

**Commercial
Printing
Business**

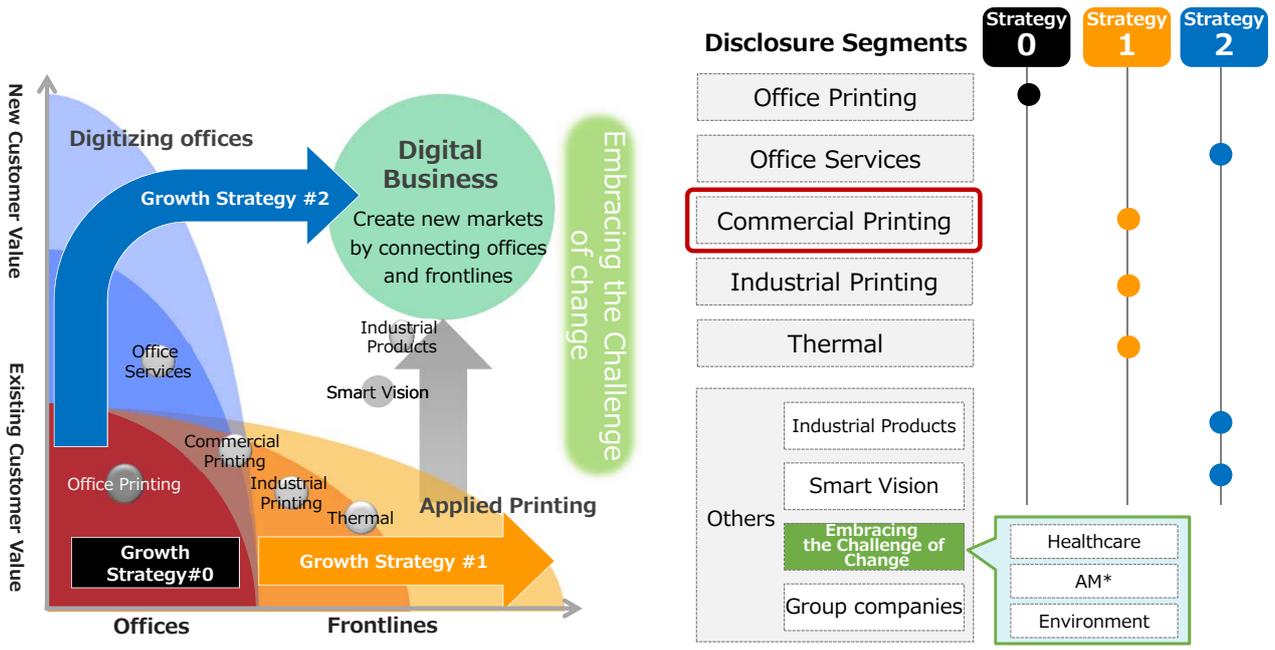
April 11, 2019

Sergio Kato

**General Manager of
Commercial Printing Business Group
Ricoh Company, Ltd.**

- I'm Sergio Kato, head of the Commercial Printing Group. Today, I'll discuss our strategies.

RICOH Ignite Growth Strategy

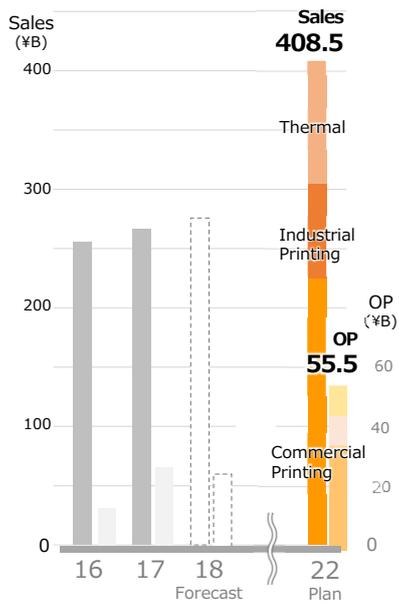


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*AM: Additive Manufacturing

- Growth Strategy #1 entails using printing technology to generate new value and expansion.



Growth Strategy #1 toward FY2022
Expand Commercial Printing business earnings and invest headily to drive Industrial Printing business growth

Commercial Printing: Bolster solutions to cater to various market needs in transaction, enterprise, commercial, and other printing areas, supporting customers and printing businesses and growing with customers

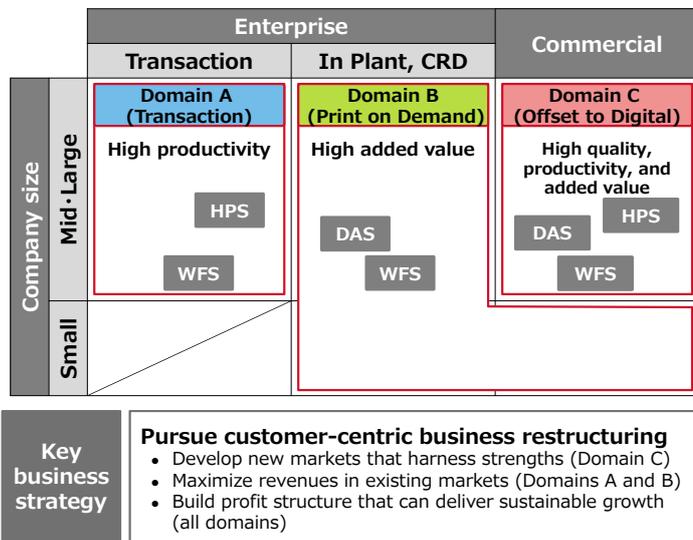
Industrial Printing: Expand our customer value proposition and reduce environmental impact by materializing our digital micro factory concept, opening up new vistas for industrial printing

Thermal: Leverage competitive edge in existing businesses to maximize earnings while launching new operations to expand our business and increase the operating margin to more than 10%

- In Commercial Printing, we will rebuild our business from customer perspectives to drive growth.

Commercial Printing Business

Three business domains that reflect differing market characteristics, and seek to deliver customer value by combining optimal solutions for customers in each domain



Main products and solutions

Digital application solutions (DAS)
(Cut-sheet printers)



RICOH Pro C7200S
Harnessing special colors to deliver vivid results



RICOH Pro C9200S
Top-quality flagship model handles an array of papers

High-productivity solutions (HPS)
(Continuous feed printers)



RICOH Pro VC40000
High-speed transaction printer



RICOH Pro VC70000
Delivers outstanding image quality and speed with offset papers

Workflow solutions (WFS)

Avanti-MIS business workflow management
Ricoch Process Director print production workflow management

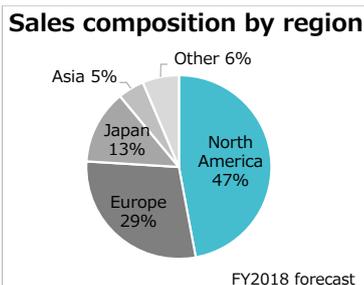
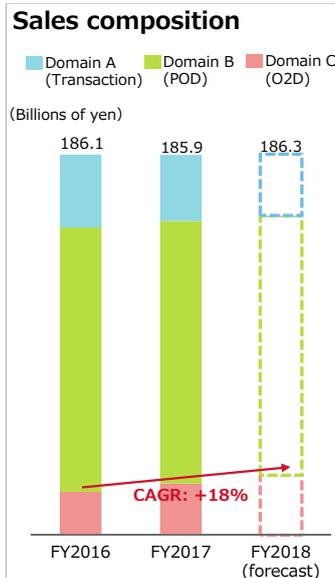
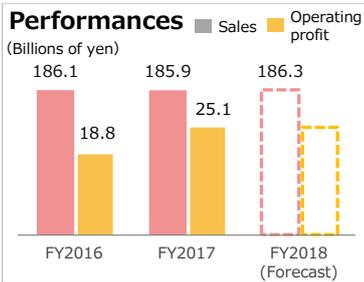




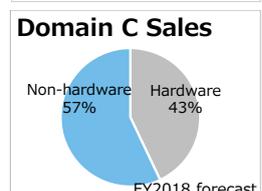
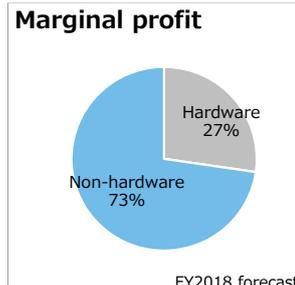
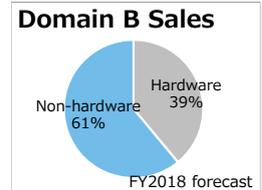
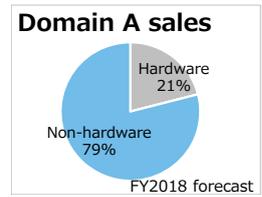
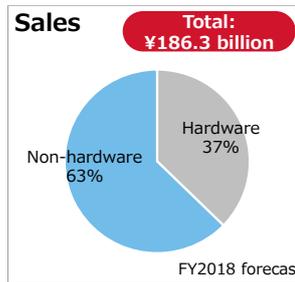

Ricoch Supervisor
IoT management

- I will now overview the Commercial Printing Business.
- We maintain three business domains that reflect differing market characteristics. In each domain, we aim to deliver customer value by combining optimal customer solutions.
- First of all, Domain A encompasses transaction printing systems within enterprises. High productivity is required in this area, such as for large print runs of forms.
- Second is Domain B, for high-value-added print on demand needs. Demand is strong here among within large enterprises and small and medium-sized printing firms.
- Third is Domain C, an offset to digital arena in which we serve printing firms, particularly those whose business is primarily with offset machines. Here, we provide high quality, productivity, and added value.
- We deliver broadly what are three value solutions for customers in these domains.
- The first is digital application solutions, based on cut-sheet printers, through which we increase printing value for customers.
- The second is high-productivity, high-quality solutions through continuous feed printers and inkjet technologies in particular.
- Third, we offer workflow solutions that relate to the other two solutions that I have just described. Here, we offer software and application solutions that increase the value of printed material by optimizing customer print process workflows.
- So, we have a matrix of three customer domains and three major value solutions.

Results



Hardware vs non-hardware



- This page shows our results.
- Commercial Printing segment sales have been around 186 billion yen over the past three years.
- We have improved operating profit over that time. The prime factors have been an expansion in machines in field and a corresponding increase in the proportion of non-hardware sales, as well as more efficient spending and development investments.
- The bottom left of the page presents our sales composition by region. North America accounts for nearly half of sales in our business.
- In the sales composition chart near the middle of the page, Domain A sales have declined slightly over three years. Domain B has represented around 70% of segment sales, growing slightly over three years. Domain C, covering offset to digital technology, is the fastest growing area. The CAGR over the past three years has been 18%.
- Non-hardware is the earnings driver, and should account for 63% of commercial printing sales in FY2018, with a marginal profit of 73%. The non-hardware component of sales is extremely high in each of our three domains.

Domain A (Transaction) Strategy



Market size	Trends and customer needs	Core customers	Ricoh's strengths and results
<p>¥130 billion (2020)</p> <p></p> <p>CAGR: -2.0% (2017 → 2020)</p>	<ul style="list-style-type: none"> Market for corporate slips, forms, and other basic printed matter Overall demand declining amid shift toward digital documentation Print needs focusing on operational stability, with few new requirements 	<ul style="list-style-type: none"> Enterprise print departments (data centers) Service bureaus 	<ul style="list-style-type: none"> Large customer base acquired from IBM printing business Transaction support operational stability Ample transaction systems specialist capabilities Revenue-based market share: Around 20%

Key business strategy	<p>Pursue customer-centric business restructuring</p> <ul style="list-style-type: none"> Develop new markets that harness strengths (Domain C) Maximize revenues in existing markets (Domains A and B) Build profit structure that can deliver sustainable growth (all domains)
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Domain strategy	Results stance
<ul style="list-style-type: none"> Cultivate colorization and keep providing reliable systems Streamline investments as markets shrink 	<ul style="list-style-type: none"> Maintain machines in field to uphold non-hardware earnings Enhanced cost efficiencies

- I will now discuss business strategies for each of our domains. I will start with Domain A.
- The market should be worth 130 billion yen in 2020, with CAGR dipping 2% from the 2017 level.
- The corporate market for printing forms is trending down overall in line with a move toward digital documentation. There are few new needs here. Operational Stability is the primary requirement in Domain A.
- Ricoh has several strengths here. They include a large customer base acquired from IBM's printing business and transaction systems that support operational stability. Other strengths are specialist capabilities for supporting transaction systems and a revenue-based market share of around 20% that makes us a top player.
- Our Domain A business strategy is to capture and maximize earnings even in shrinking markets, cultivating colorization and continuing to provide reliable systems. We will streamline investments as markets shrink.

Domain B (Print on Demand) Strategy



RICOH
imagine. change.

Market size	Trends and customer needs	Core customers	Ricoh's strengths and results
<p>¥1.2 trillion (2020)</p> <p></p> <p>CAGR: 1.4% (2017 → 2020)</p>	<ul style="list-style-type: none"> Promotional materials and manuals and other areas of digital printing market Color machine demand keeps rising owing to need for short deliveries with on-demand printing. Monochrome printing demand decreasing slightly As well as basic print quality, customers demand printed matter delivering added value 	<ul style="list-style-type: none"> Enterprise print departments (In plant, CRD) Small commercial printing firms 	<ul style="list-style-type: none"> Maintaining a direct sales and service network worldwide New application proposals with addition of special colors Deploying print solutions through alliances with post-press vendors Revenue-based market share: Around 10%

Key business strategy	Pursue customer-centric business restructuring
	<ul style="list-style-type: none"> Develop new markets that harness strengths (Domain C) Maximize revenues in existing markets (Domains A and B) Build profit structure that can deliver sustainable growth (all domains)

Domain strategy	Results stance
<ul style="list-style-type: none"> Supply digital applications that enhance the value of printed matter Expand sales channels and bolster sales in emerging markets 	<ul style="list-style-type: none"> Expanding number of machines in field to increase non-hardware earnings through and lifting hardware prices Lifting hardware and non-hardware revenues

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- I will now discuss our Domain B strategy, encompassing print on demand technology.
- The market in 2020 should be worth around 1.2 trillion yen, with a CAGR of 1.4%. The market is steadily growing.
- The market largely covers promotional materials and manuals and other areas of the digital printing market. Color machine demand is rising because of the need for short deliveries with on-demand printing. At the same time, demand for monochrome printing is decreasing slightly. A major customer need as well as for basic print quality is printed matter that delivers added value.
- Ricoh has a range of strengths. We maintain a direct sales and service network worldwide. Our technologies include special colors that help increase print value. We maintain alliances with post-press vendors, through which we deploy total print solutions. Our revenue-based market share is around 10%. Based on unit sales, our market share in fiscal 2018 had risen to 16% to 18%.
- Our strategic focus in Domain B is to develop and supply applications that increase the value that customers expect from printed matter and to offer consulting.
- We seek to expand by acquiring dealer channels and strengthening sales in emerging nations. Direct sales account for 80% to 90% of our revenues. From this fiscal year, we are broadening our dealer channels, centered on the massive U.S. market. We will step up sales in emerging nations to capitalize on growth potential there.



Our evolving high-value-added cutsheet printers

Boosting sales (Success story: Company G)

Adding value through unique new features lifts print page prices and gives our customers advantages to other printing companies.

1. White toner

White toner enhances presentation and prints easily on clear water-resistant, colored, and other challenging stock.

2. Neon toner reproducing vivid colors

Differentiating by enabling vivid hues that are beyond the reach of regular ordinary process colors.

3. Clear toner for decorating print surfaces

Making gloss over entire print surfaces possible to offer premium looks or using spot gloss to partially highlight print surfaces.



White



Neon



Clear

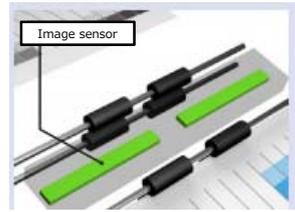
Stable operations

Automating pre-print and other adjustments to deliver consistently high-quality output.

⇒ **Reducing resources and costs from inspection return reprints.**



Auto calibration



Real-time front and back registration

- I will overview cutsheet printers that are strategic models for Domain B.
- These are five color station printers, which means that they can use toner in five colors. They can augment cyan, magenta, yellow, and black with white toner that enhances presentation, neon toner that reproduces vivid colors, or clear toner for a glossy touch of class. This capability has become very well received for enabling customers to offer high-value-added results.
- These printers employ technology to automate pre-print and post-process adjustments to deliver consistently high-quality output.
- We will draw on these strengths to expand in Domain B.

Domain C (Offset to Digital) Business Strategy

Market size

¥500 billion
(2020)


CAGR: 8.9%
(2017 → 2020)

Trends and customer needs

- Offset printing-oriented market for promotional materials, direct mail, books, and other publications
- Digital printing should expand rapidly amid demand for multi-variety, small-lot runs and the need for inventory and disposal cost reductions
- Ricoh's and rival offerings to date have failed to sufficiently satisfy strong demand for print quality and productivity
⇒The barrier to full-scale development of offset to digital
- Expectations have risen for high-value-added printing businesses using digital technology and streamlining total workflows
⇒New expectations for offset to digital

Core customers

- Medium-sized and large commercial printing firms
- Direct mailers

Ricoh's strengths and results

- High-speed, high-quality inkjet technology for offset coated paper employing heads, inks, systems, and other core technologies
- Solutions lineup optimizing customer workflows through compatibility with various media, electrophotographic technology management information systems ensuring high quality at low prices, process management, and other features
- Revenue-based market share: Around 7%
- Sales expanding faster than market (CAGR: 20%)

- Finally, I will discuss our business strategy for Domain C.
- The market for offset to digital offerings should be worth 500 billion yen in 2020. CAGR should reach around 9%.
- This market size represents just 5% or so of the 10 trillion yen offset printing market. A focus for us and our customers will be on capturing a greater digital share of the offset market and creating a massive business area.
- The focuses of offset printing are promotional materials, direct mail, and books. But digital printing should expand rapidly amid demand for multi-variety, small-lot runs and the need for inventory and disposal cost reductions
- That said, Ricoh's and rival offerings have failed to sufficiently satisfy strong demand for print quality and productivity. Digital technology has thus encountered a barrier to full-fledged adoption, accounting for just 5% of the offset market.
- At the same time, expectations have risen for digital high-value-added printing businesses, high added value for printing companies, and streamlining entire workflows with IT.
- Ricoh can play an important role in catering to such demand.
- Our strengths include high-speed, high-quality inkjet technology for offset coated paper employing heads, inks, systems, and other core technologies we have cultivated or aquired, as well as electrophotographic technology for delivering high quality through various media.
- We have expanded our solutions product to optimize customer workflows, notably through IT-based management information systems.
- We will endeavor to solidify our position. Our revenue-based market share is around 7%. We have leveraged our strengths to generate annual sales growth of 20%, surpassing the market average, and look to maintain our momentum.



Key business strategy

- **Pursue customer-centric business restructuring**
 - **Develop new markets that harness strengths** (Domain C)
 - **Maximize revenues in existing markets** (Domains A and B)
 - **Build profit structure that can deliver sustainable growth** (all domains)

Domain strategies	Results stance
<p>For general partners supporting improvement of management quality improvements at printing firms</p> <ul style="list-style-type: none"> ● Generating new customer value with digital technology ● Providing printing systems balancing high quality and productivity ● Deploy offset and other solutions fostering efficiency <p>Accelerating sales and profit growth</p> <ul style="list-style-type: none"> ● Continuing to investment extensively amid expanding markets and intensifying competition ● Maintaining mix of direct sales and alliance channels ● Rolling out ideal services models for commercial printing customers 	<ul style="list-style-type: none"> ● Expand sales (hardware and non-hardware) in growth domains <ul style="list-style-type: none"> ● Increase unit sales and machines in field ● Greatly increase print and ink volumes per machine ● Undertake extensive forward investments

- Our business strategy in Domain C is not simply to digitize offset printing but to partner printing firms in comprehensively enhancing their operations.
- We will develop and deliver new value by harnessing digital technologies that help customers increase their sales. We seek to expand revenues and earnings by offering high-quality, high-productivity printing systems and workflow solutions that streamline operations, including in offset printing.
- We seek to expand through a win-win approach, bolstering sales for customers and Ricoh and employing a mix of direct sales and agency channels.
- We aim to generate significant growth by broadening our customer base, expanding the number of machines in field and print volume per unit, and lifting prices.



Industry-leading cutsheet printer plug-in equipment

Boosting sales (Success story: Company V)

Supporting a range of papers with digital machines to enable high value-added application production.

1. Handling corrugated paper

Handling luxury impression textured paper with deep paper ditch. Expanding sales of high-end catalogs, book covers, business cards, and other items



Catalogs

2. Handling long sheets

High-quality and high-precision Printing on long sheets. Expanding sales of high-end fold-out catalogs, posters, and other items.



Fold-out catalogs



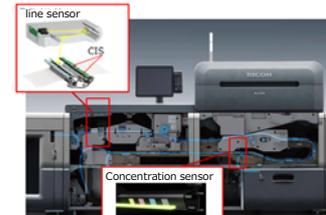
Posters

Efficient equipment operations

High image quality and stability

⇒ Building on high image quality for which the 9100 was so popular by improving blacks, for offset quality with less distortion

⇒ New inline quality control technology for high-end for high color stability



⇒ Enabling operational efficiencies without worrying about in differences in digital and offset print quality

- I will now overview two strategic models in Domain C.
- The first is the flagship RICOH Pro C9200 series, an industry-leading cutsheet printing system. This offering handles corrugated paper and long sheets and supports special media.
- This series is the only one in our industry with such capabilities, delivering high added value. It enables customers expand their sales because they can propose high-priced applications.
- Systems have to operate stably because they are capital goods for customers. This series enhances quality and employs various technologies to materialize operational efficiency.
- New inline quality control technology automatically adjusts printed matter densities and color gamuts, print positions, front and back registration. To date, skilled operators have been required for these processes, so these capabilities underscore the benefits of our digital technology.



Continuous feed inkjet printers expanding commercial applications with new drying technology and inks

Boosting sales (Success story: Beta Customer Company A)

Dramatically enhancing coated paper productivity
⇒ Systems **increase hourly sales**

*Customer defined machine production capacity (hourly sales)



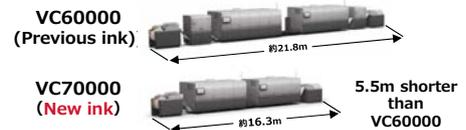
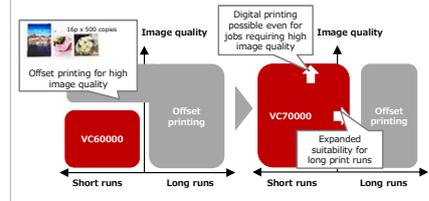
Boosting sales
(success story:
Beta Customer
Company B)

Extended Gamut ink makes it possible to print on offset coated paper without undercoats or protector coats
⇒ **Space savings and installations at low initial costs**
⇒ **Business expansion with low running costs**

Efficient equipment operations (Beta Customer Company B success story)

High densities and wide color gamuts enable print jobs requiring high image quality, which has been elusive to date

⇒ **Ensuring efficient digital and offset print facilities operations**



- The second product I wish to highlight is the RICOH Pro VC70000, which we launched in March this year. This product expands commercial printing applications with new drying technology and inks.
- This system can print coating-free, saving space and ensuring low running costs while enhancing customer sales and profits. While remaining as productive as offset printing setups, the system offers value-added digital technology that has been very well received for contributing to higher hourly sales among customers. In some cases, the improvements have been three- or four-fold.
- To date, digital printing has been used to handle short job runs in place of offset machines, but our flagship can deliver an array of solutions with long job runs.

FY2022 Goals

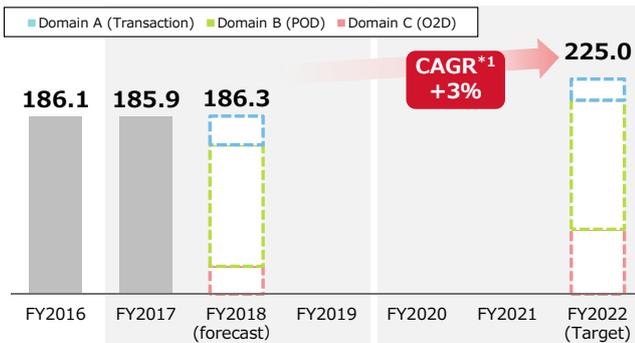
FY2022 Targets

Sales **¥225 billion**
Operating profit **¥35 billion**

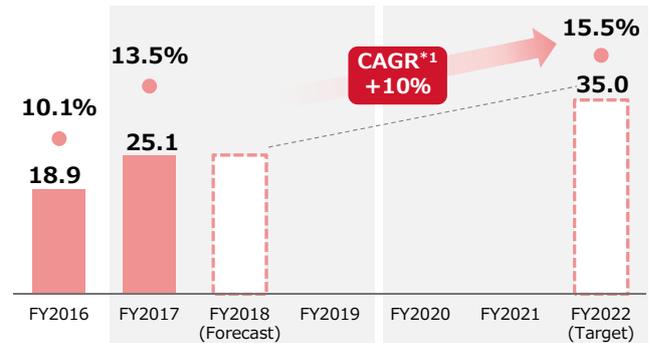
Key strategy

1. Expand sales channels and bolster sales in emerging markets (Domain B)
Lifting hardware and non-hardware revenues
2. Generating new customer value with digital technology and solutions (Domain B and C)
Expanding number of machines in field to increase non-hardware earnings
3. Providing printing systems balancing high quality and productivity (Domain C)
Expanding non-hardware revenue by increasing number of machines in field and increasing print and ink volumes per machine greatly

Sales (Billions of yen)



Operating profit (Billions of yen) / Operating margin (%)



April 11, 2019

*1 : From FY2016 to FY2022

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- We are drawing on Domains B and C to secure customers by generating new value for them with digital printing, thereby expanding our business.
- By FY 2022, we aim to lift segment sales from around 186 billion yen now, to 225 billion yen. We seek to increase operating profit from 25 billion yen, for an operating margin of 13.5%, to 35 billion yen, for a 15.5% operating margin.
- We are pursuing three key strategies to drive these improvements.
- The first is to expand in emerging market dealer sales channels.
- The second is to increase prices by employing digital technology to increase print value or to provide solutions that enhance earnings.
- Third, we will provide printing systems that balance high quality and productivity, with higher print volumes per machine, to drive business growth in FY 2022.
- That completes my presentation today.

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Forward-Looking Statements

The plans, prospects, strategies and other statements, except for the historical events, mentioned in this material are forward-looking statements with respect to future events and business results. Those statements were made based on the judgment of Ricoh's Directors from the information that is now obtainable. Actual results may differ materially from those projected or implied in such forward-looking statements and from any historical trends. Please refrain from judging only from these forward-looking statements with respect to future events and business results. The following important factors, without limiting the generality of the foregoing, could affect future results and could cause those results to differ materially from those expressed in the forward-looking statements:

- a. General economic conditions and business trend
- b. Exchange rates and their fluctuations
- c. Rapid technological innovation
- d. Uncertainty as to Ricoh's ability to continue to design, develop, produce and market products and services that achieve market acceptance in hot competitive market

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**Note: In this document, fiscal years are defined as follows:
FY2018 = Fiscal year ended March 31, 2019, etc.**