

Office Inkjet Printer Strategy

February 2, 2017

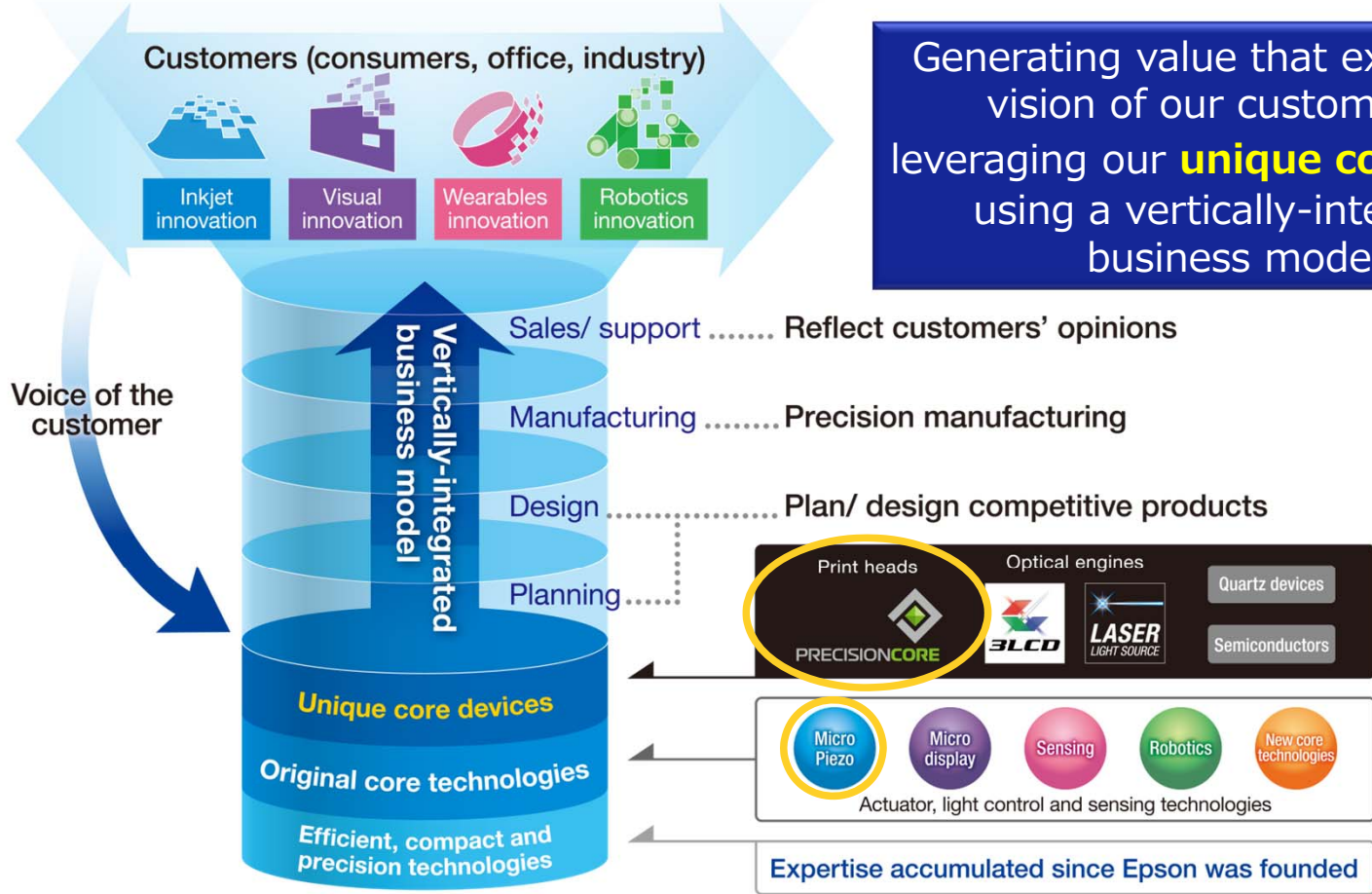
Seiko Epson Corporation

Epson's Inkjet Innovation

Printing Innovation under Epson 25

Epson's Vertically Integrated Business Model

Generating value that exceeds the vision of our customers by leveraging our **unique core devices** using a vertically-integrated business model.



Epson 25 Corporate Vision

Creating a new connected age of people, things and information with efficient, compact and precision technologies.



Epson 25 - Inkjet Innovation

Refine **Micro Piezo technology** and expand into high-productivity segments. Improve environmental performance and create a sustainable printing ecosystem.

High-speed copying

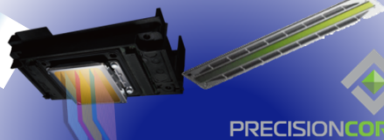


Office

PaperLab

high-speed
linehead, smart
technologies

Inkjet innovation
Micro Piezo
inkjet technology



PRECISIONCORE



Dry fiber
technology

Digital press



Highly durable,
high-speed
printhead

Industry

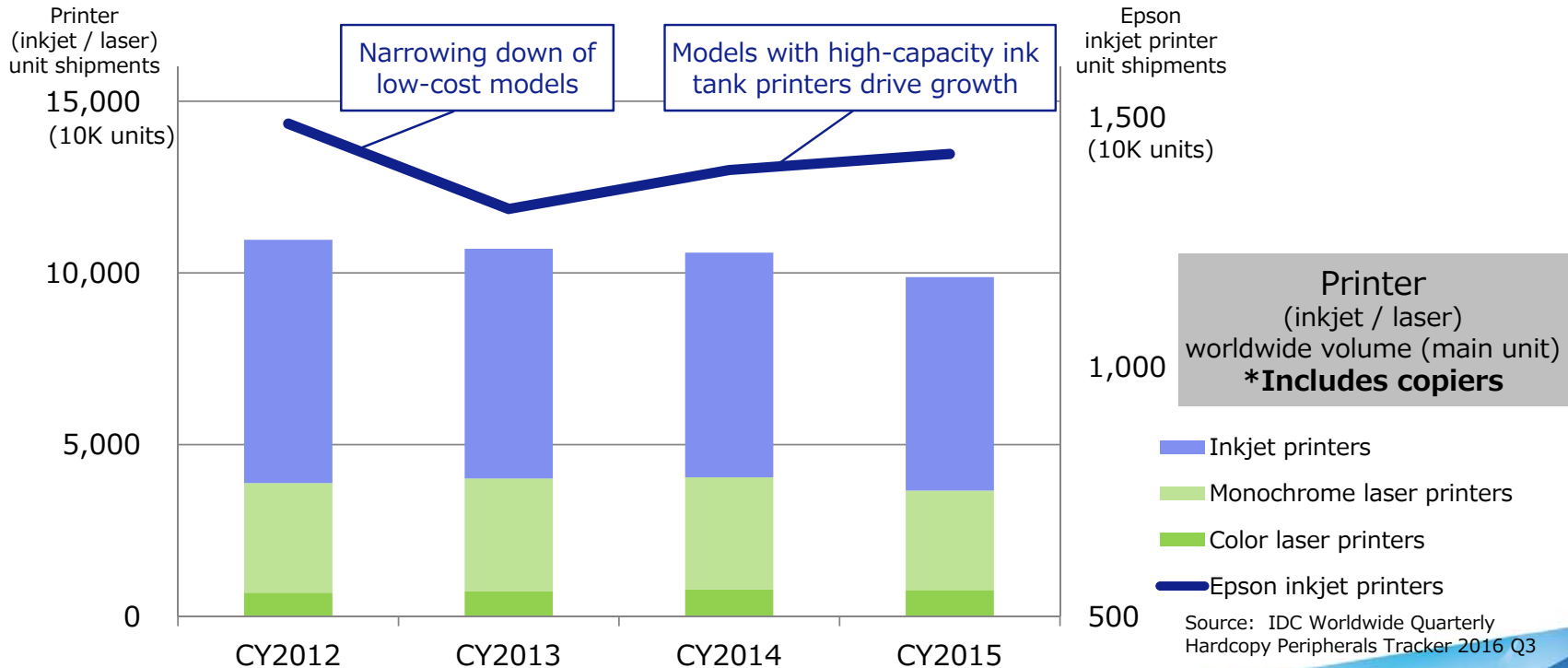
High-
performance ink
and high-speed
transport

Digital textile printing



State of the Printer Market

- ◆ Epson is expanding unit shipments by adding high-capacity ink tank printers
- ◆ The printer market overall is stagnant



Inkjet Innovation in the Office Market

What customers want

- Want to contain printing costs
- Want to lower paper use to reduce environmental footprint

Control print-related costs and opportunities

Customer printing needs

Even as tablets get popular, paper is still a universal communication tool (portable, easy to see info at a glance, easy on the eyes, can be written on, easy to understand)



Want easy, beautiful, high-speed printing

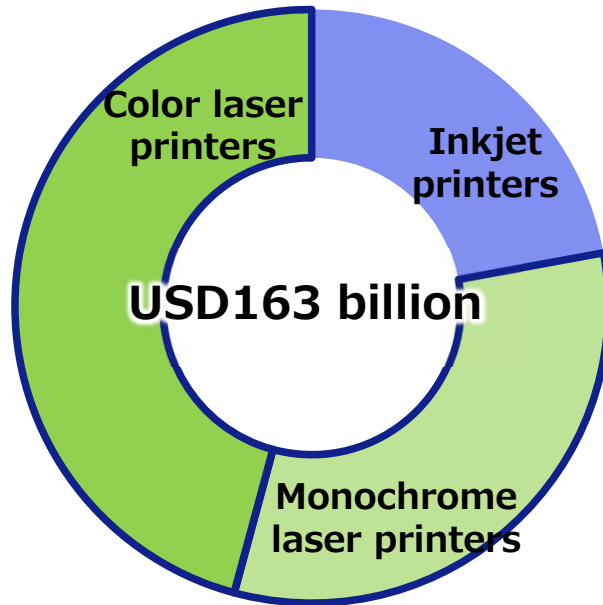
Inkjet innovation means no hesitation about printing

- **High-speed/ high image quality**
- **Low TCO**
- **Resource and energy savings**



Epson's Potential in the Printer Market

- ◆ Worldwide printer market is USD 163 billion
 - The laser printer* market is about 3.5 times as large as the market for inkjet printers
- ◆ Epson plans to take advantage of the superiority of its inkjet printheads (PrecisionCore) to persuade people to shift to inkjets from laser



Printers
(inkjet / laser):
value of world market
(main unit + consumables)
***Includes copiers**

* Laser printers: printers that use electrophotography (lasers, LEDs, etc.) to print; these are referred to collectively by the commonly known term "laser" in these slides

Epson Inkjets: The Source of our Competitive Advantage

Epson Inkjets: Their Advantages

- ◆ Epson inkjets have the potential to replace laser printers

Advantages

Printer type

Inkjet



- Thermal
- Piezo

Micro Piezo
• PrecisionCore

Others

Laser



Inkjet print head

Epson's original PrecisionCore inkjet print head

- ◆ Thin film printhead technology with ultra-high precision MEMS fabrication technology
- ◆ Uses conventional Micro Piezo inkjet technology's features, but **further enables high-speed, high-image quality printing**
- ◆ Wide range of products from office to commercial and industrial

Theoretical Advantages: Inkjet vs. laser

- ◆ Non-contact, no heat, simple structure

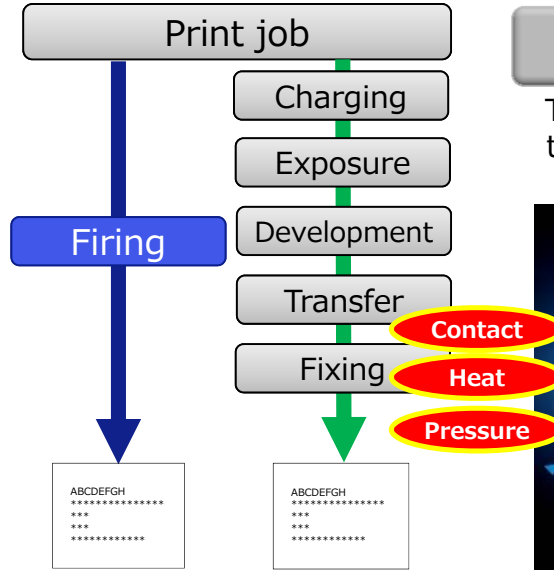
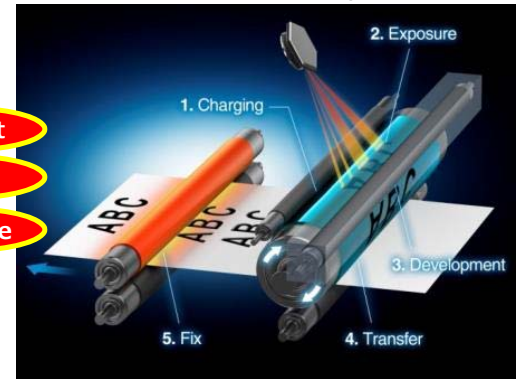
Inkjet printers

Non-contact printing: just a jet of tiny ink droplets fired at paper



Laser printers

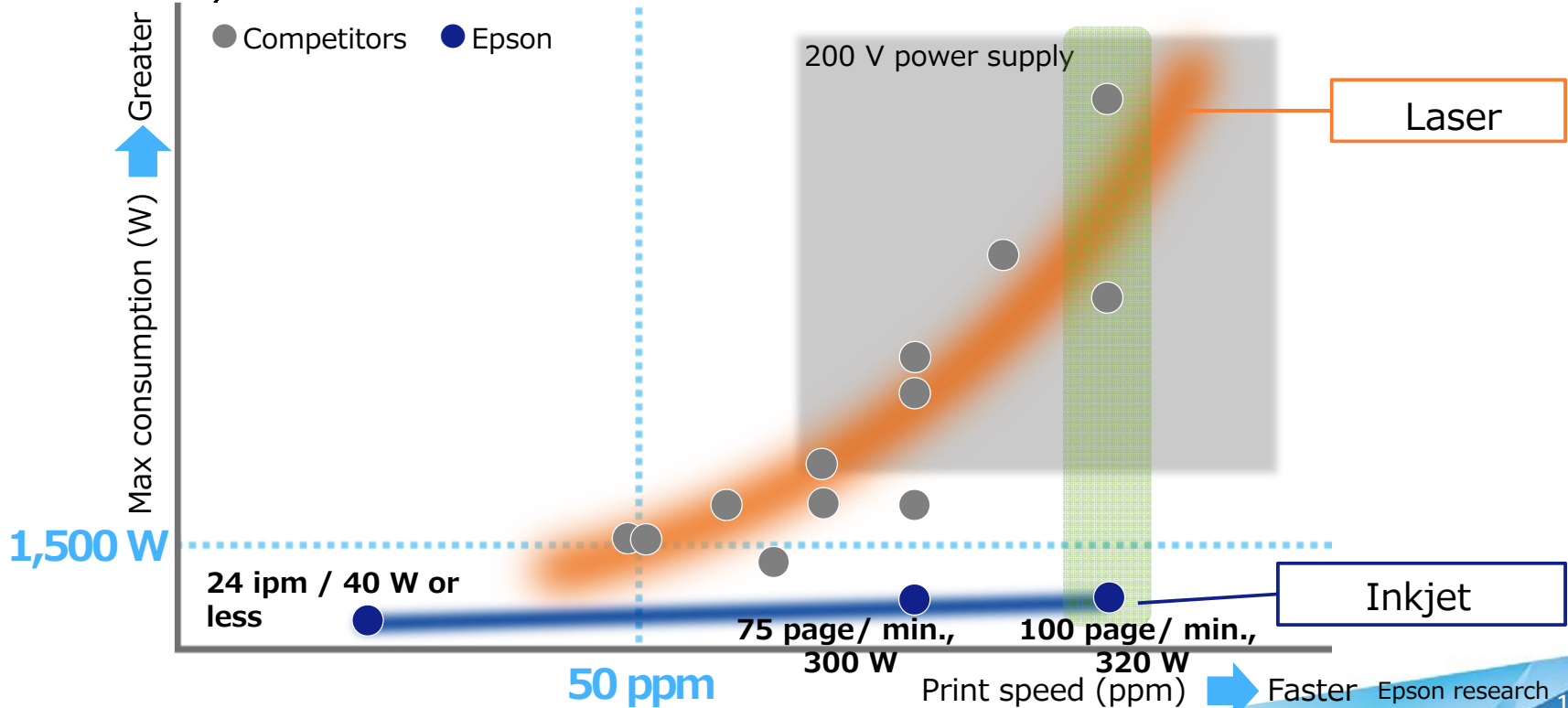
Toner makes contact with paper to transfer image, which is then fixed with heat and pressure



Inkjet printers have a simple structure
 Low TCO, low power consumption, little waste, few parts to replace, few breakdowns

Theoretical Advantages: Inkjet vs. laser

- ◆ The greater the speed, the greater the difference in power consumption



Advantages of PrecisionCore vs. Thermal Printing

PrecisionCore (Micro Piezo inkjet technology)

Ink droplets fired by mechanical movement after piezoelectric element contracts in response to applied voltage

Piezo element



Characteristics

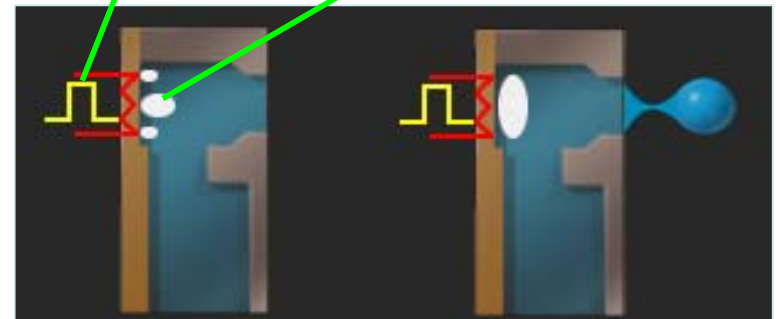
- Non-heating, so head performance does not deteriorate, types of ink less limited
- Complex structure, hard to manufacture

Thermal

Ink is fired after heat causes air bubbles to form

Heater

Bubbles



Characteristics

- Heater deteriorates, types of ink limited
- Simple structure

Advantages of PrecisionCore vs. Other Piezo System

High-displacement piezo exclusively developed by Epson



**Outstanding nozzle firing capacity
High nozzle resolution**



high-speed printing and high image quality from a compact machine

Volume produced by Epson



Stable quality and lower costs

Tohoku Epson PrecisionCore printhead production line



High quality, low price

Epson Inkjet Advantages Over Laser Printers

**Theoretical advantages of
inkjet**

+

Advantages of PrecisionCore



Customer value that only Epson can provide

- High-speed/ high image quality
- Low TCO
- Resource and energy savings

- Less time spent on maintenance
- Shorter warmup time
- Adaptable to many paper types

**We continually refine PrecisionCore technology to
always offer high customer value**

- ✓ **Greater density** means better image quality, smaller size makes us more cost competitive
- ✓ **The use of linehead technology** ensures both high-speed printing and high image quality

Innovative Key Component Technology Realizes High-Speed Printing

High-Speed Linehead Inkjet MFPs by Epson

- ◆ New high-speed linehead inkjet MFPs to speed up our development of the office market

100 pages/ min.

*A4 landscape view, single-side

At standard resolution 600 x 1,200 dpi

- ◆ New key component technology developed as core of machine
 - **New PrecisionCore linehead developed** to achieve high-speed printing
 - **Newly developed fast-drying ink** enables faster speeds

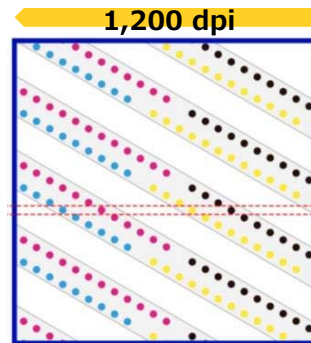


Development of PrecisionCore Linehead

- ◆ New PrecisionCore linehead developed for A3+ paper width, enabling high-speed printing
- ◆ Setting the newly developed PrecisionCore MicroTFP print chip diagonally allows for nozzles at **high density** and offers both **high-quality printing** and a **compact size**
- ◆ Offers the print resolution demanded in business documents



100 page / min. printing speed with standard resolution of 600 x 1,200 dpi



43 mm



Paper feed direction

Competing linehead product A: 180 mm

Competing linehead product B: 360 mm



- ◆ Newly developed fast-drying ink for high-speed printing
- ◆ With new ink and high-density linehead, get text printing with all the quality of laser printers, but high-speed
 - **Vivid** color printing, even on **plain paper**
 - Little penetration of ink into paper means **less curl, less back copy**, even on plain paper
 - **Sharp text quality** rivalling that of laser printers
 - Superior **water-fastness** and highlighter durability

Sharp text quality

4pt 美しい日本語 1234#\$\$&

5pt 美しい日本語 1234#\$\$&

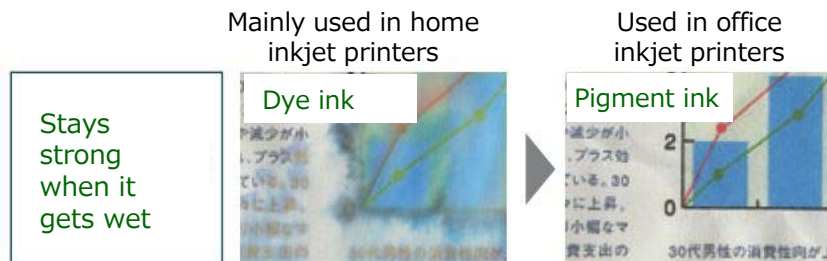
6pt 美しい日本語 1234#\$\$&

7pt 美しい日本語 1234#\$\$&

8pt 美しい日本語 1234#\$\$&

10pt 美しい日本語 1234#\$\$&

12pt 美しい日本語 1234#\$\$&



Epson's Business Platform: Connecting Core Technologies to Business

Epson's R&D Strengths

- ◆ An R&D organization that is always at the leading edge of inkjet technology
 - Continuous R&D ensures competitive advantage
 - Inkjet R&D functions and operations organization are at the same place. R&D, decision-making, problem-solving are fast and efficient
 - ✓ Strengthening the R&D functions that concern our printer business and key components such as heads (building a new factory with R&D functions in addition to our innovation center at Hirooka Office)
 - ✓ R&D functions, business HQ functions at the same place *HQ: Headquarters
 - ✓ Aggressively investing in new product & key component development to ensure sustained growth over medium- to long-term
- ◆ Intellectual property: Most patents in the industry (related to inkjet printers)

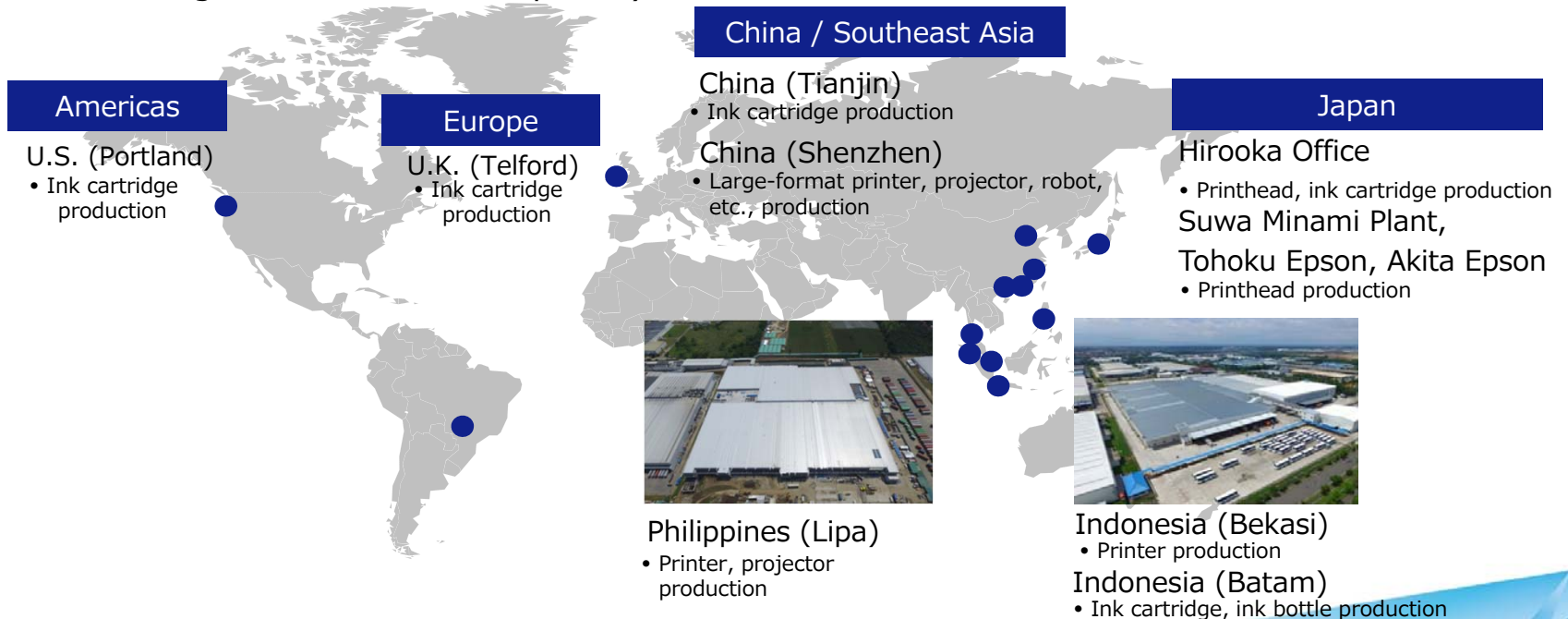
No. of registered inkjet printer-related patents in Japan, U.S., China

	Epson	Co. A	Co. B	Co. C	Co. D	Co. E	Co. F
Japan	5,800	3,101	2,539	1,859	1,767	533	1,131
US	3,660	2,753	1,994	1,271	885	1,262	332
China	1,527	975	535	184	285	299	41

* Cumulative 2006-2015 (based on Epson research, from commercial databases)
 No. of registered patents in Japan, U.S., China (year of publication of patent journal)

Epson's Manufacturing Strengths

- ◆ Having our own manufacturing sites in the value chain gives us a competitive advantage
 - We have built up excellent manufacturing technology and know-how (precision processing technology, etc.)
 - Increasing our manufacturing strength by collaborating with other businesses (e.g., using robots to save manpower)



Epson's Sales and Support Strengths

- ◆ Epson has sales and support sites in 64 locations around the world
- ◆ Selling laser printers, SIDM printers, POS printers, large-format printers, and projectors has given us relationships with a wide range of business channels
- ◆ We have the sales power to get the market to accept new concepts (such as high-capacity ink tank printers)

▲ Regional headquarters
★ Sales/ service subsidiaries



Epson America

Regional headquarters for North and Latin America



Epson Europe

Regional headquarters for Western and Eastern Europe, Middle East, Africa

Epson Singapore



Regional headquarters company for Asia-Pacific

Epson China



Regional headquarters for China

Epson Sales Japan



Future Direction

Launch of MFPs with a simple mechanism and unprecedented high-speed. The result will be a technology shift in the office printing market from laser to inkjet and mid- to long-term profit growth for Epson.



**High-speed /
high image quality**

Low TCO

**Resource and
energy savings**



Combination of high-speed linehead inkjet MFP with PaperLab will create a cycle of printing and paper recycling in the office, helping people overcome their reluctance to print.

**In-office dry paper recycler
PaperLab**



**High-speed
linehead inkjet MFP**



Everything printed by Epson

Office Inkjet Printer Strategy and Initiatives

Epson Inkjet Printers: Strategy and Status

Epson's Growth Strategy

◆ Epson's growth strategy in the printer market

- ✓ Significantly expand printer sales and product lineup for large offices, in addition to consumers/ small offices/ home offices
- ✓ Replace laser printers with inkjet printers in the office field
- ✓ Offer a wide product line to meet the needs of our various customers around the world

◆ Epson's initiatives

- ✓ Ink cartridge printers: Stepping up medium- and high-priced models that bring higher print volumes
- ✓ High-capacity ink tank printers: Sustaining growth by strengthening product lineup and expanding product awareness
- ✓ Office inkjet MFPs: Strengthening the category as a medium- to long-term growth driver



Ink cartridge printers



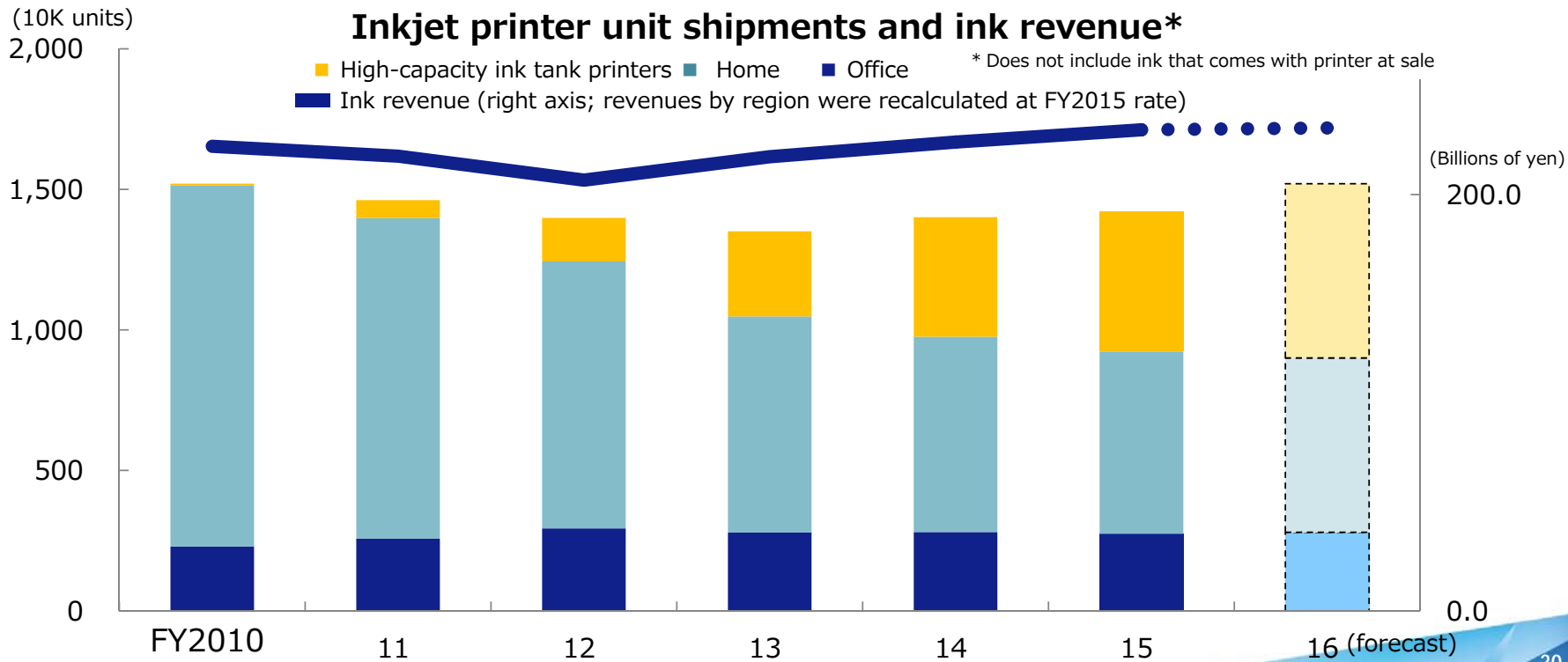
High-capacity ink tank printers



Office inkjet MFPs

Strategic Inkjet Progress

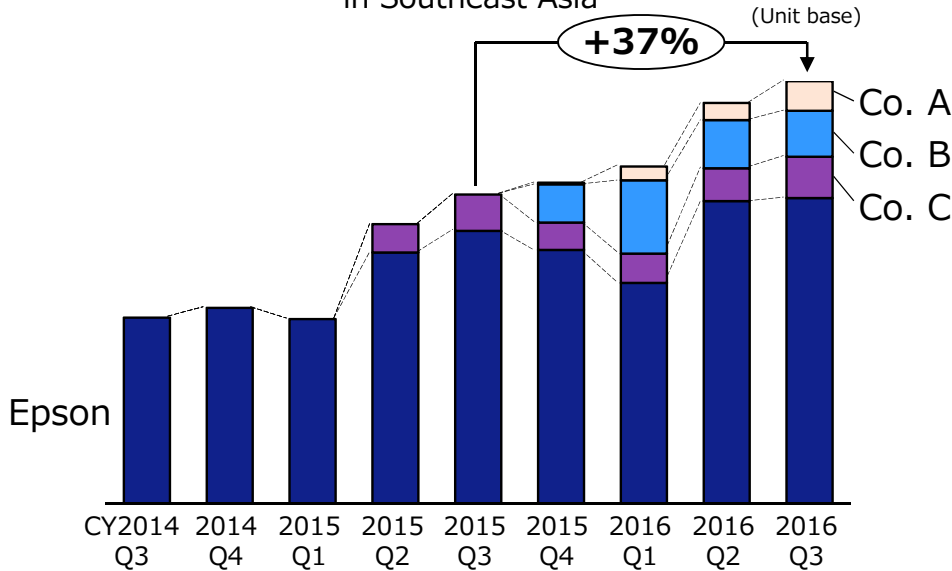
- ◆ Strategy is going strong: Ink revenue has been steady, sales of high-capacity ink tank printers are expanding



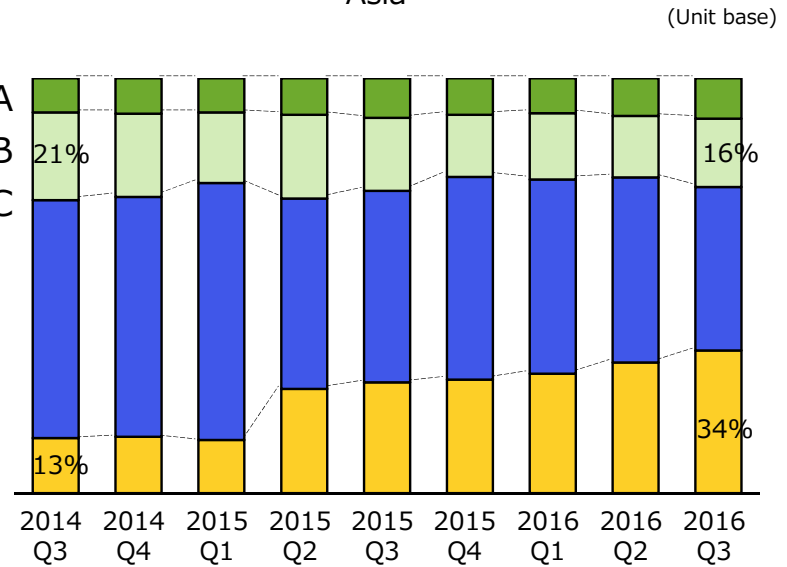
Continued Growth of High-Capacity Ink Tank Printers

- ◆ As consumer recognition rises, the market keeps expanding. And a shift has begun from the low-end laser printer market.

Size of market for high-capacity ink tank printers in Southeast Asia*



Trends in A4 size printer market in Southeast Asia*

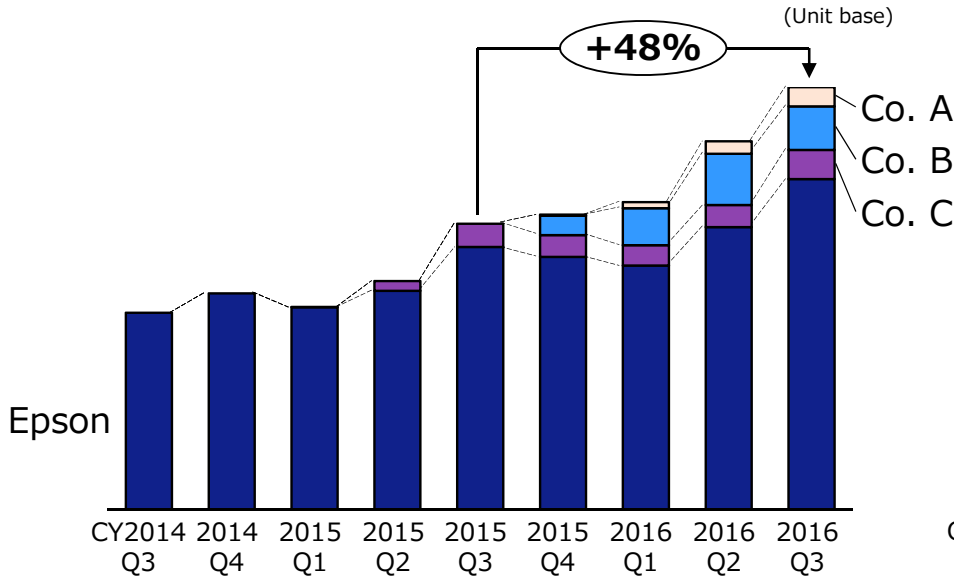


Source: IDC Worldwide Quarterly Hardcopy Peripherals Tracker 2016 Q3
 * Southeast Asia includes Indonesia, the Philippines, Thailand, Malaysia, Singapore and others (the area defined as "Asia/Pacific" by the IDC, exclusive of Australia, Hong Kong, India, Korea, New Zealand, PRC, Taiwan)

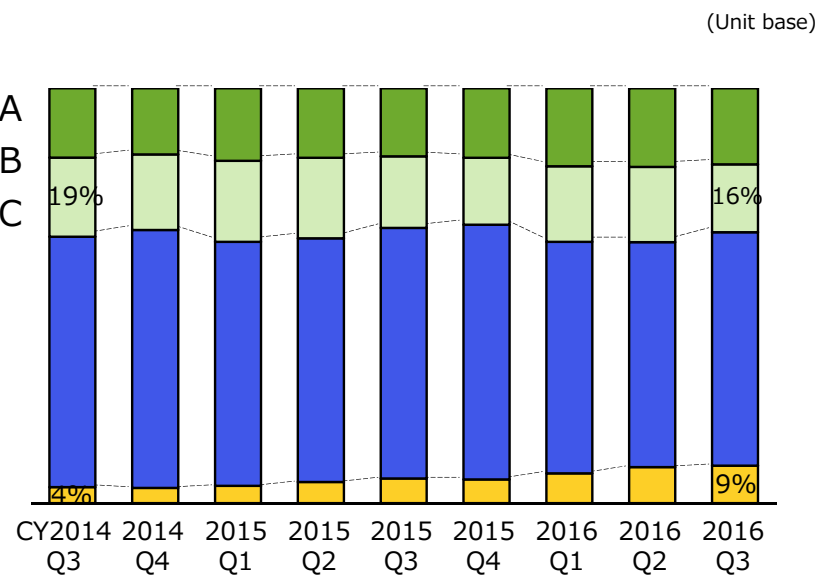
Continued Growth of High-Capacity Ink Tank Printers

◆ We recognize that there is room for further growth worldwide

Size of market for high-capacity ink tank printers worldwide



Trend in A4 size printer market worldwide



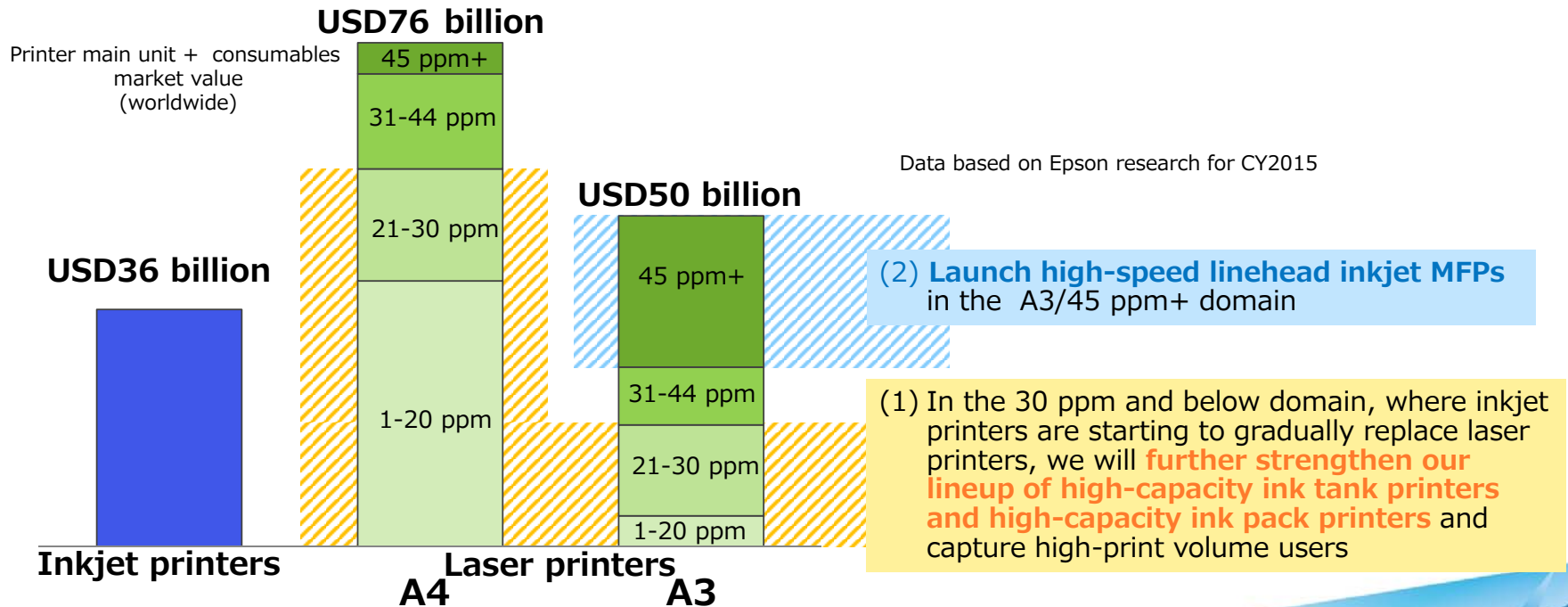
Source: IDC Worldwide Quarterly Hardcopy Peripherals Tracker 2016 Q3

 Laser printers 21-69 ppm
  Ink cartridge printers
 Laser printers 1-20 ppm
  High-capacity ink tank printers

Growth Strategy for Office Printers

Office Inkjet Printer Strategy

- ◆ Shift the vast copier and laser printer market to inkjet printers
- ◆ Launch innovative high-speed linehead inkjet MFPs, etc., to build product strength, and build a business platform for sales growth under our next mid-range business plan













Office Inkjet Printer Product Lineup (Japan)

EPSON
EXCEED YOUR VISION

*Models with PrecisionCore

These are only some of the models in Epson's lineup. Epson products and services vary by region.
The price of the main unit is a reference selling price in direct sale of Epson site in Japan, as of Feb 2, 2017

	Mobile	A4 monochrome SFP	A4 color SFP	Models with EcoTank	
				A4 monochrome SFP/MFP	A4 color MFP
					
Model number	PX-S05W/B	PX-K150/S350*	PX-105/S740*/S840*/S860*	PX-S160T/M160T	EP-M570T/EW-M660FT*
Product price range	Upper ¥20,000s	¥7,000s – mid-¥20,000s	Upper ¥9,000s – upper ¥50,000s	Upper ¥10,000s – upper ¥20,000s	Upper ¥30,000s – mid-¥50,000s
Print speed (ipm) <small>(C: color / M: monochrome)</small>	AC Power C 4.0 M 7.0	M 15-20	C 4.7-24 M 9-24	M 15	C 5-7.3 M 10-13.7
Durability range (pages)	15,000	50,000-150,000	80,000-300,000	50,000	30,000-50,000
	A4 color MFP	A3 color SFP	A3 color MFP	Inkjet MFP	High-speed linehead inkjet MFP
				 New	 New
Model number	PX-M650F*/M740F*/741F*/M840F*/M860F*	PX-1004/ PX-S5040*/S7050*	PX-M5040F*/M5041F*/ M7050F*	PX-S840X*/M840FX* PX-S7070X*/M7070FX*	LX-7000F*/10000F* series
Product price range	Upper ¥10,000s – upper ¥70,000s	Upper ¥20,000s – Upper ¥50,000	Upper ¥30,000s – low ¥200,000s	Monthly ¥5,000 – ¥13,000	Monthly ¥50,000 – ¥72,000 or product price ¥2 million – ¥2.6 million
Print speed (ipm) <small>(C: color / M: monochrome)</small>	C 7.3-24 M 13-24	C 5.5-24 M 15-24	C 10-24 M 18-24	C/M 20-24	C/M 75-100 page/ min. *A4 landscape view, single-side
Durability range (pages)	50,000-300,000	18,000-300,000	80,000-300,000	150,000-600,000 *Parts maintenance, etc., is performed on some models	6 million and up *Parts maintenance, etc., is performed

Introducing New Office Inkjet Printers

Office Inkjet Printers: New Products for Japan

High-speed linehead inkjet MFPs
(with high-capacity ink cartridges)

A3 inkjet MFPs
(with high-capacity ink packs)



Epson products and services vary by region.

Speed	75 page/ min. (A4 landscape view, single-side)	100 page/ min. (A4 landscape view, single-side)	24 ipm
Target market	Copiers / MFPs (45 ppm+ class)	High-speed MFPs & printers / basic office printing (45 ppm+ class)	Copiers / MFPs (30 ppm class)
Target users	Enterprise/ office, print industry / leaflets, forms, and other business applications		Enterprise/ office, stores
Sales plan (Japan)	Preparing three sales plans for different customer needs		Flat monthly rate service
Launch date (Japan)	May 2017 sales launch		Early March 2017 service launch

High-Speed Linehead Inkjet MFPs: New products

- ◆ With its unique PrecisionCore linehead, Epson exceeds its customers expectations in productivity and environmental performance



Features of
new
products

- 1 High-speed / high-image quality printing
- 2 Compact, simple structure
- 3 Low power consumption

Feature 1: High-Speed/ High-Image Quality Printing

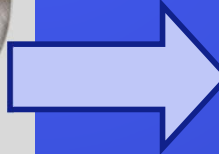
- ◆ Promises to dramatically change office printing with its overwhelming print speed and high image quality

Before



Slow printing
Worried about costs

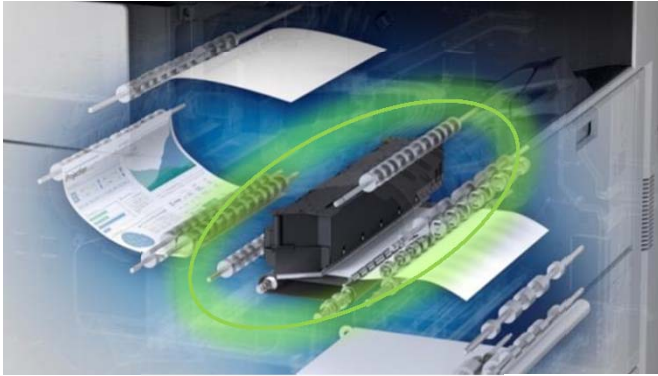
After



High-speed printing: no waiting!
No hesitation about printing in color
One machine does as much as two

Feature 2: Compact, Simple Structure

- ◆ Overwhelming speed in a compact size
- ◆ Simple structure allows for easy maintenance
- ◆ Ink is volume-efficient; high capacity means less ink replacement



Printing structure
Printhead + static
electricity absorption belt

Print yield of a set of 5 ink
cartridges (ISO standard)
Monochrome: 100,000 pages
Color: 50,000 pages



Feature 2: Compact, Simple Structure

- ◆ Simple structure means less-frequent parts replacement and other maintenance

Parts needing replacement if printing 20,000 pages per month for 60 months

LX-10000F/LX-7000F

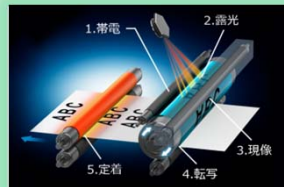


Paper feed roller

Paper-feed roller only

*Other parts will need to be replaced if printing more than 1.2 million pages

Example of laser system



Fixing unit



First transcription unit



Second transcription unit



Developing unit



Paper feed roller

*Parts needing replacement and frequency of replacement vary by model

Feature 3: Low Power Consumption

- ◆ Because it does not use heat, this inkjet technology can greatly reduce power consumption



LX-10000F

Color/Monochrome
100 ppm*

Max consumption
320 W

TEC value
1.2 kWh

Color/Monochrome
75 ppm*

Max consumption
300 W

TEC value
0.9 kWh

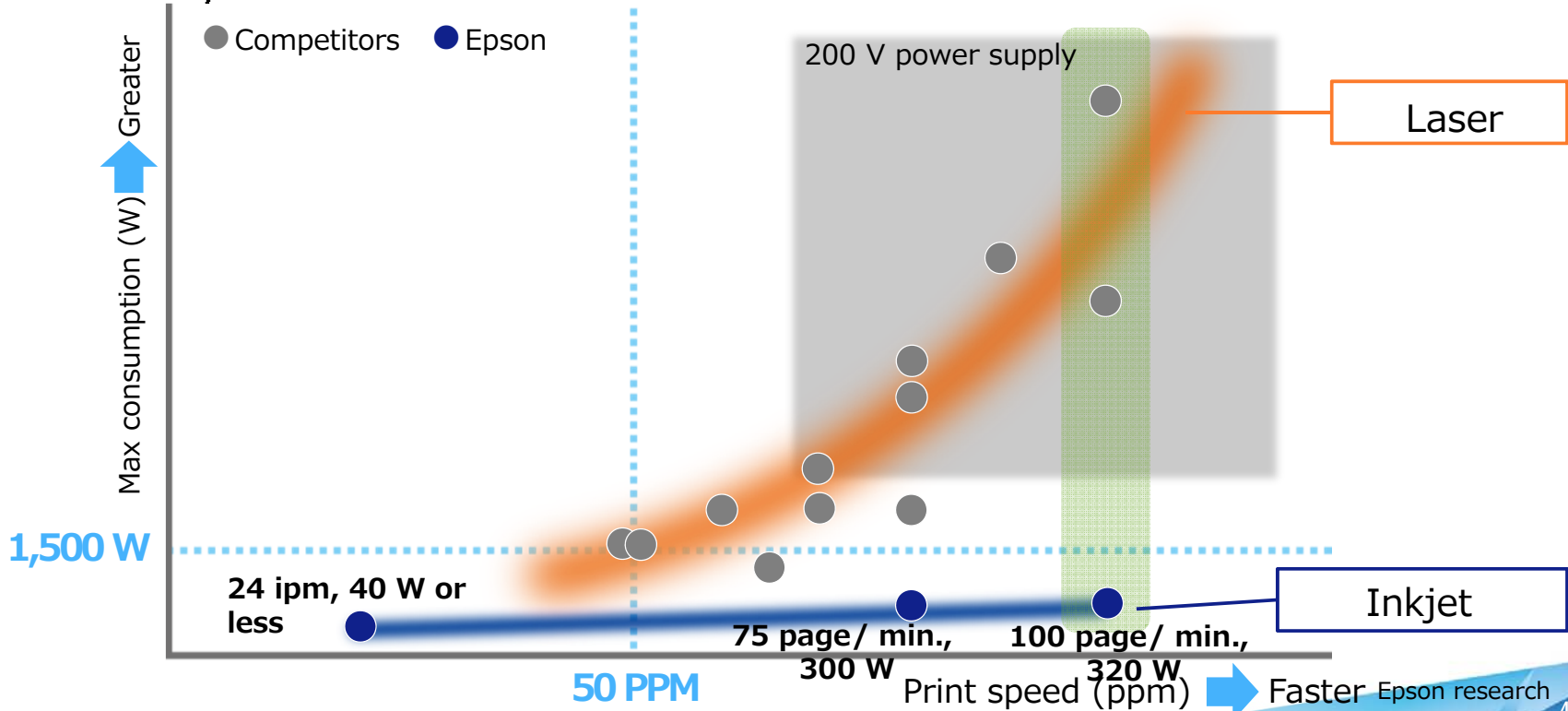


LX-7000F

*When feeding A4, single-sided, landscape view

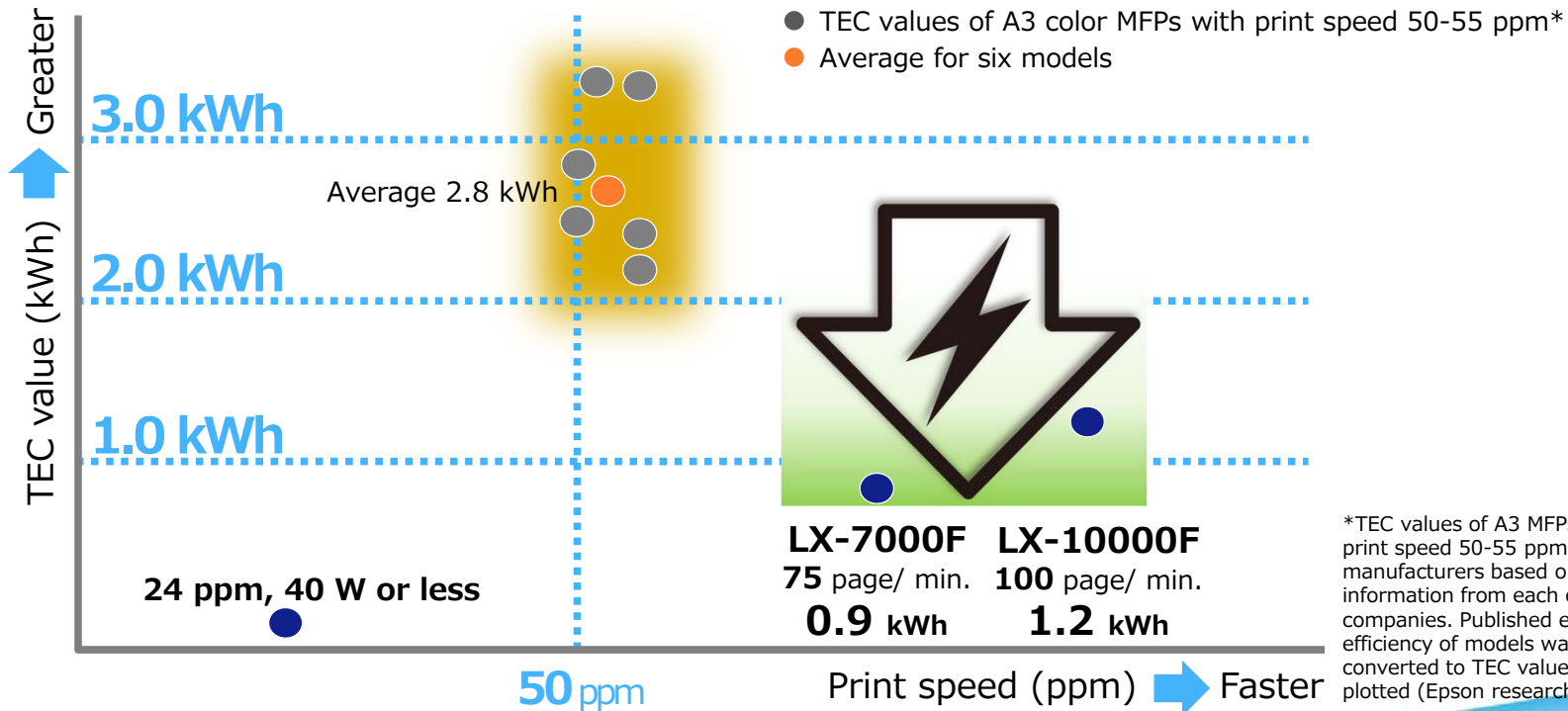
Feature 3: Low Power Consumption (Max Consumption) **EPSON** EXCEED YOUR VISION

◆ The greater the speed, the greater the difference in power consumption



Feature 3: Low Power Consumption (TEC Value)

◆ Overwhelming power savings vs. laser



High-Speed Linehead Inkjet MFPs: New products

EXCEED YOUR VISION

- ◆ Offering high-volume office printing and meeting the need for a central printer

High-capacity paper feed and eject



With options attached
**Maximum paper ejection
4,950 sheets**

With options attached
**Maximum paper feed
6,050 sheets**

Staple finisher (option)

- Stapling
- Sorting
- Ejects 4,200 sheets

High-capacity paper feed unit (option)

- Feeds 3,500 sheets

Sales Plan for Customer Needs (Sales Plan in Japan/ FAX Models)

	All-in-ones		Sales plan	Ink standard		Countercharge	
	Flat monthly rate plan			<ul style="list-style-type: none"> ● Purchase machine ● Pay-as-you-go for ink, maintenance service 	Purchase or lease machine, pay per page printed		
Features	✓ Optimal plan for customers printing a steady volume each month (small retailers, SOHO, etc.)		Features	✓ A plan for spreading use among local governments, schools, etc.		✓ A typical copy contract-like plan such as used in offices, etc.	
	LX-10000F	LX-7000F		LX-10000F	LX-7000F	LX-10000F	LX-7000F
Basic usage fee under 5-year contract (tax excluded)	Monthly fee ¥72,000	Monthly fee ¥52,000	Standard model Main unit (tax excluded)	¥2.6 million	¥2.1 million	¥2.6 million	¥2.1 million
Base print count Color / monochrome	7,000 pages / 13,000 pages	3,000 pages / 7,000 pages	Printing cost Color / monochrome (tax excluded)	Ink		Ink + maintenance service	
Charge Color / monochrome (tax excluded)	¥3.0/ ¥0.8	¥3.6/ ¥1.0		¥1.5/ ¥0.4	¥2.3/ ¥0.6	¥9.0/¥1.2	¥11.0/¥1.5

Inkjet MFPs: New Products and Services

- ◆ Productivity, operability, and serviceability have all improved, reflecting customer input on existing inkjet MFPs

Existing inkjet MFPs

What customers liked:

Overwhelmingly low cost (esp. for color), flat monthly rate, no need to buy, no need to manage consumables

Improvements customers asked for:

Good serviceability, automatic PC-free meter reading, FAX function, operability / usability, etc.



Epson's managed print service
A3 MFP full-set model



PX-M7070FX

**Improvements
created by project**

Epson products and services vary by region.

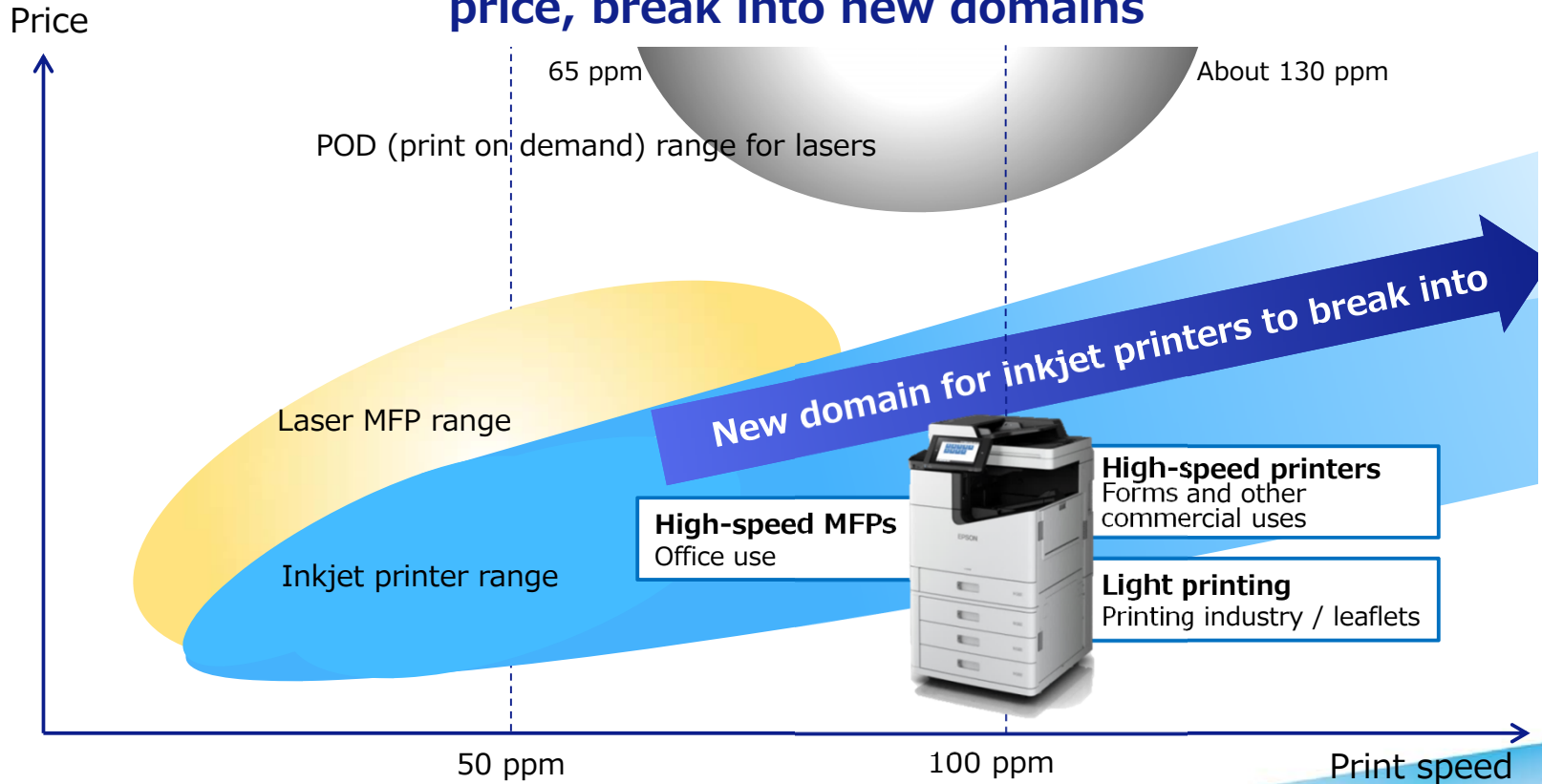
New inkjet MFPs

Major improvements in new products and services

- Structural change for improved serviceability
- DSS* function built in (PC-free use)
- Better FAX functionality
- Better GUI, operating flow, etc.

Further Expanding the Potential of Inkjet Printers

Achieve high performance with a balance of speed and price, break into new domains



Building a Business Infrastructure for Medium- to Long-term Growth in Office Printers

Strengthening Manufacturing

◆ Use a common platform to develop products efficiently

- Mechanical engine
- Controller (SOC, firmware, etc.)
- GUI, etc.

◆ Expand production capacity

- Strengthen a production base in response to growing head demand and higher densities
 - ✓ Hirooka Office: New factory construction, etc.
- Expand finished product assembly sites to meet growing volume over medium term
 - ✓ Augment factories in Indonesia and Philippines
- Increase efficiency by introducing in-house robots

Common platform examples

Unify user interface layout

EP-879A
2.7"

PX-M7070FX
5.0"



Hirooka Office: new factory
(operations to begin in FY2018)



Epson Indonesia: new factory
(operations began in FY2016)

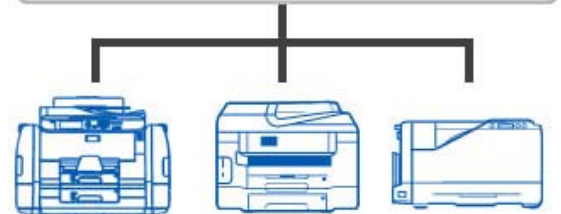


Strengthening Manufacturing

- ◆ Supporting printer fleet management
 - Stronger user management function
 - ✓ Offer server software to manage and control MFPs, with stronger functions for user management, printing security, printing cost control, function restriction, etc.
 - Stronger device control function
 - ✓ Offer software that enables IT manager to centrally manage up to 2,000 machines, including settings for MFPs, printers, scanners, etc., settings for client PCs, and machine status and usage status
 - Stronger cooperation with ISVs around the world
 - ✓ Ensure connectivity with standard solutions



Out of ink		Error		Out of paper	
Ink usage	Status	Pages			
■■■■■	■■■■■	■■■■■	■■■■■	■■■■■	■■■■■
■■■■■	■■■■■	■■■■■	■■■■■	■■■■■	■■■■■
■■■■■	■■■■■	■■■■■	■■■■■	■■■■■	■■■■■
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* ISV: Independent Software Vender

Strengthening Sales and Support

- ◆ Strengthen organization at sales centers around the world
 - Continually strengthen sales and technical support staff
 - Strengthen IT infrastructure and information support tools
- ◆ Strengthen sales network
 - Fundamentally strengthen the sales network to promote sales of high-speed MFPs
 - ✓ Build partnerships with copier dealers/distributors
 - ✓ Increase the volume of high-speed printers handled by existing partners (office automation businesses, system integrators, etc.)
 - ◆ Expand consumer recognition, take user-pull approach
 - Give demos (trade shows, sneak previews)
 - Promote the superiority of inkjet technology
 - Directly approach latent customers (strengthen cross-selling)
 - Brand campaign (promote business brand)

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NEU DENKEN

Wenn jedes Unternehmen in Deutschland auf Business-Tintenstrahlkopierer von Epson umsteigen würde, könnten mit dem gesparten Strom mehr als 170.000 Haushalte versorgt werden.

www.epson.de/neudenken

92% 96% 94%

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Financial Targets

Printer Business Targets

◆ Financial targets

		FY2015 result	FY2016 forecast	FY2018 target
Revenue		¥518.9 billion	¥483.0 billion	Average annual growth rate since FY2015 about +3.5% (assuming same exchange rates)
Exchange rates	USD	¥120.14	¥107.00	
	EUR	¥132.58	¥117.00	

◆ Key indicators

		FY2015 result	FY2016 forecast	FY2018 target
IJP main unit	Volume	Approx. 14.2 million units	+7% vs. FY2015	+20% vs. FY2015
	<ul style="list-style-type: none"> • Office ink cartridge models • High-capacity ink models as % of total unit sales	Approx. 20%	Approx. 20%	Approx. 20%
		Approx. 35%	Approx. 40%	Approx. 45%
IJP ink	Revenue	+ mid-single-digit % (after converting to JPY)	- high single-digit % (after converting to JPY)	Remain steady (assuming same exchange rates)

Epson leverages original, advanced inkjet technology and unsurpassed vertically integrated operations to provide customers worldwide with products and services that support great text- and image-based communications and efficient operations.



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