

# Mid term Business Plan GLP2020

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## Agenda

1. Basic Policy of GLP2020
2. Basic Policy of medium and long term business strategy
3. GLP2020: Revenue and operating profit plan
4. GLP2020: Financial strategy
5. GLP2020: T&M business
6. GLP2020: PQA business

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During the GLP2017 plan term (from FY2015 to FY2017), the T&M business implemented a thorough management restructuring program as a measure to respond to the drastic downward trend in the mobile measuring instruments market prompted by saturation of the smartphone manufacturing market and contraction of investment in LTE base station network and LTE development. On the other hand, the PQA business achieved rapid growth by capturing growing quality assurance needs in a timely manner. However, as the decline in the T&M business was large, we were unable to meet our overall GLP2017 targets.

Under the GLP2020, a three-year plan that ends in FY2020, Anritsu will work to achieve the following basic policy, based on the results of GLP2017.

- (1) Prosecute the policy "Continuous profitable growth"
- (2) Make our best to accomplish 2020VISION

## 2. Basic Policy of medium and long term business strategy

Capture growth drivers without fail, and realize “continuous profitable growth”

	Market average annual growth rate (estimated by Anritsu)	Vision/growth driver	Medium & long -term guideline	
			Sales growth rate	Operating margin
T&M	3-5%	<b>Become a leading company supporting 5G/IoT society</b> (1) 5G, LTE-Advanced (2) IoT/Automotive, Connectivity (3) IP Data traffic/Cloud Services	$\geq 7\%$	$\geq 20\%$
PQA	3-5%	<b>Become a world-class partner in quality assurance solution</b> Expansion from contaminant inspection into the quality assurance market	$\geq 7\%$	$\geq 12\%$
Consolidated	—	—	—	$\geq 18\%$
ROE	—	—	$\geq 15\%$	

The “Basic Policy of medium and long term business strategy” provides guidance in formulation of the Mid-term Business Plan.

Reviewing the GLP2020 plan according to this Basic Policy, while challenges remain regarding the individual targets of an “operating margin  $\geq 20\%$ ” for the T&M business, a “sales growth rate  $\geq 7\%$ ” for the PQA business, and the overall target of “ROE  $\geq 15\%$ ,” we will do our utmost to establish a foundation during the GLP2020 that will enable us to achieve these targets during the next Mid-term Business Plan, GLP2023.

### 3. GLP2020 : Revenue and Op. profit Plan (1/2)

Indicators		FY2017	FY2018	FY2020
Revenue		86.0 B Yen	92.0 B Yen	105.0 B Yen
OP. profit		4.9 B Yen	6.6 B Yen	14.5 B Yen
Op. margin		6 %	7 %	14 %
Profit		2.9 B Yen	5.0 B Yen	11.0 B Yen
ROE		3.7%	7%	12%
T&M	Revenue	54.4 B Yen	60.0 B Yen	70.0 B Yen
	Op. profit	1.8 B Yen	3.5 B Yen	10.0 B Yen
	Op. margin	3 %	6 %	14 %
PQA	Revenue	22.5 B Yen	23.5 B Yen	26.0 B Yen
	Op. profit	2.0 B Yen	2.0 B Yen	3.0 B Yen
	Op. margin	9 %	9 %	12 %

**GLP2020**

(Note) Exchange rate for GLP2020 : 1USD=105Yen, 1Euro=125Yen)

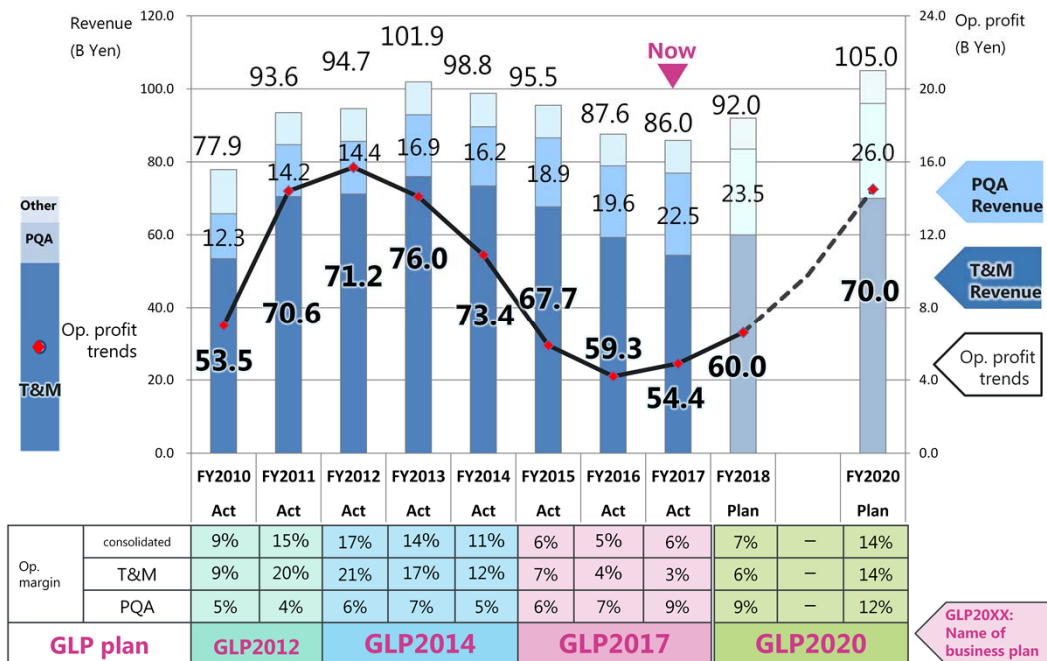
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7

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Anritsu will strive to reach our FY2020 group targets of more than 100.0 billion yen in consolidated revenue, more than 10.0 billion yen in profit, a consolidated operating margin of 14%, and an ROE of 12%.

### 3. GLP2020 : Revenue and Op. profit Plan (2/2)



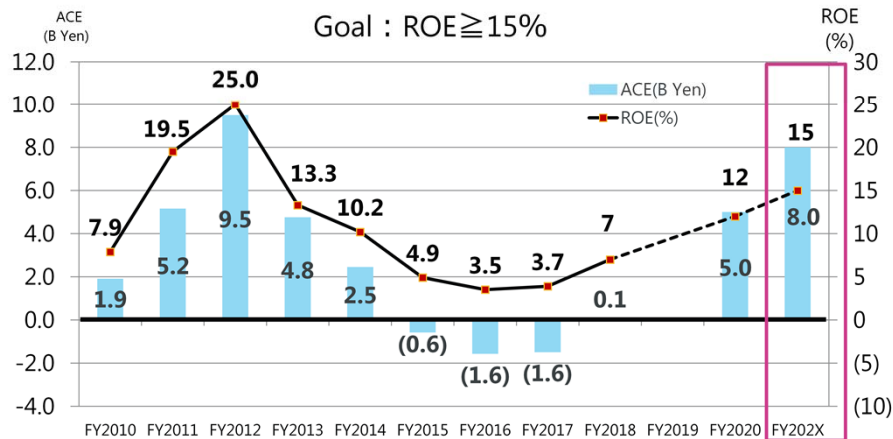
The operating margin target for FY2020 for the T&M business is 14%. Together with the target for the PQA business of 12%, we will work to recover the record high margins recorded from FY2011 to FY2013.

## 4. GLP2020 : Financial strategy

### Basic policy

**Improve corporate value KPI (ACE & ROE) through growth investment (including M&As) with a return of more than 7% of equity cost and capital efficiency improvements**

\* ACE (Anritsu Capital-cost Evaluation) : Operating income after tax-Capital Cost (WACC,5%)



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9

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While our medium and long term ROE target is 15% or more, firstly, we aim for a GLP2020 target of 12%. Anritsu will drive improvements in ROE by focusing our efforts on improving the margins of our main business activities, while maintaining an equity ratio of 60% or more. And implementing finance measures that enhance ROE by taking an increase in total asset turnover rates and capital costs into consideration.

## 5.GLP2020 T&M business

Representative Director, President,  
Measurement Business Group President  
Anritsu Corporation

**Hirokazu Hamada**

(No notes here)

## 5-1. T&M : Mid term business plan(GLP2017) Review

Business environment	Measures and Results
<p><b>Significant decline in the mobile-related market</b></p> <ul style="list-style-type: none"> <li>■ Decline in the scale of the mobile market to 40% compared with the peak in 2012</li> <li>■ Subsiding of investment in LTE base station equipment</li> <li>■ Continued evolution of LTE <ul style="list-style-type: none"> <li>- LTE-Advanced/ Pro</li> </ul> </li> <li>■ Progress in initial development for 5G ahead of schedule <ul style="list-style-type: none"> <li>- 5G NSA standards fixed at the end of March 2018</li> </ul> </li> <li>■ Investment in IoT is in its infancy</li> </ul> <p><b>Strong optics and digital measurement market</b></p> <ul style="list-style-type: none"> <li>■ Increase in demand for optical modules to achieve the development of higher speed, higher capacity data centers</li> </ul>	<p><b>Management restructuring program and strengthening 5G development investments</b></p> <ul style="list-style-type: none"> <li>■ Thorough implementation of the management restructuring program "REBORN-M"</li> <li>■ Implementation of organizational slimming measures in North America</li> <li>■ Investment in 5G business <ul style="list-style-type: none"> <li>- Release of 5G new products in February 2018</li> <li>- Acquisition of Azimuth Systems, Inc.</li> <li>- Strengthening support service structure: Establishment of the Philippines Development Center</li> </ul> </li> <li>■ Establishment of a business division focusing on the IoT business</li> </ul> <p><b>Introduction of new optical and digital products in TTM</b></p> <ul style="list-style-type: none"> <li>■ Introduction of new products for R&amp;D (400G support) and manufacturing (100G support) to meet market demands</li> </ul>

During 2015 to 2017, there were significant changes in the business environment for the mobile T&M business underpinned by changes in the structure of the smartphone market. The scale of the mobile T&M market has declined to roughly 40% compared to the peak in 2012 due to factors including restrained investment in increasing speeds of LTE in the Chinese market and a subsiding of LTE base station investment in North America.

Meanwhile, standardization of 5G NSA was fixed in March 2018, and progress towards the commercialization of 5G for major operators in Japan and overseas became more concrete.

In the face of the significant contraction in the mobile T&M market, Anritsu has thoroughly implemented our management restructuring program, "REBORN-M" and worked to secure profits.

At the same time, we have actively invested in the 5G business as our next growth driver and released new 5G products in February 2018.

In addition, Anritsu acquired Azimuth Systems, Inc., which owns phasing technologies, in September 2016, and prepared 5G conformance test systems.

Although the support system in Europe and North America has been slimmed through the management restructuring program, preparations have been conducted at the Philippines Development Center, which was newly established in March 2018 for the provision of highly cost-effective 5G support service.

In terms of the IoT-related business, there are uncertainties regarding the use of IoT in the industry world, and IoT adoption and investment has not yet become active.

Anritsu established a business division focusing on the IoT business and made preparations to ensure readiness for a launch into the IoT market.

## 5-2. T&M : GLP2020 Basic strategy

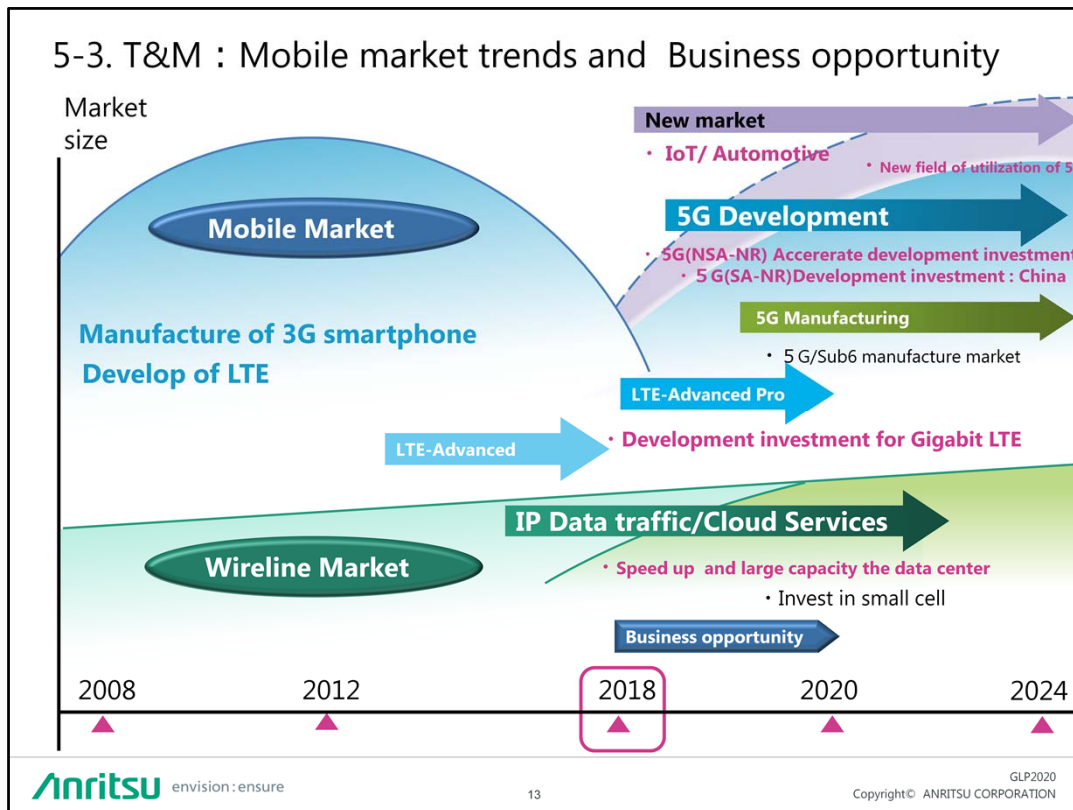
### VISION

Become a leading company that supports the 5G/IoT society

### Key points of segment strategy

- Become the No. 1 T&M vendor ahead of competitors in 5G while maintaining business in the 4G market.
- Develop new profit bases in the IoT/automotive field, where growth is expected through the utilization of 5G.
- Create test solutions that support the expansion of cloud services.

Contribute to the development of the 5G network as integrated IoT infrastructure and expand business in the development and manufacturing of evolving networks and devices as well as construction and maintenance with the aim of becoming a leading company that supports the 5G/IoT society.

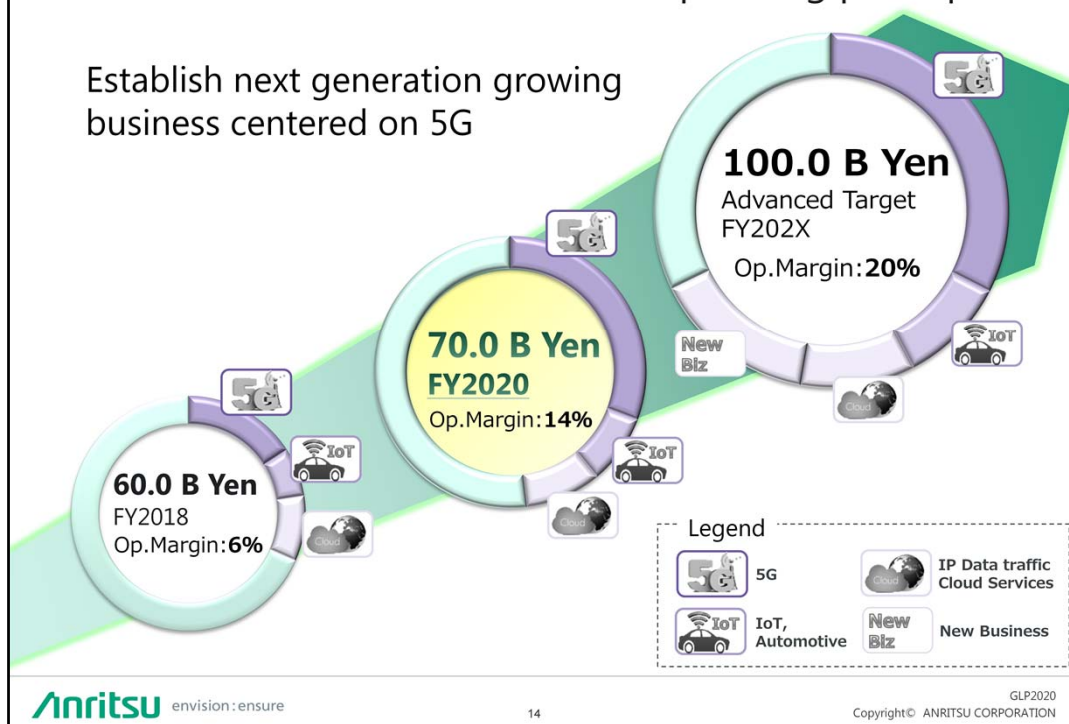


Of the mobile measurement market, the cellular test market is expected to expand with the initial development investment of 5G. We also expect that the peak is around 5 years ahead and we expect that it will remain at about 70% compared to the peak of 4G development investment.

On the other hand, along with the expansion of mobile broadband, new demand will be expected to expand due to the spread of IoT / Automotive and 5G utilization.

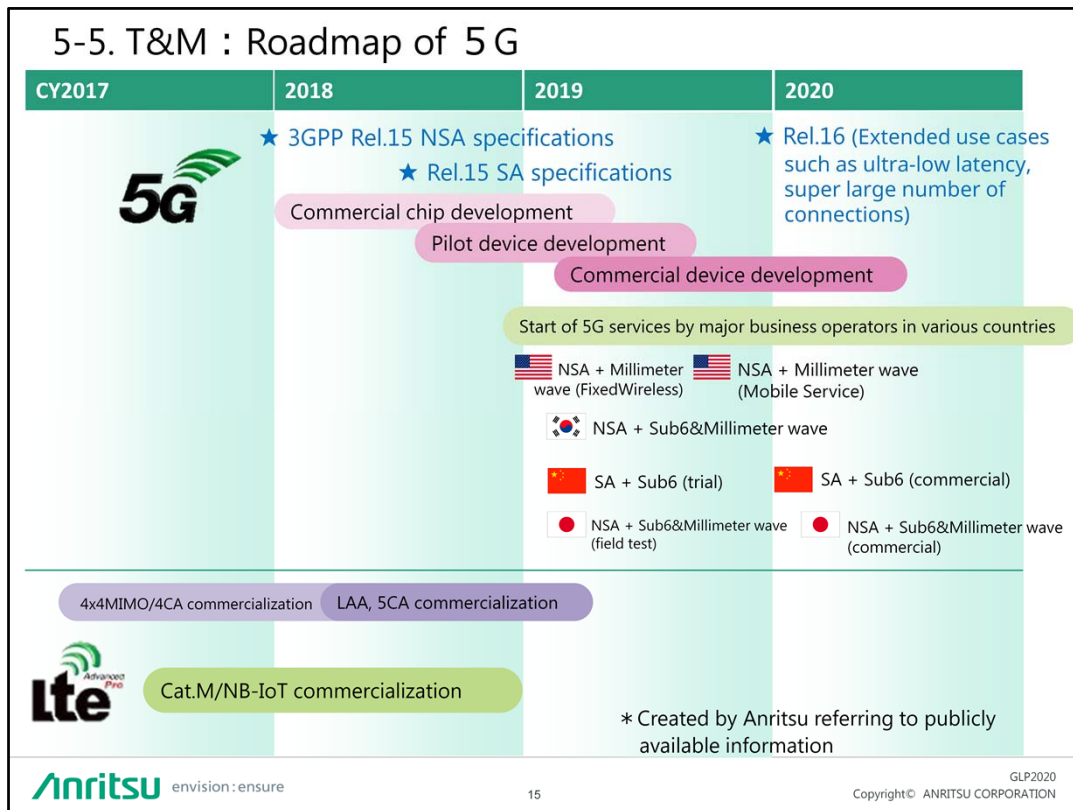
## 5-4. T&M : GLP2020 Revenue and Operating profit plan

Establish next generation growing business centered on 5G



This is the GLP2020 revenue and operating profit plan for the T&M business. We aim to increase revenue by roughly 50% by FY2020 through the three growth drivers of 5G, IoT/automotive, and IP data traffic/cloud services, and achieve revenue of 70.0 billion yen and an operating margin of 14%.

A next generation growing business will be launched in the next Mid-term Business Plan GLP2023. The plan is to increase revenue by around 60% through the four businesses comprising these three growth drivers and the next generation growing business and to achieve an operating margin of 20% as a medium to long term target.



This slide introduces the latest 5G service roadmap.

In the 3GPP, standardization of 5G NSA-NR was completed in March 2018, and moving forward, standardization of 5G SA-NR is scheduled for completion in September 2018.

The timing for the start of commercialization of 5G by carriers in various countries has tended to be ahead of schedule, following completion of the standardization of 5G.

The assumed 5G method and frequency band used for each country is shown in the chart below.

Method	Sub6GHz	Millimeter wave
NSA	Japan, South Korea	U.S., Japan, South Korea
SA	China	

There are plans to start 5G service in the U.S. in the second half of 2018.

Afterwards, there are plans to start 5G service in South Korea in 2019, and in Japan and China in 2020.

Anritsu will provide measuring instruments for 5G chipset development, followed by conformance test systems to the market.

## 6. GLP2020 PQA Business

**Masumi Niimi**

Senior Vice President  
PQA Business Group President  
Anritsu Corporation

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## 6-1. PQA Business : Mid term business plan(GLP2017) Review

Business environment	Measures and results
<p><b>Interest in safe and secure food is growing around the world</b></p> <ul style="list-style-type: none"> <li>■ Increase in demand for processed food and prolongation of expiration date</li> <li>■ Penetration of sanitary management practices such as HACCP</li> <li>■ Shift from sampling inspections to full inspections Shift from human inspections to automated inspections</li> </ul> <p><b>Global advance of inspection automation that pursues both quality improvements and productivity</b></p> <ul style="list-style-type: none"> <li>■ Expansion of production volume, increased line speeds</li> <li>■ Chronic manpower shortage, rising personnel expenses</li> <li>■ Rising raw material prices, reduction of food loss</li> </ul>	<p><b>Active investments in cutting-edge technologies to overcome quality assurance issues</b></p> <ul style="list-style-type: none"> <li>■ Sharing issues with advanced customers working on quality assurance, including major food companies and convenience store vendors</li> <li>■ Investment in automated inspections for insects, resins, small bones, etc.</li> </ul> <p><b>Development of new products that contribute to quality assurance</b></p> <ul style="list-style-type: none"> <li>■ Long-life, low-cost X-ray inspection devices</li> <li>■ X-ray inspection devices for detection of packaging and seal defects</li> <li>■ Metal detectors with radically improved detection performance</li> <li>■ Data management systems that contribute to the establishment of traceability and improvements in productivity</li> </ul> <p><b>Strengthening relationships with global companies</b></p> <ul style="list-style-type: none"> <li>■ Strengthen relationships and increase business with major global food and beverage companies and confectionery companies</li> </ul>

Stable growth continued in both Japanese and overseas markets in the PQA business during the GLP2017 period due to factors including high levels of interest regarding quality assurance among food and pharmaceutical manufacturers. In the Japanese market, investments for improvement of efficiency and streamlining continued in response to needs for more stringent quality assurance and a shortage of manpower, while in overseas markets active investments in quality assurance expanded globally, in addition to continued investments for the improvement of efficiency and streamlining by top account companies. Anritsu has responded actively to this business environment through efforts including the introduction of new X-ray inspection systems as well as the strengthening of local production structures and sales support structures for business expansion in overseas markets where growth can be expected. As a result, revenue in the PQA business has increased from 16.2 billion yen in FY2014 to 22.5 billion yen in FY2017 (an increase of roughly 1.4-fold), while operating profit has increased from 0.5 billion yen in FY2014 to 2.0 billion yen in FY2017 (an increase of roughly 4-fold).

## 6-2. PQA Business : GLP2020 Basic strategy

### VISION

Establish position as a world-class quality assurance solutions partner

### Basic strategy

- Develop the advanced market in Europe and North America with X-ray inspection systems as a key solution
- Accurately respond to market needs through localization and global business reform
- Strengthen profitability through value-added solutions and expansion of global business

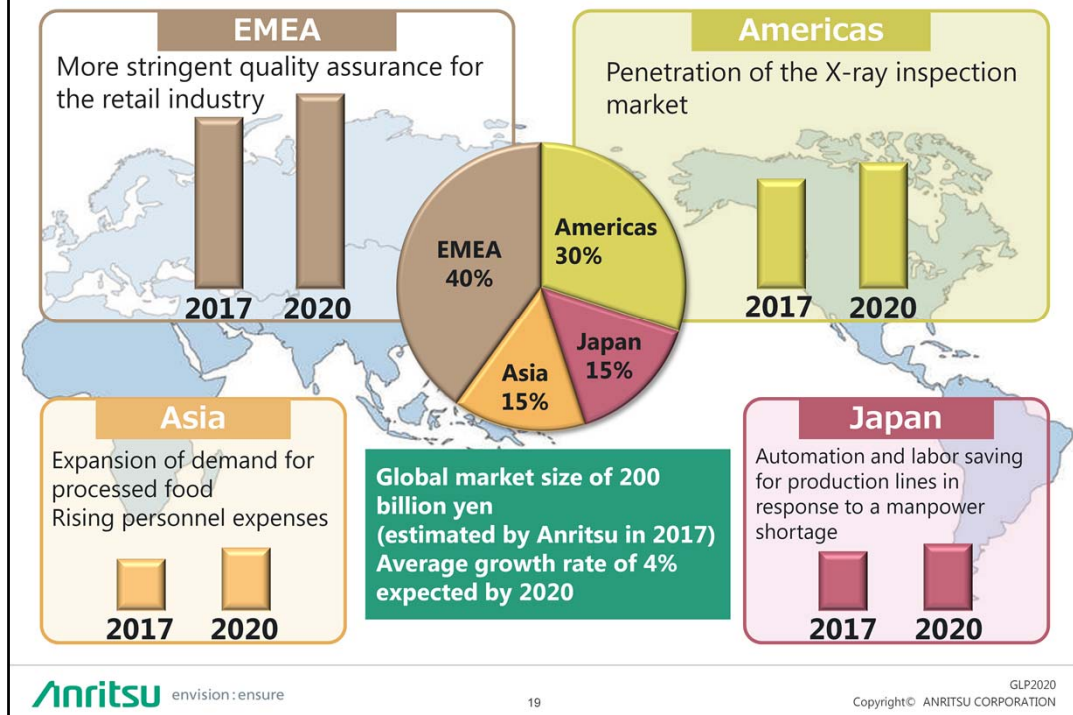
This slide introduces the basic strategy for the PQA business.

(1) Pursue image recognition and signal analysis technologies, including new sensor development and AI, and continue providing top-performance solutions that enhance customer value.

(2) Reform business processes including marketing, sales, engineering, manufacturing, and maintenance services that match customers' needs in regions around the world.

(3) Actively introduce original, excellent added value products to the market, while improving market share and the market mix in the continental European market and pharmaceuticals quality inspection market.

### 6-3. PQA Business: Current Status of the PQA Market and Outlook



The PQA market is dispersed, as it is composed of approximately 20,000 customer business locations in Japan, and several tens of thousands of locations overseas according to estimates, and at least 80% of the entire global market located overseas.

Japan and EMEA are mature markets where quality assurance has become stricter and more consolidated with major companies.

While North America is a huge mature market, for X-rays it is a growth market in which demand can be expected to expand.

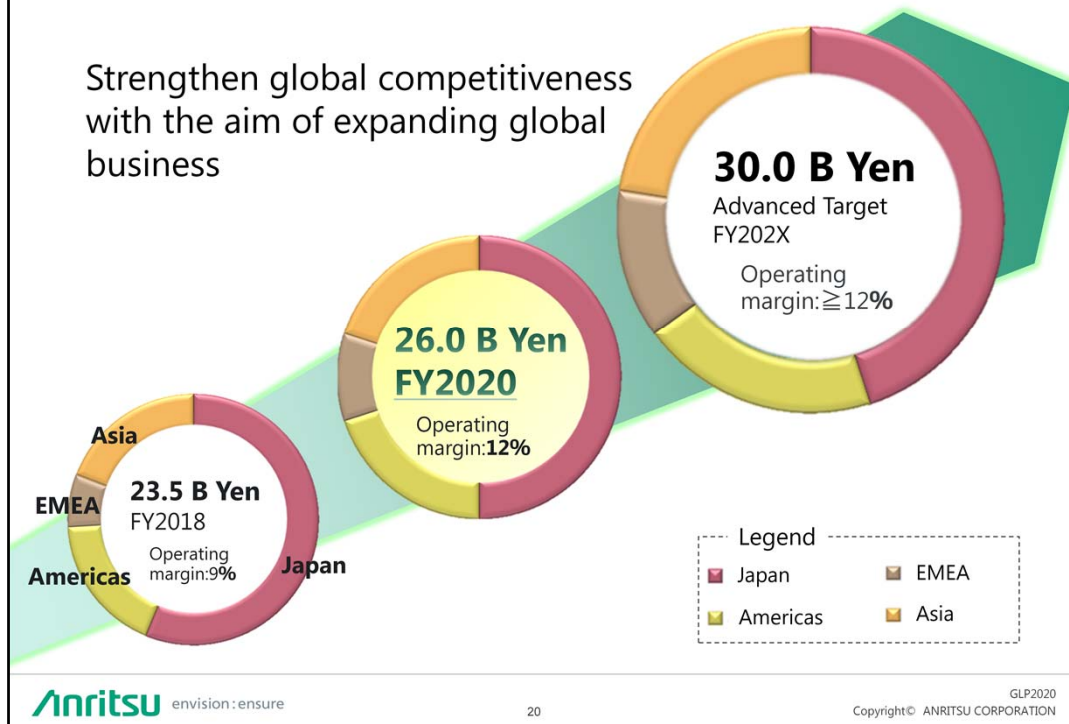
Asia is a promising market for the future, where growth continues at a high pace.

Mandatory requirements include a product lineup and engineering modifications to support diverse field environments, as well as an inspection scope ranging from primary products such as livestock and fresh fish to confectioneries, frozen foods, and lunch boxes.

In addition, the ability to offer maintenance services is an important factor in the selection of products.

#### 6-4. PQA Business : GLP2020 Revenue and operating profit plan

Strengthen global competitiveness  
with the aim of expanding global  
business



This is the GLP2020 revenue and operating profit plan for the PQA business. In GLP2020, Anritsu will develop a global business structure to become a true global company, while strengthening investments and developing business processes to improve productivity. In addition, we will fully enter the European market and pharmaceuticals market from FY2021 onward, in an effort to re-accelerate growth. We will work to enhance business resources overseas, in order to increase the overseas sales ratio to 55% as a long term target.

