



# Analyzing M2M equipment data in Qlik leads to improved efficiency of maintenance service

*“Qlik delivered a productive preventive maintenance solution that contributed substantially to equipment stability and efficient operations.”*

– Satoshi Yoshida, General Manager, Service Business Department, Service Division, SCREEN Graphic and Precision Solutions Co., Ltd.



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SCREEN Graphic and Precision Solutions (SCREEN GP) supplies printing-related equipment and equipment that manufactures PCBs for electronic parts. To help its customers stabilize their production lines, SCREEN GP developed a support program called “TRUST Network Service”. This program combines a variety of services such as monitoring the equipment by collecting and analyzing the equipment’s logs data in M2M; predictive analysis of potential problems; isolation of faults and supply of analysis reports.

In 2014, SCREEN GP selected Qlik as the primary service backbone to analyze all equipment logs. SCREEN GP associated the equipment logs with Salesforce’s customer and product data in Qlik before preparing the reports in Qlik NPrinting. Besides strengthening SCREEN GP’s product capabilities through

equipment stability and efficient operations, it also contributes to the company’s plans to ‘upsell’ services to their customers.

## Stabilizing operations of time-sensitive production lines

The main businesses of SCREEN GP are its printing-related equipment and its PCB-related equipment business. It has 14 sites in Japan (including subsidiaries) and 11 group companies with 7 sites overseas.

Stable operations of their equipment is especially important for customers who buy the company’s printing- or PCB-related equipment. In particular, on-demand printing faces strict delivery requirements. If a problem with the equipment stops operations, not only is delivery jeopardized, but the customer also suffers substantial business damage in terms of reduced sales and loss of trust.

Mr. Satoshi Yoshida, General Manager of the Service Business Department in the Service Division explains the challenge. “For example, recovery takes a long time if you consider that you need to contact the device’s maintenance support desk to get them onsite to see what the problem is, and then take the appropriate action. Compared to our major competitors, we have a smaller number of sites and staff, so we need to use our internal resources efficiently. We have to deliver a service that increases our product uptime, as well as improves customer satisfaction.”

## Solution overview

**Customer Name:** SCREEN Graphic and Precision Solutions Co., Ltd

**Industry:** Manufacturing

**Function:** Users in the Service Division

**Geography:** Japan: 14 sites including subsidiaries & Overseas: 11 group companies with 7 sites

**Challenges:** Maintenance of its customers’ production lines has become more difficult due to advances in equipment technology and limited availability of skilled manpower. The company was looking for a way to help stabilize its customers’ production lines.

**Solution:** The objective was to develop a new service that could detect signs of problems and help isolate faults. By collecting equipment data in M2M and analyzing it in Qlik, as well as provide customers with analysis reports by combining with Qlik NPrinting.

**Benefits:** The “Trust Network Service” created by Qlik delivers equipment stability and efficient operations for customers and improves the support response. Besides strengthening product capabilities, it also improves customer satisfaction.

**Data Source:** Equipment logs, Salesforce





SCREEN GP has also been trying to strengthen its upsell business with programs like support service for the equipment sold. "In the Service Supervision Division, we have been looking for a service that would provide advanced proactive system maintenance and improved operations. Such a service would also enhance customer satisfaction by delivering a stable operation," says Mr. Yoshida.

## Highly rated track record in overseas subsidiaries

The company first started to seriously consider this service at the beginning of 2012. This was prompted by its previous use of Qlik in information-sharing technical meetings with its British subsidiary.

Mr. Hiroshi Nishide, GA Device Development Department in the Graphic Arts Division explained the situation to us: "We have been using Qlik in our British subsidiary for equipment troubleshooting since 2008 and its performance was highly rated. When we were investigating an operation maintenance service that uses equipment log data, we decided to differentiate ourselves from other companies by offering a new support service by using Qlik. The GA Device Development Department decided to use Qlik after concluding that it could be reformatted and adapted to our service."

The company deployed Qlik in 2012. Besides testing the analysis of log data from more equipment, the company also gradually expanded the number of models that Qlik could be used with. In the spring of 2014, SCREEN GP started its own "TRUST Network Service" support program that provides remote equipment recovery and maintenance.

## Clear understanding of the situation enables proactive preventive maintenance

The "TRUST Network Service" consists of the following three services.

- "TRUST Guard" provides an accurate understanding of the equipment's condition by automatically sending and collecting equipment logs.

- "TRUST Assist" remotely performs fault isolation and operation guidance, based on the collected log data.
- TRUST Dialog" provides analysis reports for users from their respective "My Page".

In its printing-related equipment business, SCREEN GP has SLAs to provide the service to 70% of the models that have the automatic log sending function, most of which are inkjet printers. "The biggest benefits from Qlik are the achievement of a proactive preventive maintenance and improved precision of fault isolation", says Mr. Yoshida.

M2M is used in the Service Division to consolidate daily equipment logs that are sent automatically from customers' equipment around the world. These logs are analyzed via Qlik and are used to detect signs of problems. The collected logs contain data covering a wide range of information such as the number of print jobs; printing times; ink usage levels; number of times the head has been cleaned and all error details. The support staff then applies the analysis results to the preventive maintenance service on a daily basis.

The logs allow SCREEN GP to see signs of trouble such as an increase in the number of times a specific print head is cleaned. If this happens, the customer can send a technician to do pre-emptive maintenance on the head or replace the part before the problem occurs. This helps to prevent the serious problem of equipment stoppage. The ability to use this type of predictive detection has a big effect on SCREEN GP's operations – resulting in over 88% of equipment utilization rate for their POD products.

The equipment log data is shared by the Service Division in Japan and seven overseas sites. For example, as the company can accurately monitor the operating time of parts such as the UV lamp that dries the ink, they can proactively improve equipment stability by telling the customer to change parts when they are getting close to the end of their stable operation period.

The technical staff at the Service Division of all sites use the data. Another advantage of Qlik is that it can provide governance, e.g.

Qlik offers effective access controls that prohibit staff from accessing the analysis data of customers from other sites.

"TRUST Dialog" allows the company to build a portal site for each user in Salesforce – this is used to manage customer information and to distribute Qlik's analysis reports. Qlik NPrinting is used to create analysis reports, which are then provided to customers.

Qlik offers the capability to easily integrate various types of data. For example, log data that is automatically collected by M2M associates with Salesforce's customer and product data through Qlik. The analysis reports created through Qlik's patented associative technology then notifies SCREEN GP of equipment abnormalities, and also provides valuable information about the customer's running costs. Customers can use the data in product management and for costs control, such as knowing the exact amount of paper and ink they are using. "This is a big differentiating factor between us and other companies," says Mr. Yoshida in praise of the service.

Mr. Shotaro Iwasaki, who was in charge of development, continues: "I received training when we installed Qlik and I could easily write the loading script without any problems. It is easy to use Qlik and we can immediately respond to changes in the environment while maintaining a reliable cycle of improvement.

## Aiming for real-time response

"TRUST Network Service" recently evolved into Version 2. Equipment log retrieval, which was done once a day in Version 1, is now performed in real-time in the new version. SCREEN GP can now get an immediate understanding of the equipment's condition and changes.

"Alerts for fatal errors are sent instantly to our Service Division, enabling us to react quicker. In the future, we aim to be able to analyze the overall operating status of our equipment by obtaining its status during print data deployment before printing, and to supply reports daily to our customers," concludes Mr. Yoshida.