

Professional Printing Business Strategy



May 10, 2016
Seiko Epson Corp.

Business segment	Printing solutions				
Ops. Div.	Printer business		Professional printing business		
Market	Home	Office		Commercial	Industrial
User	Personal	SMB & SOHO	Retail, warehouse	Stores, POP display producers, Print service producers, sign makers, fashion	Printers & large enterprise
Purpose of use	Personal viewing or use		Show o	sell to others or output itself has value	
Printed output	Photos, docs	Business docs, forms	Receipts & coupons, etc.	Photo proofs, CAD, posters, signage, textiles	Labels & textiles
Products & services					

1. Business Overview
2. Target Markets
3. Epson's Strengths
4. Actions
5. Sales Targets and Growth Investments

Business Overview

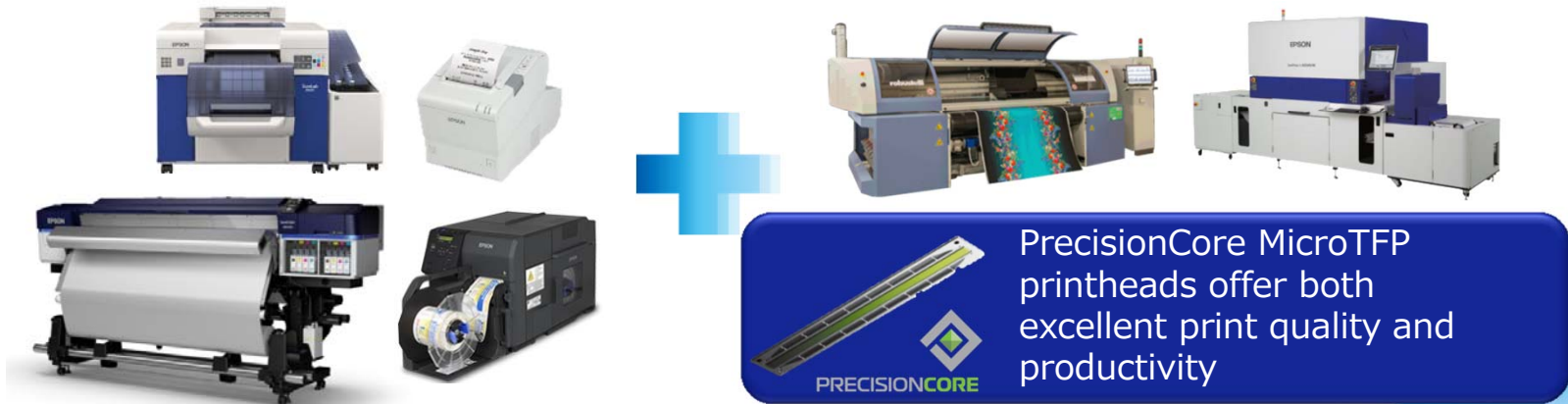
Overview

Professional printing business initiatives in the
Epson 25 Mid-Range Business Plan (FY2016-18)*

* The 3-year plan announced
in March 2016

Establish outstanding competitive advantage with hardware, improve support and other organizational infrastructure, and achieve solid growth in new domains.

Provide simple, flexible inkjet manufacturing processes in new domains (signage, textiles, labels) to accelerate industry shift to digital.



Initiatives to Date

Since launching our commercial printer business in 1999, we have led the commercial and industrial printer markets in image quality and have continued to innovate and expand our customer base.

Faster, with high image quality

More convenient & easier to use

For a wider range of uses

Technological innovations
in printheads, etc.

Improved usability
& support

Wider support for
ink & media

Epson leverages image quality to lead existing markets

Photo & Graphics

A2/A3
graphics

Photo/
proofing

Minilabs

Corporate
(CAD, GIS, posters)

And we are developing new domains.

Signage

Textiles
(dye-sublimation,
DTG, DTF)

Labels



Category	Description
Opportunities Targeted markets	<ul style="list-style-type: none"> ◆ Growth of digital printing market (signage, textiles, labels) due to a shift from analog systems in commercial & industrial printing
Strengths Accomplishments under SE15	<ul style="list-style-type: none"> ◆ Improved inkjet technology to enable commercial and industrial digital printing (including production engineering and patents) ◆ Built a vertically integrated business model ◆ Main strengths in each area (currently) <ul style="list-style-type: none"> ➤ Brand power in photo and graphics printing ➤ Expertise and insights in textile printing (M&A and alliances) ➤ Highly competitive products in the label printing (PFU)
Issues Things not achieved under SE15	<ul style="list-style-type: none"> ◆ We were unable to provide the value sought by customers due to a weak lineup and lack of knowledge in growth markets. <ul style="list-style-type: none"> ➤ Insufficient product competitiveness in the signage printing ➤ Slow to expand sales territory in textiles (DTF)

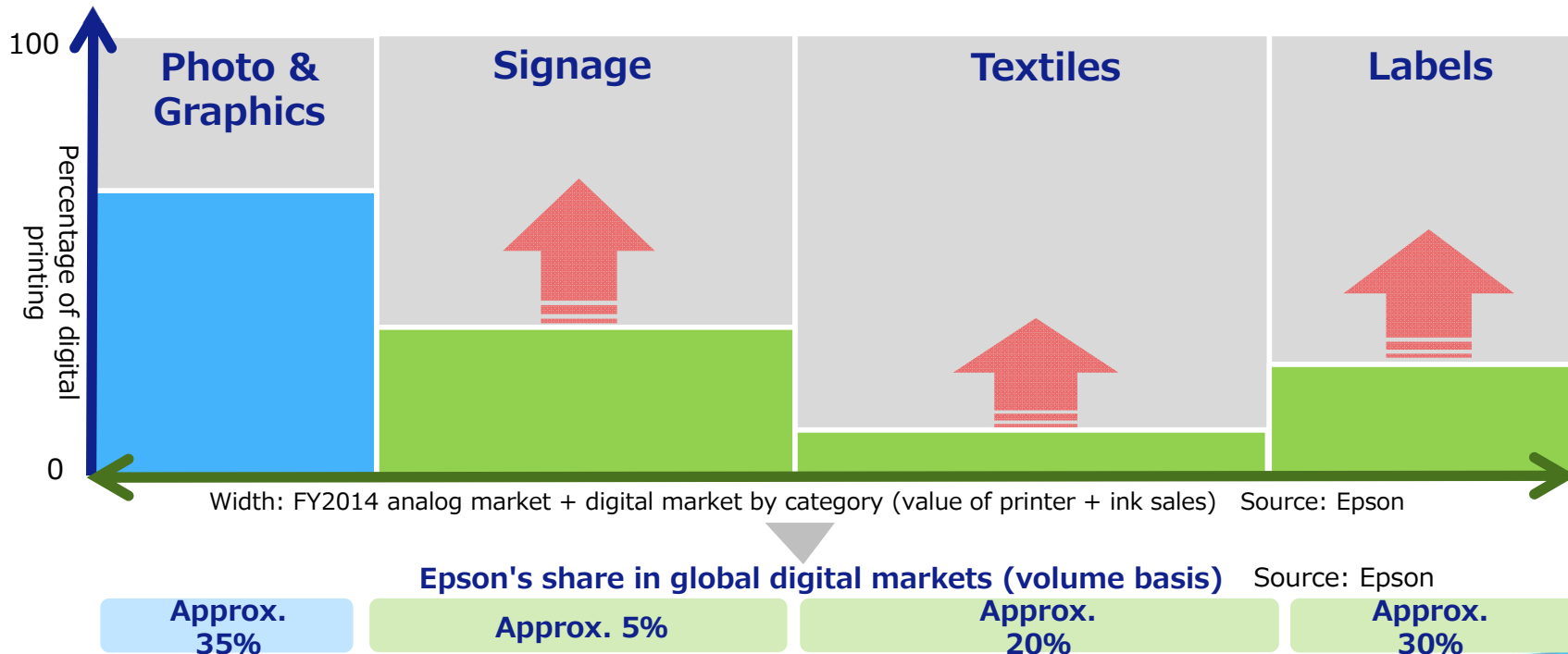
PFU: Print for Use * See page 34 for details.

DTF: Direct to Fabric *See page 27 for details.

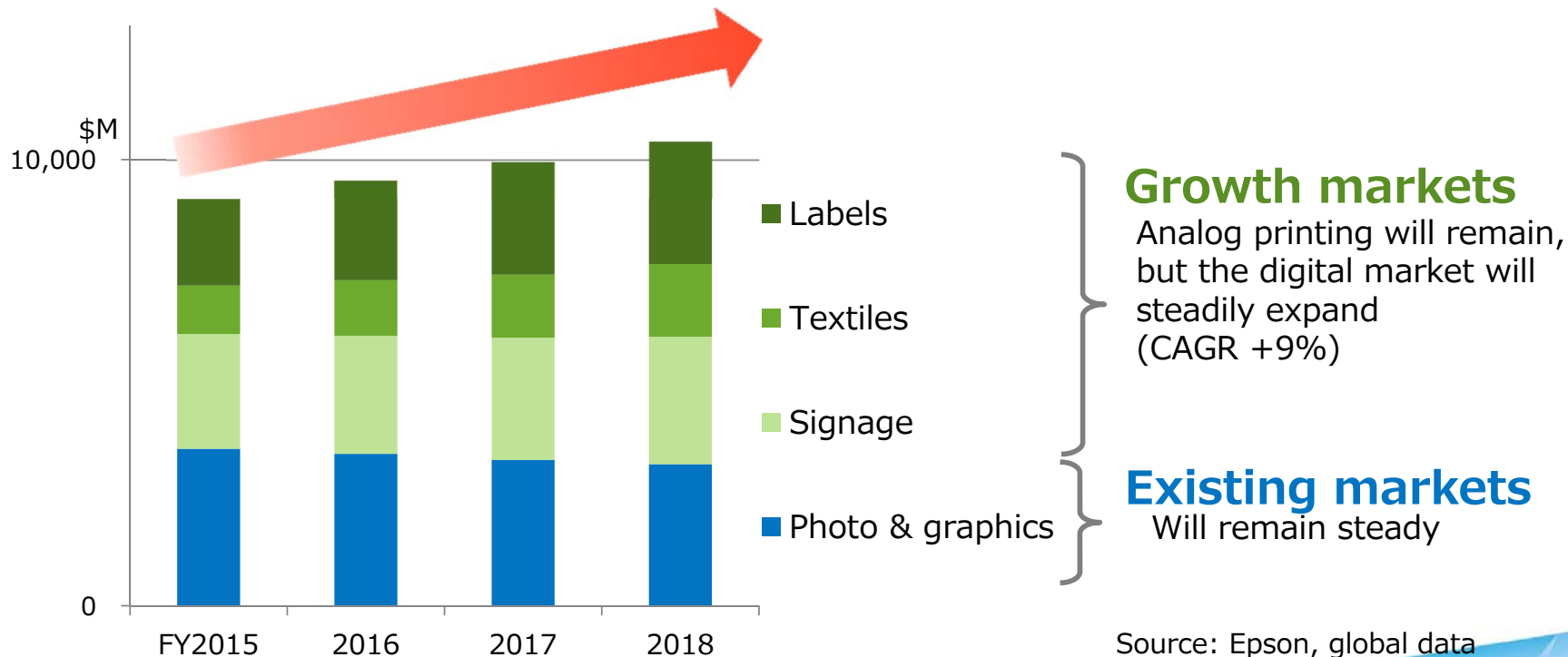
Target Markets

Target Market Size

As the \$33 billion (approx. 3,500 billion yen) global market goes digital, **Epson will lead the printing industry's transition with inkjet technology.**



There is huge room for growth in signage, textile, and label printing



Changes in the world: Transition to digital printing accelerating

Diversification of needs & expansion of short-run print jobs

Diversification of design. Pursuit of individuality & differentiation

Heightened sensitivity to the environment and costs

Customer changes: Commercial & industrial printer requirements

Increase in short-run print jobs

Print high-quality, complex designs

Simple, highly productive systems

Epson will fully support customers in the transition to digital printing by taking advantage of the collective strength of the value chain, extending from key component development to design, manufacturing, sales, and service

Basic Strategies (Epson 25 Mid-Range Business Plan)

Establish outstanding competitive advantage with hardware, improve support and other organizational infrastructure, and achieve solid growth in new domains.

Existing markets

Provide new products & services that meet customer requirements while maintaining high market share

Growth markets

Provide simple, flexible inkjet manufacturing processes to accelerate industry shift to digital.



Photo & Graphics



Signage

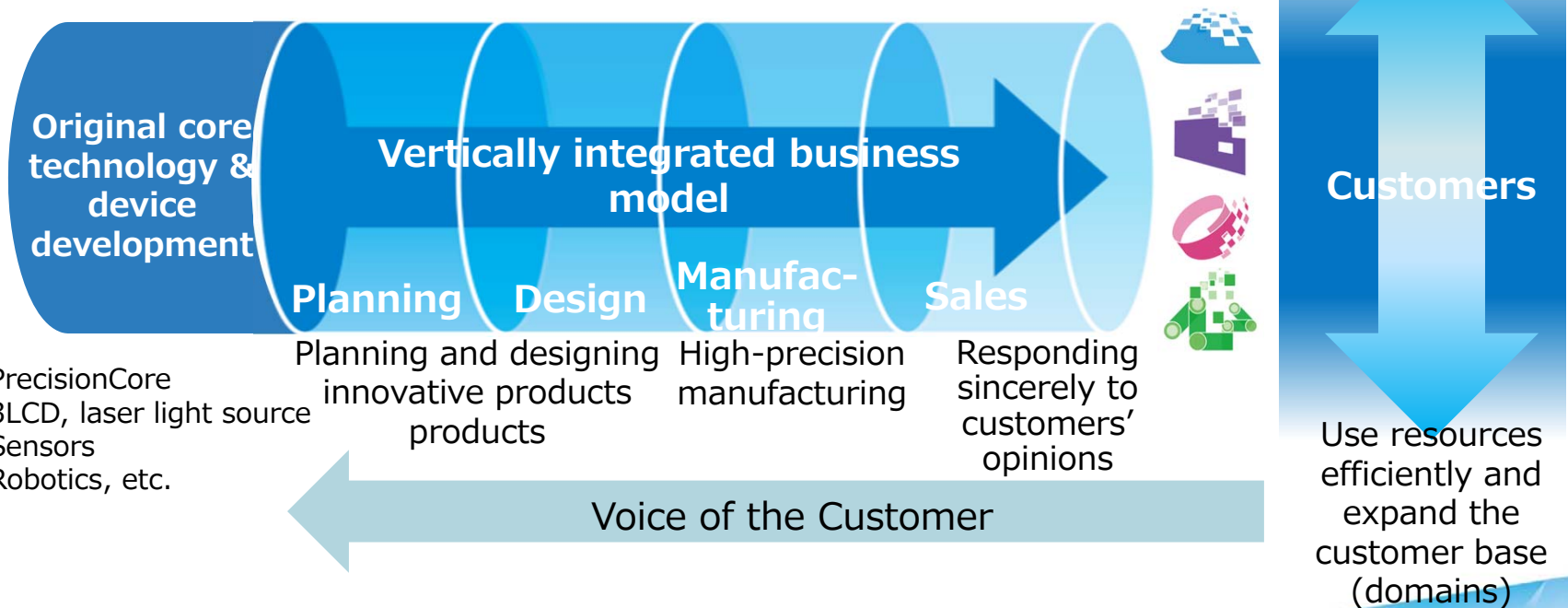
Textiles

Labels

Epson's Strengths

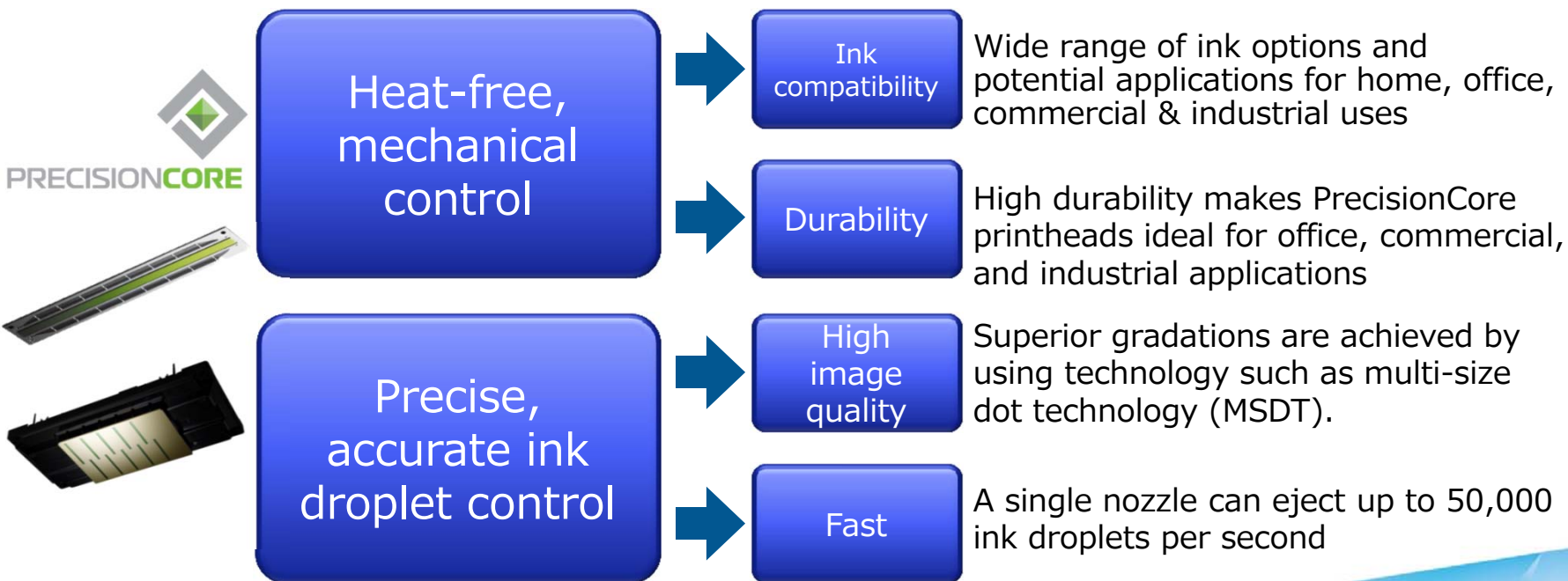
Thinking Underlying the Strategies

Provide value that exceeds customer expectations by using vertical integration to gain additional leverage on core technologies and devices



PrecisionCore Advantages: Basic Performance

- ◆ Thin-film printheads manufactured using precision MEMS fabrication technology that faster and offer better image quality than conventional inkjet printheads
- ◆ Proprietary production engineering, patents, etc., make it hard for competitors to keep pace



PrecisionCore Features: Scalability

PrecisionCore
MicroTFP print chips



PRECISIONCORE

Print chips can be used as basic modules to build low-cost printheads with different configurations, from lineheads for label production systems to heads for office printers.

Heads for office inkjet printers

1 - 4 chips used



Heads for large-format inkjet printers

10 chips used



Lineheads for high-speed label printers

4 chips used



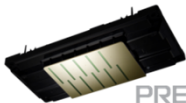

Lineheads for large, high-speed label press

11 chips used



Compatible with Ink for Almost Any Application

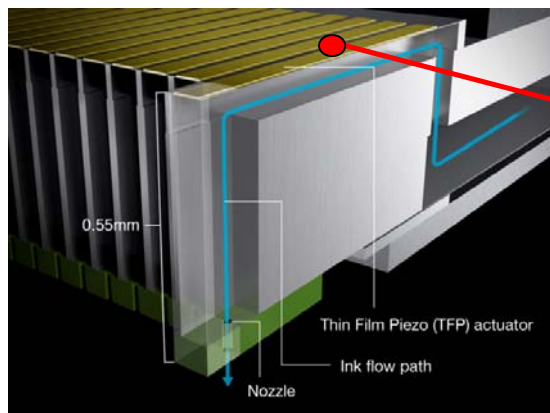
- ◆ PrecisionCore printheads are compatible with a wide range of inks
- ◆ Ink compatibility allows expansion into various customer applications

Category	Photo & Graphics	Signage	Textiles	Labels
Inkjet printheads	  PrecisionCore or conventional Epson printheads			
Ink type	Water-based pigment and water-based dye	Eco-solvent	Dye-sublimation, acid, reactive disperse, pigment	Water-based resin, UV
Ink characteristics	Beautiful image quality Water-based, so easy to handle	Ideal for PVC film	Good color on fabric, waterfast, laundry resistant	Media versatility, fast prints

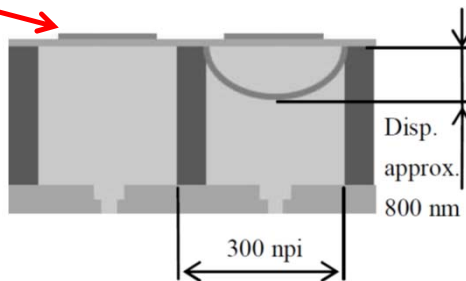
PrecisionCore—Advantages Over Competing Piezo Systems

Epson's thin-film piezo technology allows us to increase printhead resolution without decreasing actuator displacement and drop size. PrecisionCore can be optimized for any ink used in commercial or industrial applications to achieve outstanding image quality at high speed.

MicroTFP actuator



MicroTFP displacement
(conceptual illustration)



PrecisionCore vs. conventional inkjet

	Conventional inkjet system	PrecisionCore MicroTFP printhead
Resolution (nozzles per inch)	180 npi	300 npi
Nozzle line length	25.4 mm	33.8 mm
Nozzles per line	180	400
Drop size	1.5 - 32.5 picoliters	
Operating frequency	Up to 50 kHz	

Advantages over competing piezo systems

1. Outstanding nozzle performance (high density and durability for high productivity and amazing image quality)
2. Scalability (build the best printhead for the application using print chips)
3. Volume-produced by Epson to maximize quality stability & minimize cost

Strength of Business Infrastructure

Provide products & solutions that capitalize on PrecisionCore

Planning and designing innovative products

- Expand the platform design concept into various applications

High-precision manufacturing by Epson (heads & hardware)

- Achieve low total cost of ownership (TCO), incl. maintenance, with quality, low-cost heads
- Optimize production in line with product characteristics
- Share technology & expertise accumulated in internal production to increase production efficiency and quality while reducing costs

Responding sincerely to customers' opinions

- Expand global sales sites that handle home, office, commercial, and industrial applications
- Improve new products based on customer needs and feedback
- Provide suitable designs, software, and usability for applications

Example of technology for achieving high image quality



New frame structure & Advanced Auto Tension Control (AD-ATC) for accurate, stable media-handling

* Use in products announced in Japan on 5/10



Paper Feed Stabilizer:

CMOS sensor real-time feedback improves precision in high speed media feeding

* Use in products announced in Japan on 5/10

Strengthening Business Infrastructure

- Consolidated the commercial & industrial printer businesses in April 2015

Commercial inkjets

POS and inkjet label printers

Industrial inkjet press



Professional printing
business

Achieve the high performance demanded by the market and speed up the product commercialization process and business operations by combining Epson's technology, development capabilities, resources, and customer knowledge.

Actions

- ◆ Existing market
 - Photo and Graphics
- ◆ Growth markets
 - Signage
 - Textiles
 - Labels

Initiatives in the Photo and Graphics Markets

- ◆ The markets for photo and graphics are stable, but aim to expand sales with new products equipped with new heads and ink that satisfy strict requirements for high image quality
- ◆ Maintain a high share in photo-related applications (graphics, photos, proofs, minilabs)
- ◆ Take advantage of high image quality to develop high-print-volume corporate applications

A2/A3
graphics



Market: ~180 k units

Photos/ proofs



Market: ~40 k units

Corporate
(CAD, GIS, posters)



Market: ~170 k units

Lots of room for
development

Minilabs



Market: ~30 k units

Progressively shift to
IJ from silver-halide

Photo & Graphics: Products

A2/A3 graphics

- Maintain a high market share by further improving color reproduction & rendering of shadow detail to meet the image quality requirements of professional and demanding amateur photographers



SC-P800



SC-P800



SC-P600



SP-4900

Photo proofing

- Further expand sales by launching products that provide high throughput in addition to excellent image quality with a wide color gamut and high color density
- New products announced



SC-P9000



SC-P20000



SC-P8000



SC-P10000

Print size: A2/A3, water-based pigment, 8 & 10 colors

Print width: 17"/24"/44"/64", water-based pigment, 8 - 10 colors

Photo and Graphics: Products

Corporate

- Taking advantage of image quality know-how fostered in photos and proofing, reinforce sales development by expanding the lineup, taking into account customer requirements and applications in the field



SC-T3200



SC-T52MFP



SC-T7200D

Print width: 24"/36"/44", water-based pigment, 4 colors

Minilabs

- Offer great image quality at a low TCO, and replace silver-halide and dye-sub with inkjet.
- Reduce photo lab downtime with high reliability and operation stability



SL-D700

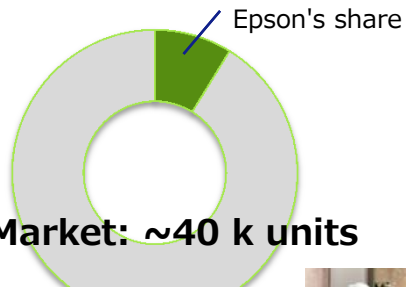


SL-D3000

Print width: 4"- 8"& 4"- 12", water-based dye, 6 colors

Initiatives in the Signage Market

- ◆ Robust demand for signs and displays supporting steady market growth
- ◆ Sign and display printers require products that are reliable, productive, low-cost and reassuring
- ◆ Expand sales and share by meeting customers' expectations for high image quality & stable operation at low TCO
- ◆ Continue sales of LFP components and capture opportunities for market expansion (*including for textile printers)



Lots of room for development

Source: Epson, global data



Signage Printing

- Leverage our strength in image quality to help signage customers expand their business
- Improve market-proven eco-solvents, and offer high image quality and low running costs
- Expand sales with new products that offer outstanding print quality, color, stable operation, productivity & low TCO

Features of new products

- 1) High-quality output
 - Wide gamut
 - Reduced banding
 - Low graininess
- 2) High productivity
 - High-speed printing
 - Low-pass image quality
 - High-speed drying
- 3) High reliability
 - Fabric wiper system
 - New stable feeding system



SC-S40600



SC-S60600



SC-S80600

Print width: 64", eco-solvent, 4 colors and 9 - 10 colors

◆ **Expand the sales & service network**

- Strengthen relationships with global sales partners and sales channels
- Launch reliable new products, enhance manufacturer warranties, and offer reassurance

◆ **Have major accounts do beta testing**

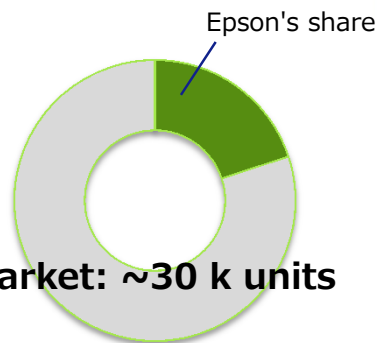
- Earn a strong reputation by having major accounts in Europe, the U.S., and Japan use our new products on a trial basis in their actual applications, with their media, and in the actual operating environment



Textile Market Situation

The market is rapidly growing with replacement of analog printing and the emergence of new business categories and services that capitalize on the advantages of digital printing

Digital textiles



Source: Epson, global data

Direct to Garment (DTG)

Images printed directly on T-shirts, etc.

Cotton

- T-shirts, sweatshirts
- Bags



Dye-sublimation

Images printed on transfer paper are transferred using heat

Polyester fabric

- Sportswear
- Soft signage
- Interior decor



Direct to Fabric (DTF)

Images printed directly on fabric

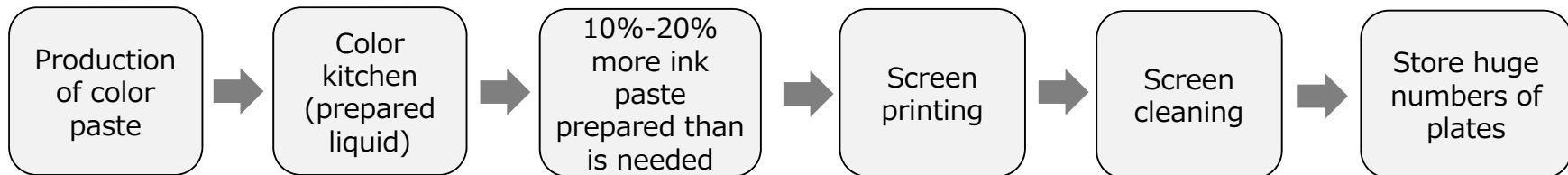
General textiles

- Order-made garments
- Luxury brands
- Fast fashion



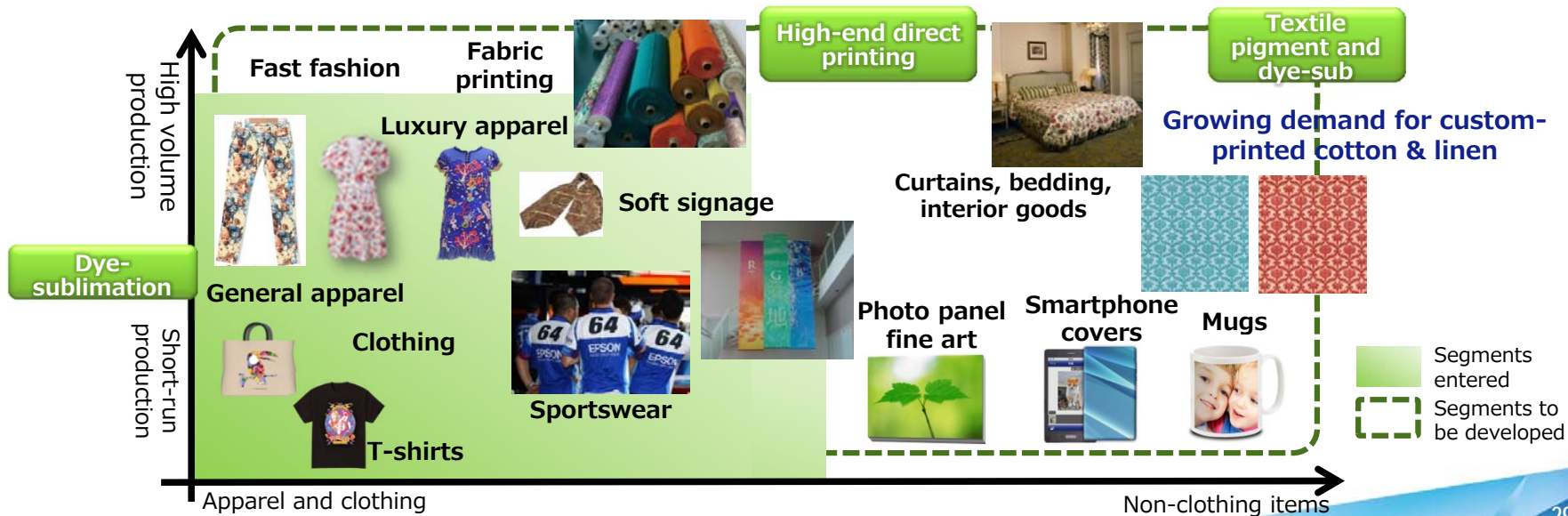
Textiles: The Situation in Analog Textile Printing

- Color paste (ink) is created by mixing materials prior to printing, and special colors are blended depending on the design.
- Plants are smelly, hot and dirty, and have cleaning baths for processing large volumes of waste fluid.
- A large space is needed to store plates (some of which are left outdoors)



Textile Market Initiatives

- ◆ Inkjet digital printing can be used for a wide variety of goods, from apparel to small personal items and interior goods
- ◆ Dye-sub printing has a wide range of uses, and the market promises to expand
- ◆ Leverage outstanding image quality and productivity to expand share in markets we have entered, and develop potential new markets



Textile Printing: Products

DTG

- Aim to expand sales in response to an increase in short-run digital print jobs for events, team uniforms, etc.



■ Bags



■ T-shirts



■ Sweatshirts



SC-F2000

Print sizes: 16" x 20", textile pigment, 4 colors + white

Textile Printing: Products

Dye-sublimation

- ◆ Provide textile printers and apparel manufacturers with reliable solutions that offer high productivity and low TCO
- ◆ Increase productivity and strengthen black density in response to customer demands, and expand digital textiles

- Sportswear
- Apparel
- Soft signage
- Accessories
- Decor



SC-F6200



SC-F7200



Print width: 44"/64", dye sub, 4 colors (high-density black)

Textile Printing: Products

DTF

- Take maximum advantage of the expertise of For.Tex (made a 100% subsidiary in 2015) to provide the industry's highest quality digital textile printing processes and expand sales in luxury apparel
- Collaborate with Robustelli to launch digital textile printers that have high throughput and a low environmental impact to accelerate the adoption of digital processes by traditional printers and to expand in general apparel and interior goods

Monna Lisa Evo Tre: 3rd-generation Monna Lisa with PrecisionCore



Monna Lisa Vinci: Raise productivity while preserving Monna Lisa's reputation for great image quality



Both demonstrated at the International Textile Machinery Exhibition (ITMA) (Nov. 2015)

Joint exhibit with For.Tex and Robustelli

Print width: From 74"; acid, reactive dispersion & pigment inks, 8 colors or more

* Reference exhibit

◆ Strengthening sites in Europe

- Strengthen development & collaboration to meet customers' image quality and fabric requirements

◆ Strengthen sales organizations in China, Southeast Asia, etc.

- Develop multiple sales partners and sales channels
- Strengthen the direct approach to major apparel companies & textile manufacturers

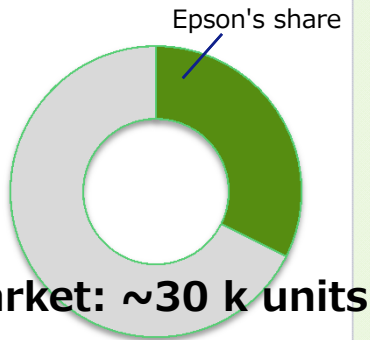


Textile Solutions Center
Jointly established with For.Tex
April 2014



International Textile Machinery Exhibition (ITMA)
Joint exhibit with For.Tex & Robustelli
Nov. 2015

Digital printing is growing on increased demand for color labels in short-run custom print jobs



Source: Epson, global data

Print for Use (PFU)

End-consumers print secondary labels



- ✓ High image quality and high-end feel
- ✓ High-speed printing

Print for Pay (PFP)

Label printing companies print a variety of primary and secondary labels



- ✓ High quality output
- ✓ Efficient workflow
- ✓ Superior economic efficiency

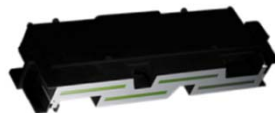
Label Printing: Products

PFU applications

- Expand the number and range of label-making applications and increase sales by taking advantage of the ability to print on demand, in-house, and in color, by adding greater media support and functions, and by launching easy-to-use products



Use PrecisionCore lineheads to achieve max. speeds of 300 mm per second



PRECISIONCORE



Print width: 4", water-based pigment, 4 colors

Label Printing: Products and Initiatives

PFP applications

- Answer short-run label printing needs with an efficient workflow, high-quality output, excellent economic efficiency, and media versatility
- Support digital printing with direct sales and direct service to help customers generate profit and achieve stable operations

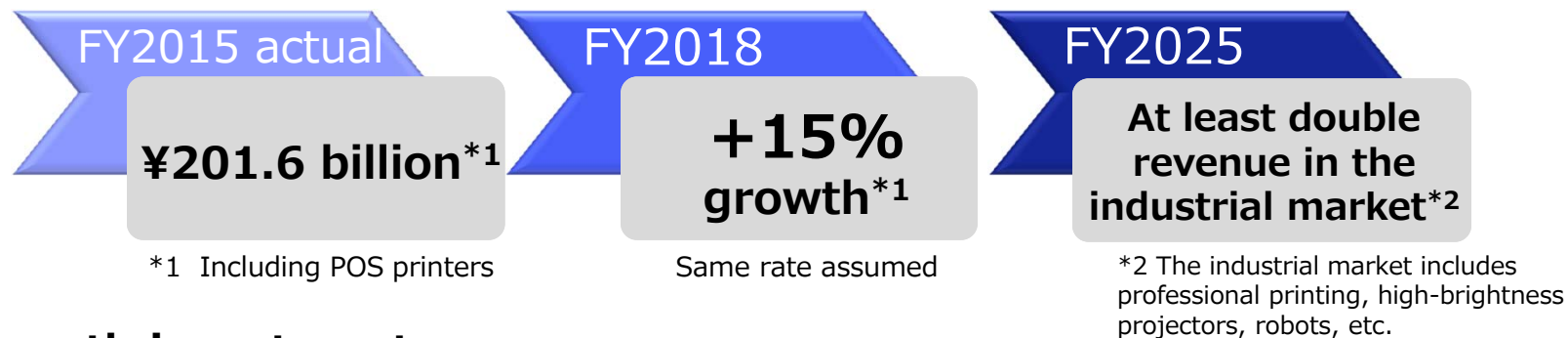


More than 200 machines in the field

Print width: 13", water-based resin: 8 colors, UV: 6 colors

Sales Targets and Growth Investments

Professional printing business revenue targets



Growth investment

Sustain or increase strategic investment in future growth during the period of the Mid-Range Business Plan (FY2016-2108).

- ◆ **Capital expenditure:** Increase due to increased production of PrecisionCore heads & new product launches, etc.
- ◆ **R&D:** Aggressively invest in new product and key component development
- ◆ **M&As:** Proactively take advantage of opportunities necessary to speed up business expansion.

Everything Printed by Epson

Pro photo & prosumer

Posters, POP, CAD

Signage

Textiles & garments

Labels & packages

Commerical photo

Home photo & documents

Business documents

Receipts & forms

Flyers, catalogs, DM

Books & magazines

Vehicle wrapping

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