Visual Communications Business Strategy

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Seiko Epson Corporation
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Projectors

Smart eyewear
New laser projectors

EB-L1300U  
8,000 lm

EB-L1505U  
12,000 lm

EB-L25000U  
25,000 lm
Still Driving the Projector Market
Epson Projectors that Popularized Presentations

1989
The VPJ-700, a pioneering 3LCD projector

1994
The ELP-3000, the projector that pioneered the projector market

Developed the projector market, and made presentations a part of business culture
Advantages of Projectors

◆ Ability to flexibly render images
  ➢ Adjust to any screen size
  ➢ Project images of any shape (aspect ratio)
  ➢ Project on almost any surface
  ➢ High mobility and installation flexibility

◆ The bigger the screen, the greater the energy efficiency advantage
Visual Communications Business Segments

- Uses expanded as performance increased
  - First half of the 1990s: VGA, 300 lm  Today: SVGA, 3,000 lm to WUXGA, 25,000 lm
- Reinforced the product portfolio as the market expanded

<table>
<thead>
<tr>
<th>Year</th>
<th>Picture Size</th>
<th>Business</th>
<th>Schools</th>
<th>Stores</th>
<th>Events</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>120-300”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>High-brightness</td>
</tr>
<tr>
<td>1995</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>80-150”</td>
<td></td>
<td></td>
<td></td>
<td>Ultra-short &amp; short throw</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>-80”</td>
<td></td>
<td></td>
<td></td>
<td>Standard</td>
<td>Incubation categories (signage, lighting, etc.)</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Place used
- Theater room
- Living room
- Various places
- Home

Smart eyewear B2B

Smart eyewear B2C
Epson Projector Unit Shipments and Share

- Cumulative unit shipments: 20 million+ units (as of the end of August 2016)
  - Annual unit shipments continue to expand
  - For the past few years we have strategically expanded ultra-short and short throw category

![Graph showing Epson projector unit shipments & global market share by product category.](image)

- Market share: 33%
- Unit shipments: 2.4 million units

*Share of projectors with 500 lumens or more. Source: Futuresource Consulting Ltd.*
Vision for the Future of Visual Communications
Epson 25 Corporate Vision

Creating a new connected age of people, things and information with efficient, compact and precision technologies.
Epson 25 Corporate Vision: Visual Innovation

Refine original microdisplay and projection technologies, and create outstanding visual experiences and a natural visual communications environment for every aspect of business and lifestyles.

Signage

Lighter, more compact; sensing and AR technology

Lighting

Ultra-high brightness technologies

Smart eyewear

Laser light source and other optical control technologies

Lighter, more compact; sensing and AR technology
Epson’s Projector Business Strengths
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.

- **Voice of the customer**
  - inkjet innovation
  - visual innovation
  - wearables innovation
  - robotics innovation

- **Vertically-integrated business model**
  - Sales/support ...... Reflect customers’ opinions
  - Manufacturing ...... Precision manufacturing
  - Design
  - Planning

- **Unique core devices**
- **Original core technologies**
- Efficient, compact and precision technologies

- **Plan/design competitive products**
  - Print heads
  - Optical engines
  - Quartz devices
  - Semiconductors

- **Expertise accumulated since Epson was founded**
  - Micro Piezo
  - Micro display
  - Sensing
  - Robotics
  - New core technologies

- Actuator, light control and sensing technologies
Epson’s Core Technologies and Core Devices for Projectors

◆ Core technologies & core devices for gorgeous images

**High-Temperature Polysilicon (“HTPS”) TFT liquid crystal panels**
- **High resolution**
  - e.g. 1920 x 1080 pixels on 0.61” (~1.5 cm) diagonal panel
- **High optical efficiency**
- **Long lifespan**
  - Inorganic alignment layer for high environmental resistance
- **Epson-produced for stable quality**

**3LCD system optical design engineering & manufacturing technology**
- Optical component unit development capability
- Optimum combinations
- Miniaturization & energy efficiency
How Epson Projectors Work

3LCD, 3-chip optical engine

The 3 primary colors (RGB) are combined and projected on a screen.

Other major projection system

RGB are displayed sequentially and combined with black-and-white images for a certain amount of time.
Advantages of Epson Projectors

◆ Brighter, sharper, more natural-looking images than competing technology

◆ Brightness
  ➢ Colors up to 3X brighter*1

◆ Gamut
  ➢ Up to 3X wider color gamut, with excellent color reproduction & gradations*2

◆ Movie support
  ➢ Smooth playback of even fast-moving images. No color breakup.

Note: The gamut volumes of these 3LCD projectors and other major projection systems, such as 1-chip DLP, were generated using the brightest mode possible. Volume was measured in 3D in the CIE L*a*b* coordinate space.

*1 Compared with other major projection system. Color Brightness (Color Light Output) measured in accordance with IDMS 15.4. Color Brightness will vary depending on usage conditions. Leading 3LCD projectors compared to leading 1-chip DLP projectors, based on NPD data for June 2013 through May 2014 and PMA Research data for Q1 through Q3 2013.

*2 Compared with other major projection system. Gamut volume of leading 3LCD projectors compared to leading 1-chip DLP business and education projectors, based on NPD data for June 2013 through May 2014. Volume is measured in 3D in the CIE L*a*b* coordinate space.
New Added Value Using Peripheral Technologies

- **Innovations in communication using interactive technology**
  - Using tables and other surfaces as interactive displays
  - Finger touch-enabled interactive functionality
  - PC-free interactivity

- **High added value with applied camera technology**
  - Easy Image Alignment
  - Auto-correction of picture quality & colors
  - Auto color correction for multi-projector displays
  - Maintain high-quality with auto color correction
  - Camera for auto correction
  - Easily combine multiple images
## Extensive Lineup

- **Extensive lineup for every size and type of venue**
  - 364 models in 60 series worldwide (as of the end of August 2016)
- **Strong trust relationships with customers and sales channels**

These are only some of the models in Epson’s lineup. Epson products and services vary by region.

<table>
<thead>
<tr>
<th>Home</th>
<th>Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>High quality</td>
<td>Ultra short-throw desktop</td>
</tr>
<tr>
<td>Standard</td>
<td>Enhanced specs</td>
</tr>
<tr>
<td>Built-in DVD player</td>
<td>Wall-mountable ultra-short throw</td>
</tr>
<tr>
<td>Basic</td>
<td>Bright permanent installation</td>
</tr>
<tr>
<td>Mobile</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th>Large venues and events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhanced specs</td>
<td>EB-L25000U</td>
</tr>
<tr>
<td>Ultra short-throw desktop</td>
<td>EB-L1000 Series</td>
</tr>
<tr>
<td>Wall-mountable ultra-short throw</td>
<td>EB-Z Series</td>
</tr>
<tr>
<td>Ultra short-throw desktop</td>
<td>EB-G7000 Series</td>
</tr>
<tr>
<td>Wall-mountable ultra-short throw</td>
<td></td>
</tr>
</tbody>
</table>
Sustained creation of high-performance projectors from Epson’s R&D departments

- Develop core devices & projectors
  - Develop devices-based vision of end-user requirements and product trends
  - Develop projectors that make the most of device characteristics
  - Synergistic effect produced by consolidating in a single location

Overwhelming lead in number of registered patents*

<table>
<thead>
<tr>
<th>No. of registered projector-related patents in Japan &amp; the U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Japan</td>
</tr>
<tr>
<td>U.S.</td>
</tr>
</tbody>
</table>

*Cumulative numbers from 2006 to 2015
Ability to Meet Cost Targets

- Internal production for increased cost competitiveness
- Control of stable quality
- Stable component supply

Platform standardization among models and generations

Combination of HTPS TFT panels, lamp, and projection lens

Light-guide with standard shape and size

Entry model component costs & ratio of internal production

Cost of parts (where FY03 is 100%)

Internal production rate (monetary basis)
Production Capacity

◆ Preparation of production plants to handle mid-term demand growth
  ➢ HTPS TFT panel production in Japan
    ✓ Suwa Minami Plant & Chitose Plant
  ➢ Assembly performed overseas, where there is a strong labor pool
    ✓ China (Shenzhen) & the Philippines

Suwa Minami Plant  Chitose Plant  New factory in the Philippines
Full-scale operations to start in the spring of 2017
Enhanced Sales Channels

◆ A variety of sales channels for the best sales and support organization for customers
  ➢ Strong trust relationships with sales channels
  ➢ Earn the No. 1 share with multiple channels in major countries

Mass retailers ➔ Web ➔ AV equipment dealers ➔ Rental dealers

Home ➔ Business & stores ➔ Schools ➔ Entertainment & events
Service and Support Network

◆ Worldwide service and support
  ➢ Provide customer-centric market support network that emphasizes speed
    ✓ Sales sites around the world
    ✓ Skilled, low-cost repair service overseas
The Projector Market and Epson’s Status
**Projector Market Environment and Outlook**

- Projector market will remain steady, with unit shipments synchronized with major sporting events

<table>
<thead>
<tr>
<th>Category</th>
<th>Market size (FY2015)</th>
<th>Outlook</th>
</tr>
</thead>
<tbody>
<tr>
<td>High brightness*, total</td>
<td>190,000 units 2.3 billion USD</td>
<td>Demand to steadily expand</td>
</tr>
<tr>
<td>Units with 10,000 lm or more</td>
<td>25,000 units 1 billion USD</td>
<td>The launch of competitive models by Epson will further stimulate market expansion</td>
</tr>
<tr>
<td>Ultra-short &amp; short throw</td>
<td>7.3 million units 6.5 billion USD</td>
<td>Demand particularly in the education segment will remain steady, but competition from FPDs is expected.</td>
</tr>
<tr>
<td>Standard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home</td>
<td></td>
<td>Demand will be steady due to the increase in available content and greater variety in how visual content is enjoyed in the home</td>
</tr>
</tbody>
</table>

* High brightness is defined here as a projector that produces at least 5,000 lm and has a replaceable lens.

Date: Futuresource Consulting Ltd.
Projector Competitive Environment

- Though we have established a dominant global presence, there are still untapped regions & product categories.
  - China, EMEA (Europe, the Middle East & Africa) & high-brightness category

Global market share (unit volume)

- 7.5 million units

Product category | Epson’s share
--- | ---
High brightness, total | 16%
Units with 10,000 lm or more | 10%
Ultra-short and short throw, standard, home | 33%

Brand share by region & category in FY2015
Data source: Futuresource Consulting Ltd.
Growth Initiatives
Growth Initiatives

◆ Refine original microdisplay and projection technologies, and create outstanding visual experiences and a natural visual communications environment for every aspect of business and lifestyles.
  
  ➢ Strengthen sales and support for customers in all regions
    ✓ Sales policies in high potential regions (China, EMEA)
  
  ➢ Continue to evolve core technologies and devices to expand projector applications
    ✓ Expand the high-brightness segment primarily by using the new laser light source, and create new markets to achieve mid-term growth.
Sales Policies in High-Potential Regions (China, EMEA)

◆ China
  - Strengthen development of channels such as AV equipment & rental dealers
  - Expand sales of interactive projectors for education
  - Focus sales promotions on rapidly expanding online markets

◆ EMEA (Europe, the Middle East, & Africa)
  - Further reinforce the sales organization to develop the high-brightness market
  - Build a sales organization in emerging markets (Middle East, etc.) and roll out sales campaigns
  - Raise awareness that 3LCD projectors produce up to 3X brighter colors
Evolve Core Technologies & Devices to Achieve Visual Innovation

- **HTPS TFT panels**
  - Higher definition
  - Longer lifespan

- **Laser light source**
  - High brightness
  - Long lifespan
  - Low power consumption

- **Si-OLED microdisplays**
  - Smaller, lighter, higher definition
    - High image quality for unprecedented AR & VR experiences

- **Gorgeous images**
- **Brighter, more amazing big displays**
  - High-performance, high-brightness projectors

- **Provide images in new spaces**
  - Signage, lighting, etc.

- **Enable new ways to communicate**
  - Smart eyewear
Advantages of High-Brightness Epson Projectors

◆ Produce amazing, scalable big-screen images
◆ High investment efficiency and peace of mind for users

➢ High-brightness and a long lifespan
  ✓ Inorganic materials and laser light source for long-term reliability

➢ Bright yet compact
  ✓ 30% smaller than previous model

➢ Bright yet have low power requirement
  ✓ High energy efficiency
  ✓ Heat generation controlled

➢ Highly robust due to new sealed construction
  ✓ Dust-proof construction and smoke protection
New Market Creation: Signage and Lighting

- Projectors for signage and spatial performance, etc.
  - Propose new displays that leverage the advantages of projection technology
    - Project an endless variety of images anywhere and in any size

Dramatic spatial performance in the home
Dramatic spatial performance in retail
New Market Creation: Smart Eyewear

◆ Develop new markets by providing wearable new ways to communicate information

➢ Advantages of Epson smart eyewear
  ✓ Anytime, anywhere*
  ✓ Binocular, see-through lenses
  ✓ Hands-free

*Be sure to exercise care when using smart eyewear.
New Market Creation: Smart Eyewear

Smart eyewear is uniquely able to form certain markets in the personal, service and industrial fields.

**Personal**
- Spread use with new ways to enjoy

**Service**
- Offer a smart tourism experience
- Exhibit commentary at museums

**Industry**
- Support the development of industry and society
  - Equipped with Epson's high-precision sensors BT-2000

- Movies
- Images photographed by drones
- Information about works at art museums
- Use in projector assembly
Financial Targets
Visual Communications Business Targets

◆ Financial targets

<table>
<thead>
<tr>
<th></th>
<th>FY2015 Result</th>
<th>FY2016 Forecast</th>
<th>FY2018 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>¥184.0 billion</td>
<td>¥173.0 billion</td>
<td>¥200.0 billion</td>
</tr>
<tr>
<td>Business profit</td>
<td>¥15.5 billion</td>
<td>¥15.0 billion</td>
<td>Steadily improve profitability while strategically investing</td>
</tr>
<tr>
<td>Exchange rates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USD</td>
<td>¥120.14</td>
<td>¥106.00</td>
<td>¥115</td>
</tr>
<tr>
<td>EUR</td>
<td>¥132.58</td>
<td>¥121.00</td>
<td>¥125</td>
</tr>
</tbody>
</table>

◆ Key indicators

<table>
<thead>
<tr>
<th></th>
<th>FY2015 Result</th>
<th>FY2016 Forecast</th>
<th>FY2018 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of projectors</td>
<td>2.4 million units</td>
<td>Up 4% vs. FY2015</td>
<td>Up 20% vs. FY2015</td>
</tr>
<tr>
<td>Share of high-brightness (10,000 lm or higher) category</td>
<td>10%</td>
<td></td>
<td>Double</td>
</tr>
<tr>
<td>New segments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smart eyewear</td>
<td>Launch products for industry</td>
<td>Launch OLED products</td>
<td>Smart eyewear is uniquely able to form certain markets in the personal, service &amp; industrial fields</td>
</tr>
<tr>
<td>Signage &amp; lighting</td>
<td></td>
<td></td>
<td>Aim to contribute under the next mid-range business plan</td>
</tr>
</tbody>
</table>
EPSON
EXCEED YOUR VISION