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Strategy for Medical Systems Business

Shimadzu Corporation

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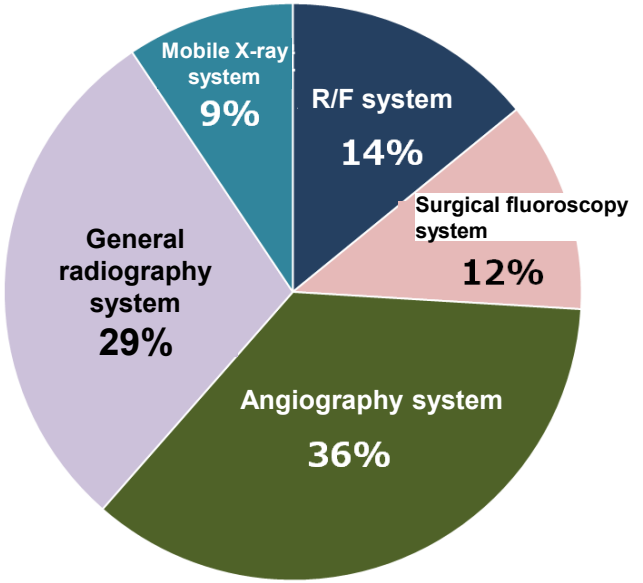
SHIMADZU

Current Status of Business

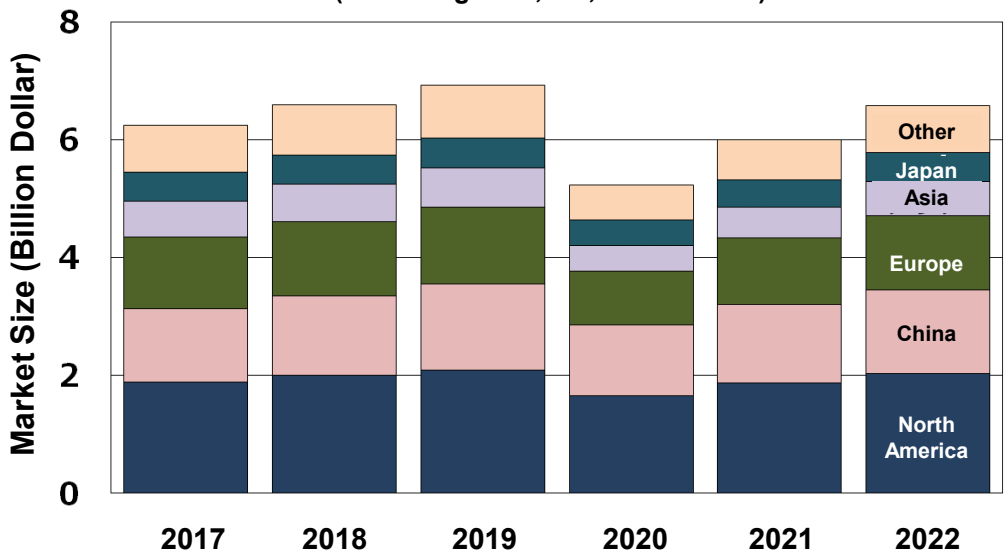
Overview of Diagnostic Imaging System Market

- Global market for diagnostic imaging systems is about 3 trillion yen with strong growth.
  - Of that, global market size for diagnostic X-ray systems is about 700 billion yen (in 2019).
    - Globally, Shimadzu is the fourth largest (with a 7 % market share), after the three major non-Japanese manufacturers.
    - The most important regions are the United States, China, and Japan, which have large domestic markets.
  - In 2020, due to the COVID-19 pandemic, demand for mobile X-ray systems increased significantly, but demand for large medical systems, such as R/F systems and angiography systems decreased significantly.

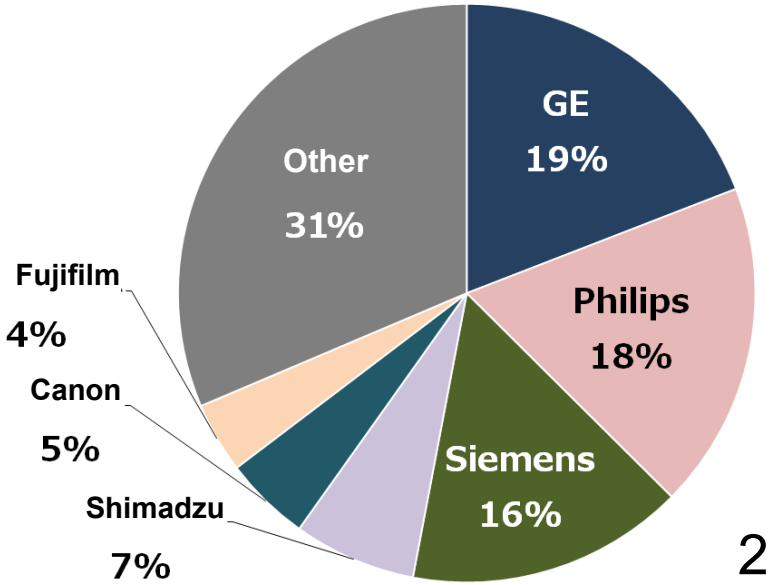
Diagnostic X-Ray System Market Share by Model
(2019, excluding CCD, CR, and retrofits)



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



Diagnostic X-Ray System Market Share
(2019, excluding CCD, CR, and retrofits)

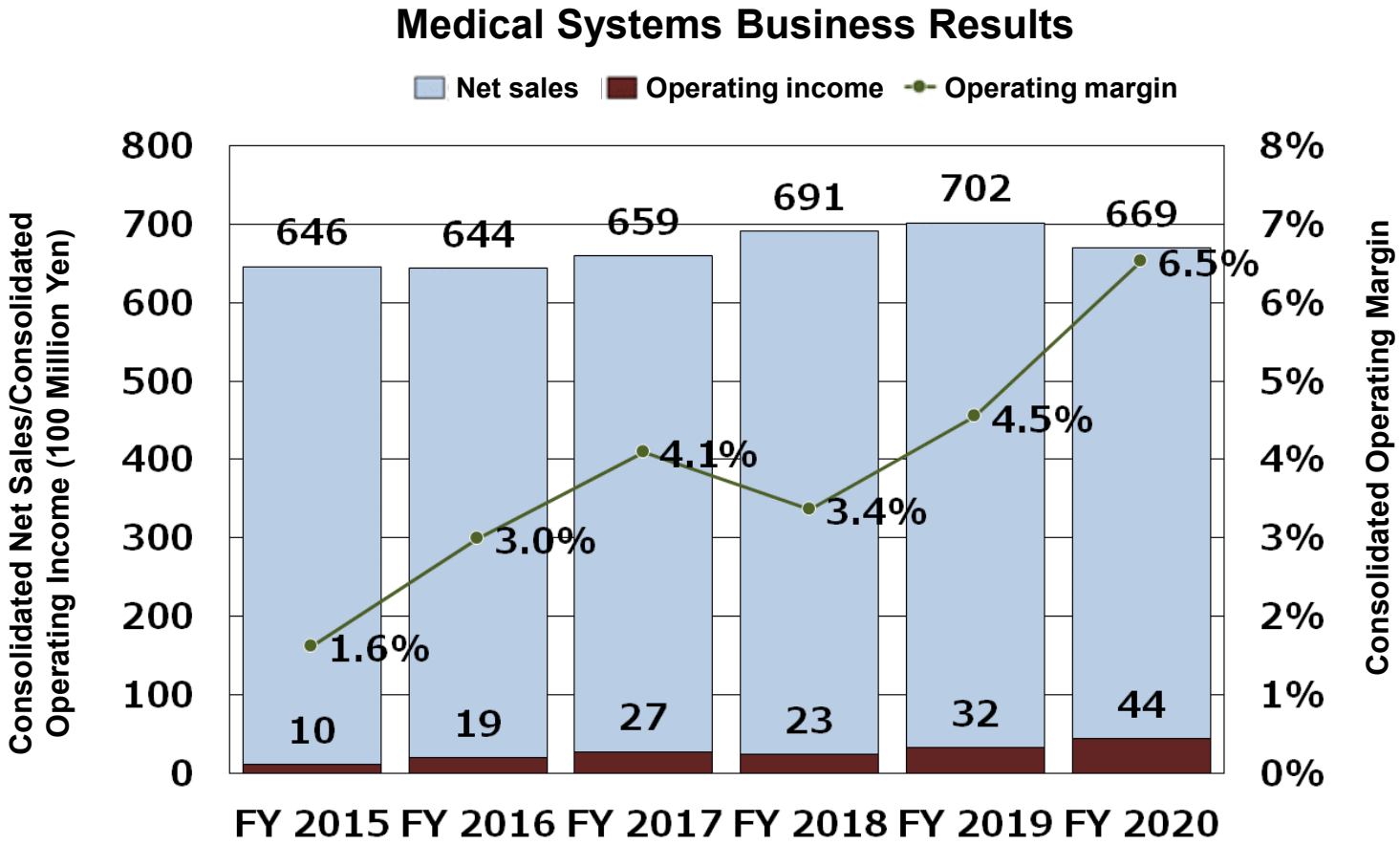


Sources of market data:
Shimadzu estimates based on IHS market data, F&S market data, and other sources

Current Status of Business

Medical Systems Business Results

- Consolidated Net Sales: Decreased last year due to changes in standards used to recognize profit and due to market changes associated with the COVID-19 pandemic
  - ➢ During the four years of growth maintained until FY 2019, net sales increased by 5.6 billion yen (8.7 % increase at a 2.1 % CAGR).
- Consolidated Operating Income: Improved significantly, increasing by 3.3 billion yen during a five-year period (420 % increase at a 33.1 % CAGR)



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 Procedure Support Functionality

Angiography System

Fluoroscopy/Video Recording Functions

Medical Service Efficiency Improvement Solutions

Medical Information System

Advanced Diagnostic Solutions

Near-Infrared Imaging System

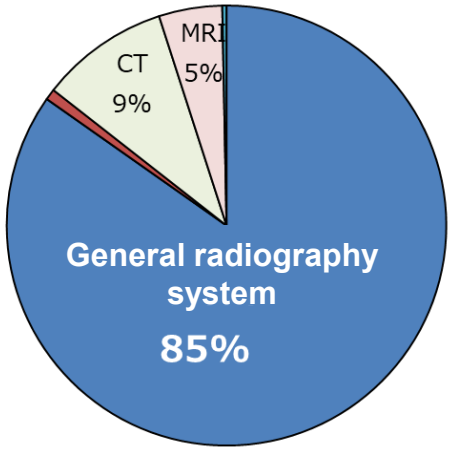
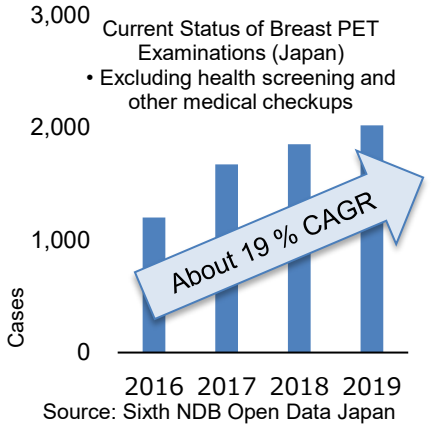
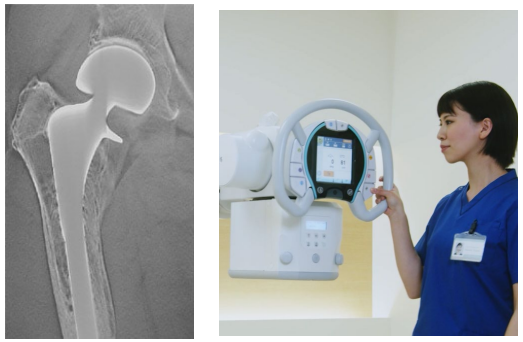
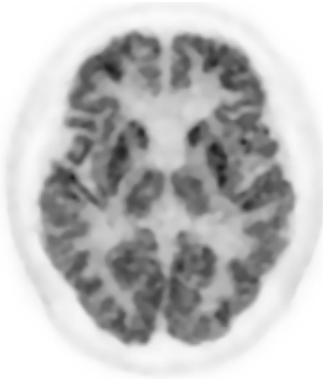
PET System

New Procedure Support Solutions

Near-Infrared Fluorescence Imaging System

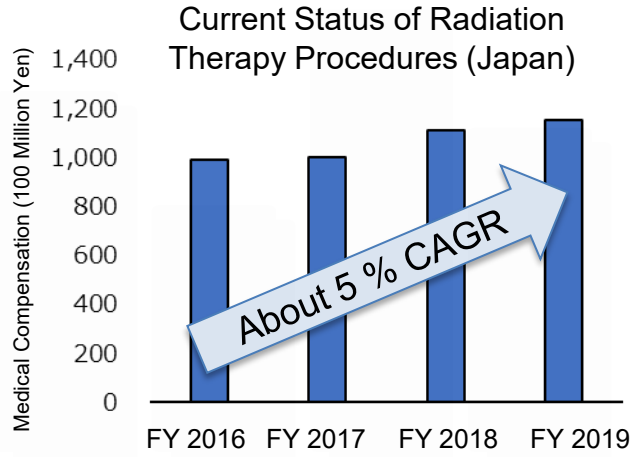
Radiotherapy System

Clinical Value of Products—Expanding/Improving Diagnostic Capabilities

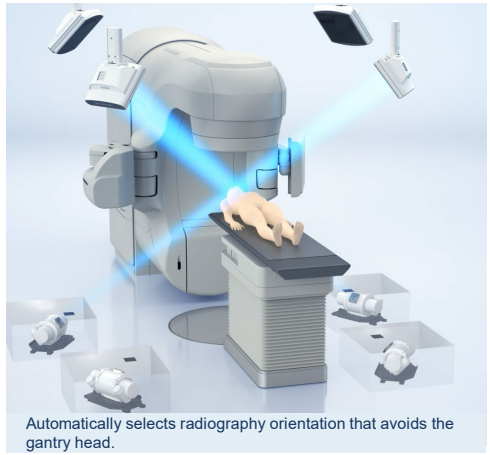
Product	General Radiography System	Mobile X-Ray System	Fluoroscopy System	PET System
Clinical Value	 Number of Diagnostic Imaging Cases (within Japan during FY 2019) Source: Sixth NDB Open Data Japan	Enables radiography wherever necessary based on a battery-powered operation and addresses infectious diseases 	 This year is 60th anniversary of first remotely-operated diagnostic X-ray system! Dynamic fluoroscopic imaging enables rapid diagnoses 	● Early detection of breast cancer ● Head PET examination  Source: Sixth NDB Open Data Japan
Features	● Reduces operator fatigue. ● FPD is freely selectable.  POWER GLIDE	● Enables examinations even in confined spaces. ● Freely flexible operability  GLIDE VIEW	● Supports examinations for many purposes. ● AI-assisted bone mineral density measurement ● Assists artificial joint replacement surgery.   	● High-resolution PET images show detailed pathological changes. 

Clinical Value of Products—Improving Procedure Support Functionality

Product	Surgical Fluoroscopy System	Angiography System	Radiotherapy System
Clinical Value	Dynamic fluoroscopic imaging supports minimally invasive surgery even in confined operating rooms	Enables quick catheterization procedures for cardiovascular disorders that occur suddenly	Supports accurate radiotherapy for moving areas of the body
Features	● Clean cable-free design ● Optimal X-ray parameter control reduces X-ray dose levels. ● Suitable for small and confined operating rooms	● Broad whole-body movement range supports interventional procedures anywhere in the body. ● High image quality with low X-ray dose levels	● Tumor-tracking function helps irradiate tumors with pinpoint accuracy in organs subject to movement.



Source: Sixth NDB Open Data Japan

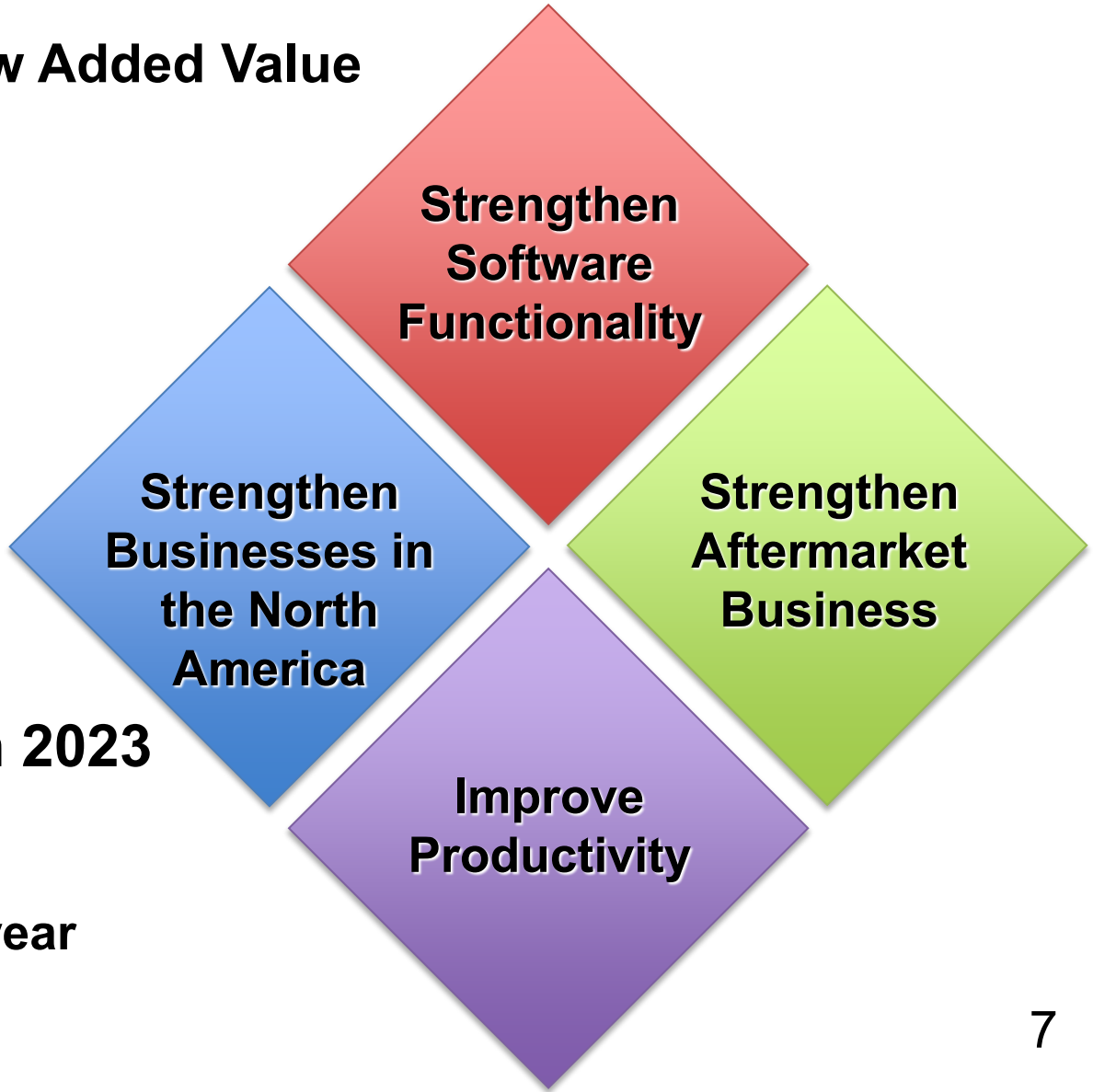


Overview of New Medium-Term Management Plan

Expand Profitability by Constantly Offering New Added Value

Rebuild businesses while responding to changing business conditions

- Expand added value by strengthening software functionality, such as with image processing and AI technologies.
- Expansion in North America: Increase penetration of hospital networks and strengthen direct sales/service capabilities.



Performance Targets for Year Ending March 2023

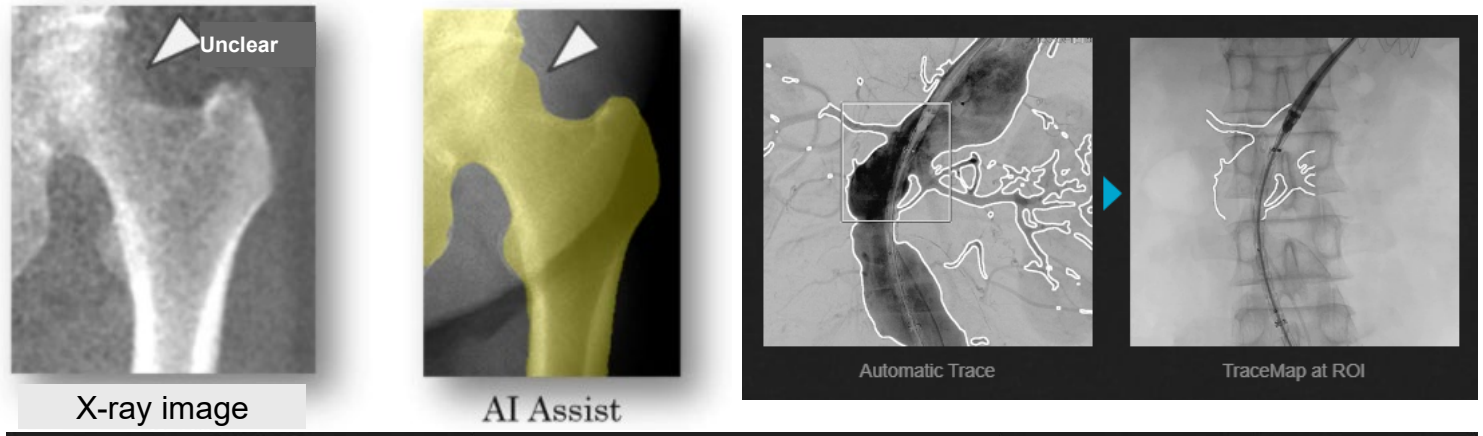
Consolidated Net Sales: 72.0 billion yen
(103 % increase from year ending March 2020)

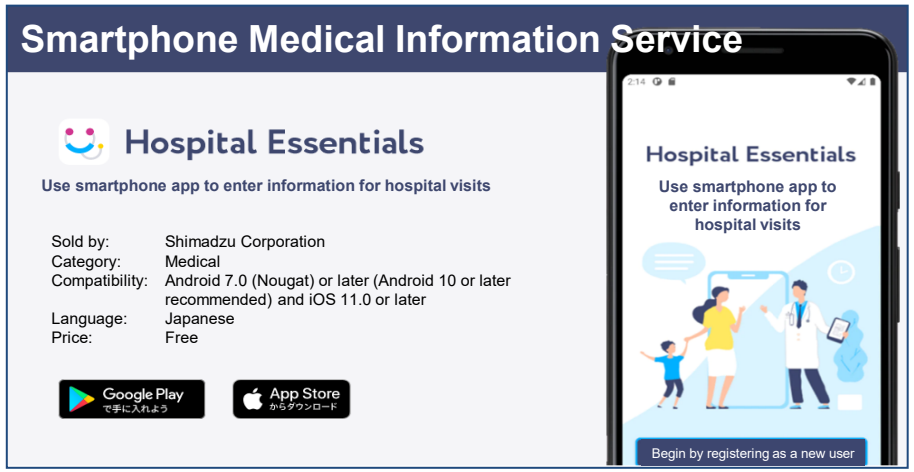
Medium-Term Management Plan

Strengthening Software Functionality

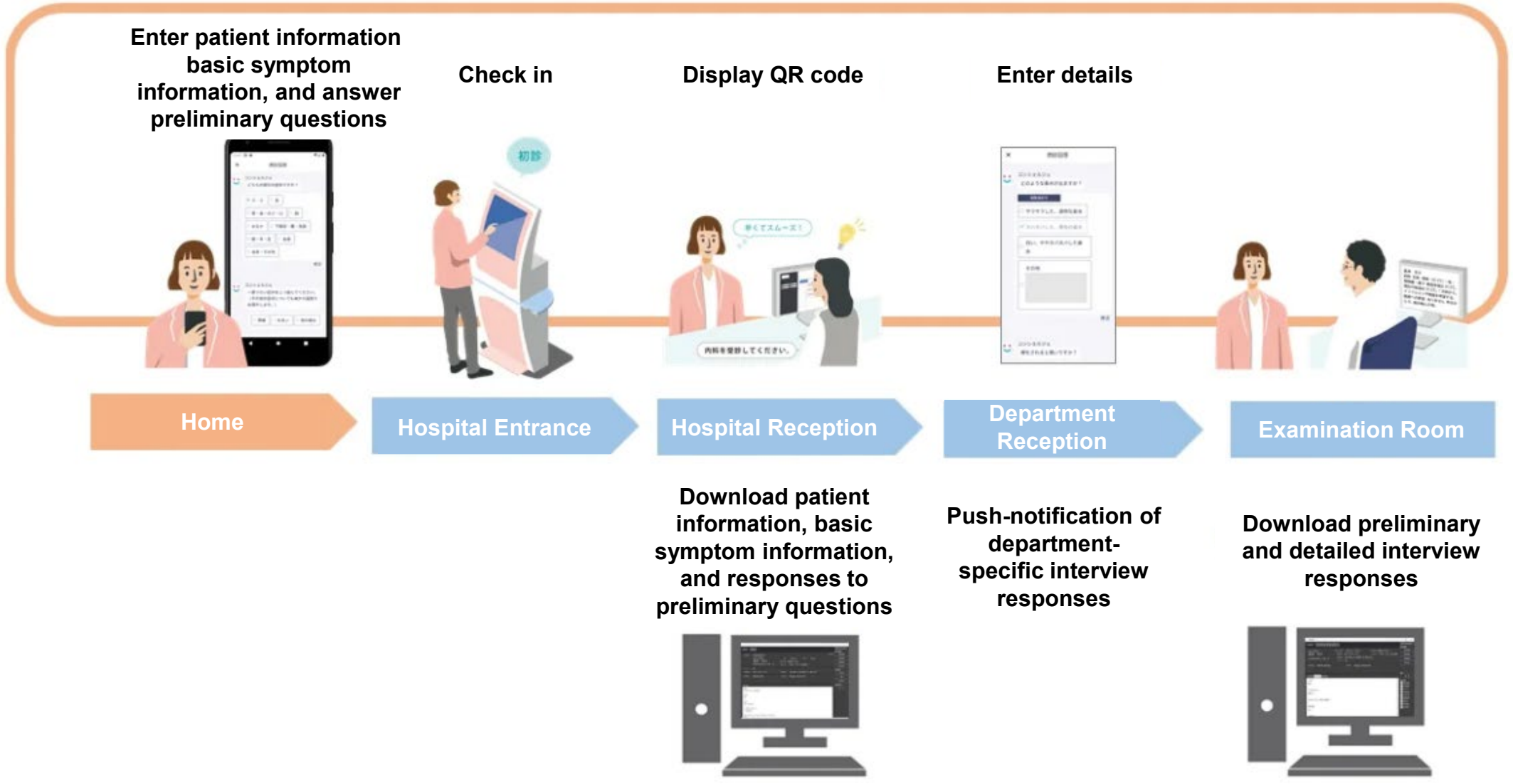
- Deploy subscription business and expand added value by strengthening software functionality, such as with image processing and AI technologies.
  - Deploy AI technologies.
    - ➢ Automate expert operating methods.
    - ➢ Increase image quality and decrease X-ray dose levels.

- Deploy subscription business.
  - Sell software.
  - Offer digital patient interview services.





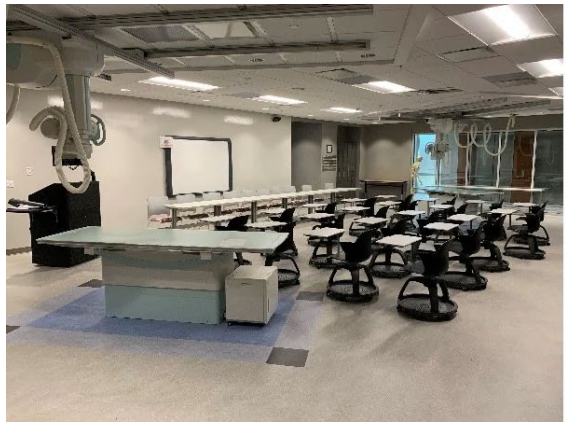
“Hospital Essentials” Digital Patient Interview Service

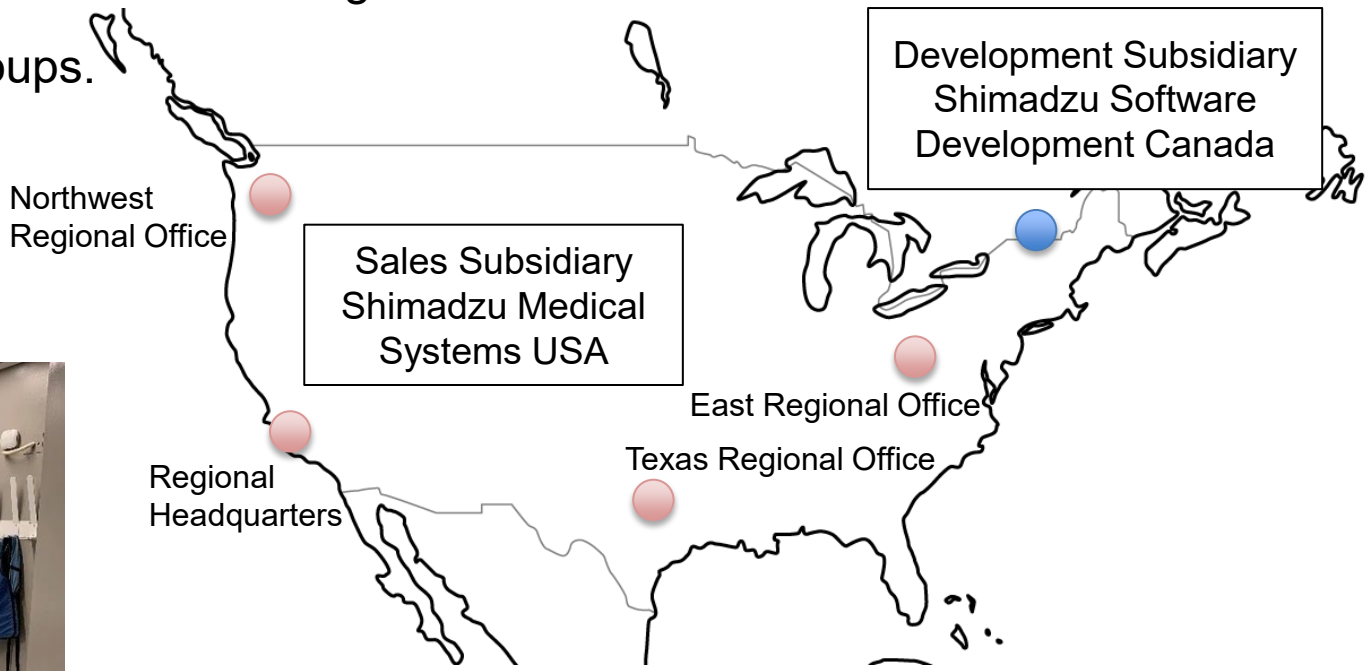


Medium-Term Management Plan

Strengthening Businesses in the North America

- Reorganize sales network with expanded direct-sales and direct-service regions.
  - ➢ January 2019: Acquired Core Medical Imaging, Inc.
    April 2020: Integrated Washington state and three neighboring states as territory covered by Northwest Regional Office.
  - ➢ Study the potential of further expanding direct sales/service regions.
- Strengthen sales activities to regional hospital groups.
- Jointly establish radiological technologist teaching/training facility in partnership with Midwestern State University (United States).





Medium-Term Management Plan

Strengthening Businesses in the North America

- Strengthen sales expansion of new products with modest sales growth due to the COVID-19 pandemic.
  - ➢ FLUOROspeed X1 Patient-Side R/F System

    Offer an ultimate multipurpose X-ray examination room.
    - ■ High quality digital system equipped with FPD and state-of-the-art X-ray dose level reduction functionality
    - ■ Patient-side operability demanded in the U.S.
    - ■ Also include features for examining elderly and obese patients, in addition to regular examinations.
  - ➢ SONIALVISION G4 Remote-Controlled R/F System

    Strengthen digital radiography functionality and include chest exam capability.
  - ➢ RADspeed Pro General Radiography System

    Add new diagnostic functionality to general radiography systems by adding dynamic imaging with kinetic analysis capability.
    - ■ Lung function visualization, breathing function assessment, and postoperative follow-up observation

FLUOROspeed X1

Medium-Term Management Plan

Strengthening Aftermarket Business

- Service Businesses

Target sales for year ending March 2023:
10 % increase versus year ending March 2019
At least 30 % service-to-sales ratio

- Utilize customer support centers.

  Strengthen support for users of diagnostic/treatment support systems.
  - Offer 24-hour on-site service and periodic inspections on holidays and closed days.
  - Deploy in China. (Scheduled to open in October 2021)

- Expand service coverage area. (U.S. and Japan: April 2020)
  - Strengthen direct service capabilities, expand sales, and increase profitability.

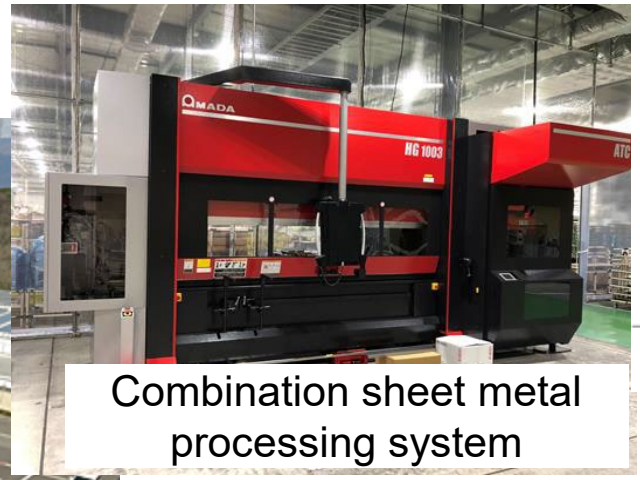
- Collect information for IoT-based remote maintenance and failure prediction.
  - Remote troubleshooting/repair and interactive remote maintenance services
  - Analyze data, accumulate experience, and deploy outside Japan.

Medium-Term Management Plan
Improving Productivity
(Strengthen Shimane Shimadzu, Manufacturing Location in Japan)

- Two years since startup of new facilities (new building and combination sheet metal processing equipment)
  → Significantly improve productivity.
  - ➢ Promote cost reductions, such as by moving processes in-house, consolidating simple tasks, and reducing labor hours.

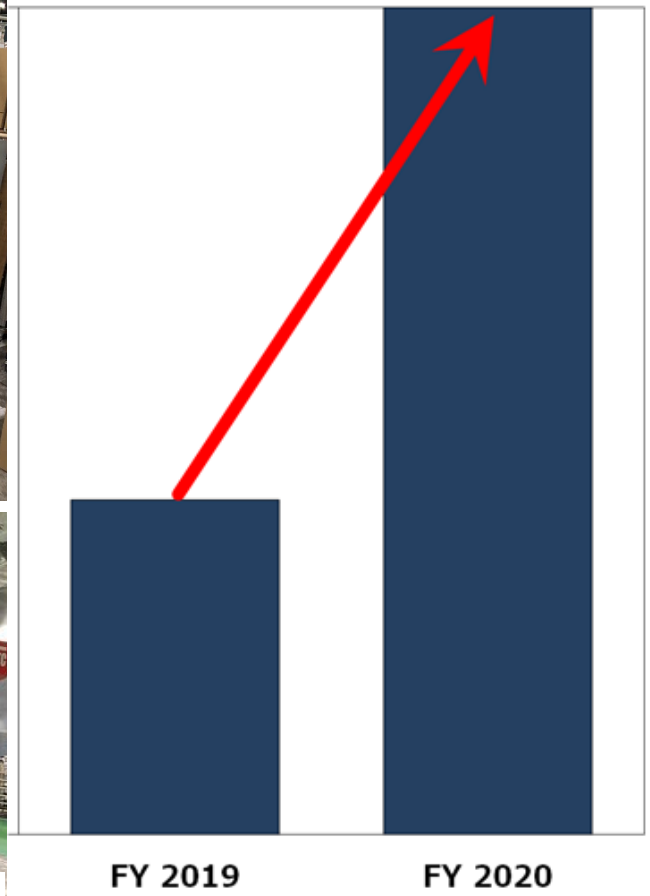
- During FY 2020, ensured production capacity for satisfying increased demand for mobile X-ray systems (about 200 % year-on-year increase).
- During FY 2021, continue production by flexibly sourcing parts and materials that are difficult to obtain globally.

New building



Combination sheet metal processing system

Production Quantity of Mobile X-Ray Systems



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Responding to Changing Business Conditions

Sales of Digital Mobile X-Ray Systems

MobileDaRt 6000 units

- Importance of mobile X-ray systems recognized due to pandemic
  ⇒ Offer user-friendly operability.
- Offer new value with rapid diagnostic imaging for patient rooms, emergency medicine, and operating rooms.

For a Wide Variety of Customer Applications

Integrated DR Model with Large Monitor

For Customers with Existing DR Systems

Image Processing, Security, and Other Software Upgrades

Fig.9-2 Normal Mode

Fig.9-3 Catheter Tip Enhancement Mode (Fine-View)

- Large monitor enables rapid on-the-spot diagnosis: Integrated DR model
- Freely selectable FPD makes introduction easier: DR neutral
- Expand aftermarket business by selling service contracts and optional products for existing mobile X-ray systems.

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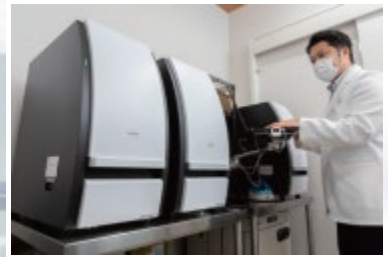
Responding to Changing Business Conditions

Sales of AutoAmp™ Genetic Analyzer

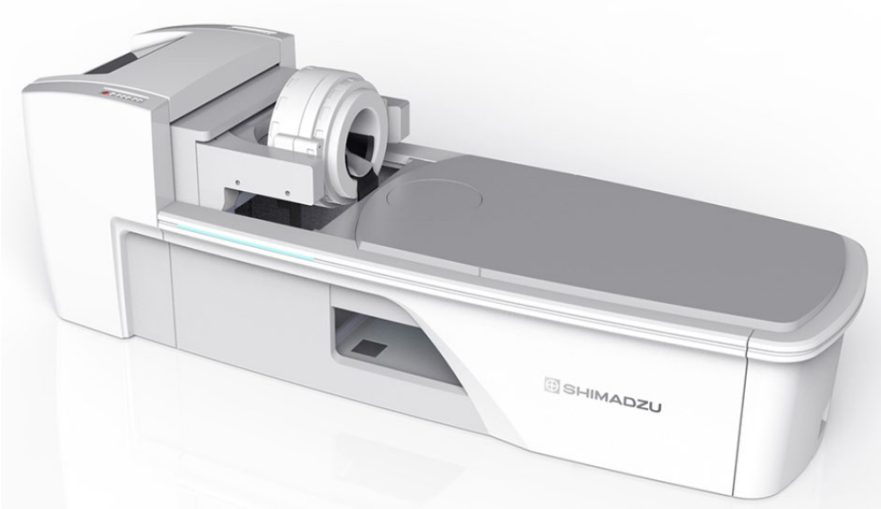




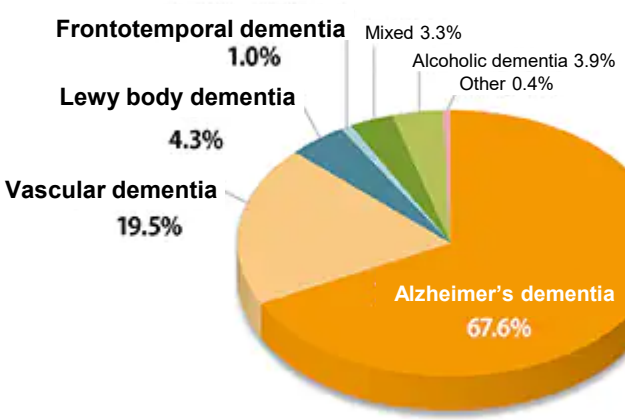





Responding to Changing Business Conditions
Taking on the Challenge of Early Detection/Treatment of Alzheimer's Disease



Percent of Dementia Cases by Disease Type



Source: Addressing Dementia Morbidity and Functional Impairment in Urban Areas—Comprehensive Report on Research from 2011 to 2012 (Japanese Ministry of Health, Labour and Welfare Funded Scientific Research on Dementia Countermeasures)

Ultra-Early Examination

Diagnosis

Treatment

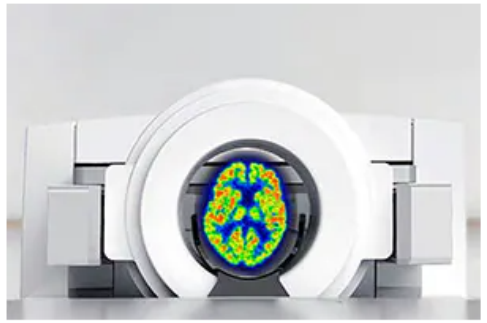
Prognosis Management

Predicting Amyloid-Beta Plaque Levels in the Brain from a Blood Test

Shimadzu is developing technology for predicting the amount of amyloid-beta plaques accumulated in the brain based on results from using mass spectrometry to measure amyloid-beta quantities in a few drops of blood (about 0.5 mL).

Amyloid-MS

Product details (for medical personnel)



Using PET to Visualize Amyloid-Beta Plaque Levels in the Brain

High-performance PET scanning can be used to visualize amyloid-beta plaques in the brain (not covered by Japanese national health insurance). Shimadzu will use it to contribute to future dementia or drug discovery research.

BresTome TOF-PET System (for medical personnel)

Evaluating Cognitive Function by Optical Brain Function Imaging

Functional near-infrared spectroscopy (fNIRS) can measure cognitive brain activities while the body is positioned similarly to everyday life.

fNIRS

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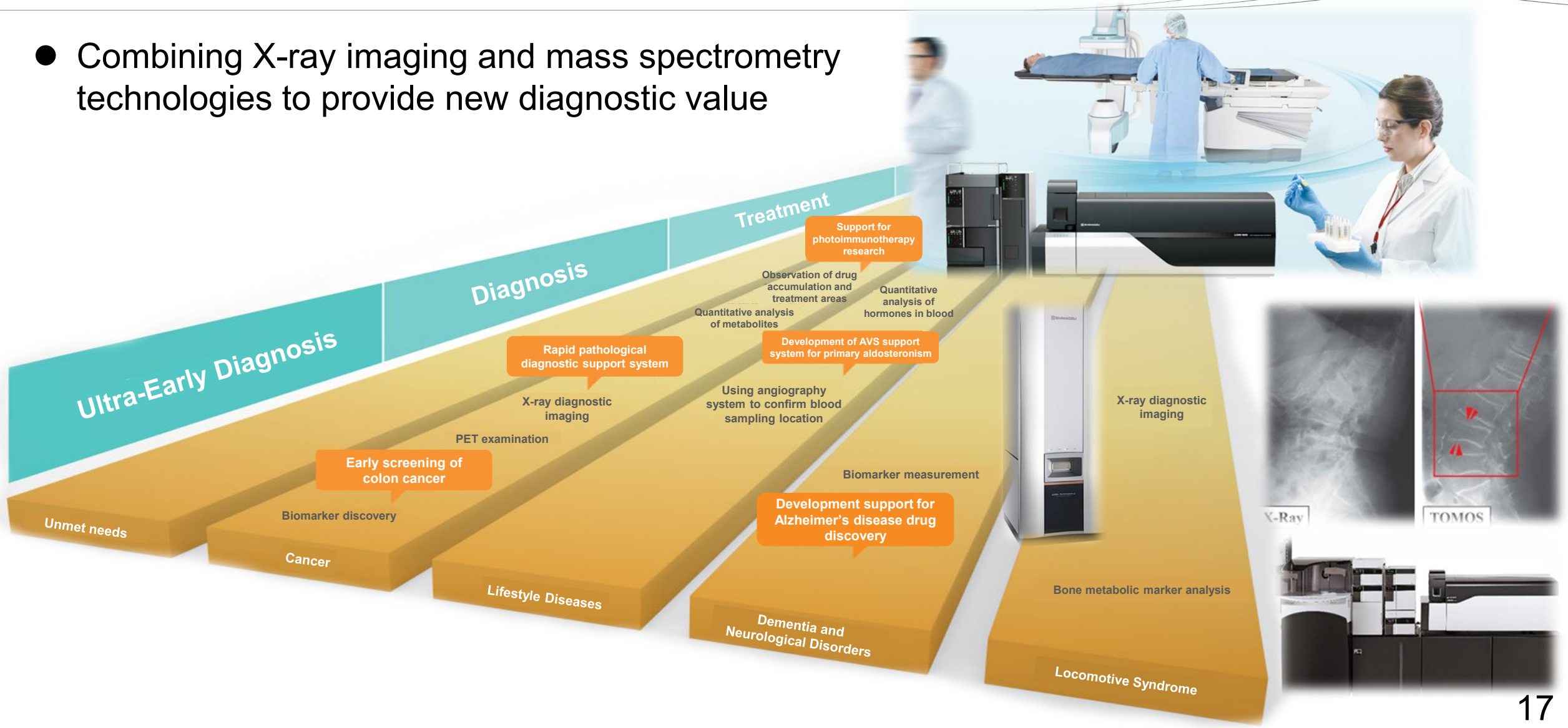
Responding to Changing Business Conditions

Advanced Healthcare Measures

- Combining X-ray imaging and mass spectrometry technologies to provide new diagnostic value



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Realizing Our Wishes for the Well-being of Mankind and the Earth

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