

# Manufacturing Solutions Business Strategy

June 10, 2021

Seiko Epson Corporation  
Manufacturing Solutions  
Operations Division

## ■ Disclaimer regarding forward-looking statements

The foregoing statements regarding future results reflect the Company's expectations based on information available at the time of announcement. The information contains certain forward-looking statements that are subject to known and unknown risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statements. Such risks and uncertainties include, but are not limited to, the competitive environment, market trends, general economic conditions, technological changes, exchange rate fluctuations and our ability to continue to timely introduce new products and services.

## ■ Note regarding business profit

Business profit is calculated by deducting cost of sales and SGA expenses from revenue. Although not defined in the statement of consolidated comprehensive income, this indicator is very similar to the concept of operating income under J-GAAP. Epson will present this information as a reference, as the Company believes users of financial statements will find it useful when evaluating Epson's financial performance.

## ■ Numerical values presented herein

Numbers are rounded down to the unit indicated. Percentages are rounded off to one decimal place. Years mentioned in these materials are fiscal years unless otherwise indicated.

## 1. Goals

- (1) Achieving the Epson 25 Renewed Corporate Vision  
(announced in March 2021)
  - (2) Manufacturing innovation
- 

## 2. Growth strategy

- (1) Market size
  - (2) Epson's strengths
  - (3) Issues and actions
  - (4) Financial targets
- 

## 3. Examples of initiatives

# 1. Goals

- (1) Achieving the Epson 25 Renewed Corporate Vision (announced in March 2021)
- (2) Manufacturing innovation

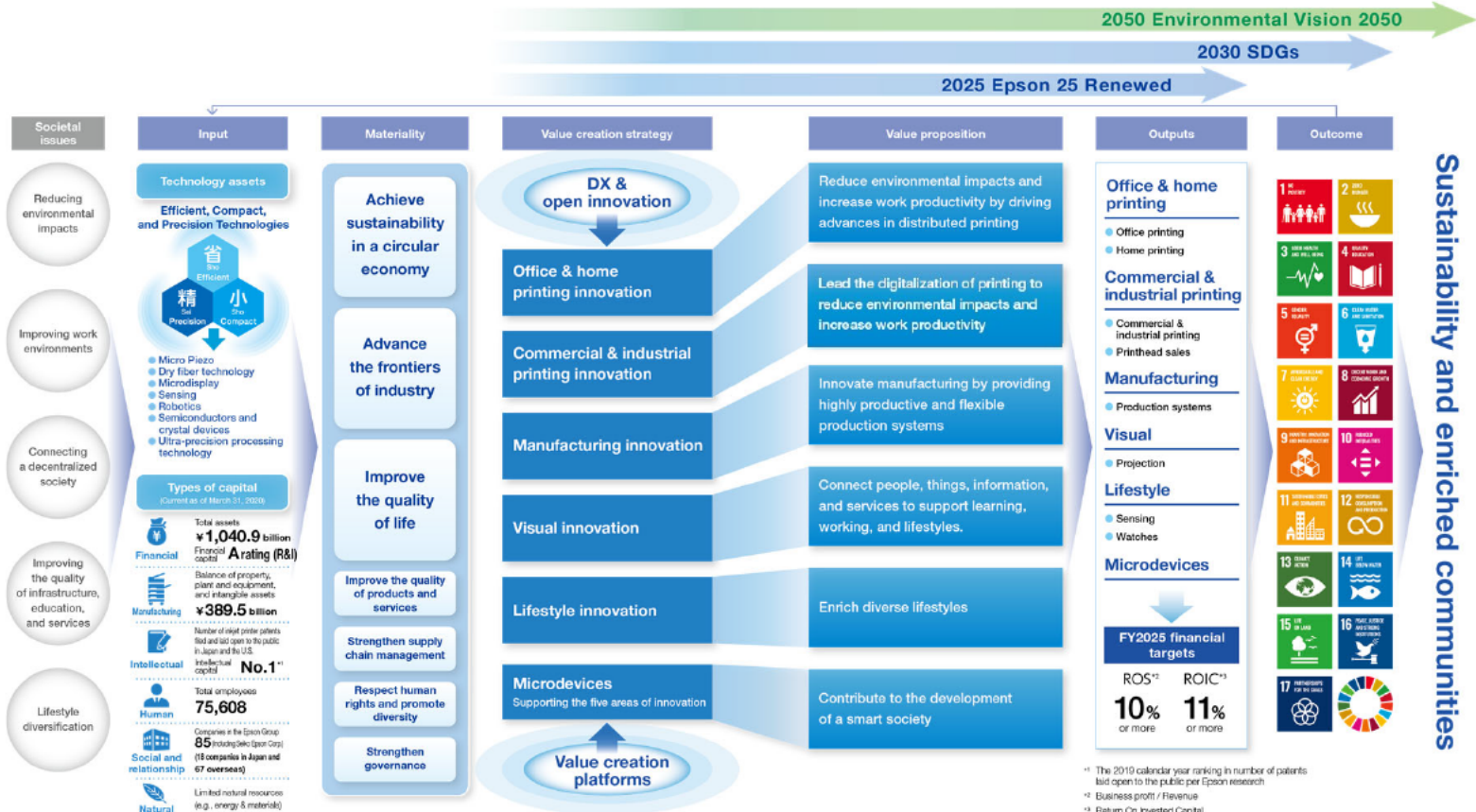


## Achieving sustainability and enriching communities



Corporate vision	Manufacturing	Market size	Strengths and growth strategy	Issues and actions	Financial targets	Examples of initiatives
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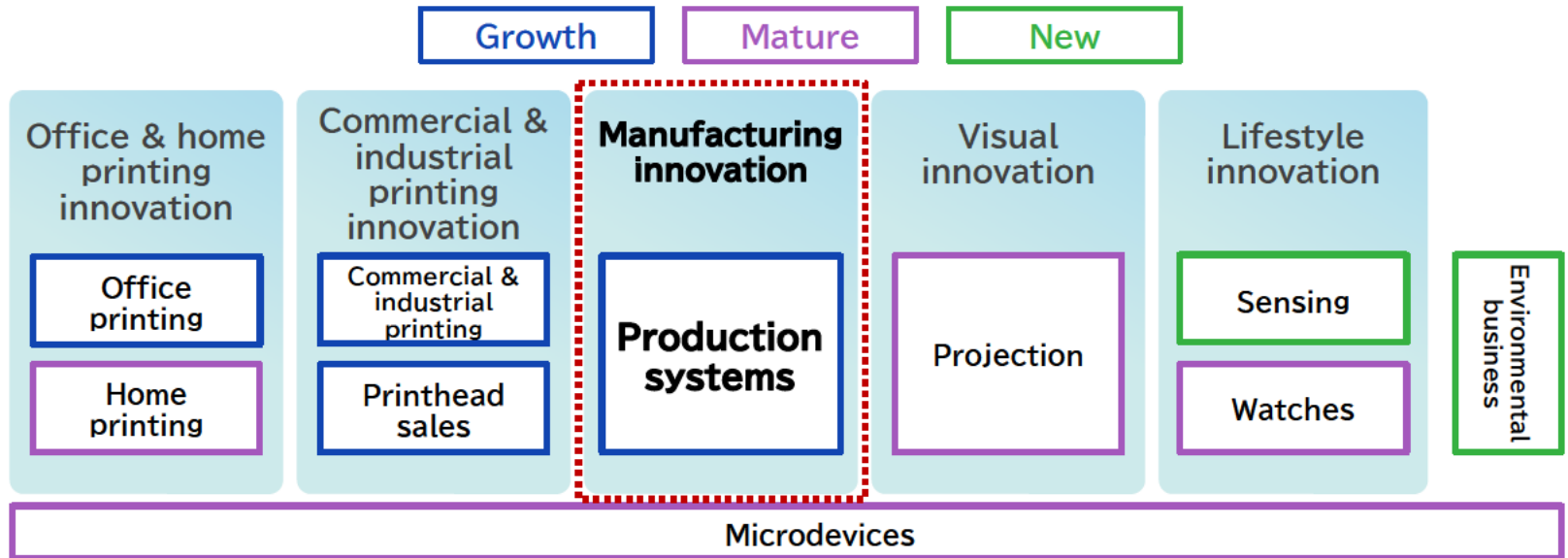
# Value creation story



<sup>1)</sup> The 2019 calendar year ranking in number of patents filed open to the public per Epson research  
<sup>2)</sup> Business profit / Revenue  
<sup>3)</sup> Return On Invested Capital

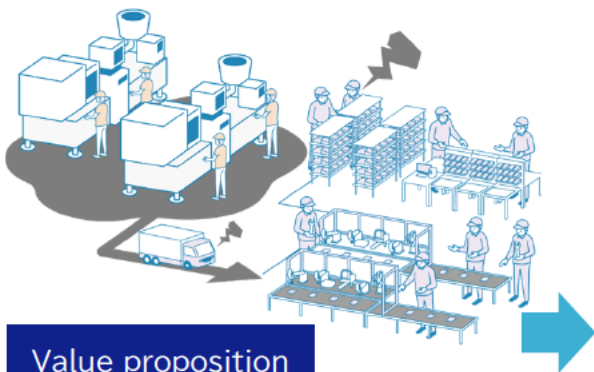
# Positioning of manufacturing innovation

- Positioned as a **growth area** in our business portfolio to achieve the goals of our Epson 25 Renewed Corporate Vision
- We will invest and spend in the near term to ensure we take advantage of the significant growth potential

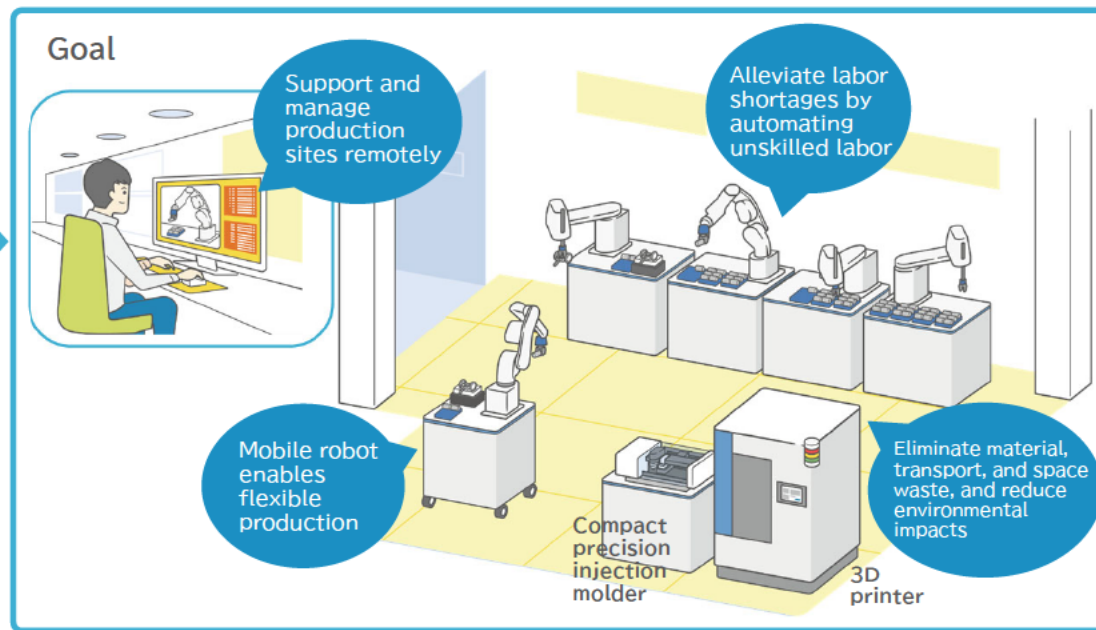


Innovate manufacturing by co-creating flexible high-throughput production systems that reduce environmental impacts

-  Achieve sustainability in a circular economy
-  Advance the frontiers of industry
-  Improve quality of life

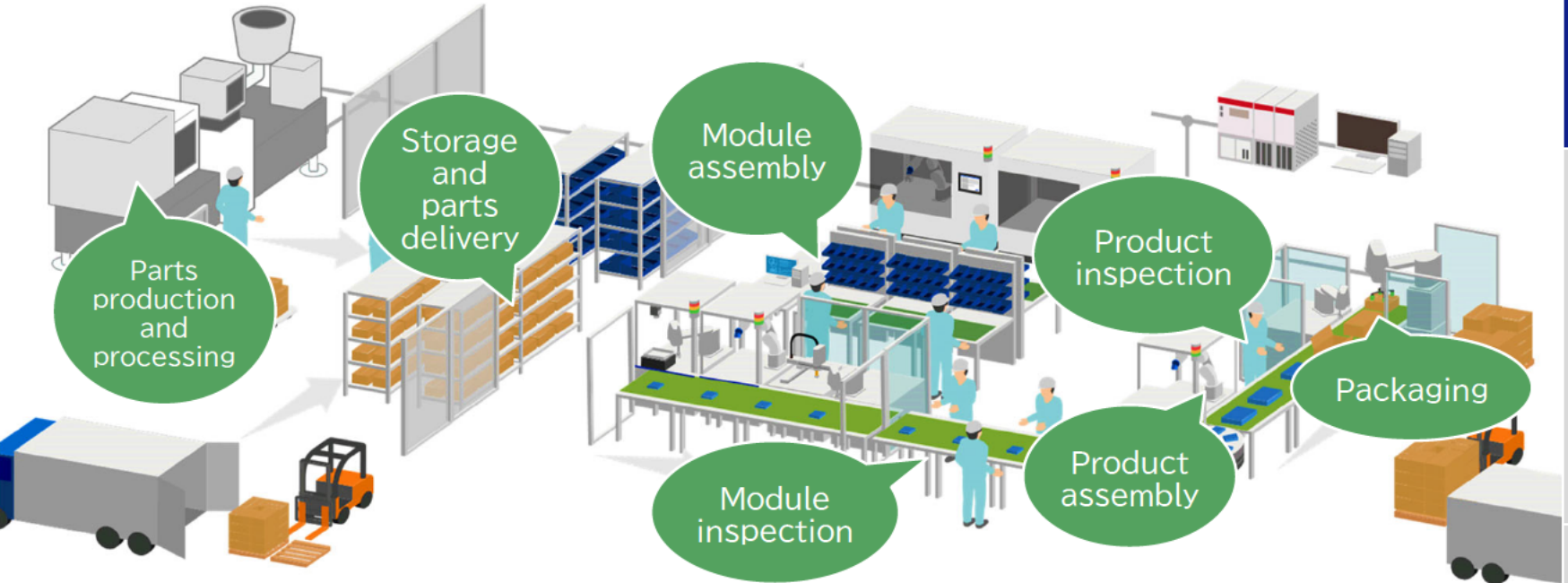


- Accommodate low volume, high mix production
- Alleviate labor shortages
- Distributed production, and local production for local consumption
- Reduce environmental impacts and close the resource loop
- Save space
- Reduce burden for system building



# Typical factory process flow

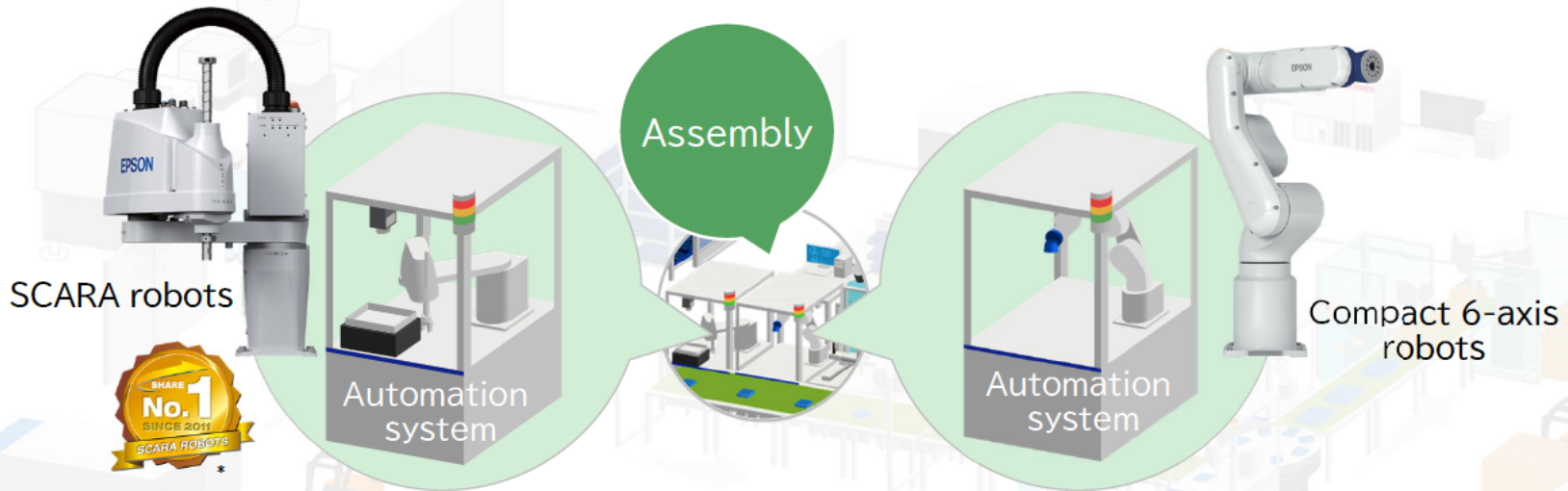
- ▶ Most products are delivered to customers after going through a variety of processes
- ▶ Factories operate with many types of industrial equipment





# Main focus area: Previously

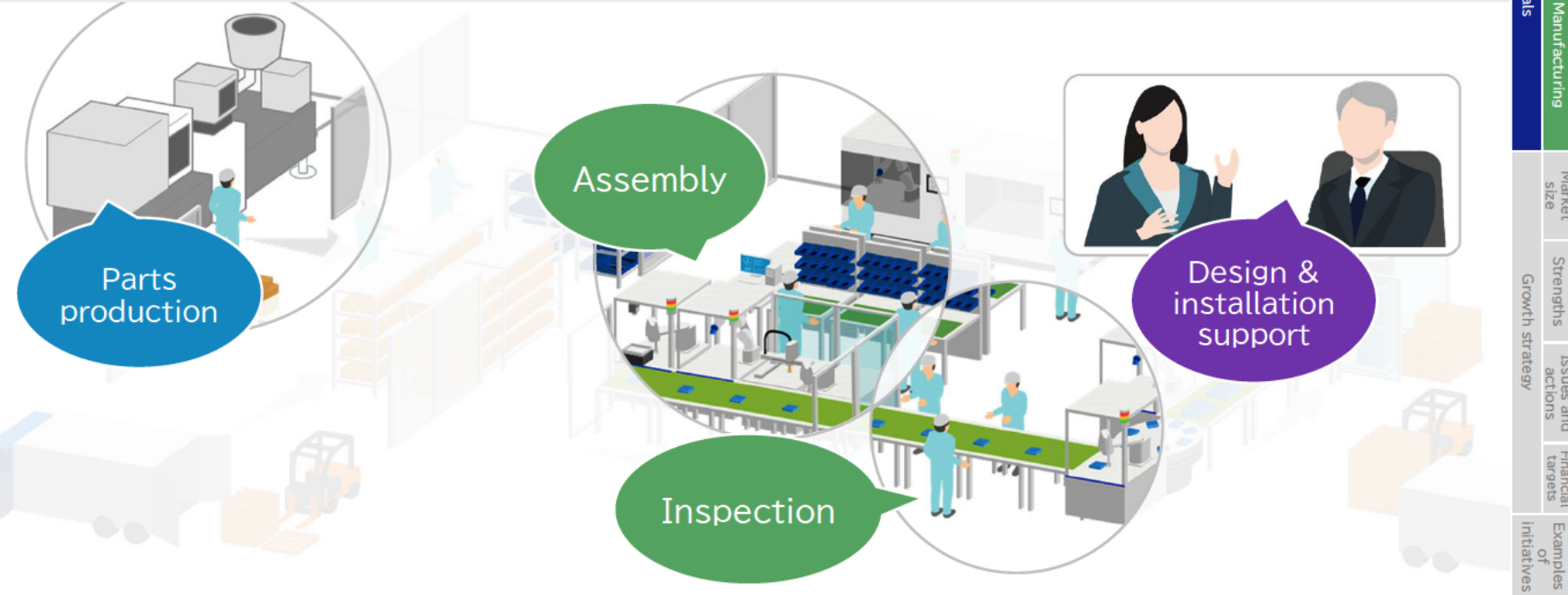
- ▶ Robots are important equipment often incorporated in automated systems used in assembly processes
- ▶ Epson owns the top share\* of the global market for SCARA robots



\*Epson was No. 1 in industrial SCARA robot unit shipments from 2011 through 2020.  
(Source: Fuji Keizai "2012-2021 Worldwide Robot Market and Future Outlook").

# Main focus area: Current and future

- ▶ Expand into parts production and inspection processes in addition to the current assembly business
- ▶ Build new business around design and installation support, including production line creation

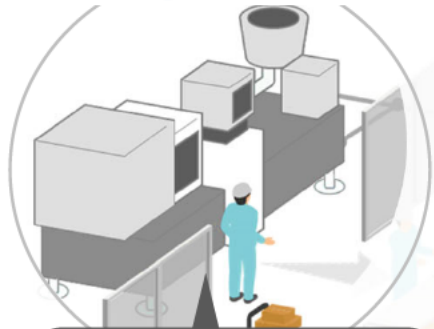


Corporate vision	Goals	Manufacturing	Market size	Strengths and actions	Issues and targets	Examples of initiatives
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# Customer expectations

- ▶ Customers are seeking factory innovations that allow them to respond to things such as environmental issues and changes in consumer trends

## Parts production



Mitigate environmental impacts while also improving economic feasibility

## Assembly & inspection



Flexibly and stably produce high-quality products

## Design & installation support



Introduce new processes quickly and with minimal investment

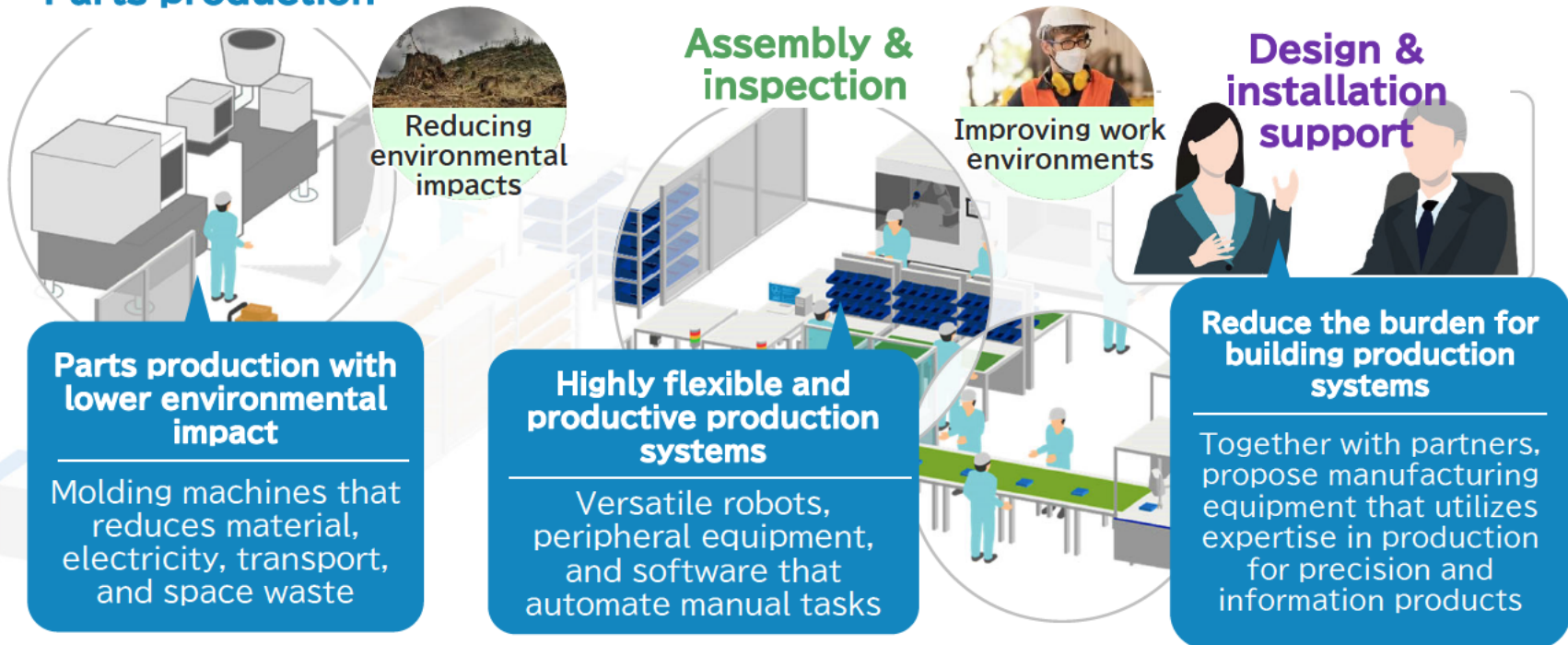
Corporate vision	Goals	Manufacturing	Market size	Strengths	Issues and actions	Financial targets	Examples of initiatives
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# What Epson provides

- ▶ Mitigate environmental impacts, improve work environments, and respond to diverse customer needs

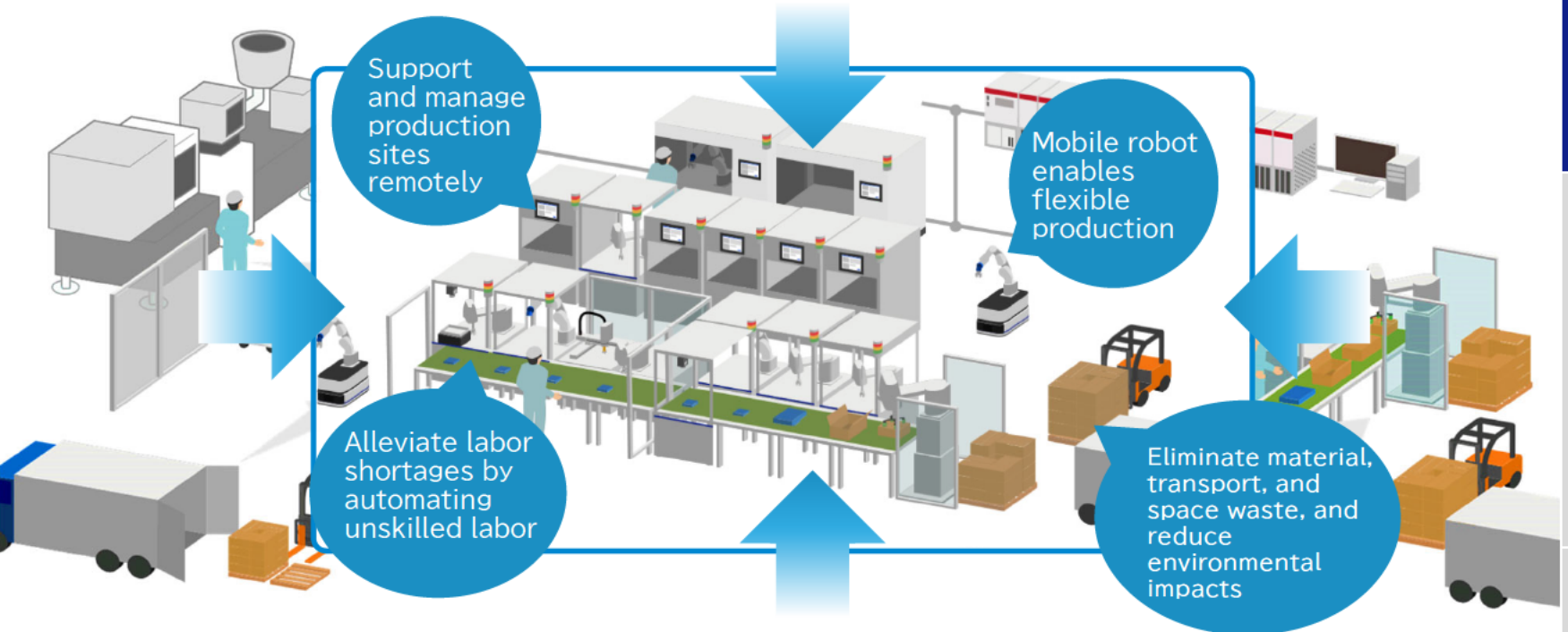
## Parts production



Corporate Vision
Goals
Manufacturing
Market size
Strengths and actions
Financial targets
Examples of Initiatives

# What Epson provides

- ▶ Increase personnel and space productivity and reduce environmental impacts by driving innovations in manufacturing



Corporate Vision
Goals
Manufacturing
Market size
Strengths and Growth strategy
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Examples of Initiatives

Old

**Robotics innovation**

**Sell robots** (sell technologically superior products)



New

**Manufacturing innovation**

**Innovate manufacturing by answering the expectations of customers in factories**

Corporate vision
Goals
Manufacturing
Market size
Strengths and growth strategy
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## 2. Growth strategy

- (1) Market size
- (2) Epson's strengths
- (3) Issues and actions
- (4) Financial targets

▶ Epson will target the *compact* segment of the market

## Parts production

### Molders



CAGR 2.8%

¥1.7 trillion WW

### Compact precision injection molder<sup>2</sup>



CAGR 4.9%

¥110 billion WW

## Assembly & inspection

### Robot<sup>1</sup>



CAGR 5.5%

¥1.0 trillion WW

### Compact robot<sup>3</sup>



CAGR 8.4%

¥230 billion WW

## Design & installation support

### Engineering



CAGR 7.0%

¥2.1 trillion WW

### For 3C & beginners



CAGR 7.0%

¥780 billion WW

\*System design & service (including machines)

## Differentiation backed by efficient, compact and precision technologies

- High-speed, high-precision robots and sensing devices
- Compact, energy efficient, high-precision flat screw

1

## Volume production expertise in compact, precision assembly factories

- Ability to design equipment that delivers high quality and high productivity
- Ability to develop apps and methods that automate complex processing

## Strengths

## Global sales and service network

2

- Sales companies located in major industrial regions
- Building relationships of trust with talented dealers and SIers, mainly in 3C markets

### Parts production



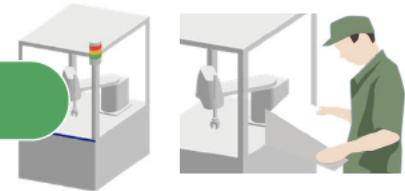
- Reduce material, energy, and space waste
- Efficient high-mix production support
- High-quality production at low cost

### Assembly & inspection



- Labor shortage alleviation and distributed production
- Higher quality and productivity
- Higher utilization rate and earlier trouble management

### Design & installation support



- Rapid machine installation
- Production process innovations

## Customer value

Corporate Vision
Goals
Manufacturing
Market size
Strengths
Growth strategy
Issues and actions
Financial targets
Examples of Initiatives



- ▶ Our strengths are efficient, compact and precision technologies and mass production expertise in compact precision-assembly factories. These strengths enable us to automate tasks formerly only performed by humans

## A collection of strengths



Fast, accurate robots



High-precision sensing devices

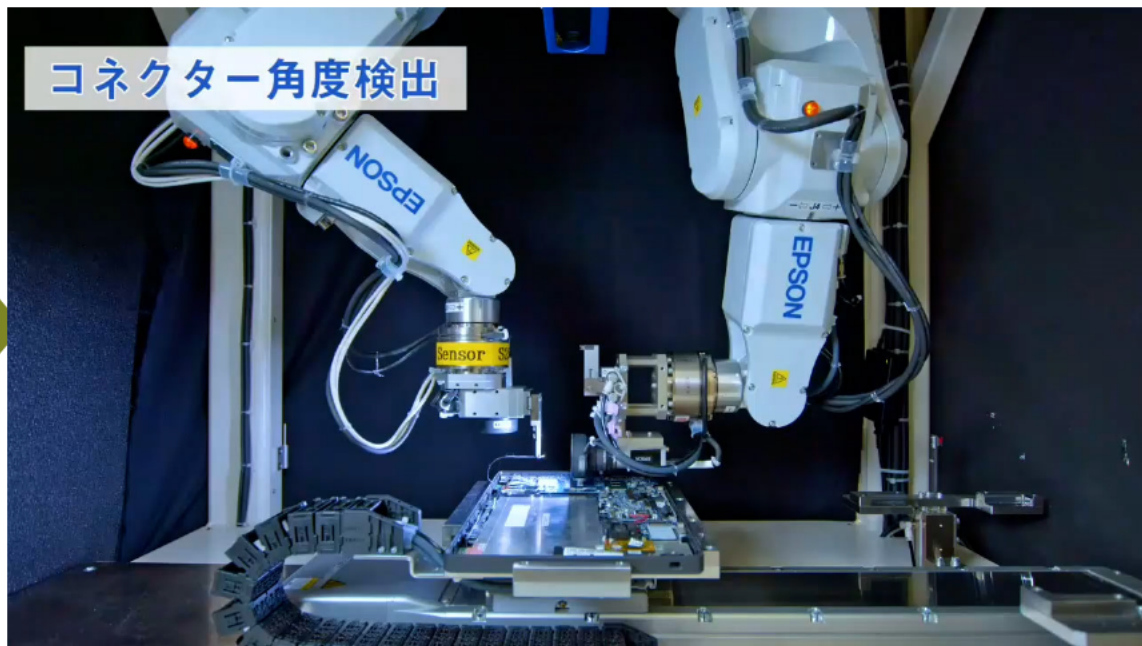


Software optimized from a factory floor perspective



Equipment development capability to automate complex processes

Use of sensing devices enables insertion of soft and flexible items like flexible flat cables



\*Caution: Several scenes have heavy flashes of sensor lighting

- ▶ Our sales and service network spans the globe
- ▶ Leverage the advantage of owning the No. 1 share in the global SCARA robot market along with talented dealers and SIers to meet diverse customer expectations in assembly processes and in other parts production and inspection processes

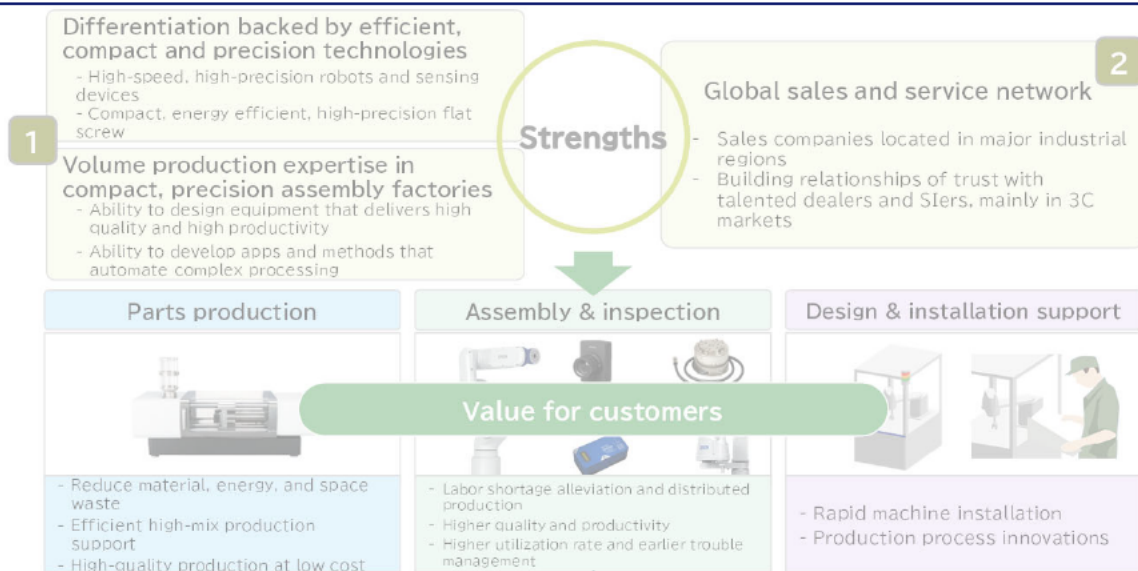


- Manufacturing Solutions Operations Division
- Manufacturing Solutions sales sites

\* No. 1 in industrial SCARA robot unit shipments from 2011 through 2020.  
(Source: Fuji Keizai "2012-2021 Worldwide Robot Market and Future Outlook").



# Issues and actions



Issues

Response to customer needs not fast enough  
Inadequate standardization of parts, slower cost reductions

Action 1

Assembly & inspection

Development of next-generation platforms

Rapid response to customer needs and greater cost competitiveness

Issues

Data is scattered and underutilized  
Proposals are based on personal skill  
Equipment support is slow and reactive

Action 2

Parts production  
Assembly & inspection

Design & installation support

Strengthening DX Infrastructure

Strengthening relationships with customers

# Action 1 | Development of next-generation platforms

Rapid response to customer needs and greater cost competitiveness

Parts production  
Assembly & inspection

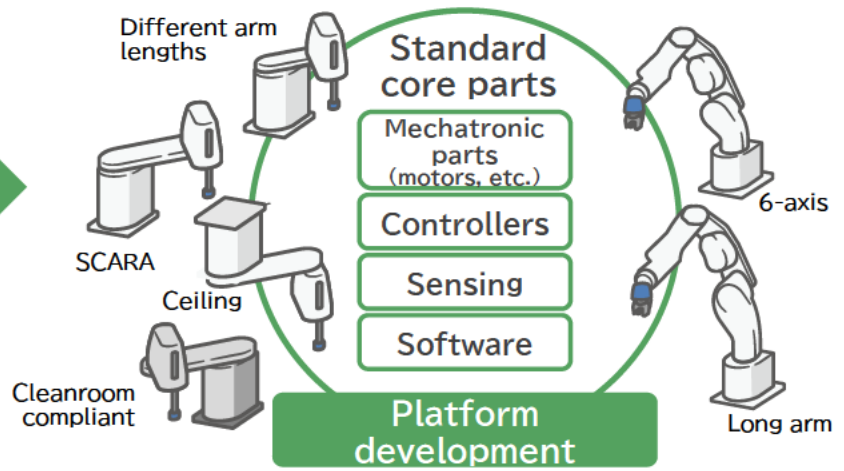
Design & installation support



## Current robot lineup



## Next-generation



\* More shared, standardized core parts will facilitate lineup expansion.

Issues

Response to customer needs not fast enough  
Inadequate standardization of parts, slowing cost reductions

Aims

Rapid response to customer needs with standardized platforms  
Strengthen cost competitiveness by using standard parts

Corporate vision	Goals	Manufacturing	Market size	EPSON's strengths	Growth strategy	Issues and actions	Financial targets	Examples of initiatives
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# Action 2

## Strengthening DX infrastructure

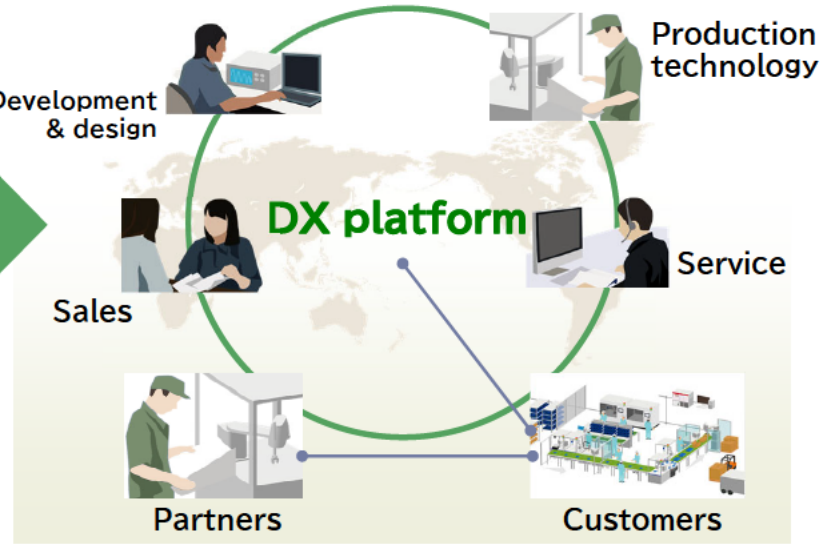
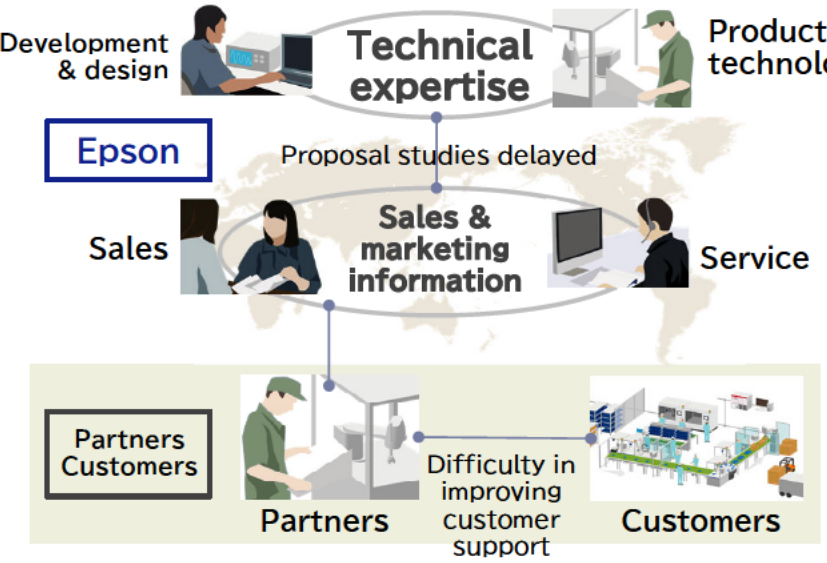
## Strengthening relationships with customers

Parts production  
Assembly & inspection

Design & installation support

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Corporate vision  
Goals  
Manufacturing  
Market size  
Epson's strengths  
Growth strategy  
Issues and actions  
Financial targets  
Examples of initiatives

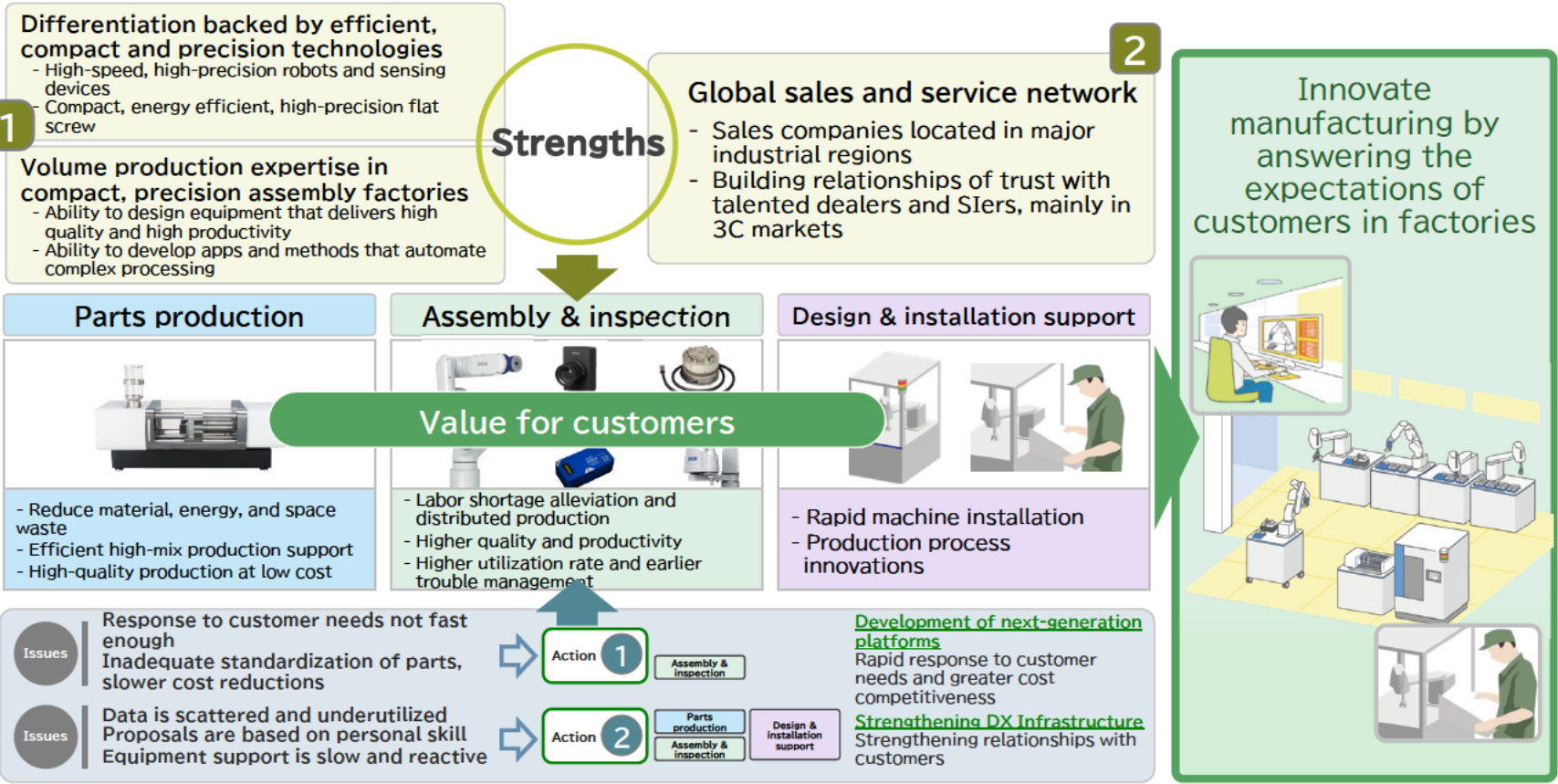


Issues

Data is scattered and underutilized  
Proposals are based on personal skill  
Equipment support is slow and reactive

Aims

Rapid response by centralizing data  
Improve proposals by sharing technical expertise  
Provide early support by monitoring equipment operation

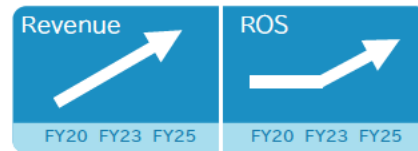


Corporate vision	Goals	Market size	Epson's strengths and actions	Issues and targets	Examples of Initiatives
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Innovate manufacturing by answering the expectations of customers in factories



FY2020 to FY2025 revenue CAGR **+15%** or better



- Parts production
- Assembly & inspection
- Design & installation support

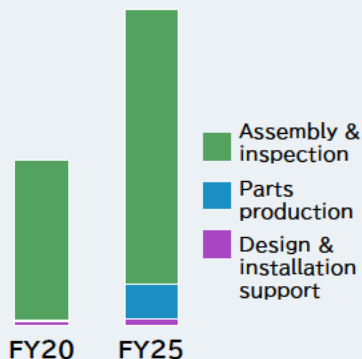
Expand the business footprint

- Parts production
- Assembly & inspection
- Design & installation support

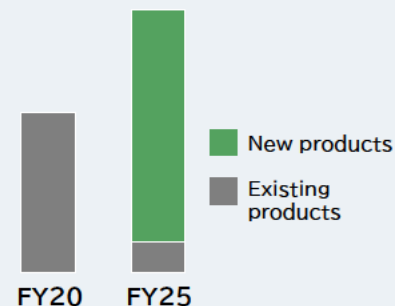
Build next-generation platforms to

- rapidly respond to customer needs
- increase cost competitiveness

Breakdown of revenue by area



Breakdown of new product revenue in assembly & inspection areas

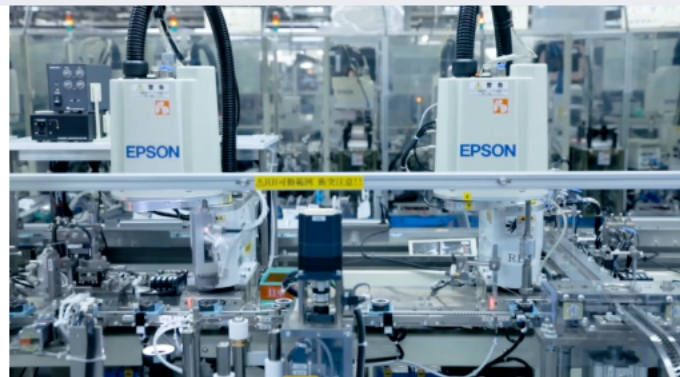


# 3. Examples of initiatives

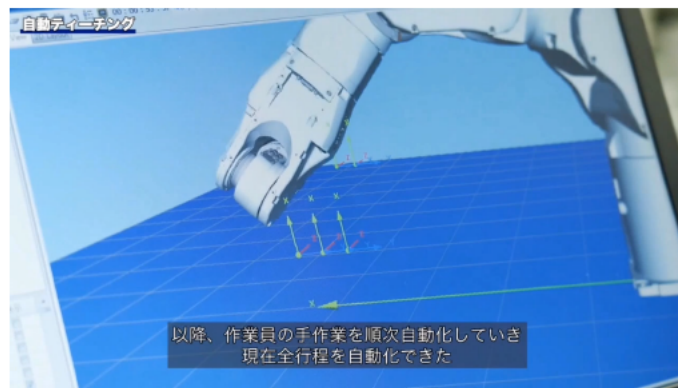
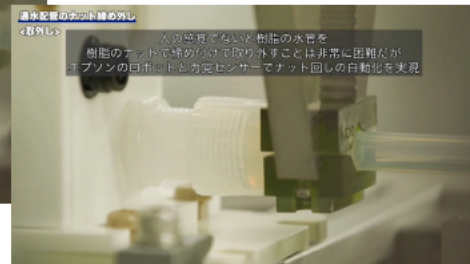
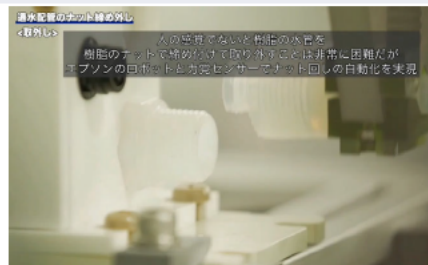
Innovate manufacturing by answering the expectations of customers in factories



## ▶ Build production line in Epson to accumulate knowledge and experience



## ▶ Understand customer expectations and propose solutions



Corporate vision	Goals	Manufacturing	Market size	EPSON's growth strategy	Issues and actions	Financial Targets	Examples of Initiatives
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# Example 3

Robots

Molders

Sensing

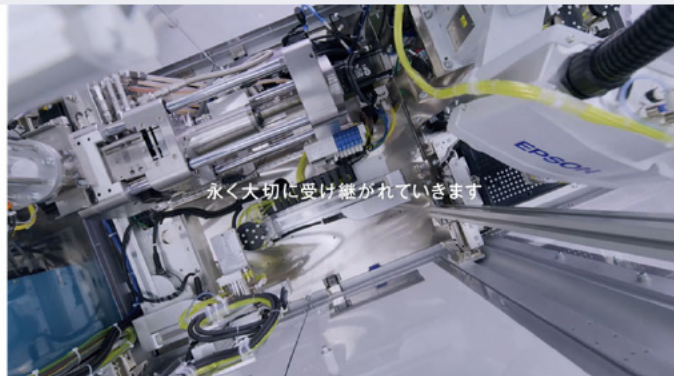
Software

IJ heads

Installation

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## ▶ Complete multiple processes in the factory with a single system



Corporate Vision	Goals	Manufacturing	Market size	EPSON's strengths	Growth strategy	Issues and actions	Financial Targets	Examples of Initiatives
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# Example 4

Robots

Molders

Sensing

Software

IJ heads

Installation

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▶ Print directly on 3D objects by combining inkjet printheads and robots

Before

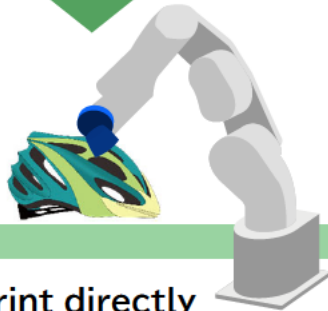
Label printing

Label attachment

Finished



3D surface printer



Print directly



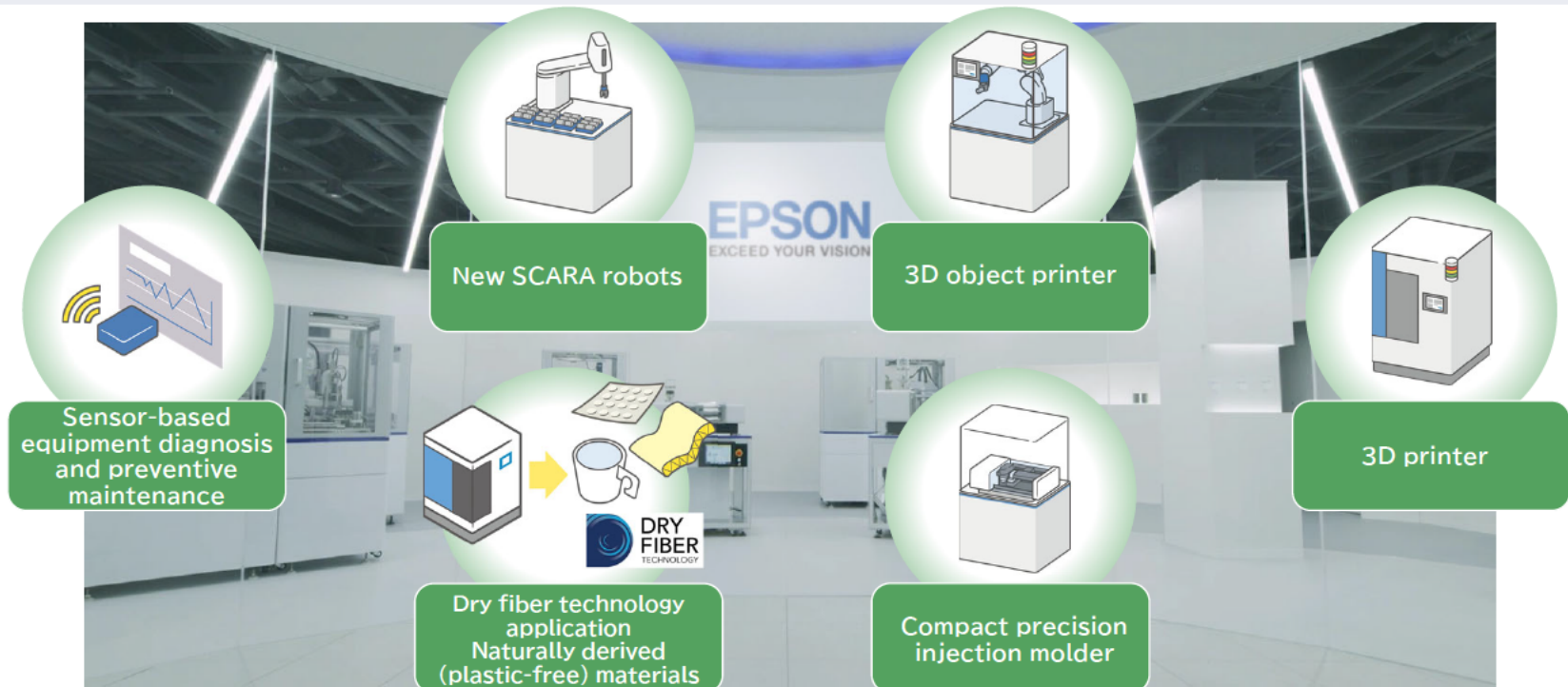
Finished



Corporate vision	Goals	Manufacturing	Market size	EPSON's strengths	Issues and actions	Financial Targets	Examples of Initiatives
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# Additional Information

- ▶ New concept product families will be exhibited at the International Robot Exhibition scheduled for March 2022



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Term	Meaning
<b>Injection molding machine</b>	A machine that works by injecting melted plastic into a mold to form parts (example application: manufacture of plastic model kits)
<b>Peripheral equipment</b>	Hardware that is mounted on, connected to, or used with robots, such as force sensors, vision cameras, vibration feeders, and general-purpose end-effectors
<b>Engineering</b>	Conceptualizing, proof-of-concept testing, designing, manufacturing and improving the operation of automation systems for manufacturing processes (i.e., production engineering)
<b>3C</b>	Communication (mainly smartphones), consumers (mainly of home electronics), and computers (mainly PCs)
<b>Sensing device</b>	Devices that utilize Epson's own sensing technology
<b>Flat screw</b>	A key component technology for Epson's compact precision injection molding machines, flat screws are a disc-shaped plasticizing mechanism (a part that melts and transports resin)
<b>Sler</b>	Here, an Sler refers not to a software system integrator but to a business operator that proposes, conceptualizes, installs, and supports automation systems in manufacturing processes
<b>Sensory inspection</b>	Inspections performed to assess product quality using human senses, such as sight for visual inspections and tactile/pressure sensing for inspecting motion during assembly