**Business Scope**

**Professional Printing Business**

**Commercial & Industrial IJP**

### Finished product business

*(printers, ink, service)*

- **Photo/photo**
  - Fine art, photos, proofs, etc.

- **Corporate**
  - CAD drawings, GIS (maps), etc.

- **Textile DTG**
  - Direct to Garment
  - Direct printing on ready-made articles like t-shirts

- **Textile dye-sublimation transfer**
  - Heat is applied to dye-sublimation ink printed on transfer paper to transfer it to textiles

- **Labels**
  - Identifying labels for products such as food and beverages

- **Signage**
  - Indoor/outdoor signs, posters

- **Textile DTF**
  - Direct to Fabric
  - Direct printing on fabric

---

**Printhead sales business**

*(printheads & ink)*

- **POS printers, other**
Contents

1. Value Creation Story
2. Epson’s Actions to Date
3. Market Overview
4. Epson’s Growth Strategy
5. Financial Targets
Value creation story

Value creation strategy

Input

- Climate change and resource depletion
- Heightened expectations for sustainable practices
- Increased productivity & preservation of artisanal skills
- Response to lifestyle diversification
- Widening of regional disparities
- Dangerous and harsh working environments

Materiality

- Efficient, Compact, and Precision Technologies
- Achieve sustainability in a circular economy
- Improve the quality of products and services
- Strengthen supply chain management
- Respect human rights and promote diversity
- Strengthen governance

Value creation strategy

Open innovation

- Advance the frontiers of industry
- Inkjet innovation
- Visual innovation
- Wearables innovation
- Robotics innovation
- Microdevices

Value proposition

- Inkjet-based solutions for improving productivity and saving energy and resources
- Dry fiber technology-based solutions for in-office resource recycling
- Projection technology for amazing visual experiences and easy visual communications
- Unique wearables that are a pleasure to wear
- Collaborative and smart robotic solutions that serve people
- Device technologies that enable smart communities

Outputs

- Expansion of the office market
  - Inkjet printers
  - Office papermaking systems
  - Projectors
  - Scanners
- Expansion of the commercial and industrial markets
  - Commercial and industrial printers
  - Robots
  - Wearable products
  - Smart glasses
  - Inkjet printers

Achieving a sustainable society

Indispensable company

- FY2025 financial objectives
  - Revenue ¥ 1,700 billion
  - Business Profit ¥ 200 billion
  - ROS 12%
  - ROE 15%

Output

- Transforming the office environment
  - Higher productivity
  - Lower environmental impact
  - Advanced communication

- Transforming the production floor
  - Higher productivity
  - Lower environmental impact
  - Improved work environment
Value creation story | Social issues

- Climate change and resource depletion
- Heightened expectations for achieving sustainability
- Increased productivity & preservation of artisanal skills
- Response to lifestyle diversification
- Growth in geographical inequities in infrastructure, education, and services
- Dangerous and harsh working environments
Value Creation Story | Innovation on the Printing Floor

- Realize safe, efficient production processes that produce minimal waste
  - Balancing productivity and sustainability with inkjet solutions

**Complex, wasteful work process**

Analog textile printing

- Image arrangement
- Plate making
- Ink mixing
- Sample printing
- Plate cleaning & storage
- Mass production ink manufacturing
- Mass production printing
- Plate cleaning & storage
- Disposal of unneeded ink
- Post-processing

Digital textile printing

- Conditioning
- Image arrangement
- Sample printing
- Mass production printing
- Post-processing

**Value provided**

- Faster turnaround. **Less dead stock and disposal losses**
- **Reduces water use** (no plate cleaning) and **waste ink**
- **Saves plate and WIP storage space**
- **Offer a clean and safe printing environment**
Growing need for local production for local consumption and for distributed printing

- Respond to the need for solutions that do not assume travel or movement
Commercial & Industrial IJPs: Epson’s Actions to Date
Since launching our commercial printer business in 1998, we have expanded applications by leveraging the extraordinary image quality and broad ink compatibility of Piezo printheads.

- Developed the photo segment with high image quality
- Developed multiple applications (for signage and textiles)
- High productivity, lower cost

1998 Launched the PM-9000C, our first large-format printer
2005 Launched the photo-quality PX-7500/9500 series of printers
2010 Launched the SurePress series of label presses
2012 Launched products for posters and CAD
2013 Launched dye-sub and DTG products
2014 Launched minilabs and SureLab
2015 Made Italian DTF company For.Tex a wholly owned subsidiary
2016 Made Italian DTF printer manufacturer Robustelli a wholly owned subsidiary
2018 Expanded and enhanced new corporate printers
2014 Products for signage
Commercial & Industrial IJPs: Market Overview
C&I Market Opportunities

- Commercial and industrial markets are expanding in step with economic development and population growth
- The digitization of textile and label printing presents a huge opportunity

**Rate of digitization in different printing market categories**

*(printer + ink: approx. ¥3.4 trillion)*

<table>
<thead>
<tr>
<th>Main applications</th>
<th>Photo/proof</th>
<th>Digital</th>
<th>Analog</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine art, Photos, Proofs</td>
<td>Corporate</td>
<td>Signage</td>
<td>Textiles</td>
</tr>
<tr>
<td>Indoor/outdoor signs, wallpaper, soft signage, etc.</td>
<td>Apparel (fashion, sportswear), interior goods, etc.</td>
<td>Various products</td>
<td></td>
</tr>
</tbody>
</table>

* Geographic information system

Source: Epson, global data

FY2018 Epson research
Epson's Market Share in Finished Products

- **Photo/proofing**: Captured a consistently high share by differentiating with superb image quality
- **Other categories**: Share limited due to time needed to expand the lineup
- **Signage, dye-sub, other**: Chinese manufacturers have won high share

### Photo/proof
- Differentiation achieved with high image quality

### Corporate
- Limited lineup

### Signage
- Chinese manufacturers compete on low price
- Epson's lineup is limited

### Textile
- DTG share is high, but penetration of high production segment is limited
- In dye-sub and DTF, Chinese manufacturers compete on low price

### Dye-sub transfer
- (24" & more)

### DTF
- Problems in high-productivity model expansion

### Labels
- Label press

---

Global unit share in FY19
Epson research
Textile Digitization (Apparel)

- Digitization is advancing in small lot, high added value segments.
- Higher production segments (medium and large lots) are a growth opportunity for Epson.

<table>
<thead>
<tr>
<th>Selling price</th>
<th>Production volume (lot size)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20,000 m</td>
<td>40,000 m</td>
</tr>
<tr>
<td>10,000 m</td>
<td>20,000 m</td>
</tr>
<tr>
<td>1,000 m</td>
<td>2,000 m</td>
</tr>
<tr>
<td>25 m</td>
<td>100 m</td>
</tr>
<tr>
<td>100 m</td>
<td>1,000 m</td>
</tr>
<tr>
<td>1,000 m</td>
<td>2,000 m</td>
</tr>
</tbody>
</table>

- High-end textile printing companies (silk)
- High-performance sports textile printing companies (sports casual)
- Sports textile printing companies (non-silk, mens' shirts, etc.)
- General apparel textile printing companies (high brands)
- High-end textile printing companies (luxury brands)
- High-performance textile printing companies (national brands)
- High-performance textile printing companies (fast fashion)

Areas Epson has penetrated:
- High-end textile printing companies (silk)
- High-performance textile printing companies (team uniforms)
- General apparel textile printing companies (non-brands)
- High-end textile printing companies (high brands)
- Sports textile printing companies (national brands)
- High-performance textile printing companies (luxury brands)
Textile Digitization (Apparel)

- Digitization is advancing in small lot, high added value segments.
- Higher production segments (medium and large lots) are a growth opportunity for Epson.
### Printing Company Needs

#### Color quality control

<table>
<thead>
<tr>
<th>Target color</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need simpler, more accurate color matching</td>
<td>Need the same output from different machines</td>
</tr>
</tbody>
</table>

- It is difficult to match the colors of over 1,000 textiles and several hundred color patches.
- Repeated trial-and-error: printing → transfer → visual inspection → data correction.
- Since colors don't match between different machines and models, production on multiple machines is not possible.
- Model replacement is difficult.

#### Production management

<table>
<thead>
<tr>
<th>Efficient management</th>
<th>Multi-site production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need to efficiently run printing equipment</td>
<td>Need to effectively transfer production between sites and manage operations</td>
</tr>
</tbody>
</table>

- Many small and mid-sized companies manage their printers and printer settings with handwritten notes.
- It is hard to minimize downtime and run printers efficiently.
- Large companies that have production at multiple sites need to manage operations among sites.
- Move more toward local production, small lots, and multi-site production.
Commercial & Industrial IJP: Epson's Growth Strategy
Rapidly expand the lineup of high productivity products through platforming and collaboration with partners.

Expand the business by responding to a diverse range of needs with external printhead sales and open innovation.

Epson's Strategy for Accelerating Growth

Key strategic points
- Capitalize on Epson's strengths in addition to high image quality to further differentiate.
- Use platforming to rapidly expand our lineup of high-productivity products for multiple applications.
- Develop software applications that meet the demand for distributed printing and additional installations.
- Accelerate the transition to digital by strengthening customer touch points and supporting system.

Customer issues
- Want to raise productivity
- High TCO for digital printing
- Color matching is difficult
- Different machines/models produce different colors
- Production management is inefficient

Epson’s issues
- Rapid market launch of products
  - Thin lineup of high-productivity products
- Achieving lower TCO
- Lack of color matching and production management solutions
Rapidly expand the lineup by engineering platforms.

- Enable us to expand the lineup without slowing down new product development.
  - Create diverse products by combining different printheads, print mechanisms, ink supply systems, and control systems.
- Share technologies and assets developed for office and home products, and take advantage of economies of scale.

### Commercial & Industrial IJP Platforming

**Printheads**
- Large-scale production
- Small-scale production

**Print mechanisms**
- High-end 76"
- Middle range 64"
- Compact 24"-44"

**Ink supply systems**

**Control systems**
- Electrical systems
- Firmware
- Software
C&I IJP Platforming | 1) Printheads

- Micro Piezo system for C&I printing
  - Delivers amazing image quality at high speeds
  - Compatible with a wide range of inks
- A variety of heads can be produced at low cost by combining print chips in different configurations.

**Heads for SOHO inkjet printers**
- Use 1-4 print chips

**Heads for large-format inkjet printers**
- Use 10 print chips

**Heads for high-speed large-format inkjet printers**
- Use 4 print chips for each color

**Lineheads for large, high-speed label presses**
- Use 11 print chips
C&I IJP Platforming | 2) Print Mechanisms

- Introduce high-end, high productivity platforms (76”)
  - Enable a lineup ranging from low-priced to high-productivity products

**Application development**

- **Low end**
  - Faster

- **Middle range**
  - Significant speed increase

- **New**
  - High-end FY20 launch

**High-speed printing**
- Continuous stable operation
- Easy user maintenance
- Precision handling of thin paper

**Productivity**
Create platforms that also utilize office IJP technologies

<table>
<thead>
<tr>
<th>Ink &amp; control systems</th>
<th>Platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low end</td>
<td>Middle range</td>
</tr>
<tr>
<td>Ink supply systems</td>
<td>Created platforms with different ink capacities</td>
</tr>
<tr>
<td>(Utilized high-capacity ink tank model technology)</td>
<td></td>
</tr>
<tr>
<td>Electrical systems</td>
<td>Consolidated according to required data processing capacity</td>
</tr>
<tr>
<td>System A</td>
<td>System B (Utilized high-speed LIJ technology)</td>
</tr>
<tr>
<td>Firmware</td>
<td>Standardize based on an office IJP platform</td>
</tr>
<tr>
<td>Software</td>
<td>Created standardizing remote monitoring infrastructure, color management, and RIP</td>
</tr>
</tbody>
</table>
## Ink Lineup for a Wide Range of Applications

- Ensure even broader compatibility between Piezo printheads and ink
- Develop and introduce diverse inks while simultaneously expanding the product lineup

<table>
<thead>
<tr>
<th>Category</th>
<th>Photo/proof Corporate</th>
<th>Signage</th>
<th>Textile</th>
<th>Labels</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ink type</strong></td>
<td>Water-based pigment</td>
<td>Eco solvent</td>
<td>Dye-sub transfer</td>
<td>Water-based resin</td>
</tr>
<tr>
<td></td>
<td>Water-based dye</td>
<td>Water-based dye</td>
<td>Acid</td>
<td>UV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UV</td>
<td>Reactive dispersion</td>
<td>Pigment</td>
</tr>
<tr>
<td><strong>Ink characteristics</strong></td>
<td></td>
<td>UV Resin</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Main applications</strong></td>
<td>Fine art, photos</td>
<td>Excellent environmental</td>
<td>Excellent image quality</td>
<td>Compatible with broad</td>
</tr>
<tr>
<td></td>
<td>CAD, GIS, posters</td>
<td>resistance</td>
<td>and color</td>
<td>range of media, from paper</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ideal for high-quality</td>
<td>High washing fastness</td>
<td>to film</td>
</tr>
<tr>
<td></td>
<td></td>
<td>signage</td>
<td>Wide fabric compatibility</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Interior goods</strong></td>
<td>Indoor/outdoor signs,</td>
<td>Soft signage, rigid boards,</td>
<td>Apparel (fashion, sportswear)</td>
<td>Various products</td>
</tr>
<tr>
<td></td>
<td>wallpaper</td>
<td>backlit panels</td>
<td>Rigid material</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Interior goods</td>
<td></td>
</tr>
</tbody>
</table>
Rapidly Expand the High Productivity, Multi-Application Lineup

- FY19-21: Launch at least 3 times more models than in FY16-18
New 6-color model in the 64” series & high-capacity ink tank model in the 24" series

Expand and upgrade the lineup by adding a 76" high-speed, high-productivity printer.

**2019 new models**

- **24" compact dye-sublimation transfer printer**
  - Based on a corporate model
  - Uses high-capacity ink tanks

- **64" six-color model launched**
  - Fluorescent inks expand design possibilities

**76" high-productivity dye-sub printer (2020)**

- Continuous stable operation
- Precision handling of thin paper
- Enhanced user self-maintenance functions

**44" model**
- Reliable compact model ideal for production of smaller items

Textile Dye-Sub | New High-Productivity Products
● High-productivity flagship model encompasses Epson's textile technology
  • High image quality with up to 8 colors
  • Promote digitization by offering ink prices linked to print volume

Current machine, the Monna Lisa Evo Tre 32
600 x 600 dpi 2-pass mode: 423 m²/h

Monna Lisa Evo Tre 64
600 x 600 dpi 2-pass mode: 740 m²/h

Beta testing began in 2019
Total Support for Printing Operations with Software Solutions

- **Color quality control made easy with Color Control Technology**
  - Match colors quickly and accurately.
  - Get repeatable, consistent color matching on the same and different models.

- **Achieve scalability with distributed printing.**
  - Avoid stock and supply risk by printing locally.
  - Easily expand production capacity as business expands.

![Diagram showing Color Control Technology and distribution of printing sites](image)
Epson Cloud Solution platform
- Supports production management and maintenance management in addition to color quality control
- Entered service in 2020. Functions to be expanded.

Epson Cloud Solution

- Quality control
  - Color consistency and repeatability
- Production management
  - Distributed printing and high productivity
- Maintenance management
  - Maintenance and high utilization rate

Foundational technology and infrastructure

Color Control Technology
- Technology for consistently high image quality
- Remote monitoring infrastructure
Reducing the TCO of Digital Printing

- Reduce printer and ink costs through benchmarking.
- Reduce running costs by proposing new services.
  - Offer ink volume discounts commensurate with print volume.
  - Offer programs such as subscription and managed print services.

**Printer cost reductions**

Using Chinese manufacturers as a benchmark, drive down costs and increase printing speeds.

**Ink cost reductions**

Ink prices have been falling as analog inks are replaced. Expand MIF and reduce costs by increasing volume.

Source: Epson research

EX.) Dye-sublimation transfer printer positioning

EX.) DTF reactive ink market price trend (Italian avg.)
Strengthen Customer Touch Points and Support

- Communicate the value of digital printing
  - Strengthen customer touch points while using primarily a direct sales approach for large machines and dealer sales for medium- and small-sized large format printers.

Expand and upgrade showrooms
  - Sharply expand in Japan and at global sales sites

Pre-sales activities
  - Step up private demos and seminars for dealers and customers
  - Early contact and feedback into products

Approaching brand owners
  - Directly emphasize the value of digital printing
  - Promote joint development
Strengthen Customer Touch Points and Support

- Enhance consulting in support of customer growth and joint development with industry players

Solve customers’ issues
Collaborate with industry players

Textile Solution Centers
Equipped with all digital textile printing processes, including pre- and post-treatment steps
Sell to prospects while checking their quality expectations.
Take on technical support and development functions.

Solution Center
Cover all commercial and industrial IJP categories

Hirooka Solution Center (Nagano Prefecture)
(Opened spring of 2020)

TSC Asia
Jointly established with For.Tex in Italy
Commercial & Industrial IJP: Financial Targets
Financial Targets

● Simultaneously realize both revenue and profit growth
  - Double finished product business revenue by FY25
    - Grow revenue mainly in the corporate, signage, textile, label categories
  - FY20 the final year for large capital expenditures

Finished product business revenue targets

<table>
<thead>
<tr>
<th>Profits</th>
<th>POS printers, other</th>
<th>Commercial &amp; industrial IJP</th>
<th>Professional printing</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY19 result</td>
<td>100.0</td>
<td>100.0</td>
<td>200.0</td>
</tr>
<tr>
<td>FY25 target</td>
<td></td>
<td>200.0</td>
<td></td>
</tr>
</tbody>
</table>

Capital expenditure

Finished product business
Investment in molds, dies, machinery

Maintain same level
New Product Lineup

- Textile DTG
- Labels
- Photo/proofing, corporate
Textile DTG | New Products That Boost Production

- Industrial DTG printer offering elevated productivity and durability
- Two lines created in alignment with customer needs

**Current model**

For small and medium-sized print shops

**New model (2020)**

- Equipped with dual printheads for super-fast printing of even deep-colored t-shirts
- Bulk ink packs (1.5L) support high print volume
- Easy user maintenance features for reduced downtimes
Label | New Products That Raise Production & Offer Advanced Functionality

- **SurePress series: Sharply higher speeds**
  - Leverage high-production to gain momentum in displacing analog printing
  - Promote digitization by offering ink prices linked to print volume

  ![SurePress Series Machines](image1.jpg)
  
  **High-quality mode:** 15 m/min.
  
  **High-speed mode:** 50 m/min.

- **ColorWorks series: Advanced functionality**
  - World’s first* color inkjet printer with a peeler

  ![ColorWorks Series](image2.jpg)
  
  Released in 2019
  
  CW-C6520P (8” peel-and-present model)

  * Not sold in Japan
  
  * Not sold in Japan
  
  * Per Epson research conducted on Oct. 24, 2019

* Significant increase in speed

* With a built-in external interface and peeler, the printer seamlessly integrates into automated production lines
Photo/Proofing, Corporate | Lineup Reinforcement

- High-speed printing of photos with amazing detail and color
  Image quality for photos, fine art & proofs (11-color machine)
  2.3 times faster than predecessor
  - Achieves high-speed printing in the photo segment
  - Expanded color gamut
  - Covers up to 99% of the Pantone color chart
  - Delivers deep, dense blacks

- Apply office IJP technology to expand in the corporate segment
  Expanded ink tank, MFP, and high-capacity models based on the T3000/5000 series launched in FY18

Current lineup

* Print speed compared to Epson model with the same maximum print width. The SC-P9550 is compared to the PX-H10000 (released in 2008) & SC-P9050V (released in 2015). Comparison conditions: A1 professional photo paper (thin, glossy), level 1 (fast) (720 dpi × 720 dpi). PX-H10000 & SC-P9050V/G: A1 professional photo paper (thin, glossy), level 1 (fast) (720 dpi × 720 dpi). Print speeds do not include data processing and transmission times with the host. Print speeds differ depending on data volume, size, and application software.