～ Quality Assurance Survey in Japan～
III release report

November 2018

JMAC 株式会社 日本能率協会 コンサルティング

Foreword

Following the first two releases of 2009 and 2014, the Japan Management Association (JMA) and JMAC conducted the 3rd Japan Quality Assurance Fact finding Survey in 2018.

The purpose of this time is to see where a change may have been affecting the same items investigated so far and to clarify how the quality assurance faces the change and trend which have come surrounding enterprises in recent years.

Goal	To understand current quality status and issues of current quality assurance in Japanese manufacturing industry in Japan: also, to catch the situation and problems of Japanese manufacturers' compliance situation based on recent trends.

Focus	Sample number of companies: 280 Respondents ranging across all industries, with a sales scale of 23%less than 10 billion yen,, 51% in between 10 and 100 billion yen, 26% over 100 billion yen.

November 2018

JMA Consultants Inc.
«Quality Assurance Survey» Commettee

Resumé

On the actual quality of quality assurance with manufacturing industries:
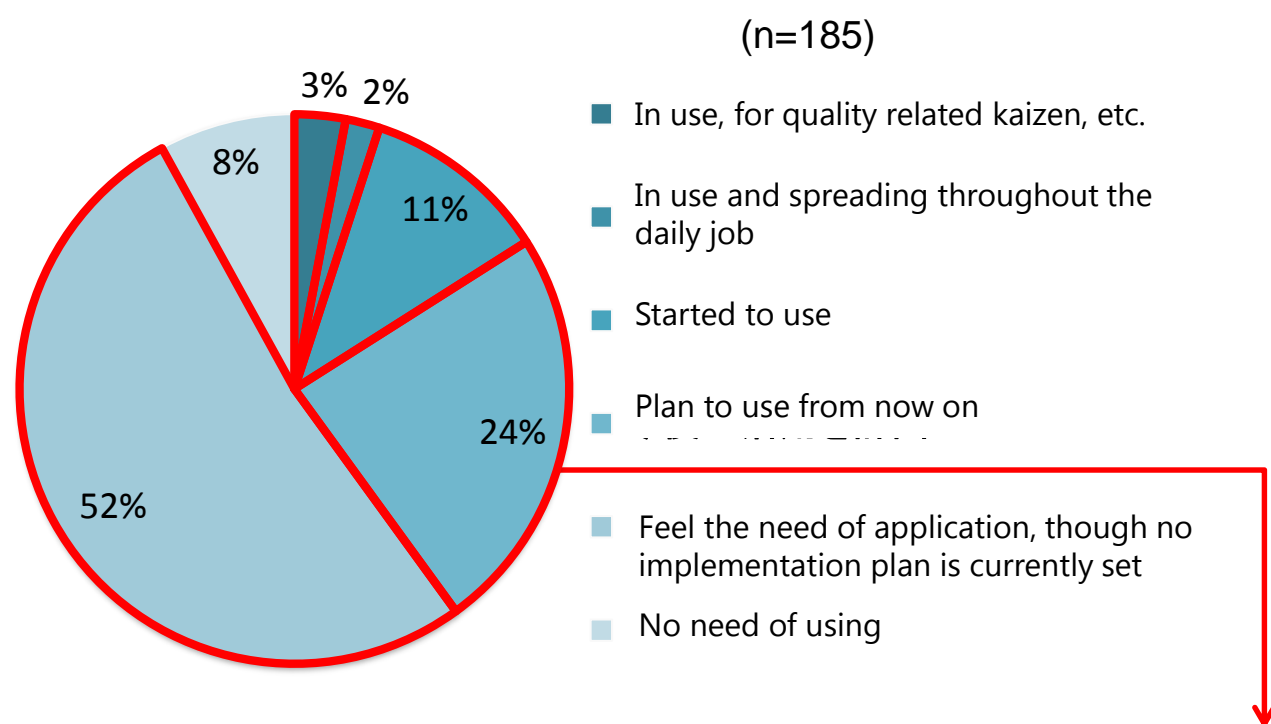
1. More than half of responding companies have established a corporate quality assurance department
2. Evaluation of quality assurance cost, especially evaluation / prevention cost has been improving
3. The number of quality assurance personnel has increased with each company, but the actual work status has changed little, and it is focused mainly on inspection · complaint · defective response
4. As a result, the number of complaints occurred is slightly improving
5. Meanwhile, the (qualitative as well as quantitative) shortage of quality assurance personnel has become normal
6. The mechanism of quality assurance has not undergone any review and the implementation / operation level has not increased
7. Educational development and operations have not changed, while concepts about quality and the degree of understanding tend to decline

Respondence of each company to several changes against the past, such as the promotion of service business in the manufacturing industry and the digital transformation
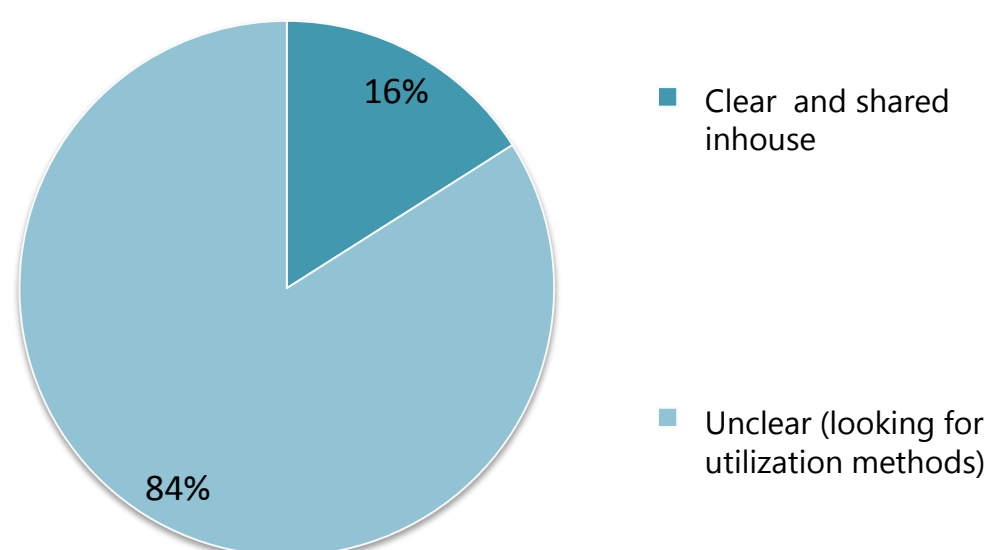
1. Approximately half of the companies in the manufacturing business are going to develop service businesses. The majority of them not for free.
2. Although they make money by such service businesses, the definition of service quality etc. is broadly insufficient. Similarly, maintenance of the mechanism has not progressed in most cases.
3. If we compare claims in the service business by the number of cases per 100 million yen, we will make 3 times more than that of *monozukuri.*
4. The use of IoT / AI is not advanced yet, but it has high attention.
5. Quality assurance should be taken not only within the enterprise, but also on the network.
6. They have huge problems in human resources development

Topic: Use of IoT / AI for quality assurance activities

■Current utilization of IoT / AI for quality assurance activities

(n=185)

3% 2%

8%

11%

24%

52%

- In use, for quality related kaizen, etc.
- In use and spreading throughout the daily job
- Started to use
- Plan to use from now on
- Feel the need of application, though no implementation plan is currently set
- No need of using

■16% is currently using IoT / AI for quality assurance activities

16%

84%

- Clear and shared inhouse

- Unclear (looking for utilization methods)

A 92% of the sample state that the application of IoT / AI is positive, but its utilization is as low as 16%. Also, while the application necessity is highly recognized, the aim of utilization is not clarified, and those searching for some utilization method are a big 84%.

In the past decade the environment in which the manufacturing industry was placed has changed drastically. Representative examples include advances in new versatile technologies such as IoT /AI, evolution of business models including some outsourcing different from conventional outsourcing, along with service development, changes in how people work, changes in personnel structure within the company.

Changes have also emerged in the recognition of society and customers; also, **corporate responsibility for society is strongly required**. The quality assurance survey of 10 years ago and the survey result of the current quality assurance survey also felt the necessity of responding to such change. This *Quality Assurance Actual State Investigation Committee* has summarized the **following six recommendations**.

1: Quality assurance activities beyond the framework of the quality assurance division

More than half of companies have established quality assurance departments, but there are many levels of recurrence prevention Efforts towards levels to prevent defects beforehand are required, which need to take corporate activities beyond the framework of divisions

2 : Assure the response to expectations as well as the fulfillment of responsibility

As the supply chain is becoming more complex and complex, it is important how responsibly each process will carry out in response to the customers' expectations in terms of quality.

3: Improvement of quality assurance system needs meet a structural change

While half of the quality assurance system charts, standards, standards etc. are being satisfied, undeveloped parts are left. It is necessary to further improve the quality assurance system as well as thorough operations .

4: Utilization of New Technology (Digital Quality Assurance)

By further utilizing IoT / AI, technology solutions, it is possible to collect and analyze quality related data at an unprecedented level.

5: Developing new resources for quality assurance

There are 40% of companies that are lacking human resource of quality assurance organization, but it can be said that the level required for quality assurance is expanding. n addition to enhancing the education system on quality, it is essential to improve and maintain the company's quality awareness and culture level.

6: Not only respond to new things but also train quality assurance personnel

The human resources need to be able to discuss not only new products but also the quality required for the next generation.

First of all, it is necessary to define the quality of the next generation, but apart from that, will those resources produce a method to measure if good or bad or realize a satisfactory product?