

Growth Strategy for Medical Systems Business

Shimadzu Corporation

Kunimasa Ito, Managing Executive Officer and
Medical Systems Division General Manager

Current Status of Business

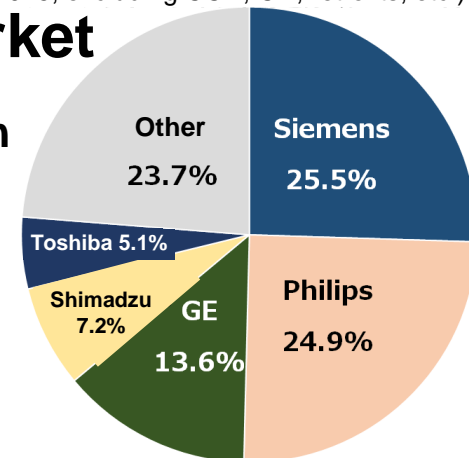
Overview of Diagnostic Imaging Equipment Market

● Global market for diagnostic imaging equipment is about 3 trillion yen with strong growth.

➤ Of that, global market size for diagnostic X-ray systems is about 700 billion yen.

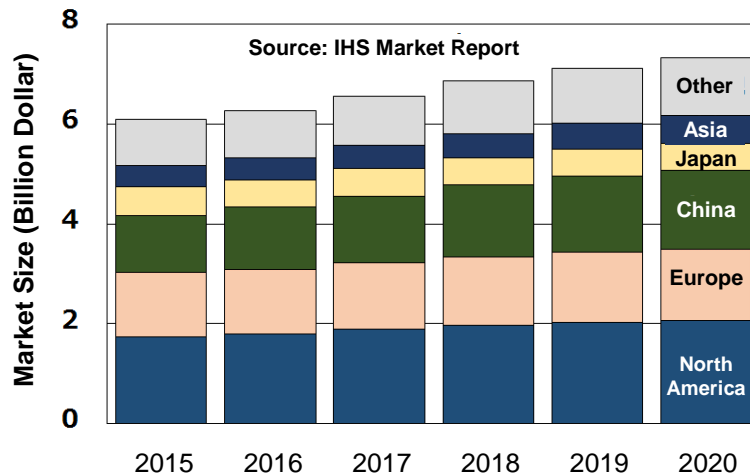
- ◆ Globally, Shimadzu is the fourth largest (7.2%), after the three major non-Japanese manufacturers.
- ◆ Increasing number of companies entering the radiography equipment market (general radiography systems and mobile X-ray systems) has resulted in intense price competition and commoditization
- ◆ The most important regions are the United States, Japan, and China, which have large domestic markets.

Diagnostic X-Ray System Market Share (2015, excluding CCD, CR, retrofits, etc.)

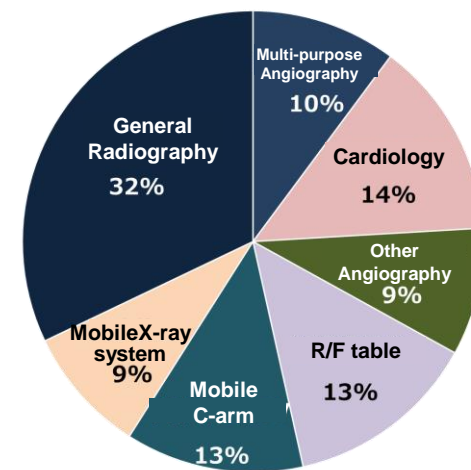


Source: IHS Market Report

Diagnostic X-Ray System Market by Region (Excluding CCD, CR, retrofits, etc.)



Diagnostic X-Ray System Market Share by Model (Source: HIS X-Ray Intelligence Database, 2016)

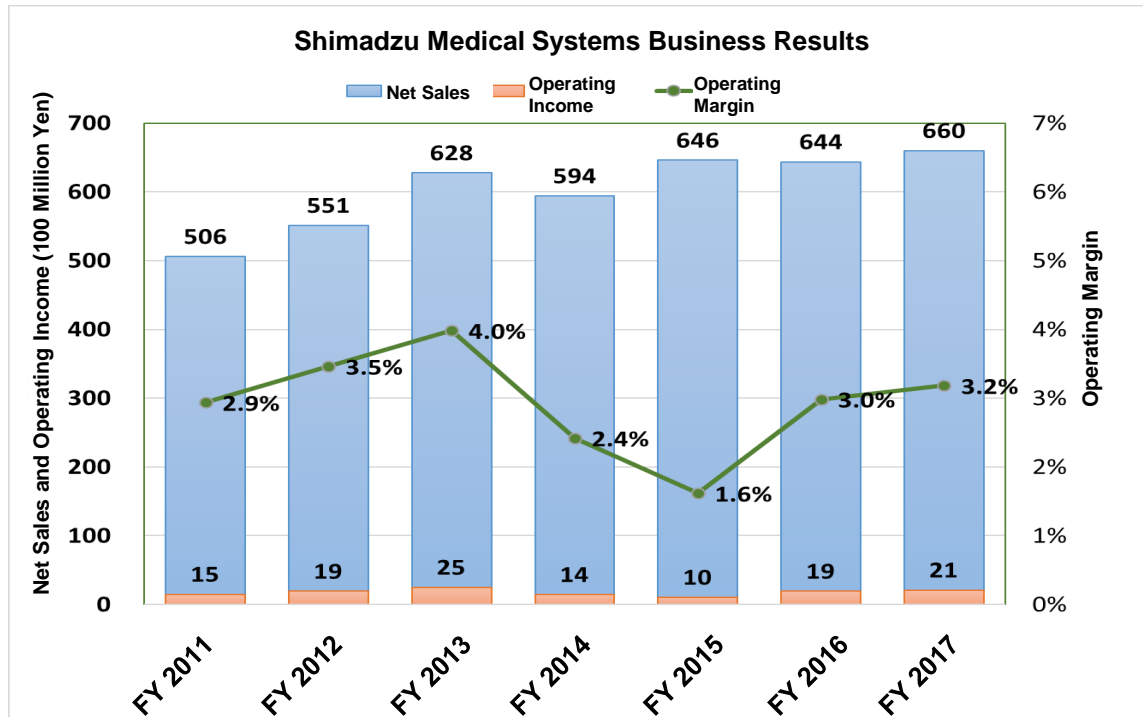


Current Status of Business

Medical Systems Business Results

- **It is essential to improve growth potential and reform profit structure.**

- Consolidated net sales grew by 15.4 billion yen in six years (+30 % at 4.5 % CAGR).
In addition to strengthening the base of key businesses (X-ray businesses), also establish businesses in new areas.
- Aim to improve profitability by implementing structural reforms for consolidated operating income.



• FY 2017 values are from values published February 7, 2018.

Product Line and Direction for Increasing Competitiveness

Diagnostic X-Ray Systems

Expanding/Improving Diagnostic Capabilities



General Radiography System



Mobile X-Ray System



Fluoroscopy System

Improving Treatment Support Functionality



Mobile C-arm System



Angiography System

Fluoroscopy/Video Recording Functions

Medical Service Efficiency Improvement Solutions



Electronic Medical Records System

Returning Patient Reception System

Advanced Diagnostic Solutions



PET System



Near-Infrared Imaging System

New Treatment Support Solutions



Fluorescence Imaging System



Radiation Therapy System

Medium-Term Management Plan

Overview of New Medium-Term Management Plan

Achieving Sustained Growth and Improved Profitability by Strengthening Angiography System, North America, and Aftermarket Businesses

Performance Targets for Year Ending March 2020

Consolidated Sales	71.0 billion yen (10 % increase from year ending March 2017)
Consolidated Operating Income	4.0 billion yen (135 % increase from year ending March 2017)

Angiography System Business

Target sales for year ending March 2020:
57 % increase from year ending March 2017

North America Business

Target sales for year ending March 2020:
26 % increase from year ending March 2017

Aftermarket Business

Target sales for year ending March 2020:
9 % increase from year ending March 2017

Medium-Term Management Plan

Strengthening the North America Business

- **Achieve the next growth by strengthening business capabilities and releasing new products.**
Target sales for year ending March 2020: +26 % increase from year ending March 2017
 - Expand sales of diagnostic X-ray systems.
 - ◆ KLAS, a third-party institution, awarded Shimadzu's digital X-ray system as the best in U.S. (awarded seven times since 2009).
 - ◆ Digital X-ray system market is strong due to changes in Medicare coverage.
 - ◆ **Sales of Mobile X-ray Systems are strong.**
FPD can be freely selected based on the customer needs.
 - Expand sales of angiography systems
 - ◆ Establish and strengthen sales/service capabilities.
 - ◆ **Create installation sites corresponding to respective clinical applications.**
 - Strengthen support for customers in the East
 - ◆ **Establish a parts center in the East.**
 - ◆ **Establish a training center.**



Medium-Term Management Plan

Strengthening the North America Business

● New product release

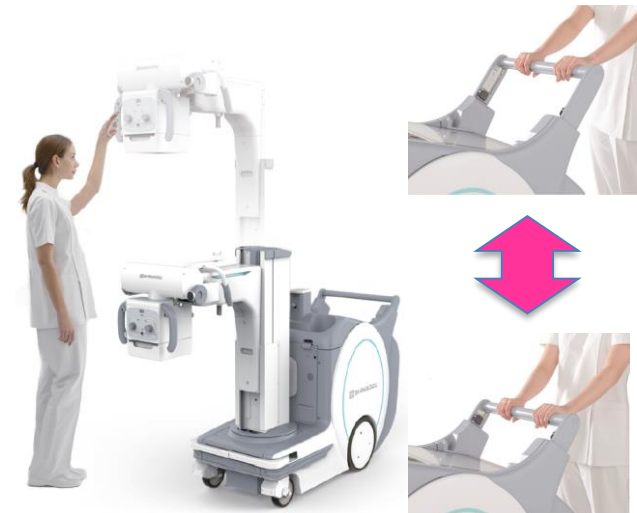
➤ MobileDaRt Evolution MX8 series (November 2017)

Aim to become number one digital mobile system in the world.

- ◆ The collapsible column during travel to realize a virtually unobstructed wide field of view, significantly increase user comfort.
- ◆ Advanced usability
Large monitor screen, adjustable steering handle height, and wireless operation
- ◆ Supports DR Neutral 2.0 and FPD can be freely selected from four models.
- ◆ Improved security, patient confirmation, and theft prevention

➤ Trinias unity edition series (October 2017)

➤ Digital general radiography system for clinics scheduled for release (FY 2018)



Award for Shimadzu X-Ray Business Strategy

Award Received from Frost & Sullivan in the U.S.

2017 Global General Radiography Product Line Strategy Leadership Award



Shimadzu received the award due to high marks for global strategy and product deployment for X-ray diagnostic imaging systems.

Applicable Models

RADspeed Pro EDGE package,
MobileDaRt Evolution MX7 version
SONIALVISION G4, etc.



Fluoroscopy



Radiography



Mobile X-ray

Medium-Term Management Plan

Strengthening the Aftermarket Business

● Service businesses

Target sales for year ending March 2020: +9 % increase from year ending March 2017

➤ Customer Support Center established (in Japan)

Call center is available 24-hours a day, 365 days a year (April 2017).

- ◆ Phone calls are answered by technical experts.
- ◆ Remote problem diagnosis/repair and interactive remote maintenance services
- ◆ User support strengthened for procedure support system
- ◆ Analyze data, accumulate experience, and deploy outside Japan.

➤ Started new premium services (May 2017)

- ◆ 24-hour on-site service

➤ Global Parts Center (October 2017)

- ◆ Established in Singapore.
- ◆ Expand/improve capabilities for supplying parts in Asia region.

カスタマーサポートセンター ご紹介資料



日本を網羅する、 安心のサービスネットワーク。

サービス-販売拠点は、北海道から九州まで、全国に広く展開。
各エリアのサービス拠点には、熟練した技術と知識を誇る
サービスエンジニアが常駐し、どんな時もスピーディーに正確に、
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カスタマーサポートセンター
運営時間：24時間7days
1日の業務：夜間もしくは休日の緊急センターへ転送・緊急対応の対応 業務時間外は専用



Medium-Term Management Plan

Strengthening the Angiography System Business

- **Support minimally invasive catheterization procedures.**

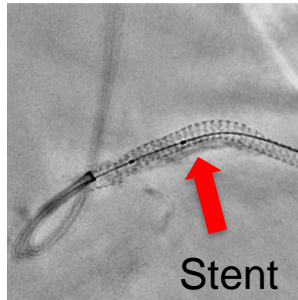
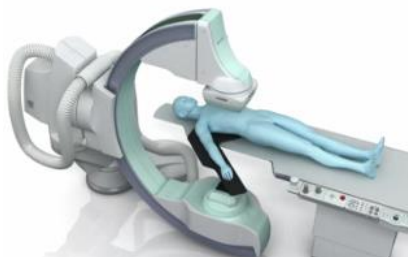
Target sales for year ending March 2020: +57 % increase from year ending March 2017

Healthcare technologies that developed in Japan, where there are few complications and hospitalization periods are short (catheter access via the wrist) are penetrating markets outside Japan.

→ Take advantage of Shimadzu product strengths cultivated in Japan.

- **New Trinias unity edition series released** (October 2017)

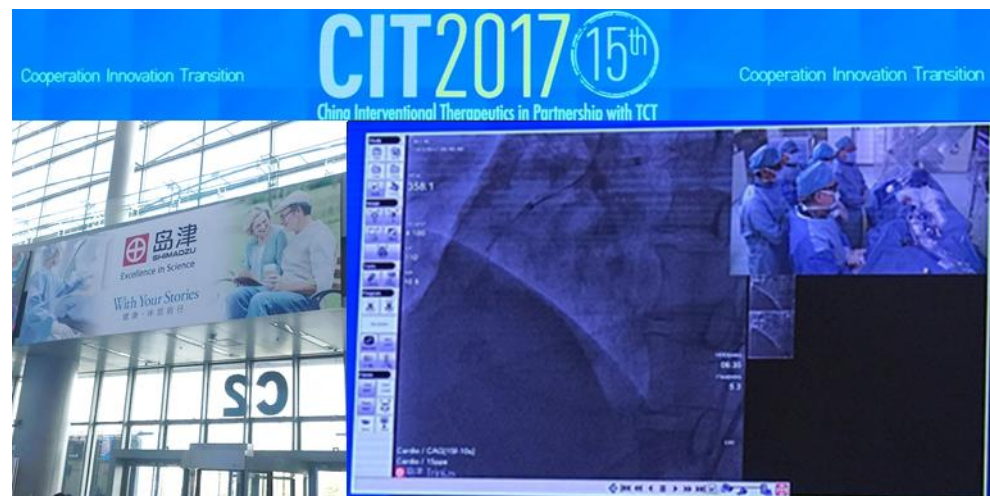
- ◆ Develop application software for supporting interventional procedures.
- ◆ Based on three concepts—reduce exposure, reduce contrast media, and reduce procedure time.
- ◆ SMART table featuring tilt function and software for supporting lower extremity interventional procedures
- ◆ Large FPD systems added to product line



Medium-Term Management Plan

Strengthening the Angiography System Business

- **Strengthen sales in markets outside Japan.**
Support adoption of Japanese medical technology outside Japan.
- **Enter North America market.**
 - ◆ Establish sales/service capabilities.
 - Strengthen sales departments.
 - Establish a service/application training center.
 - Establish a parts center in the East.
 - ◆ Exhibit at Transcatheter Cardiovascular Therapeutics in the U.S.
- **Focus efforts on China and Southeast Asia markets.**
 - ◆ Strengthen sales activities in the interventional procedure market.
 - ◆ China International Therapeutics Used Shimadzu products for live demonstration of procedure.



Achieving Additional Growth Increase/Strengthen Production Capacity and Reduce Costs

- **Build new building at manufacturing subsidiary Shimane Shimadzu Corporation.
Investment: 1.74 billion yen
Scheduled construction completion: February 2019**
 - Main plant for manufacturing diagnostic X-ray systems
 - Expand production capacity by 50 % (by 2025).
Expand/strengthen machining equipment and expand production area.
Utilize IoT technologies and improve production efficiency.
 - Establish new design and prototyping center.
Share expertise with head office plant.
Evaluate prototypes quickly.
Reduce costs.
 - Centralize product distribution.
Reduce logistics costs further.



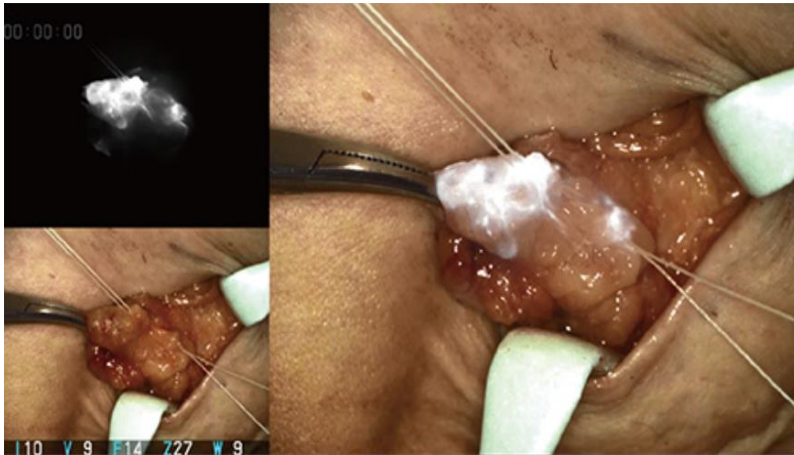
Shimane Shimadzu Corporation
(Izumo City, Shimane)

Achieving Additional Growth

Expanding Clinical Applications for Near-Infrared Technologies

- **Expand clinical applications for a fluorescence imaging system.**

- Expand applications for ICG agents.
Identify plus evaluate blood flow through blood vessels and tissue in Japan. lymph nodes
- Expand range of medical treatment departments applicable for clinical applications.
Departments of breast surgery, plastic surgery, cardiovascular surgery, gastrointestinal surgery, and hepato-biliary-pancreatic surgery



Identification of Breast Sentinel Lymph Nodes (Breast Surgery Department)

Image provided by: Mammary Gland Center, Kochi Medical School Hospital



LIGHTVISION

Achieving Additional Growth—Reducing Healthcare Costs and Promoting Cooperation Between Hospitals and Clinics

Using AI to Reduce Wait Times at Hospital to Zero

- NEDO project for Excellence in Next-Generation Artificial Intelligence Technology Fields
Investigative research on using artificial intelligence to infer optimal clinical departments
- Create new businesses using open innovation by industry-academia collaboration (both universities having a guidance role).
 - Startup company having advantage of cloud computing technology—A.R.I.
 - Experience using AI for healthcare—Hamagami Laboratory, Yokohama National University
 - Guidance on healthcare information—Teikyo University Hospital

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基本情報を入力して下さい

性別を選択して下さい

男性 女性

年齢を入力して下さい

59 歳

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痛い かゆい

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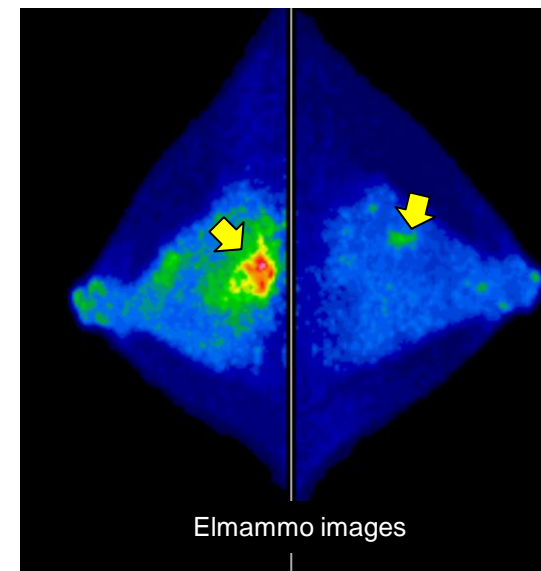
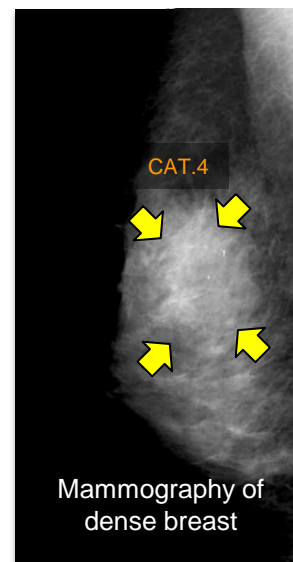


New Measures for Health Management

Subsidizing Breast PET Screening for Employees

- Increasing breast cancer screening rates and providing Shimadzu's healthcare technology to employees
- Combining ultrasound and PET breast exams results in about half the exposure dose of a stomach X-ray. Achieve a breast cancer screening method that is pain-free and patient-friendly.
- Full cost of breast PET examination plan reimbursed.
- Goal is to not only increase screening rates, but also to reduce the number of deaths from breast cancer in the future.

SHIMADZU PINKRIBBON PROJECT



Comparison of Mammography and Breast PET Images

Advanced Healthcare Measures

- From localized blood sampling to interventional procedures
- Establish method for early detection of Alzheimer's from blood.
- Support research on new cancer treatment methods—cancer photoimmunotherapy.





SHIMADZU

Excellence in Science

Contributing to Society through Science and Technology
Realizing Our Wishes for the Well-being of both Mankind and the Earth

- ➔ Future result values indicated in this presentation document are projections of the future based on information available at the time the document was released and include potential risks and uncertainties. Consequently, due to a wide variety of factors, actual results may differ significantly from the projections indicated in this document.