

Multi-Client Study

# Research Proposal

[2021 version of Inkjet Printing Market Forecast]

**"Latest Trend of the Industrial Inkjet:  
Aiming to Create New Innovation"**

*= Detailed analysis of the commercial and industrial inkjet market  
(hardware, ink, printheads) =*



September 2021  
**Data Supply Inc.**

<Overview>

## I. Theme

[2021 version of Inkjet Printing Market Forecast]

**“Latest Trend of the Industrial Inkjet: Aiming to Create New Innovation”**

= Detailed analysis of the commercial and industrial inkjet market (hardware, ink, printheads) =

## II. Abstract

More than a year has passed since the coronavirus pandemic (COVID-19) occurred. In 2020, China was one of the quickest to bring this under control, followed by the U.S. and some European countries that also saw a decrease in their new infections as of May 2021 thanks to more vaccinations. As a result, economic activities started to normalize, however, more infectious virus variants have been spreading violently since July, causing new infections to rise worldwide. The current situation has been reversed to the time it was impossible to predict when the pandemic would subdue.

COVID-19 has greatly affected the commercial and industrial inkjet market because it caused many large-scale events to be cancelled, postponed, or held online. As a result, the wide-format printing market including indoor and outdoor posters and signage suffered a great fall. Demand for commercial printing, such as catalogs and flyers also declined after physical contact was widely restricted. The fashion industry (textile printing) was another victim as people were forced to stay home. In contrast, demand of corrugated and flexible packaging, label printing, and marking and coding printing maintained firm demand as mail orders grew from the so-called stay-at-home demand after people refrained from going out and worked from home. Despite the clearer signs of recovery from the autumn of 2020 across the industry, the pandemic, as mentioned above, is likely to stay longer, making it still uncertain how each market will deal with this in 2022 and beyond.

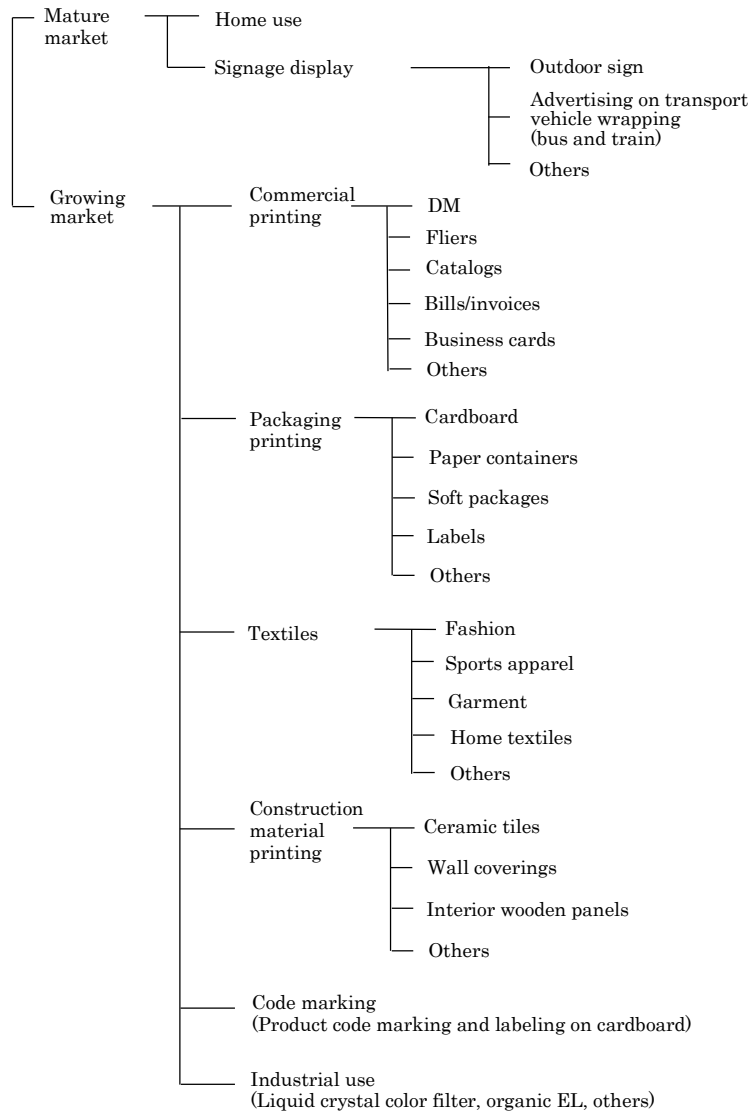
Nonetheless, there is no doubt that industrial inkjet technology carries strong expectations for sustainable growth even during and after the pandemic. The shift from analog to digital inkjet technology meets today's social values for the environment, a call for shifting away from mass production and mass consumption, while it also enables printing where consumers are physically close, eliminating inventory and supply risks. This would help strengthen the supply chain disrupted by COVID-19. The industrial inkjet market is not dominated by a few giant companies; it is crowded with many large, medium, and small companies in each field. It is a market of great potential for various future innovations. And Japanese companies have a large presence in the inkjet printhead, ink, and ink material fields that underpin the base inkjet technology.

The 2021 version of the Inkjet Printing Market Forecast will be the fifth publication of the series. We hope our report helps many readers engaged in the inkjet-related business.

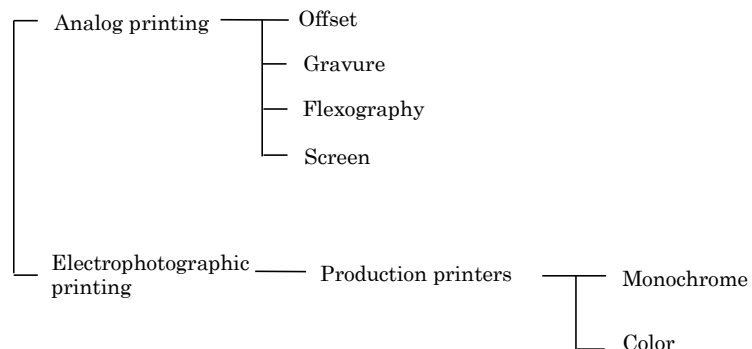
### III. Items and Makers

#### 1. Items

##### 1) Inkjet-related Items



##### 2) Rival Markets



## 2. Makers

- 1) Hardware makers (23 makers in Japan and more than 80 from overseas)
- 2) Printhead makers (9 makers in Japan and 7 from overseas)
- 3) Ink · dispersion makers (25 makers in Japan and more than 100 from overseas)
- 4) Others (post-processing equipment makers and parts makers)

## IV. Research Period and Methodology

### 1. Research period

The research period is set from 2018 to 2024 and target regions are: Japan, North America, Europe, China, and other regions.

### 2. Methodology

- 1) On-site and in-person interviews with target makers as a principle
- 2) Analysis and review of open literatures, materials, statistics, and other sources
- 3) Analysis of Data Supply's own proprietary database

## V. Format and Report Preparation Period

1. Research form: Multi-client study
2. Research period: August to October of 2021
3. Expected release date: December 15, 2021
4. Report format: A4 size (PDF format: 2020 version contains 366 pages)
5. Price: \$5,000-
6. Researchers

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## VI. Research Items

### A. Comprehensive Analysis

1. Trend of overall shipment value of the industrial and commercial inkjet (2018-2024)
2. Digital versus analog in the printing market
3. Industrial and commercial inkjet business sales share by IJ maker (2020)
4. Shipment trend of hardware machines by market (volume and value: 2018-2024)
5. Shipment trend of ink (2018-2024)
6. Shipment trend of printheads (2018-2024)
7. Major acquisitions in the industrial inkjet market

### B. Market Trend

<Definition of each market>

Graphic market	It's a market of wide-format (A2 or larger) printers and their inks for photos, proofing, and posters.
Technical market	It's a market of wide-format (A2 or larger) printers and their inks for CAD and GIS (Geographic Information System).
Signage market	It's a market of wide-format (A2 or larger) printers and their inks mainly for large outdoor signage, but the market extends to include UV printers for embellishing smart phone cases and cards, and latex printers for indoor wallcoverings.
Textile market	It's a market of DTF (Direct to Fabric) printers, sublimation transfer-based printers, DTG (Direct to Garment) printers and their inks. On top of fabric printing, the market is extending to include home textile printing such as curtains and bedspreads in recent years.
Transaction market	It's a market of printing financial transaction bills and statements in a high-speed mass variable data processing field. The market includes customer-based DM printing.
Commercial printing market	The market normally includes printing of corporate promotional tools such as catalogs and leaflets but also includes publication printing such as books and magazines among others in the report.
Labels market	It's a market of adhesive label printing systems and their inks. Such labels are used for products targeting general consumers. Machines worth 10 million yen or more will be discussed in this report and excludes small desk-top type devices.
Packaging market	It's a market of large printers and their inks for folding carton, soft and corrugated packages. Mass printing machines will be discussed in the report and small proofing devices are excluded.
Marking & Coding market	It's a market of marking and coding printers and their inks for corrugated packages and labels to stamp product information such as data of production, origin, and barcodes.
Ceramic printing market	It's a market of printing machines and their inks for ceramic tiles and other ceramic-based products.
Construction printing market	It's a market of machines and their inks for wallcoverings and exterior walls as well as other construction material printing applications.
Other markets	3D printer market, printed electronics market, anti-counterfeit printing market, food printing market, etc.

### B-1. Graphic & Technical market

1. Overall shipment value (hardware & ink: 2018-2024)
2. Market summary (digital ratio and inkjet ratio)
3. Graphic & Technical business sales share by IJ maker (2020)
4. Shipment trend of hardware machines by application (graphic/technical: 2018-2024)  
Shipment volume/shipment value/shipment volume share by maker
5. Shipment trend of ink by type (water-based dye/water-based pigment: 2018-2024)  
Shipment volume/shipment value/technological trend/price trend
6. Printhead adoption trend
7. Summary of major makers
8. List of major machines of each company

#### Primary target

Region	Country	Maker
<b>Japan</b>	—	Seiko Epson/Canon/Ricoh/Mutoh Industries
<b>N. America</b>	USA	HP

### B-2. Signage market

1. Overall shipment value (hardware & ink: 2018-2024)
2. Market summary (digital ratio and inkjet ratio)
3. Signage business sales share by IJ maker (2020)
4. Shipment trend of hardware machines by type of ink (solvent/UV/latex: 2018-2024)  
Shipment volume/shipment value/shipment volume share by maker
5. Shipment trend of ink by type (solvent/UV/latex: 2018-2024)  
Shipment volume/shipment value/technological trend/price trend
6. Printhead adoption trend
7. Summary of major makers
8. List of major machines of each company

#### Primary target

Region	Country	Maker
<b>Japan</b>	—	Mimaki Engineering/Roland DG/Mutoh Industries/Seiko Epson/OKI/Ricoh/Fujifilm
<b>N. America</b>	USA	HP/EFI (VUTEk)
<b>Europe</b>	UK	Inca Digital Printers (SCREEN)
	Italy	Durst
	Netherlands	Canon Production Printing (formerly Océ, Canon)
	Belgium	Agfa-Gevaert
	Switzerland	SwissQprint AG
	Israel	Matan Digital Printers (EFI)
<b>Asia</b>	S. Korea	DGI/Dilli
	China	Beijing JHF/Fei Yeung Union/Gongzheng Group/XULI/ALLWIN/Wit-Color/HANDTOP/FLORA/Others

### B-3. Textile market

1. Overall shipment value (hardware & ink: 2018-2024)
2. Market summary (digital ratio and inkjet ratio)
3. Textile business sales share by IJ maker (2020)
4. Shipment trend of hardware machines by type (DTF/sublimation transfer/DTG: 2018-2024)  
Shipment volume/shipment value/shipment volume share by maker/shipment trend of DTF & sublimation transfer by speed segment/shipment trend of DTG by mass production device and by desktop device
5. Shipment trend of ink by type (reactive/dispersion/acid/sublimation transfer/pigment: 2018-2024)  
Shipment volume/shipment value/ink maker share (DTF/sublimation transfer)/ technological trend/price trend
6. Printhead adoption trend
7. Summary of major makers
8. List of major machines of each company

#### Primary target

Region	Country	Maker
<b>Japan</b>	—	Konica Minolta/Mimaki Engineering/Mutoh Industries/Seiko Epson/Toshin Kogyo/Brother Industries/Ricoh/Seiren/Others
<b>N. America</b>	USA	HP/formerly Anajet (Ricoh)
<b>Europe</b>	Italy	MS Printing Solution (Dover)/Reggiani (EFI)/Robustelli (Epson)/Aleph/La Meccanica (Mimaki)/Durst
	Netherlands	SPGPrints/Hollanders Printing Systems
	Austria	Zimmer/Aeoon
	Israel	Kornit Digital
<b>Asia</b>	S. Korea	DGI
	China	Atexco/Homer/Hopetech/Others

### B-4. Transaction market

1. Overall shipment value (hardware & ink: 2018-2024)
2. Market summary (digital ratio and inkjet ratio)
3. Transaction business sales share by IJ maker (2020)
4. Shipment trend of hardware machines by size (2018-2024)  
Shipment volume/shipment value/shipment volume share by maker
5. Shipment trend of ink by type (water-based dye/water-based pigment: 2018-2024)  
Shipment volume/shipment value/technological trend/price trend
6. Printhead adoption trend
7. Summary of major makers
8. List of major machines of each company

#### Primary target

Region	Country	Maker
<b>Japan</b>	—	Ricoh/SCREEN/Miyakoshi/Fujifilm/Others
<b>N. America</b>	USA	HP/Xerox/Kodak/BlueCrest
<b>Europe</b>	UK	Domino (Brother)
	Netherlands	Canon Production Printing (formerly Océ, Canon)

**B-5. Commercial printing market**

1. Overall shipment value (hardware & ink: 2018-2024)
2. Market summary (digital ratio and inkjet ratio)
3. Commercial printing business sales share by IJ maker (2020)
4. Shipment trend of hardware machines by size (continuous-feed/sheet-feed: 2018-2024)  
Shipment volume/shipment value/shipment volume share by maker
5. Shipment trend of ink by type (water-based pigment/UV: 2018-2024)  
Shipment volume/shipment value/technological trend/price trend
6. Printhead adoption trend
7. Summary of major makers
8. List of major machines of each company

Primary target

Region	Country	Maker
<b>Japan</b>	—	Konica Minolta/Fujifilm/Ricoh/SCREEN/Others
<b>N. America</b>	USA	HP/Kodak
<b>Europe</b>	Netherlands	Canon Production Printing (formerly Océ, Canon)
	Israel	Landa

**B-6. Label & Package market**

1. Overall shipment value (hardware & ink: 2018-2024)
2. Market summary (digital ratio and inkjet ratio)
3. Label & Package business sales share by IJ maker (2020)
4. Shipment trend of hardware machines by application (label/package: 2018-2024)  
Shipment volume/shipment value/shipment volume share by maker
5. Shipment trend of ink by type (water-based pigment/UV: 2018-2024)  
Shipment volume/shipment value/technological trend (label, corrugated package, folding carton, flexible package)/price trend
6. Printhead adoption trend (label/package)
7. Summary of major makers
8. List of major machines of each company

Primary target (labels)

Region	Country	Maker
<b>Japan</b>	—	Seiko Epson/Iwatsu/SCREEN
<b>N. America</b>	USA	HP (liquid toner machines)/Jetrion (Xeikon)/Mark Andy/Colordyne Technologies
	Canada	Buskro
<b>Europe</b>	UK	Domino (Brother)
	Germany	KBA-Kammann, mPrint
	Italy	Durst
	Switzerland	BOBST/Gallus
	Netherlands	Canon Production Printing (formerly Océ, Canon)
	Belgium	Xeikon
	Denmark	Trojanlabel (AstroNova)
<b>Asia</b>	S. Korea	Dilli
	China	HanGlobal
	India	MONOTECH



Primary target (corrugated package)

Region	Country	Maker
<b>N. America</b>	USA	HP/EFI/SUN Automation
<b>Europe</b>	Spain	Barberan
	Italy	Durst, Engico
	Germany	Koenig & Bauer
	Switzerland	BOBST
<b>Asia</b>	China	Hanglory Group/Wonderjet

Primary target (flexible package)

Region	Country	Maker
<b>Japan</b>	—	Fujifilm/Miyakoshi/SCREEN/Think Laboratory/Tritek
<b>N. America</b>	USA	HP (liquid toner machines)
<b>Europe</b>	Germany	Heidelberger
	Italy	UTEKO
	Israel	Landa

B-7. Marking & Coding market

1. Overall shipment value (hardware & ink: 2018-2024)
2. Market summary (digital ratio and inkjet ratio)
3. Marking & Coding business sales share by IJ maker (2020)
4. Shipment trend of hardware machines by type (CIJ/DOD: 2018-2024)  
Shipment volume/shipment value/shipment volume share by maker
5. Shipment trend of ink by type (solvent/UV: 2018-2024)  
Shipment volume/shipment value/technological trend/price trend
6. Printhead adoption trend
7. Summary of major makers
8. List of major machines of each company

Primary target

Region	Country	Maker
<b>Japan</b>	—	Hitachi Industrial Equipment Systems/Kishu Giken/Keyence /Others
<b>N. America</b>	USA	Videojet Technologies (Danaher)
<b>Europe</b>	UK	Domino (Brother)
	Switzerland	Markem-Imaje (Dover)

B-8. Ceramic tile & Construction material market

1. Overall shipment value (hardware & ink: 2018-2024)
2. Market summary (digital ratio and inkjet ratio)
3. Ceramic tile & Construction material business sales share by IJ maker (2020)
4. Shipment trend of hardware machines by type (ceramic tiles/construction materials: 2018-2024)  
Shipment volume/shipment value/shipment volume share by maker
5. Shipment trend of ink by type (oil-based/water-based: 2018-2024)  
Shipment volume/shipment value/technological trend/price trend
6. Printhead adoption trend
7. Summary of major makers
8. List of major machines of each company

Primary target

Region	Country	Maker
<b>Japan</b>	—	Ricoh
<b>Europe</b>	Italy	Sacmi/Durst/System Ceramics/SITI-B&T/Tecno Ferrari
	Spain	Cretaprint (EFI)/KERAjet
<b>Asia</b>	China	Hope Ceramics/Meija/KEDA/FLORA/Teckwin

**C. Inkjet Printhead Market**

1. Changes in shipment value by maker (2018-2024)
2. Breakdown of total shipment value by market (2020)
3. Summary of individual companies

Primary target

Region	Country	Maker
<b>Japan</b>	—	Kyocera/Seiko Epson/Konica Minolta/Ricoh/SII Printek /Toshiba TEC/Brother/Funai Electric
<b>N. America</b>	USA	Fujifilm Dimatix/HP/Xerox
<b>Europe</b>	UK	Xaar
<b>Asia</b>	China	Suzhou Real Fast Print Technology/AMSKY Technology/Others

**D. Related Market**

1. Shipment trend of hardware machines (2018-2024)  
Shipment volume/shipment value
2. Shipment trend of ink (2020)

**E. Individual Makers**

E-1. Business summary of major makers

— 《Common items》 —

Sales of industrial inkjet by field (2020)/shipment trend of hardware machines and ink (shipment volume of machines, shipment volume of ink: 2020)/market-by-market trend

E-2. Summary of each company (Japanese maker/overseas maker)

— 《Common items》 —

Company name/address of head office/representative/established year/capital/sales (most recent FY)/number of employees (most recent)/summary of the industrial inkjet business

E-3. List of industrial inkjet-related makers (overall/ink • dispersion makers)

— 《Common items》 —

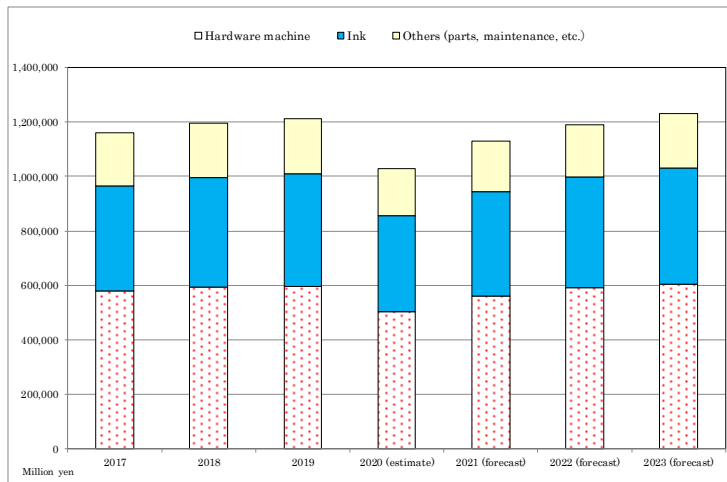
Company name/address of head office/target market (water-based/solvent/UV/textiles/ceramics/others)/production capacity, etc.

◆ Sample pages of the report (2020 version)◆

**A. Comprehensive Analysis**

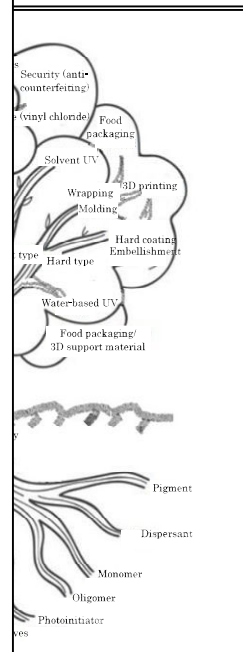
1. Overall trend of shipment value of industrial inkjet machines (2017-2023)

1) Overall (hardware machines, inks, others)



	2017		2018		2019		2020 (estimate)		2021 (forecast)		2022 (forecast)		2023 (forecast)	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Hardware machine														
Ink														
Others (parts, maintenance, etc.)														
Total														

Application of the underlying technology



Inkjet technology was spread with home printers, and then its applications expanded to the high-speed printing market, such as office and digital printing. The applications keep expanding to include non-paper media, such as outdoor signboards (vinyl chloride), textiles (fabrics), flooring (ceramic tiles, wood, concrete), and packaging (film, corrugated package).

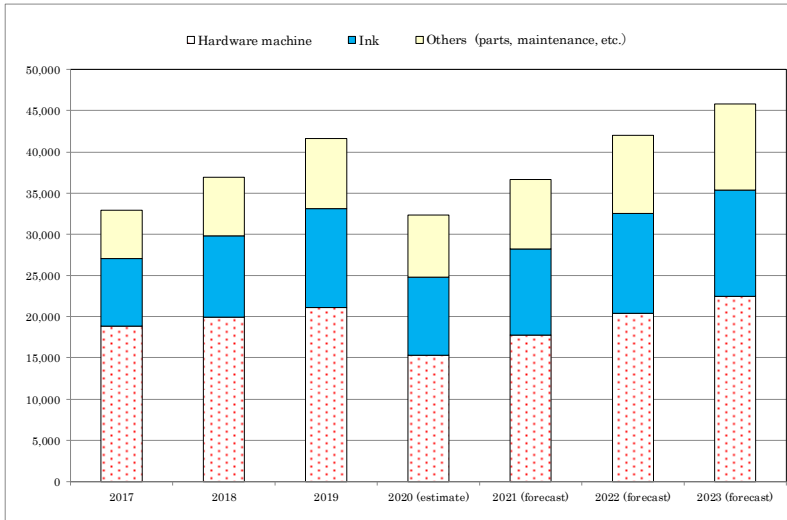
The key material that helps inkjet technology to expand its applications is various types of ink. As shown in the illustration above, inks are broadly classified into water-based and oil-based inks, of which the highly volatile oil-based inks are further classified as solvents and the less volatile inks as oil-based inks. There are also phase-change inks (to be discussed later), which have different properties from water-based and oil-based inks. They include a UV ink.

The base technology that supports the quality of these inks is a variety of ink materials used to make inks through expertise-packed dispersion and filtration technologies.

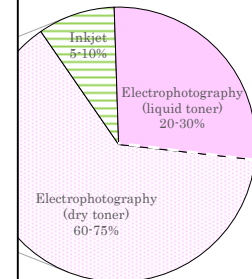
In the following pages, the basic ink technologies will be outlined.

B-5. Commercial printing market

1. Overall shipment value (hardware machines and inks from 2017 to 2023)



		Million yen													
		2017		2018		2019		2020 (estimate)		2021 (forecast)		2022 (forecast)		2023 (forecast)	
			%		%		%		%		%		%		%
Hardware machine															
	%														
Ink															
	%														
Others (parts, maintenance, etc.)															
	%														
Total															
	%														



to be around 5% of the total printing demand. Electrophotography is the leading technology for digital printing, as the inkjet system accounts for only 5-10% of total digital printing.

In electrophotography, dry-toner machines from Xerox and Xerox Corp. were first introduced as POD machines in the early 1990s, while many A3 light-production machines were also launched by Japanese copier makers. In recent years, HP's liquid toner machines have gaining power with technologies such as high-speed printing, high-image quality, as well as wide-format support. Sales have since been expanding sharply.

On the other hand, inkjet printing, with improved image quality and ability to handle offset paper, is proving its worth in the fields of publication printing and direct mail. The current target seems to be the field of HP's liquid toner machines. Inkjet printing is expected to expand the usage ratio by improving productivity and cost efficiency.

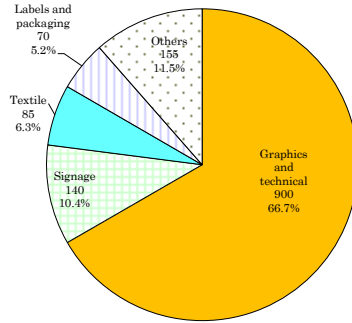
In the post-COVID-19 era, the need for high-variation low-volume printing is likely to expand as it reduces waste. The digital ratio is expected to advance to around 15-20%.

[2] Seiko Epson

1. Sales of industrial inkjet products by segment (2019)

Unit: 100 million yen

Application	Sales
Graphics and technical	
Signage	
Textile	
Transaction	
Commercial printing	
Labels and packaging	
Marking and coding	
Ceramic tiles and building material	
Others	
Total	



Seiko Epson's ("Epson" hereinafter) sales of inkjet business for professional use is 135 billion yen (excluding the small printer business for the retail market). The company is expanding investment in the signage, textile, labels and packaging segments, and external sales of printheads as the next business of its mainstay graphics and technical business.

2. Shipment trend of hardware machines and inks (2019)

Market	Hardware machines (unit)	Inks (ton)
Graphics and technical		
Signage		
Textile		
Transaction		
Commercial printing		
Labels and packaging		
Marking and coding		
Ceramic tiles and building material		
Total		

Epson's total shipments of hardware machines and inks are estimated at 65,800 units and 4,800 tons respectively. Its shipments of inks for the graphics filed is the largest in the industry.

	URL
	<a href="http://www.affordink.com/">www.affordink.com/</a>
	<a href="http://www.afford-inks.com/">www.afford-inks.com/</a>
	<a href="http://www.adfa.com">www.adfa.com</a>
	<a href="http://www.alphachem.net">www.alphachem.net</a>
	<a href="http://www.alphainkjet.com/">www.alphainkjet.com/</a>
	<a href="http://www.antonine-inks.co.uk/">www.antonine-inks.co.uk/</a>
tons a year	<a href="http://www.acmya.com/">www.acmya.com/</a>
	<a href="http://www.a-2-i.com/">www.a-2-i.com/</a>
corporations in 2017.	<a href="http://www.inks.averydennison.com/en/home.html">www.inks.averydennison.com/en/home.html</a>
ents, and dispersions. UV inks.	<a href="http://www.basf.com">www.basf.com</a>
tons a year	<a href="http://www.kincolor.dps.com.cn/">www.kincolor.dps.com.cn/</a>

Company	Country	Production Capacity (tons/year)	Notes	URL
Belgium Glass And Ceramics	Belgium			<a href="http://www.belgiumglass.com/index.php">www.belgiumglass.com/index.php</a>
BCINK (Jiaxing Baichuan Printer Technology)	China		Officially upgraded by 700 tons in January 2018.	<a href="http://www.inks.com.cn/index.asp">www.inks.com.cn/index.asp</a>
BDR Boya Kimya San. Tic. A.S.	Turkey		Acquired by EFI in 2019.	<a href="http://www.inkbdr.com/">www.inkbdr.com/</a>
Binzhou Gaily Electronic Technology	China	5,000	Production capacity: 5,000 tons a year	<a href="http://www.gailyink.com">www.gailyink.com</a>
Biporn	Indonesia			<a href="http://www.biporn.com/">www.biporn.com/</a>
Bordeaux Digital Printink	Israel			<a href="http://www.c-m-y-k.com/">www.c-m-y-k.com/</a>
Cabot	USA			<a href="http://www.cabotcorp.com/">www.cabotcorp.com/</a>
Canon	Japan			<a href="http://www.canon.jp/">www.canon.jp/</a>
Celludye	China			<a href="http://www.celludye.com/">www.celludye.com/</a>
ChenBang	China	3,000	Production capacity: 3,000 tons a year	<a href="http://www.chenbangink.com/">www.chenbangink.com/</a>
Chespa	Poland			<a href="http://www.chespa.eu/">www.chespa.eu/</a>
Clariant	Switzerland			<a href="http://www.clariant.com/en/Corporate">www.clariant.com/en/Corporate</a>
CMS Ink	France		Mainly for coding.	<a href="http://www.cmsink.com/">www.cmsink.com/</a>
Colorlink Technology	Taiwan		Production capacity: NA	<a href="http://www.refillcolor.com/">www.refillcolor.com/</a>
Colorobbia	Spain			<a href="http://www.colorobbia.es/?lang=en">www.colorobbia.es/?lang=en</a>