SHIMADZU
Excellence in Science

150 YEARS ANNIVERSARY

Analytical & Measuring Instruments (AMI) Business Briefing

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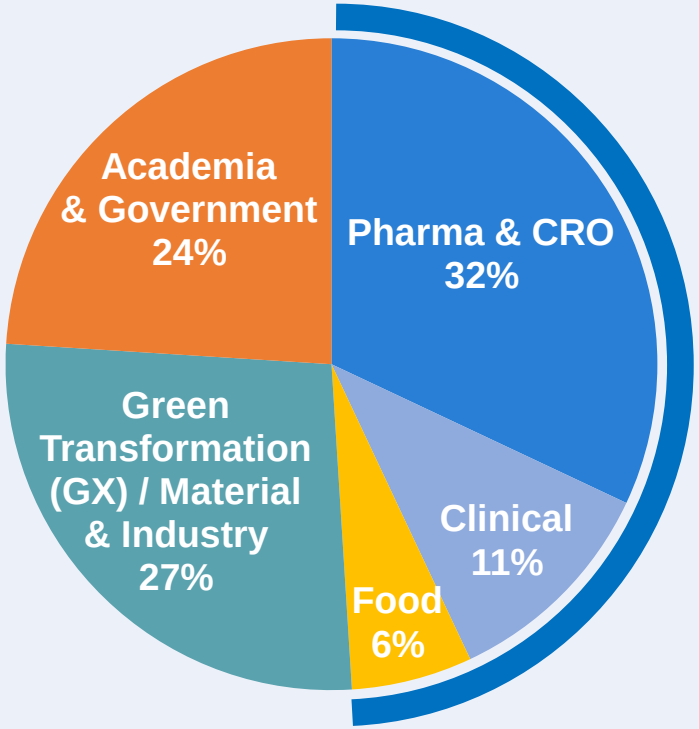
1. Analytical & Measuring Instruments (AMI) Market

Market Characteristics

Market Size
(FY2024)
$83B

CAGR
(FY2024-2029)
4%



Healthcare
49%

Source: Recompiled by Shimadzu based on SDi Global Assessment Report 2025

Market Characteristics

1. **High entry barriers** driven by emphasis on data reliability and measurement expertise
2. **Wide customer base** with diverse applications, from R&D to quality control
3. **Healthcare accounting for approx. 50% of the market, with stable mid- to long-term growth potential**

Broad product lineup required
to support customer workflows

2. Business Overview

Product Portfolio

- Diverse product lineup enabling multi-faceted approach aligned with customer workflows

Instruments: 62%

Three Key Models (LC, MS, GC): 55%

Liquid Chromatograph (LC)

Supercritical Fluid Chromatograph (SFC) Analytical/Preparative/ Extraction System

Gas Chromatograph (GC)

GC-MS System

LC-MS System (Triple Quadrupole)

LC-MS System (Quadrupole Time-of-Flight)

Other Models: 45%

FTIR Spectrophotometer

UV-Vis Spectrophotometer

Precision Universal Testing Machine

Energy Dispersive X-Ray Fluorescence Spectrometer

Microfocus X-Ray CT System

Scanning Electron Microscope

Recurring: 38%

Services & Maintenance: 63%

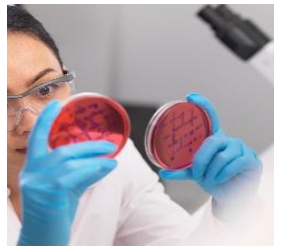
Preventive Maintenance

Inspection & Calibration

Consumables: 37%

Reagents

Columns



Culture Media

Product Portfolio (Healthcare)

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☐ Expanding businesses focused on extending healthy life expectancy

Pharmaceutical / CRO

Contributing to pharmaceutical R&D and manufacturing innovation toward diversified treatment options

Analysis of specific components in pharmaceuticals

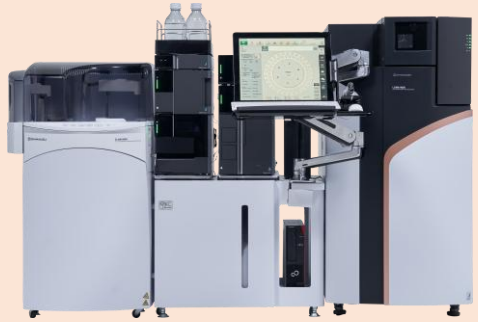
LC-MS System

SFC
Analytical/Preparative/Extraction System

Clinical

Contributing to early diagnosis, prevention, and infectious disease control

Analysis of specific components such as vitamins in blood



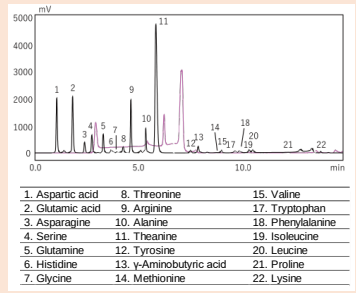
Fully Automated Sample Preparation Module for LCMS

Food

Contributing to quality control for development and safety assurance of functional foods

Analysis of functional components in foods

LC



1. Aspartic acid	8. Threonine	15. Valine
2. Glutamic acid	9. Arginine	17. Tryptophan
3. Asparagine	10. Alanine	18. Phenylalanine
4. Serine	11. Theanine	19. Isoleucine
5. Glutamine	12. Tyrosine	20. Leucine
6. Histidine	13. γ-Aminobutyric acid	21. Proline
7. Glycine	14. Methionine	22. Lysine

Analysis example of umami components in matcha

Product Portfolio (GX / Materials)

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Expanding businesses focused on reducing environmental burden

Environmental Regulations

Contributing to environmental protection through measurement methods for pollutants

PFAS Concentration Management in Drinking Water

LC-MS System

Microplastics Analysis in Environmental Water

Microplastic Automatic Preparation Device

FTIR-Microscope Particle Analysis System for Microplastics

Chemical

Supporting R&D of new energy toward carbon neutrality

Impurity Analysis & Quality Evaluation of Hydrogen

GC

GC-MS

Durability Evaluation of Hydrogen Storage Tanks

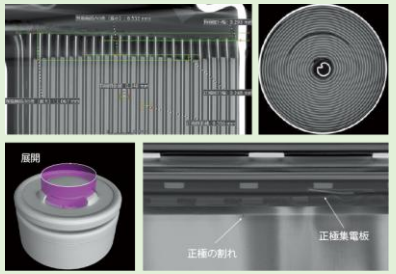
Precision Universal Testing Machine

Transportation Equipment, Electrical / Electronics

Safety evaluation of automotive batteries to reduce fossil fuel consumption

Internal Observation of Lithium-Ion Batteries

Microfocus X-Ray CT System



Example CT Images of Lithium-Ion Batteries

Product Portfolio (Industry)

☐ Expanding businesses focused on developing advanced technologies in the semiconductor field

Semiconductor

Contributing to purity management of ultrapure water in semiconductor processes

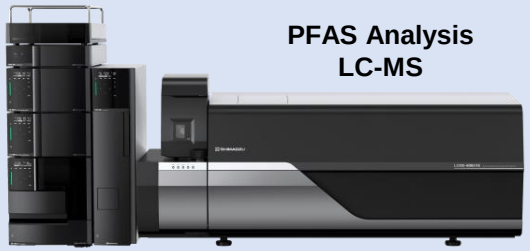
Monitoring of Ultrapure Water

On-Line TOC Analyzer for Pure Water

If impurities are present in the ultrapure water used in the front-end semiconductor manufacturing process, they can cause defects on the wafer surface and lead to performance degradation of the final product.

Contributing to wastewater management

Reducing Environmental Impact



PFAS Analysis LC-MS

On-Line TOC Analyzer for Wastewater Management

Improving reliability of quality control in semiconductor manufacturing processes

Monitoring of Volatile Organic Compounds (VOCs), etc.

GC-MS System GCMS-QP2050

In semiconductor manufacturing, AMCs (Airborne Molecular Contaminants) have a significant impact on product quality and yield.

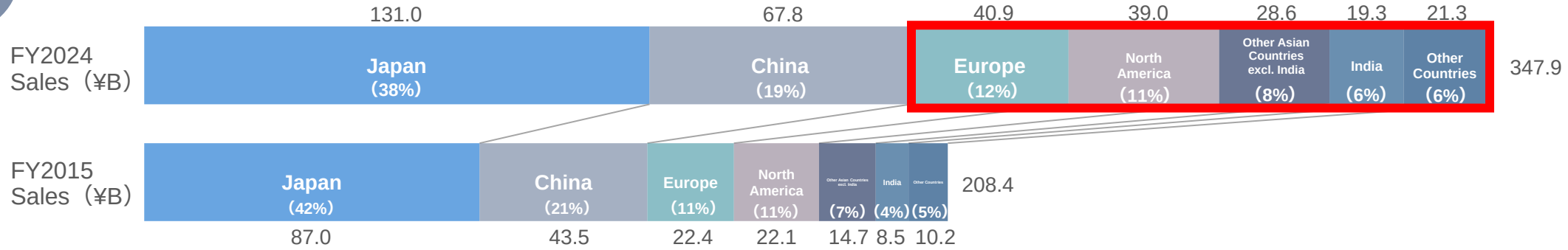
Performance

Sales	OP	OPM	Overseas Sales Ratio
¥347.9B	¥52.1B	15.0%	62%
CAGR 6%	CAGR 5%		

By Region

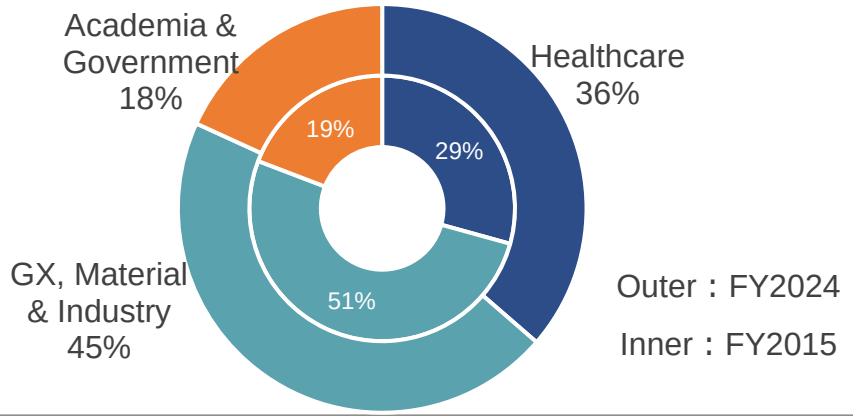
Revenue growth across all regions, with significant increase in Asia

CAGR 6% or higher



By Customer

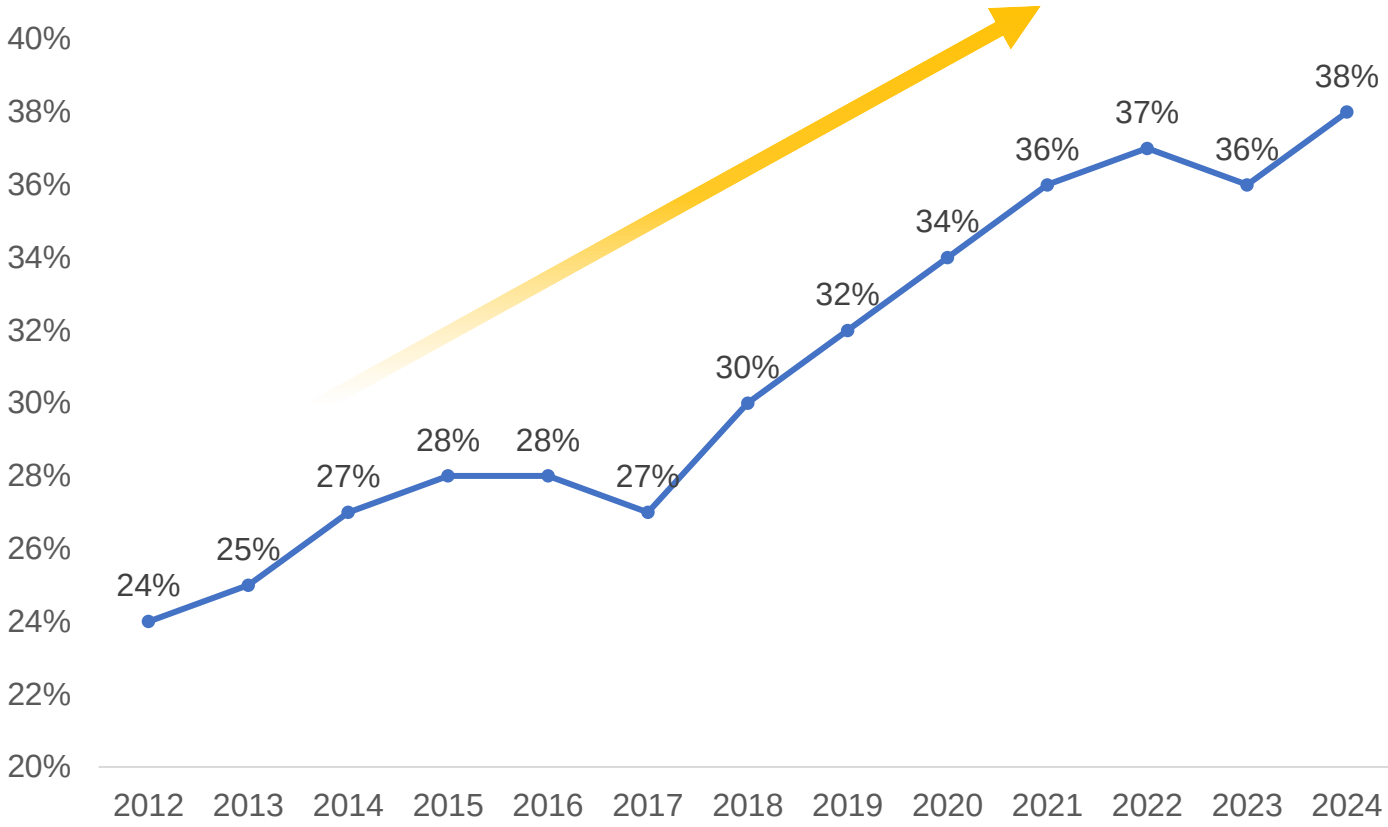
Increase in Healthcare sales composition



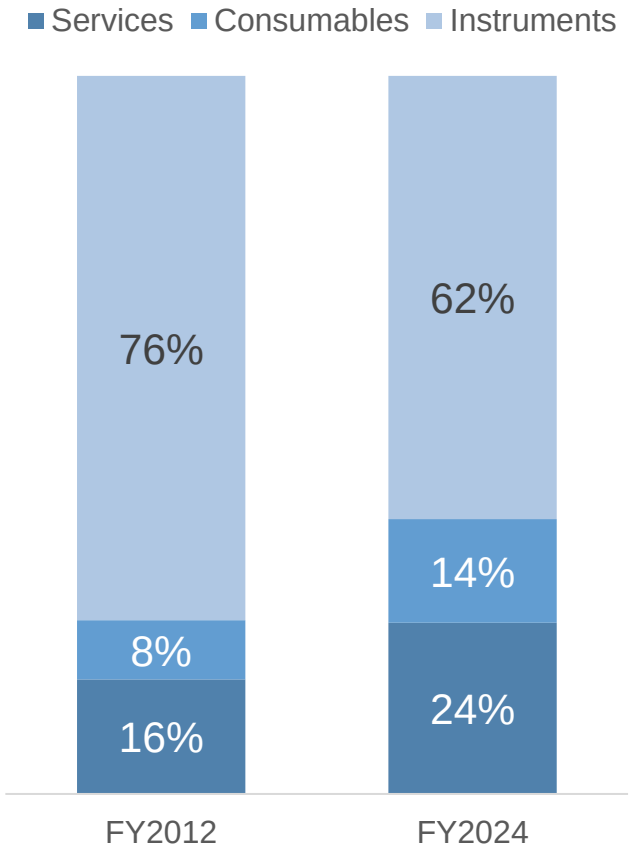
Recurring Revenue Business

Recurring revenue ratio improved by over **10%pts** in 10 years, driven by expansion of consumables lineup (e.g., reagents and columns) and acquisition of Zef Scientific Inc., enabling multi-vendor services

Recurring Revenue Ratio



Breakdown



3. Growth Strategy

1) Medium-Term Management Plan and Business Domains

2) Healthcare / Solutions for Pharmaceutical Market

3) For North American Market

4) AX (Analytical Transformation)

Medium-Term Management Plan and Business Domains

- Becoming an end-to-end solution provider (offering essential “data” to customers)
- Co-creating a sustainable society by strengthening global partnerships, focusing on social value creation domains such as Healthcare and GX (Green Transformation) / Material

Business Domain	Social Issues	Our Initiatives
Healthcare	● Overcoming diseases such as cancer, lifestyle-related diseases, infectious diseases, neurological / psychiatric disorders ● Initiatives to extend healthy life expectancy	● Pharma: Expanding business by focusing investment in nucleic acid-related fields and North America ● Clinical: Focusing on clinical diagnostics, microbiological testing, and cell analysis ● Food: Supporting functional food offerings through partnerships
GX / Material	● Realizing a sustainable society through the widespread adoption of new energy and biomanufacturing ● Addressing environmental pollution and regulatory compliance	● Contributing to creating new industries such as new energy and biomanufacturing ● Developing and standardizing analytical and measuring technologies for new environmental regulations ● Promoting application development to support EV-related needs
Industry	● Efficient reuse of ultrapure water to reduce environmental impact ● Stable supply of high-quality products	● Contributing to management of ultrapure water and process gases in semiconductor manufacturing ● Enhancing reliability in quality control for semiconductor manufacturing process ● Expanding sales channels by leveraging synergies with Industrial Machinery Business such as TMP

Pharmaceutical (Market Size & Environment)

- Existing modalities (small/large-molecule drugs) have large market size and are expected to grow steadily
- New modalities (medium-molecule drugs, cell/gene therapies) are expected to have higher growth going forward

Our Category	Modality	Market Size* (2021, $B)	CAGR* (2021-2026)	Market Environment
Existing Modality	**Small-Molecule Drugs**	400	5%	• Accounting for about half of FDA new drug approvals • Growing number of generic manufacturers and CDMOs, mainly in Asia
	Large-Molecule Drugs (Antibody Drugs)	190	8%	• Market growth driven by ADCs (antibody-drug conjugates) and other next-generation high-efficacy antibodies
New Modality	**Medium-Molecule Drugs (Nucleic Acid Drugs)**	3.3	32%	• Market growth supported by establishment of DDS (drug delivery systems) technologies
	Gene Therapy	3.1	47%	• Accounted for 10% of FDA new drug approvals in 2023
	Cell Therapy	0.6	52%	• Main players include academia and university-affiliated startups

*Source: Arthur D. Little, “Survey on Trends in Technology Development and Value Chain for Biopharmaceuticals and Regenerative Medicine Products”

Overall Strategy for Pharmaceutical Market

☐ While leveraging existing modality businesses as a revenue base, we will expand into diverse directions to drive growth.

Bioprocessing Business

2. Expanding by process

3. Expanding by business model

Business for Existing Modalities (Small/Large-Molecule Drugs)

- Achieved strong share centered on LC as a core product
- Further growth through AI-equipped models and response to local production needs

Recurring Revenue Business
(Services, Consumables, Software)

Business for New Modalities
(Medium-Molecule Drugs, Gene/Cell Therapies)

1. Expanding by modality

4. Expanding by technology

SFC Business
(Explained in slide 16:
“Business for Existing Modalities”)

Business for Existing Modalities

- Achieved a high market share centered around our flagship product, the i-Series LC
- Further growth through AI-enabled functions, expanding market share with Mega Pharma using SFC, and meeting demand for local production

Initiatives to Date

- Launched the i-Series, an LC model, in 2014
- Captured robust demand for general-purpose LC, improving performance and market share
- Continuous improvements in line with pharmaceutical customer needs by supporting method transfer from automated pretreatment devices and other vendors' instruments, etc.

Integrated LC
i-Series

No.1 Share in
India's LC Market: **40%**
(Global Share：25%)

* Based on unit volume as of 2023

Strategies Going Forward

- Improving customer productivity through AI-enabled functions
- Expanding presence at Mega Pharma using SFC* as a door opener
- Meeting demand for local production (e.g., new plant in India scheduled to start operations in 2027)
- Addressing automation needs (e.g., external device integration software)

* Supercritical Fluid Chromatograph (SFC):
Uses no organic solvents and offers low environmental impact, leading to growing adoption by pharmaceutical companies in Europe and the U.S.

Supercritical Fluid Chromatograph
Nexera UC

Rendering of New Plant in India

Business for New Modalities

- Expanding collaborations with domestic and international partners, including KOLs
- Developing systems and applications based on advanced needs and technologies to expand key account business

Japan

- LC optimized for the analysis of **biopharmaceuticals** (Jointly developed with Kyoto University, launched in 2022)
- Software for **Oligonucleotide** Sequence Characterization (Jointly developed with CDMO PeptiStar Inc., launched in Mar 2025)
- Analytical systems and methods for stable manufacturing of **gene therapy drugs** (Joint development underway with CRO U-Medico Inc.)

Nexera inert series: LC system for the analysis of biopharmaceuticals

LCMS with Software for Oligonucleotide Sequence Characterization LabSolutions Insight Biologics

Overseas

- Opened three sites of the R&D Center in **North America** to capture advanced needs of **major pharma** and **biotech companies** and promote joint development (opened in 2024)
- Collaboration with Sepragen Corporation in the U.S. to market its chromatography system for **biopharmaceutical** purification in Asia and other regions (sales launched in 2024)

R&D Center in North America

Sepragen's Purification Chromatography System "QuantaSep Adept 300"

Bioprocessing Business

- Enhancing solution capabilities for customers by expanding product portfolio in culture and purification processes essential for the development and manufacturing of biopharmaceuticals
- Focusing on expanding recurring revenue product lineup including culture media, chromatography columns, and resins

Biopharmaceutical Development and Manufacturing Workflow

Establishment of Clone Strains

Confirming mutation introduction

DNA / RNA analysis

Microchip Electrophoresis System MultiNA II

Optimization of Culture Conditions

Next-generation AI-based cell cultivation, independent of experience or know-how

LCMS with CellTune, Culture Condition Optimization Support Software

Trace metal analysis

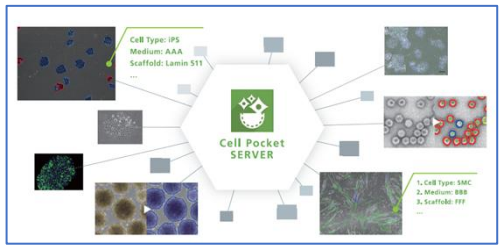
ICP-MS ICPMS-2050

Glycan analysis

Fully Automated Sample Preparation Module for Glycan Analysis MUP-3100

Verification of Condition Monitoring

AI-powered image analysis



Web Application Supporting Cell Observation Cell Pocket

Purification / Analysis of Target Compounds

Chromatographic purification

Purification Chromatography System by Sepragen

Analysis & structural elucidation of target substances

LC-MS System: LCMS-9050

Recurring Revenue Business

- Strengthening focus on three key areas: services, consumables, and software
- Enhancing customer engagement and building stable revenue streams by offering end-to-end solutions that integrate with hardware

Hardware Products

+

Recurring Products

Services

- Expanding maintenance contracts by developing IoT-based remote maintenance features
- Proposing efficient asset management via multi-vendor services*
  *After-sales service covering multiple manufacturers' instruments. Multi-vendor service provider Zef Scientific Inc. in the U.S. acquired in 2024 to enter this business

Consumables

- Expanding lineup via strategic partnerships
  with chromatography column and resin suppliers
- Promoting sales of culture media
  in combination with culture optimization systems

Software

- Expanding recurring revenue
  through subscription-based software sales

Enhancing customer engagement and revenue stability through end-to-end solution offerings

Product Development at R&D Center in North America

- Developing high-value-added products in collaboration with partners in the pharmaceutical and clinical laboratory testing markets at the R&D Center in North America
- The Nexera QX Multiplex System (Nexera QX) has been well-received by a major clinical laboratory in the U.S. and is planned for a global rollout

- Established three R&D sites in North America (May 2024)
- Strengthening joint development with pharmaceutical and clinical laboratory testing markets
- Targeting contribution of over $500M in sales from R&D center-developed products by 2035

Example of R&D Center-Developed Product:

Nexera QX Multiplex System

- Jointly developed with a major clinical laboratory testing company
- Advances in automation and processing speed have enabled analyses that previously required four systems to be handled by a single system.

Recurring Revenue Business by Entering the MVS Market

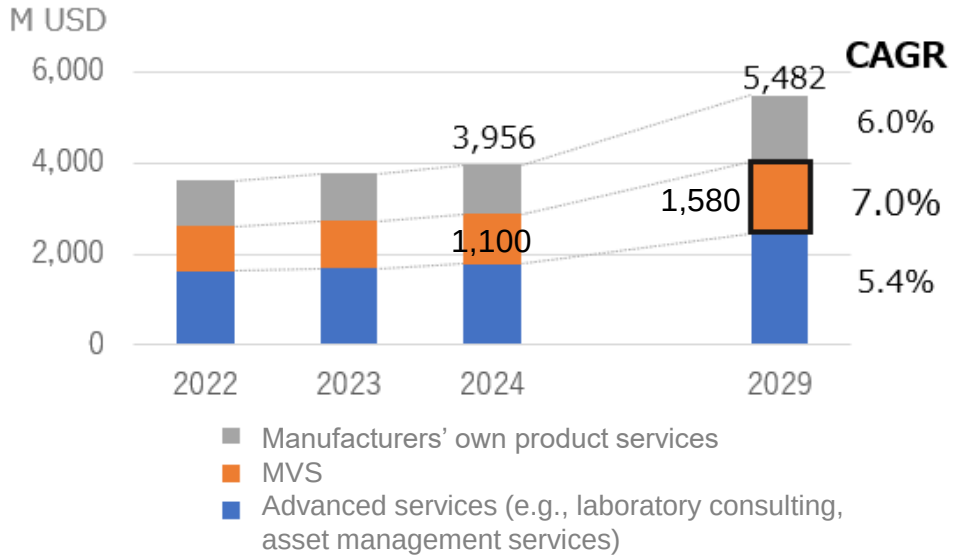
- Acquired Zef Scientific Inc. in April 2024 to enter the multi-vendor service (MVS) market in North America
- Strengthening after-sales service framework for pharmaceutical customers and expanding recurring revenue business

- In April 2024, acquired U.S.-based multi-vendor service (MVS)* provider Zef Scientific Inc., and entered the MVS market
- Built a one-stop service framework that supports multiple instrument brands, helping improve lab operational efficiency for customers

* MVS: After-sales service covering multiple manufacturers' instruments, enabling efficient lab asset management. Demand is growing particularly in the pharmaceutical industry.

Among analytical and measuring instrument services, the MVS segment is expected to see strong growth with a CAGR of 7%

Global Market Forecast:
Analytical and Measuring Instrument Services



Source: Frost & Sullivan, (CAGR 2022–2029)

Transforming Customer Workflows by AX

AX Analytical Transformation

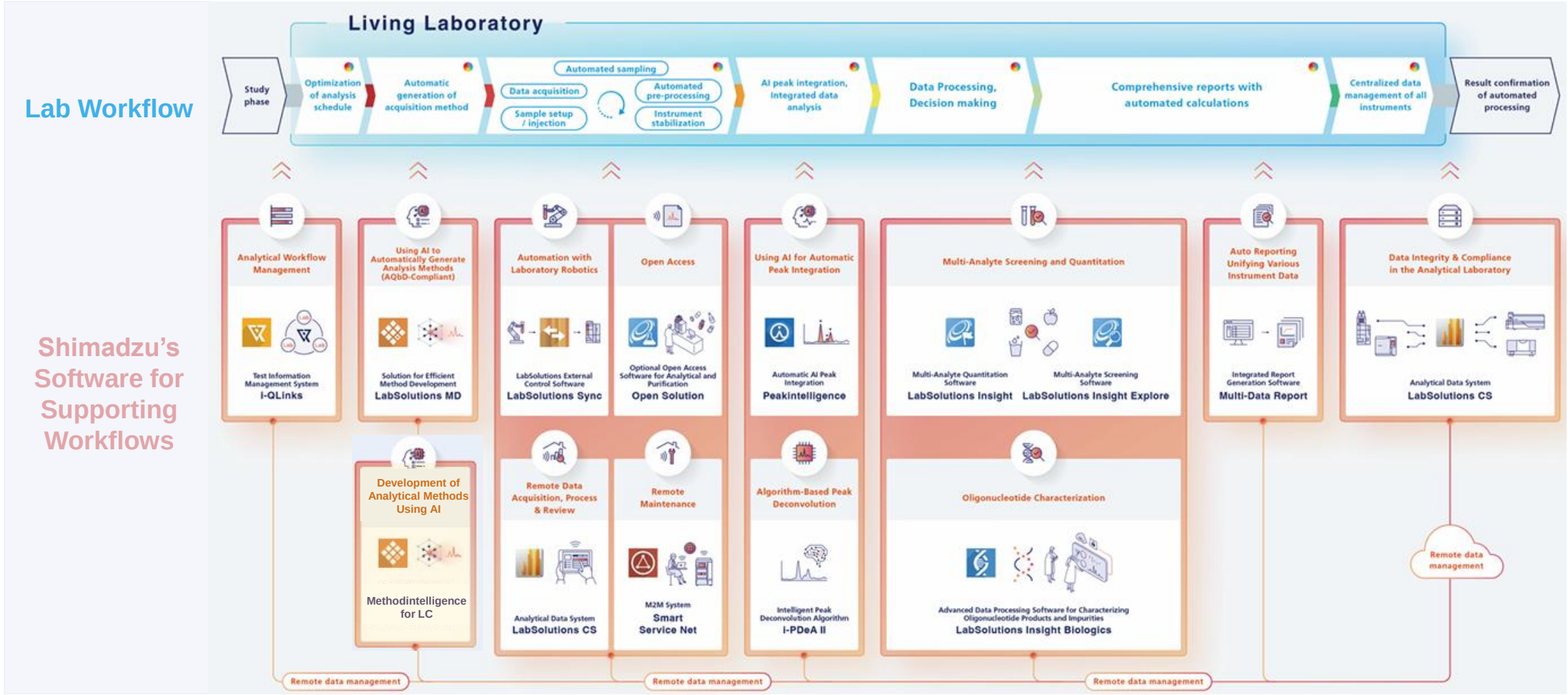
Founded in 1875 (Meiji 8), Shimadzu Corporation celebrated its 150th anniversary in 2025. Since its inception, the company has continuously embraced challenges under the mission of "contributing to society through science and technology," leading to initiatives that shape the future of analysis.

Analytical Transformation is a concept that leverages cutting-edge Analytical & Measuring Instruments, robotics, AI, and IoT technologies to eliminate dependency on individual lab personnel. This approach supports researchers' creativity and enhances productivity in analysis and business development.

Shimadzu Corporation will continue to engage with people, society, and the Earth, believing in the power of science and technology to change the world.

Transforming Customer Workflows by AX

- Eliminating dependency in the lab, effective utilization of human resources, and supporting work style reform



Transforming Customer Workflows by AX

- Shortening time for method development and data analysis through AI and automation technologies
- Supporting efficiency improvement and reduction of dependency on individual expertise in laboratories, enabling customers to focus on advanced tasks

Analysis Conditions / Auto-Generation

AI-based Method Development
Methodintelligence for LC

- Generative AI automatically conducts literature searches and method exploration, proposing optimal analytical conditions
- Shortening time required for method development

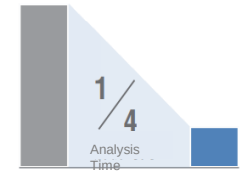
* Currently available as a trial version

AI Waveform Processing / Integrated Analysis

AI-based Automated Peak Processing
Peakintelligence for LC/LCMS/GCMS

- AI assists data analysis operations
- Significantly reduces data analysis time
- Providing results equivalent to those of experienced analysts

ANALYTICAL INTELLIGENCE



4. New Products

Liquid Chromatograph Mass Spectrometer

Liquid Chromatograph Mass Spectrometer

LCMS-8065XE

1 Significantly Enhanced Analytical Performance & Reduced Environmental Burden

- Improved ion intake into the detector by newly developed technology
- Enabling highly sensitive analysis of a wide range of compounds, including PFAS

2 Improved Lab Operational Efficiency & Reduced Environmental Burden

- Integration of AI functions for automatic system checks and tuning
- Supporting analysis in optimal system conditions

3 End-to-End Solutions for PFAS Analysis

- Providing not only the instrument but also analytical methods, software, and consumables
- Enabling tailored proposals to meet diverse customer needs

Healthcare **GX / Material** **Industry**

Target Markets: Contract analysis labs, public institutions, etc.
Sales Target: 70 units in the first year after launch

Integrated Liquid Chromatograph

Integrated Liquid Chromatograph

i-Series LC-2070/2080

Healthcare | GX / Material | Industry

1 Automated Diagnosis, Prevention, and Recovery

- Automatically detecting and preventing analytical failures
- Minimizing downtime and supporting robust routine analysis in pharmaceutical companies

2 Enhanced Data Reliability

- Further reduction of carryover
- Further suppression of baseline fluctuations in the PDA detector
- Automatic linking of used column information with analysis reports

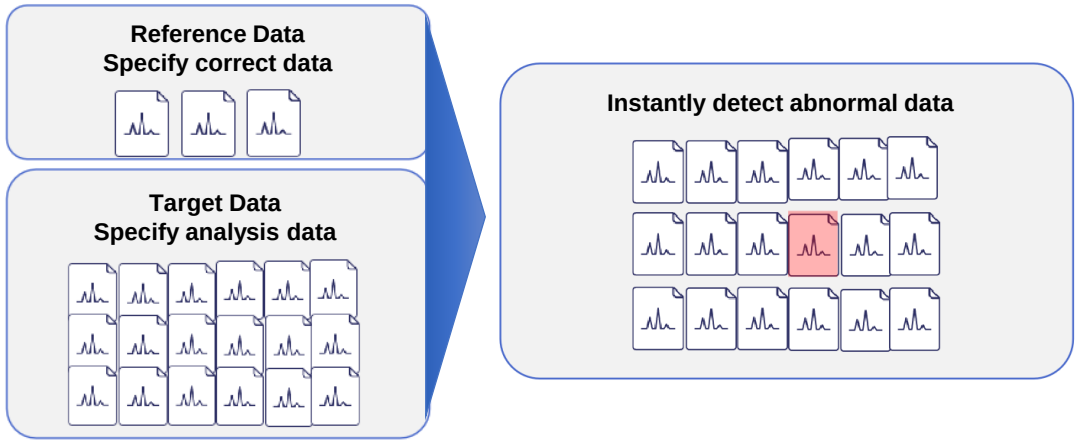
3 Green Transformation

- Reducing environmental impact across the product lifecycle
- Achieving through use of recycled resin materials and lower power consumption

Target Markets: Quality control departments in pharmaceutical companies, etc.
Sales Target: 5,000 units in the first year after launch (combined total for both models)

Optional Software for LC

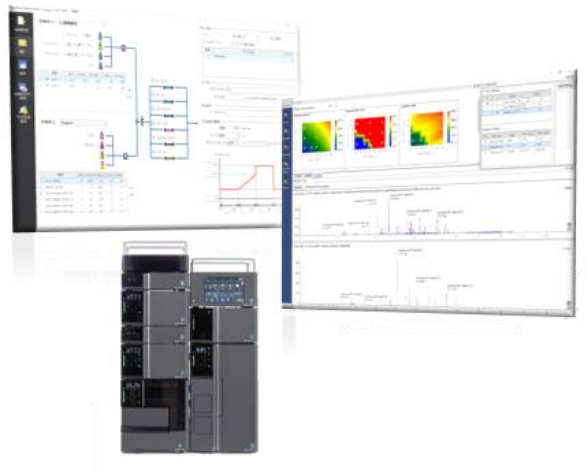
Anomaly Peak Detection Support Software
LabSolutions Detect



1. **Instantly detecting abnormal peaks by comparing with historical data**
2. **Efficiently comparing waveform patterns with reference data**
3. **One-click report generation**

Target Markets: Quality control departments in pharmaceutical companies, etc.

Analytical Method Development Support System
LabSolutions MD Ver. 5.0



1. **Automatically optimizing analytical methods using AI**
2. **Supporting both analysis and fractionation, expanding customer applicability**
3. **Enabling simple development of highly reliable, low-risk analytical methods**

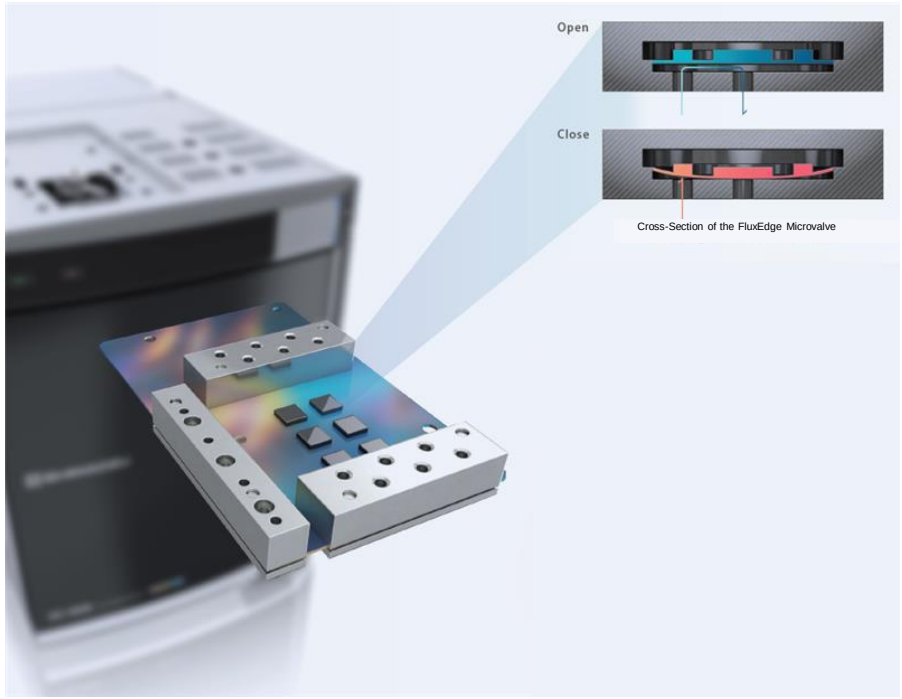
Target Markets: Drug discovery departments in pharmaceutical companies, etc.

Healthcare | GX / Material | Industry

GC with New Gas Sampling Module

GC with New Gas Sampling Module

FluxEdge GC System



1 Ultra-Fast and Reliable Analysis

- Industry-smallest, highly durable flow path design
- Minimizing sample loss, ensuring fast and reliable analysis

2 Unmatched Durability and Performance

- Maintenance-free design enabled by high durability
- High reproducibility in analysis

3 Versatile Scalability and Ease of Use

- Wide selection of detectors and columns for diverse applications
- Improved usability with simple operation

Healthcare | GX / Material | Industry

Target Markets: New energy, battery, and catalyst-related industries, etc.
Sales Target: 30 units in the first year after launch

Tabletop Precision Universal Testing Machine

Tabletop Precision Universal Testing Machine
Autograph AGS-V Series

1 Industry-Leading Testing Quality

- Enhanced data acquisition speed and expanded accuracy assurance range
- Significantly improved overall test quality

2 Improved Usability and Efficiency

- Controller-based operation without PC
- Self-diagnostic functions for real-time abnormality detection and reduced downtime

3 World-Class Safety

- Instant halt of operation upon detecting accessory impact or finger contact
- Standard protective cover to block flying fragments

Healthcare | GX / Material | Industry

Target Markets: Transportation, chemical, electric/electronic industries, etc.
Sales Target: 900 units in the first year after launch

High-Speed Video Camera

High-Speed Video Camera
HyperVision HPV-X3

1 World-Leading Ultra-High-Speed Recording

- Doubling of maximum frame rate compared with previous models
- Captures of ultra-high-speed phenomena without missing critical moments

2 Enhanced Image Resolution

- Tripling of pixel count from previous models
- Support for high-precision materials testing and contribution to new material development

3 Synchronization with External Devices

- Synchronization of capture timing with external signals
- Accurate recording of ultra-fast phenomena

Healthcare | GX / Material | Industry

Target Markets: Universities, public research institutions, chemical companies etc.
Sales Target: 40 units in the first year after launch

In Closing

December 1877
Successful Launch of a Manned Hot Air Balloon

Shimadzu × Traditional Kyoto Craft Arts
150th Anniversary Concept Models

Since its founding in 1875, Shimadzu Corporation marked its **150th anniversary** on March 31, 2025.

Going forward, we will continue to pursue **“Creating Shared Value”** and strive to achieve **Planetary Health**, in response to the expectations of all our stakeholders.

SHIMADZU
Excellence in Science

The forward-looking statements in this presentation may differ materially from actual results due to various external factors such as economic conditions, exchange rates, and technological changes.

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