# Test and Measurement Business

With a mission of being the first to deliver optimal test and measurement solutions with its advanced measurement technologies, Anritsu contributes to the creation of industry and advances in innovation that assist with the development of a sustainable society by helping customers build safe and secure communication infrastructure.

## Social Issues and Customer Needs

Anticipating the next social transformation through digital transformation

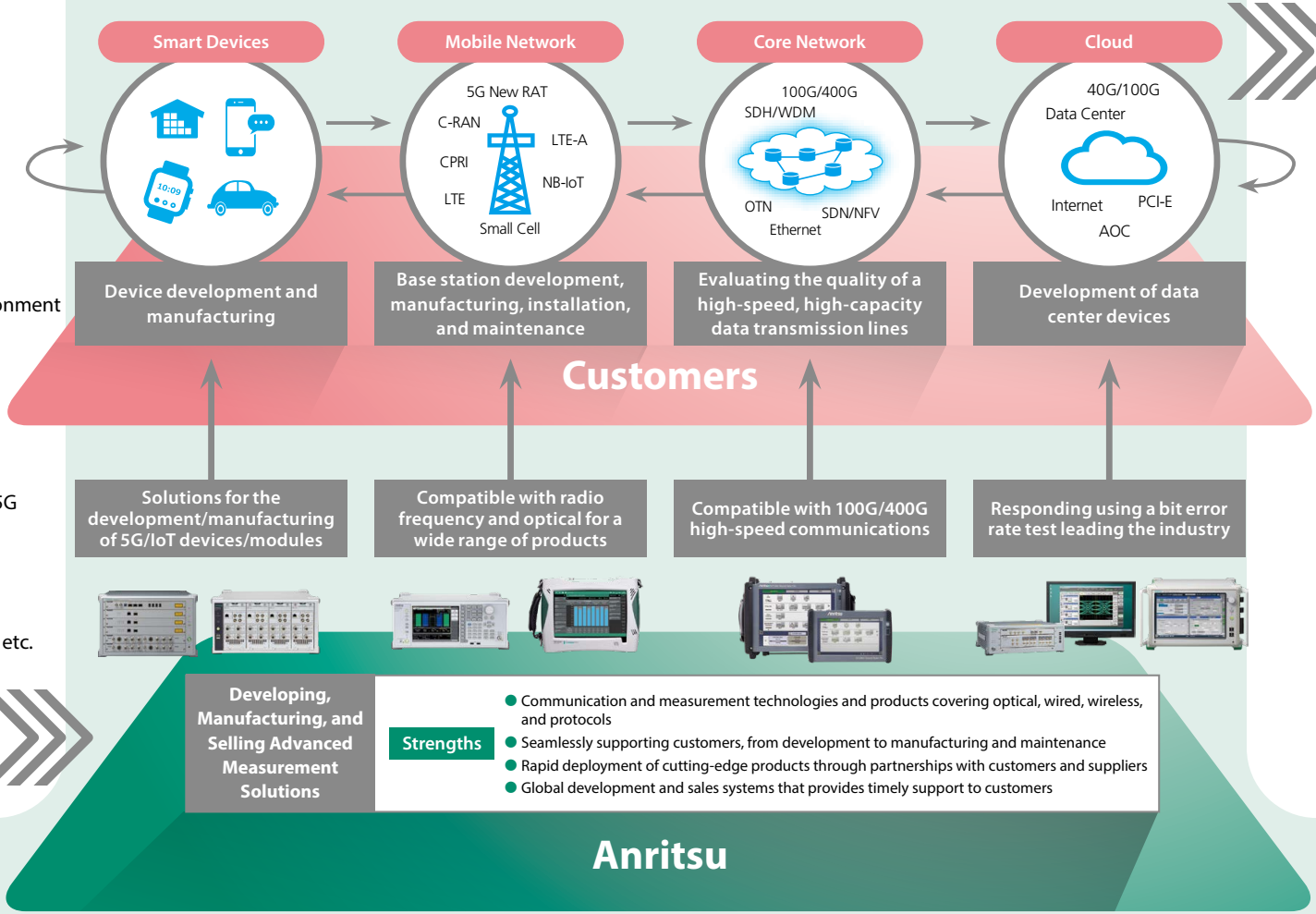
**Social Issues**

- Digital transformation
- Strengthening telecommunication infrastructure
- Improving telecommuting environment
- Reducing traffic accidents
- Improving industrial efficiency
- Eliminating regional disparities

**Customer Needs and Interests**

- Quick response to cutting-edge 5G technology
- Development of 6G technology
- Global support
- High Return on Investment
- Reducing environmental impact, etc.

## Evaluating and Inspecting the Development, Manufacturing, Construction, and Maintenance of 5G Infrastructure Using Anritsu's Measuring Instruments




## Future Society

Leveraging 5G advantages to create a prosperous future with solutions that address social issues

**5G**

Ultrahigh-speed, large-capacity

Multiple simultaneous connections

Ultra-low latency

Factories

Remote monitoring

Agriculture

Farming support

Construction

Remote control

Automobiles

Autonomous driving

Healthcare

Telemedicine

# SDGs in the Test and Measurement Business

In the future society, technological innovations such as DX are expected to support industries and everyday life. These innovations will be supported by advanced communications networks. Anritsu's Test and Measurement Business contributes to achieving Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation and Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable, in partnerships with customers by providing reliable communication test solutions to support development and ensure the quality of the communications network.

## Questions Posed to Anritsu Engineers by a Visiting Student

**Q: How will technological innovations shape the communities of the future?**

A: In the communities of the future, a variety of social issues will be solved by DX and people will be able to lead more comfortable, prosperous lives. For instance, we will be able to use autonomous driving and telemedicine, which leverages 5G's ultra-low latency characteristics.

**Q: How is Anritsu helping to develop the communities of the future?**

A: The infrastructure for future communities will incorporate securely connected advanced communications networks. The quality of communications will be ensured by using reliable communication test solutions.

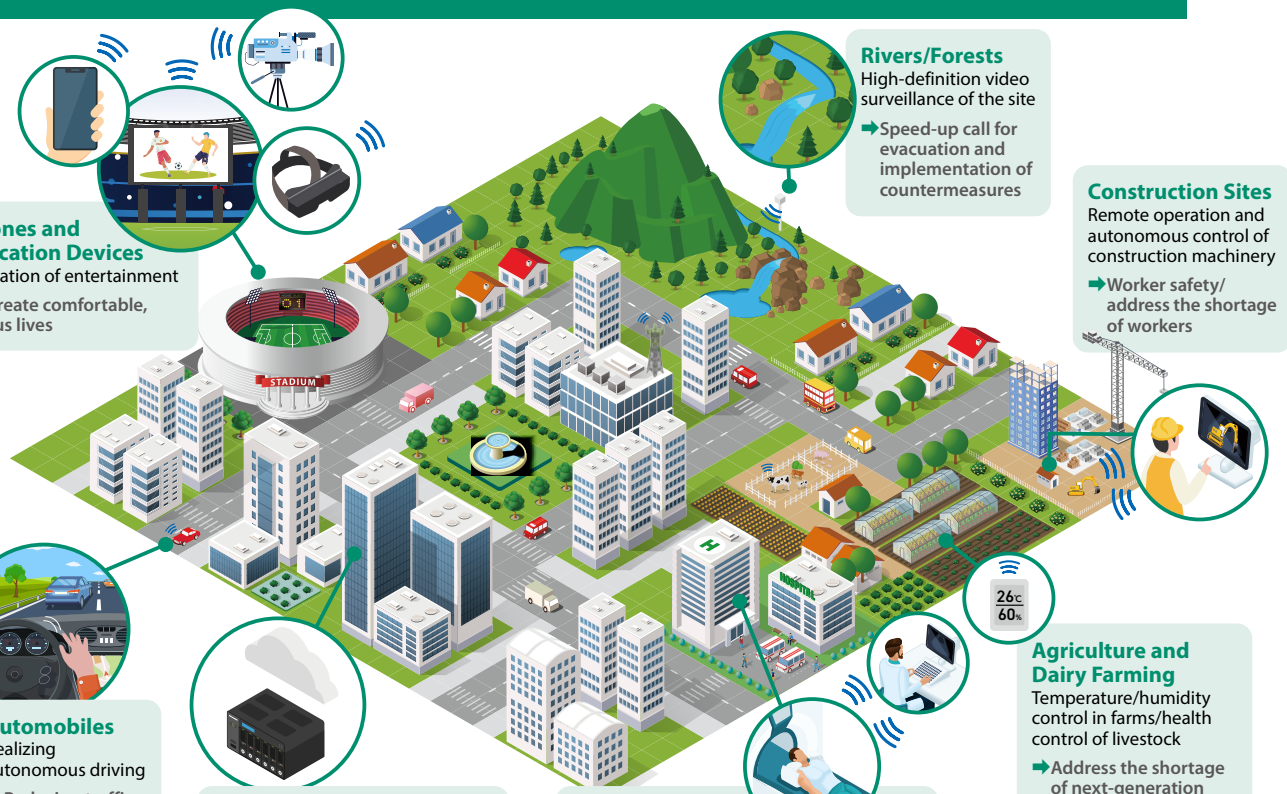
Anritsu provides test solutions to ensure the quality of communications required for the development, manufacturing, and maintenance of smartphones and base stations. Telecommunications operators taking advantage of Anritsu's support will be able to construct resilient communications networks with highly reliable connectivity. This will also lead to better traffic safety. These efforts will contribute to achieving Targets 9.1 and 11.2 of the SDGs.

**Q: Please elaborate on the roles played by your test solutions.**

A: Communications terminals and equipment must be verified to have been manufactured in accordance with global mobile telecommunications specifications. Our measuring instruments, which serve as testing solutions, make invisible electrical waves visible. They also perform the functions of base stations in verifying that terminals and equipment operate in accordance with the latest communications specifications. Terminals and equipment verified by our measuring instruments will help to create safe, secure, and prosperous communities, as shown in the illustration on the right.

**I see. That's how Anritsu is helping to achieve Goals 9 and 11 of the SDGs.**

## Communities of the Future Based on 5G



# PQA Business

The PQA Business provides solutions for automating the quality inspection process on production lines of the food and pharmaceutical industries. Representative Anritsu initiatives (presented below) address social issues faced by the food industry and account for over 80% of our PQA business.

## Realizing the Automation of Quality Inspection Process with Anritsu's Quality Assurance Solutions

### Social Issues and Customer Needs

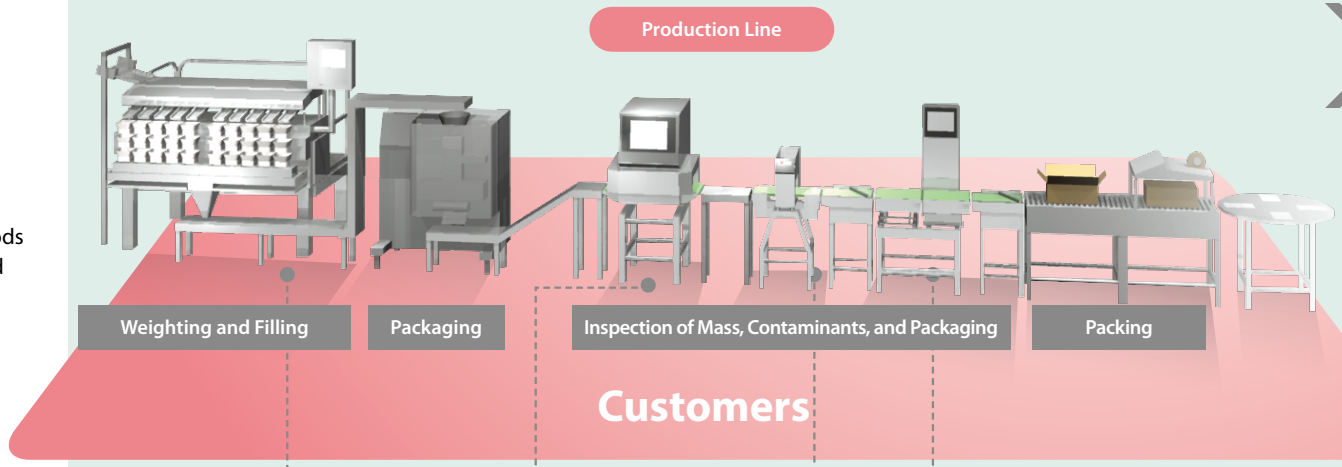
Stable supply of safe and secure foods

**Social Issues**

- Stable supply of healthy, tasty foods
- Assurance of safe and secure food quality
- Reducing food loss
- Alleviating labor shortages

**Customer Needs and Interests**

- High-speed, high-precision inspection
- Excellence in sanitation and ease of cleaning
- Easy maintenance
- Automated production lines and remote monitoring
- Improved productivity through the use of data
- Securing Traceability





**Developing, Manufacturing, and Selling Fast, Precise, and Highly Reliable Inspection Equipment**

**Strengths**

- High-speed, high-precision inline quality inspection technology
- Adaptability for introducing inspection equipment into diverse production lines
- Extensive maintenance service system and experienced maintenance engineers in Japan
- Past record and top-class market position in the food inspection market in Japan

**Anritsu**

### Future Society

Increasing the sophistication of quality assurance for food to achieve:

- A safe and secure society
- A sustainable society with little food loss

# SDGs in the PQA Business

Every year, 1.3 billion tonnes of food are lost around the world. Reducing this loss has become a key challenge for realizing a sustainable society. While the principal causes of food loss are leftovers and reaching the expiration date, some of the loss can be avoided by improving the quality of production. The PQA Business is focusing its quality assurance solutions on achieving Target 12.3 of the SDGs: By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.

## Questions Posed to Anritsu Engineers by a Visiting Student

**Q: Please explain about food loss, which has become a social concern.**

A: "Food loss" refers to food that has been thrown away even though it was still edible. Before ingredients such as vegetables and meats are processed in factories and consumed at home, a huge volume of food is discarded as waste. This has become a major social issue. Target 12.3 of the SDGs calls for cutting food loss in half. The International community is working together to achieve this target.

**Q: Please tell us about Anritsu's Food Loss Reduction Solutions. of the future?**

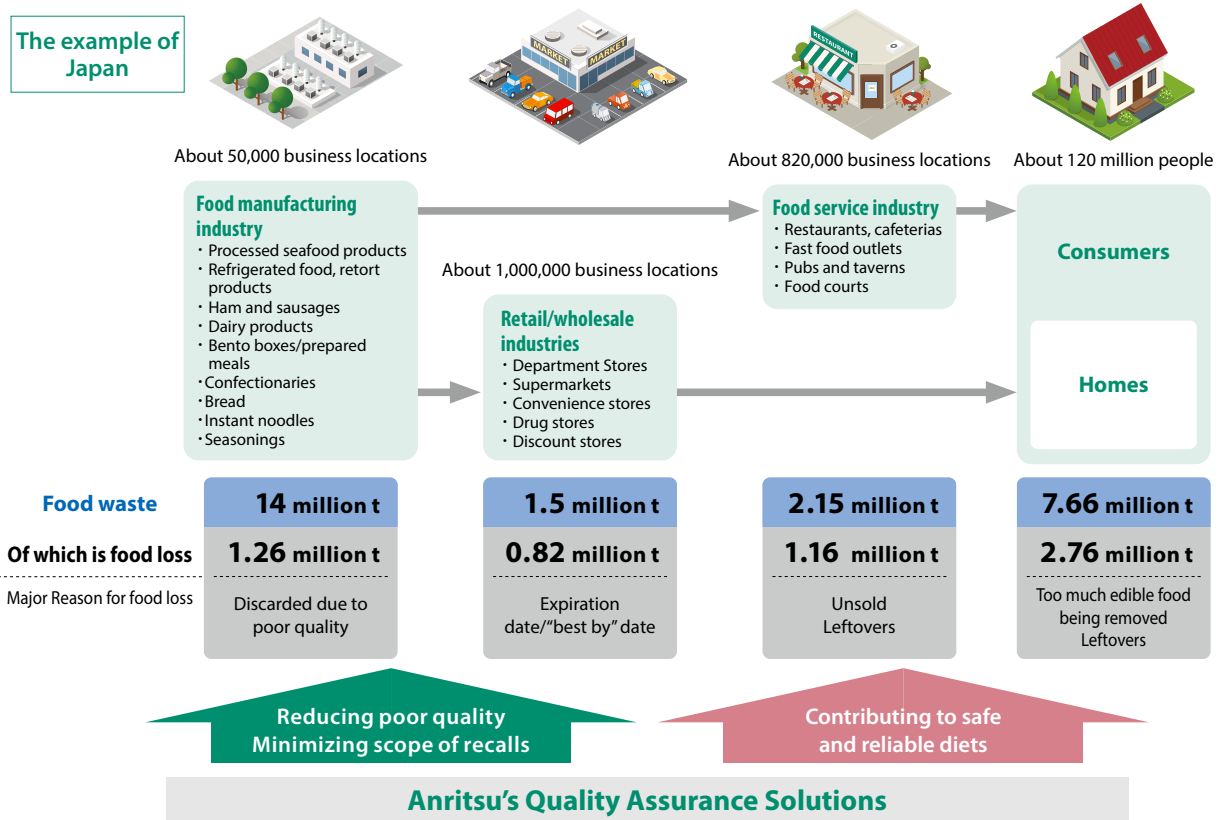
A: When processed food is found to be defective products after having been shipped from the factory and distributed in the market, a large volume of food must be recalled and discarded. Anritsu helps to reduce food loss by providing inspection equipment to food manufacturers to prevent the shipment of defective products to the market.

**Q: The ideal solution is to prevent the production of any defective products. Do you have any solutions for reducing food loss in the manufacturing process?**

A: Anritsu's quality assurance solutions encompass the entire manufacturing process. For example, we can prevent the production of defective products by removing defective raw materials. We can also discover and discontinue the production of defective products by monitoring quality data. Reducing food loss leads to an increase in customer profits.

**That makes sense. Now we understand how Anritsu's quality assurance solutions contribute to safe production of food while minimizing or eliminating loss.**

## Amount of food loss generated at each food distribution stage




Note: "Food waste" refers to foods that are still edible as well as parts of foods such as the bones of meats and fish that are separated out in the course of food processing and are not edible. "Food loss" means foods that are still edible but have been discarded. The food waste and food loss figures are estimates in FY2018 and were published by the Ministry of Agriculture, Forestry and Fisheries of Japan.

# Environmental Measurement Business

Anritsu plays an important role in realizing a safe, secure, and comfortable society with its customers by providing highly reliable solutions to improve communications quality and video surveillance solutions while leveraging its advanced technology. We also support the introduction and operation of local 5G and its dissemination to advance the transformation of the new digital society.

P.71 TOPIC Contributing to the Popularization of Local 5G

## Social Issues and Customer Needs

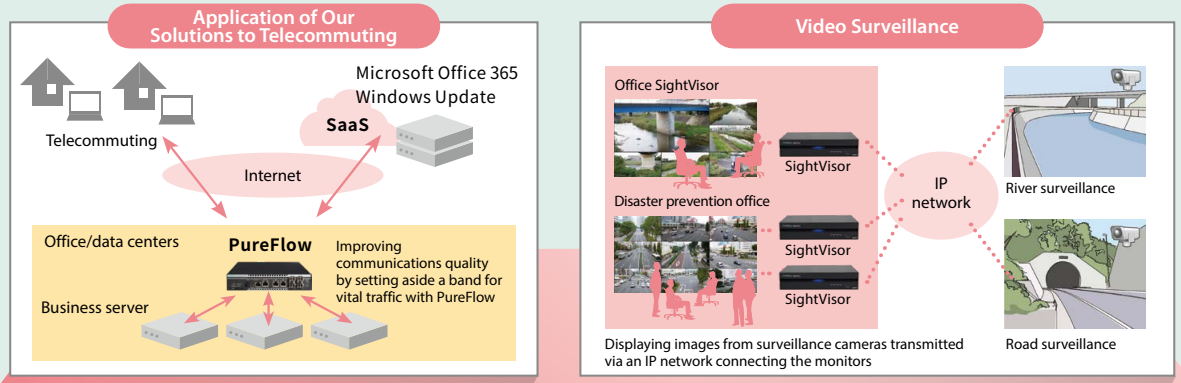
Anticipating the next social transformation through digital innovation.

**Social Issues**

- Dramatic rise in traffic due to increased telecommuting and online education
- Increase in natural disasters such as torrential rains and earthquakes

**Customer Needs and Interests**

- Easily dealing with communication failures in a company (late transmission, disconnection)
- Accurately grasping the state of a monitoring site with visual images in real time




**Eliminating unstable access to an operating server due to an increase in the number of telecommuting employees by introducing PureFlowWS1 to implement priority control of the communications band.**

**High-resolution images, from surveillance cameras across a wide area to monitor rivers and roads, are displayed on monitors in the disaster prevention office. They capture multifaceted information from multiple locations to prevent and mitigate the impact of disasters.**

## Customers

**Bandwidth Controller PureFlowWS1**
Improving communications quality and stabilizing network access

**Video Information System SightVisor2**
Broadcasting high-vision images on a nine-window screen

**Developing, Manufacturing, and Selling Highly Reliable Communications Network Equipment**

**Strengths**

- Proprietary technologies and solution proposal capability
- Strong installation base

## Anritsu

## Future Society

Creating a communications environment that ensures stress-free, comfortable connectivity anywhere, anytime

Realizing a society in which measures to prevent and mitigate natural disasters have advanced and everyone can live securely

# Sensing and Devices Business

Anritsu contributes to realizing a safe, secure, and comfortable society by improving convenience in our lives together with customers through the provision of optical devices that constitute core components of industrial products and Ultrafast electron devices across the world.

## Social Issues and Customer Needs

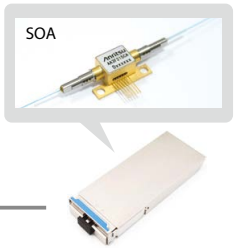
Anticipating the next social transformation through digital transformation

**Social Issues**

- Building a robust communications infrastructure that handles increased data traffic
- Increased number of patients with eye diseases due to the aging population

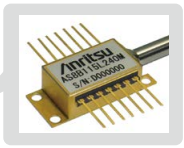
**Customer Needs and Interests**

- Secured quality of optical signals transmitted through optical fiber that constitutes part of the communications infrastructure
- Development of a high-resolution retinal examination device




Data center　　Optical transceiver

Anritsu's SOA, a low-noise optical signal amplifier, between data centers for long-distance optical communications, realizes a reliable communications environment.



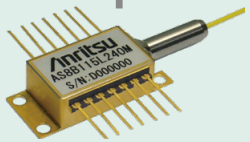
SLD light source

Optical coherence tomography (OCT) for ophthalmology

Incorporating Anritsu's SLD light sources into ophthalmic OCT systems allows for high-resolution retinal examination, leading to the early detection of age-related macular degeneration and glaucoma.

## Customers

**Semiconductor Optical Amplifier (SOA)**
Amplifies weak optical signals of long-distance communication



**SLD Light Sources for Optical Sensing for Medicine**
High resolution imaging for ophthalmic OCT systems

**Developing, Manufacturing, and Selling High-performance, Highly Reliable Devices**

**Strengths**

- Advanced device technologies, many with compound semiconductors
- Realizing flexible responses and high product quality through integrated processes

## Anritsu

## Future Society

Helping to resolve social issues through digital transformation and high-speed, high-capacity communications

Realizing a society in which people of all generations can enjoy healthy lives due to medical advances