

CUSTOMER STORY

**JTEKT Corporation**

# JTEKT achieves compliance in the Automotive Industry: ISO 26262 and ASPICE with Tuleap



## QUALITY AND PRODUCTIVITY

Process standardization increased clarity and consistency at each development step.



## FASTER COMPLIANCE AUDITS

For ISO/IEC 15504 et ISO 26262 standards.



## EFFICIENT ACCESS TO INFORMATION

Traceability and product history is made easier with centralized information.

# Summary

## THE ORGANIZATION

JTEKT Corporation is a Japanese international company, created by the merger of Koyo and Toyota, two subsidiaries of Toyota. The organization is a manufacturer in different areas such as automotive, aerospace, wind power generation and more. But it is above all one of the world leaders in the electric power steering market, supplying major manufacturers like BMW and Daimler.

## SPEAKER

Testimony of an engineer in charge of setting up and monitoring quality management. He participates in continuous improvement within the system and software departments at JTEKT.

## THE AUTOMOTIVE INDUSTRY CHALLENGE

The Electric Power Steering (EPS) market is expanding at an extremely fast pace. It is estimated to register an annual growth rate of 5.7% over the forecast period 2022 - 2027. And software development is playing an increasing role.

We needed tools to adapt to these trends. For our future products like Automatic Park Assist and Lane Keep Assist, we will be developing embedded software. The automotive industry has very strict standards we have to follow because our products are critical. We currently have **ISO 9001**, **ISO 26262**, and, to meet our customers' needs, **ASPICE** (Automotive SPICE) certifications.

According to an engineer in charge of setting up quality management, « the purpose is to control software development. » JTEKT **has to be certified at Level 3**, which means we have to implement process models and show that we are using them for all of our projects.

## ABOUT A-SPICE STANDARD

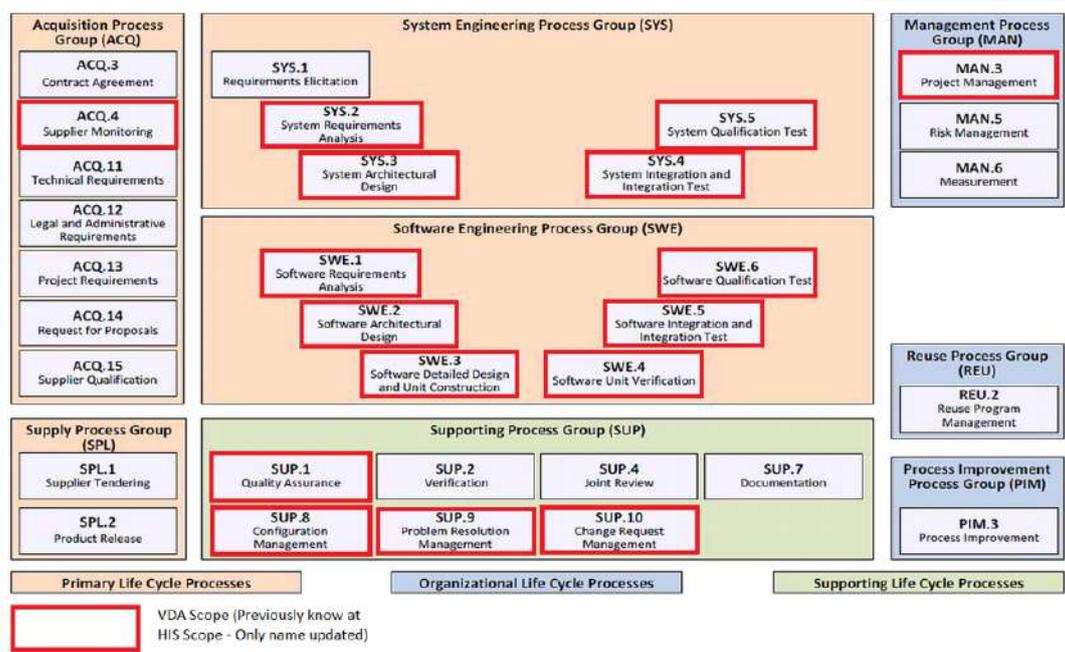
Automotive SPICE (Software Process Improvement and Capability Determination) is **an automotive-industry standard that is derived from the international ISO 15504 standard**. It provides a framework for the evaluation of software development processes.

Increasing numbers of companies are using ASPICE to evaluate their processes and identify improvements to be made at the project and organizational levels. ASPICE audits evaluate the degree to which an organization has **control over its software development processes**. There are five Key Process Areas, or KPAs, each with objectives that must be achieved and the rules for achieving them.

# JTEKT chooses Tuleap to meet customer expectations and industry standards

## STANDARDIZING PROCESSES

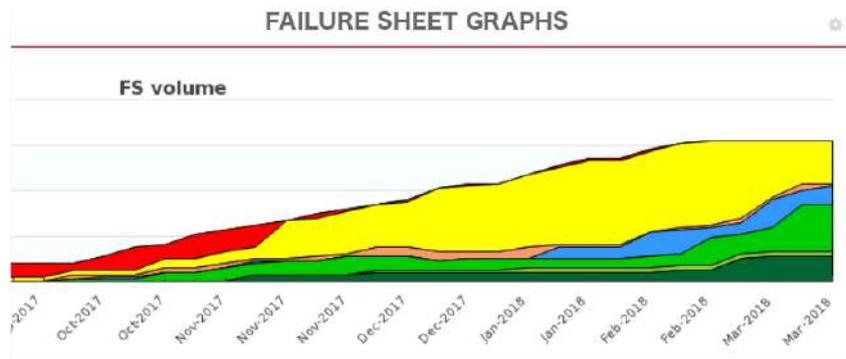
In 2012, JTEKT chose Tuleap Enterprise to take control of its software development processes and standardize both processes and project management to prepare for ASPICE certification. JTEKT used Tuleap to implement process models for each ASPICE process (in red). To align with SPICE Level 3, JTEKT created **20 tracker templates**, each with its own custom fields, workflows, graphs, permissions, and colors.



A-SPICE Process

## PROCESS: PROBLEM RESOLUTION MANAGEMENT

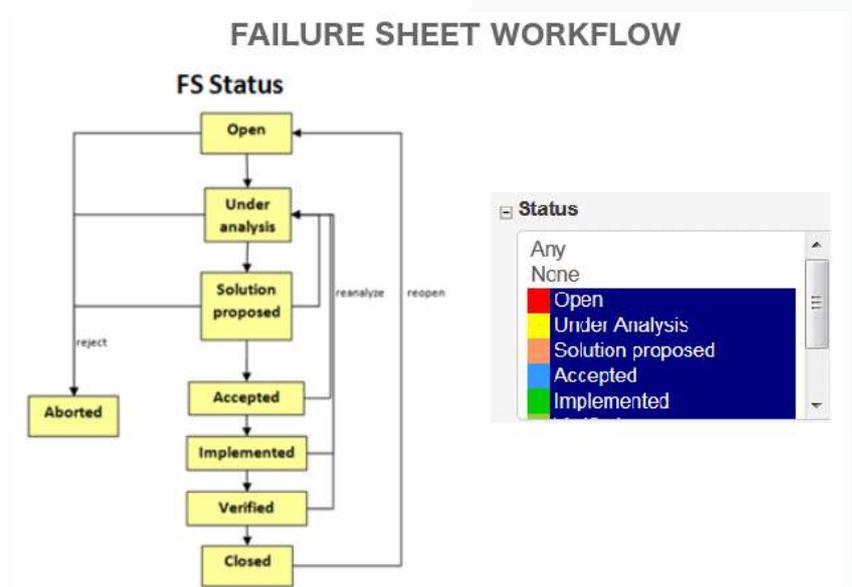
JTEKT created a «Failure Sheet» Tracker with individual and/or public reports with automated graphs configured to meet the company’s project management needs. Project managers can very easily obtain up-to-the-minute information on what is happening with each project.



Failure sheet graphs

The Workflow is a **crucial element in Incident Management**. ASPICE requires accurate information on project progress, with deadlines. With Tuleap, there is complete traceability from beginning to end. JTEKT organized Failure Sheets with fields sets so that each person that has to fill them in knows exactly where to start.

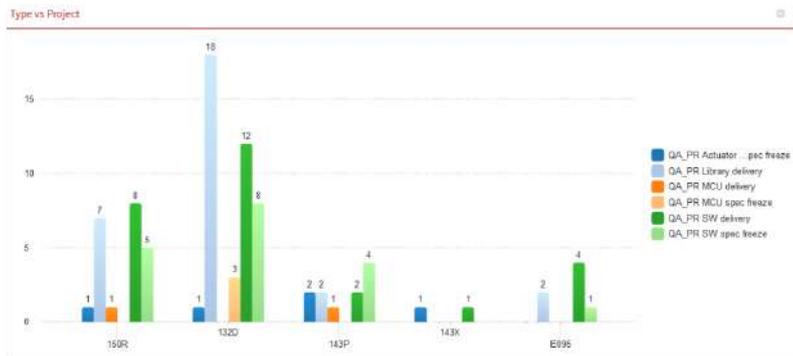
JTEKT uses **Tuleap Agile Dashboard** with Burndown Charts for management and planning. The Failure Sheets are the entry point and feed the backlog. This configuration allows JTEKT to estimate the amount of work required to resolve incidents. A Card Wall is used to provide a visual overview.



Failure sheet workflow

## PROCESS: QUALITY ASSURANCE

JTEKT created an Engineering Quality Indicator Tracker and can search individual and public reports. Information can be filtered by project to view the different QA reviews and determine whether or not a product can be delivered.



Using Tuleap for Quality Assurance

A series of graphs was also created to ensure alignment with objectives and make adjustments as needed. The graphs are linked to Trackers using the Attachments field. Using Tuleap in this way provides the necessary **audit trail**.

## IMPLEMENTING TULEAP COMPANY-WIDE

At JTEKT, Tuleap has grown to encompass **2,000 users and 200 projects** and **implementation is now worldwide**. What started out as an approach to software R&D has also expanded to product and department management. Tuleap truly is present throughout JTEKT's global organization.

A quality manager said, «We have moved from a software community to something much broader. Tuleap users are not just software developers and project managers. The solution has also been adopted by non-technical employees.»

« Tools like the Document Manager and Trackers are highly configurable, so we were able to tailor them to specific needs. »

“ Tuleap is highly configurable. When you start using it, you quickly realize just how much you can do with it. To get the most out of Tuleap, I recommend sitting down with your team before you start to determine exactly what you want to be able to do. That way, you can ask for what you need and get relevant advice from Tuleap team on how to use the tool appropriately. ”

| System and Software Process Improvement Engineer at JTEKT Corporation

# Their results: full traceability and better customer satisfaction

“

Traceability is one of the keys to ensuring that our software respects safety regulations. Tuleap has become our critical friend for ASPICE audits.

”

| System and Software Process Improvement Engineer at JTEKT Corporation

Several positive changes have taken place at JTEKT since the company implemented Tuleap.

- The **all-in-one integrated environment** lets all users find the information they need quickly and easily
- Objectives can be tracked and adjustments made using visual graphs.
- The community has expanded beyond just software developers to **encompass stakeholders across the organization.**



[www.tuleap.org](http://www.tuleap.org)