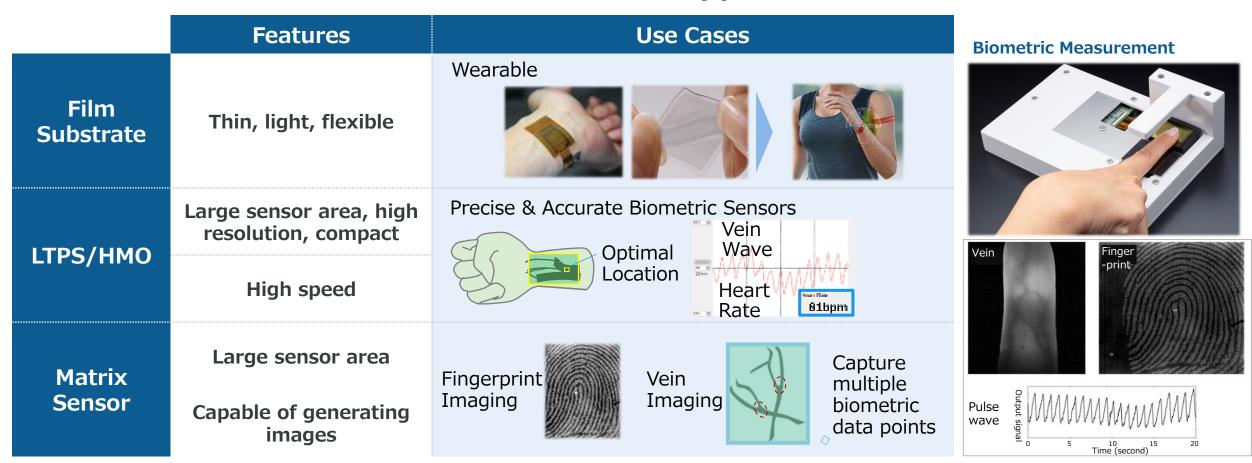
LumiFree allows for fully free & flexible control of light to improve how we
experience illumination of people, places, & things & to tailor to diverse user needs
& environments, while reducing energy consumption & light pollution



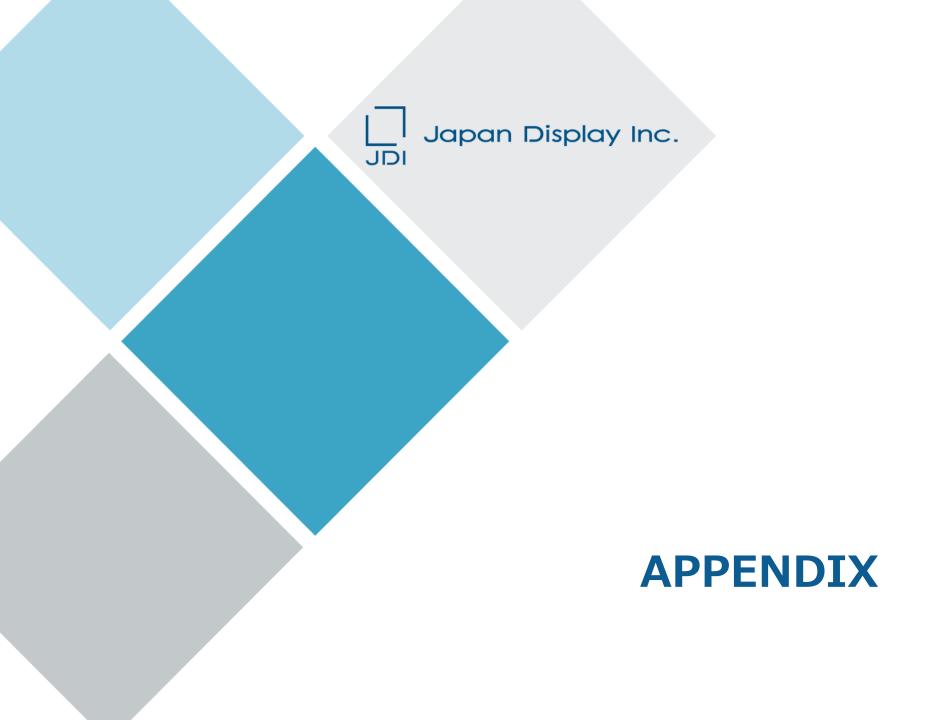
#### New Tech, Products, & Businesses | Biosensors for Personal Care



# Applying TFT technology to thin, light, curved, & flexible matrix sensors for wearable biosensor applications



Part of these researches were conducted with the support of the Japan Science and Technology Agency.



#### **Business Environment & Countermeasures**

Risk of geopolitical disruptions to supply chain



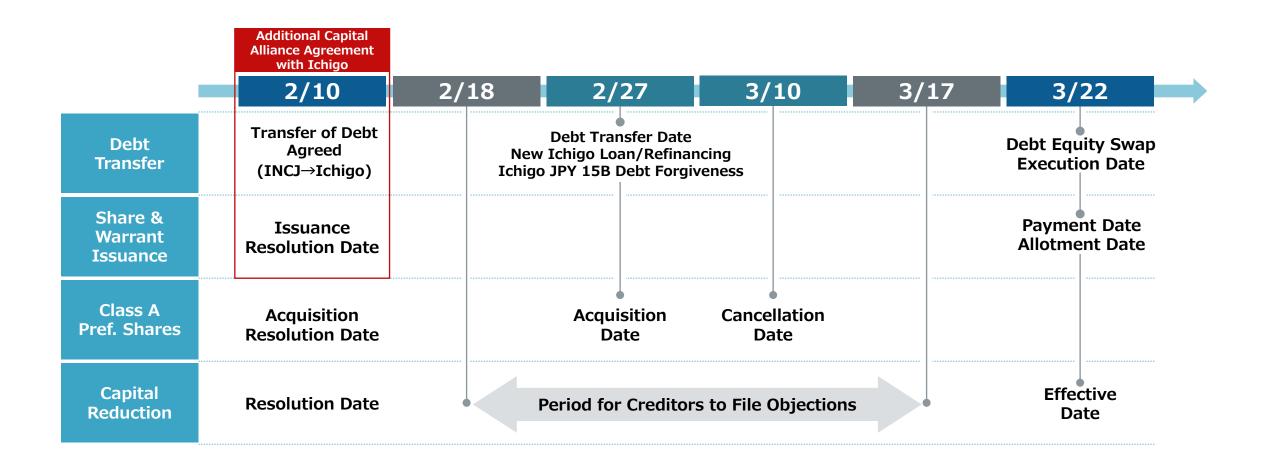
#### Accelerate METAGROWTH 2026 to address rising costs & declining demand

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	Business Environment	Countermeasures		
Mobile	<ul> <li>US &amp; Europe: LCD demand continues gradual decline</li> <li>China &amp; Other: smartphone market continues to be weak</li> </ul>	Significantly reduce Mobara plant smartphone display production capacity to cut fixed costs		
Auto- motive	<ul> <li>Demand remains strong, but production adjustments caused by analog IC shortage forecasted to continue</li> <li>Risk of automobile demand decline due to inflation and high gasoline prices</li> </ul>	<ul> <li>Maximizing shipments through reliable parts procurement while maintaining thorough inventory control</li> <li>Continuing negotiations to pass on increased costs</li> </ul>		
Non- Mobile	<ul> <li>Inflation has hurt demand for consumer electronics</li> <li>Continued parts shortages for some products</li> <li>Customer demand for new product development remains strong</li> </ul>	<ul> <li>First eLEAP order in Feb 2023. Shipments start in FY24</li> <li>Accelerate new product commercialization</li> <li>Grow medical &amp; life science businesses</li> </ul>		
Overall	<ul> <li>Business environment deterioration increased need for new capital measures</li> <li>Rising material, energy, shipping costs due to inflation and yen depreciation</li> </ul>	<ul> <li>Announced today measures to strengthen financial position</li> <li>Continued fixed cost reductions through Chinese subsidiary sale &amp; production end at Higashiura Fab</li> </ul>		

Building supply chain redundancy

#### Schedule to 2023 March-End





#### **Summary of Capital Increase & Use of Funds**



### Capital increase through common stock issuance and debt equity swap (DES) & securing of funds for long-term growth through issuance of warrants

	Principal Terms	Use of Funds
Common Shares	<ol> <li>Issue Price: JPY 45</li> <li>Total Issue Price: JPY 86.68B</li> <li>Number of Shares Issued: JPY 1.926B</li> </ol>	<ul> <li>DES: JPY 86.68B</li> <li>Significant capital increase &amp; elimination of debt</li> <li>Debt to be swapped: Ichigo loan claims totaling JPY 86.68B</li> </ul>
Warrants	<ol> <li>Notional Amount: JPY 173.56B</li> <li>Amount Raised through Warrant Issuance: JPY 200M         <ul> <li>Total Number of Warrants: 100</li> <li>Issue Price: JPY 2M per warrant</li> </ul> </li> <li>Amount Raised through Warrant Issuance: JPY 173.36B         <ul> <li>Share Type Subject to Warrant: Common Shares</li> <li>Exercise Price: JPY 45</li> <li>Number of Dilutive Shares: 3.852B</li> </ul> </li> <li>Exercise Period: 2023/6/1~2028/11/30<sup>(1)</sup></li> </ol>	METAGROWTH 2026 Acceleration Funds: JPY 172.56B (2)  ① R&D to Fund Continued Creation of Global No.1 Technologies: JPY 50B ② Further Build Out JDI Proprietary IP: JPY 20B ③ Targeted M&A in Synergistic Businesses: JPY 10B ④ Launch Rælclear, LumiFree, & Other New Businesses: JPY 15B ⑤ DX (Digital Transformation) Investments: JPY 10B ⑥ Bring eLEAP, HMO, HUD, Metaverse, and Other JDI Proprietary Technologies to Mass Production in Scale & Fund Sustainability Initiatives: JPY 30B ⑦ Bolster Working Capital: JPY 37B

<sup>1.</sup> Exercise period of warrants designed to be exercised in stages

① First 50: June 1, 2023 to May 31, 2028

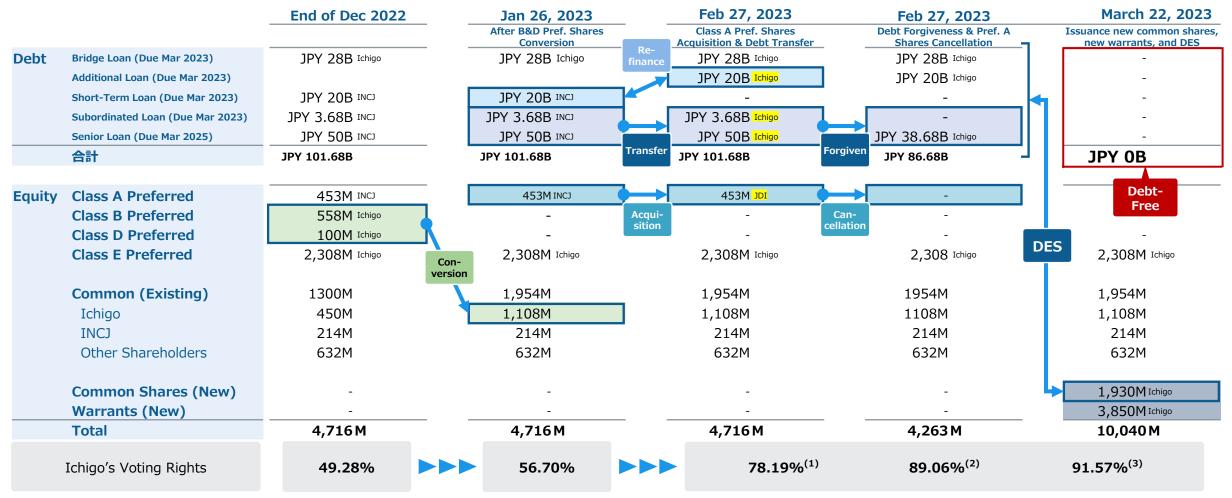
② Second 50: December 1, 2023 to November 30, 2028

<sup>2.</sup> Estimated net proceeds

#### **Capital Structure Changes**



- Capital increase strengthens JDI's financial position and eliminates all debt
- Ichigo's voting rights ownership increases to 78.19%



<sup>1.</sup> Percentage of Voting Rights owned by Ichigo after the third-party allotment of new common shares.

<sup>2.</sup> Percentage of Voting Rights owned by Ichigo when all dilutive shares are converted into common shares by the exercise of the warrants after the third-party allotment of new common shares.

<sup>3.</sup> Percentage of voting rights held by Ichigo when all dilutive shares are converted into common shares upon exercise of the warrants and exercise of the right to request acquisition of Class E Preferred Shares after the third-party allotment of new common shares.

#### Conversion of Class B & D Preferred Shares into Common Shares (Announced 2023/1/26)



Conversion of Ichigo's Class B & D preferred shares completed on January 26. Ichigo's voting rights ownership increased from 49.28% to 56.70%, making it JDI's controlling shareholder

#### **Common and Preferred Shares Outstanding**

Share Types (Shareholder)	Pre-Conversion	Change	Post-Conversion
Common Shares	1,296,165,800	+658,000,000	1,954,165,800
Ichigo Ownership	450,000,000	+658,000,000	1,108,000,000
Class A Pref. Shares (INCJ)	1,020,000,000	Conversion	1,020,000,000
Class B Pref. Shares (Ichigo)	372,000,000	-372,000,000	0
Class D Pref. Shares (Ichigo)	500	-500	0
Class E Pref. Shares (Ichigo)	5,540	Conversion   -	5,540
Ichigo's Number of Voting Rights / Percentage of Voting Rights	8,220,000: <b>49.28%</b>	<b>&gt;</b>	11,080,000: <b>56.70%</b>

<sup>1.</sup> The Number of Voting Rights above does not include any share dilution related to Class E Pref. Shares.

<sup>2.</sup> Percentage of voting rights Post-Conversion is calculated with the number of voting rights as of September 30, 2022 (16,681,253) as the denominator.

<sup>3.</sup> Percentage of Voting Rights Pre-Conversion is calculated with the number of voting rights as of September 30, 2022 (16,681,253) plus the number of voting rights increased through the conversion of Class B Preferred Shares and Class D Preferred Shares into JDI's common shares as of January 26, 2023 (2,860,000) (a total of 19,541,253) as the denominator.

<sup>4.</sup> Percentge of Voting Rights is rounded to the second decimal place.

<sup>5.</sup> Shares outstanding are calculated on the above premise that Class B Preferred Shares and Class D Preferred Shares that had become JDI's treasury shares have been canceled.

With the conversion, JDI is expected to fall short of the Tokyo Stock Exchange (TSE) Prime Market's listing requirement to keep its tradable share (free float) ratio over 35% at the end of FY 23/3. Under the TSE's listing rules, in principle JDI needs to comply with this requirement within one year. However, there is an exception that allows the listing to be maintained for 5 years (or a period approved by the TSE) if a third party owns the shares in order to support a company's business turnaround and the TSE determines that the company has the prospect of meeting the listing requirement within 5 years. In order to be eligible for this exception, JDI plans to announce by the end of June 2022, which is the deadline set by the TSE (i.e., within three months after a company's fiscal year-end), a specific plan for conformance with this requirement within 5 years.





# PersonalTech For A Better World