

Labor-  
saving



# Reduced configuration time for operation monitoring system of machine tools by approx. **83%**!

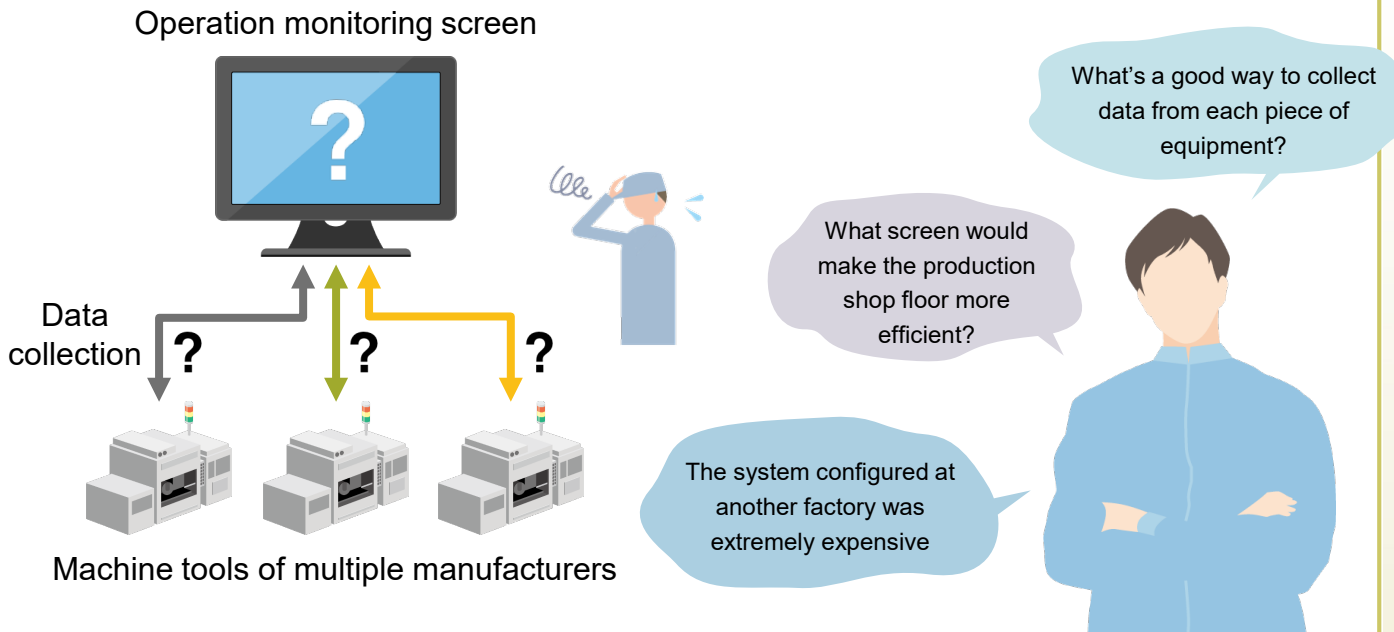
Company A wanted to inexpensively and swiftly configure an operation monitoring system for its production floor which had a wide range of machine tools from multiple manufacturers. By introducing an operation monitoring system supporting the machine tools made by multiple manufacturers, it was able to reduce configuration time by approx. 83%. What is the secret to its success?

See inside  
for details!



## Customer's Concern

Company A wanted to configure an operation monitoring system for its production floor which had a wide range of machine tools from multiple manufacturers. When the company configured another monitoring system at a separate factory in the past, all the studies into screen specification and equipment data collection were extremely costly, so it was looking for a method to configure a system swiftly and inexpensively.



## What has improved

By introducing an operation monitoring system supporting machine tools made by multiple manufacturers, it became easy for the company to design and develop screens, as well as collect data by individual equipment. This significantly reduced time required for studies into specifications and design, which resulted in reducing the configuration period from 12 months to 2 months, and further reducing introduction cost by approx. 75%.

Construction period

Before

Approx. **12** months  
(Introduction cost:  
Approx. 12 million yen/factory)

After

Approx. **2** months  
(Introduction cost: Approx.  
300 million yen/factory)

Configuration period reduced by approx. **83\***%

\*  $2 \div 12 \approx 17\%$  (approx. 83% less than conventional)

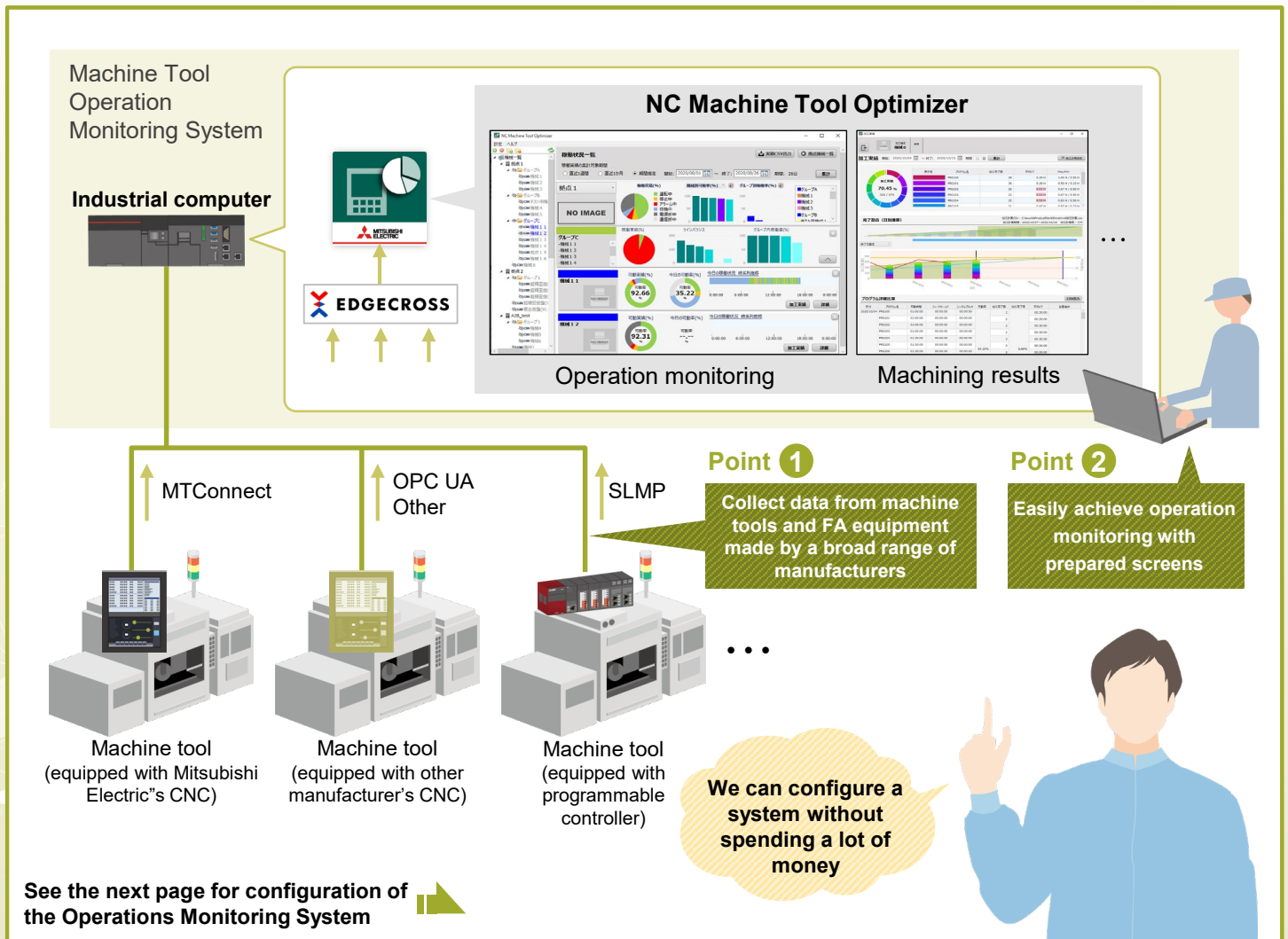


Point 1

By utilizing Edgecross, it is possible to collect data from machine tools and FA equipment made by a broad range of manufacturers.

Point 2

Various operation monitoring screens are prepared in the application, therefore easy and fast start-up is achieved simply by connecting collection data.



Return on investment (ROI)

Cost

Approx. **3** million yen / factory  
(including system configuration costs)

Construction period

Approx. **2** months  
\* Setting of NC Machine Tool Optimizer itself was completed in **1 day**

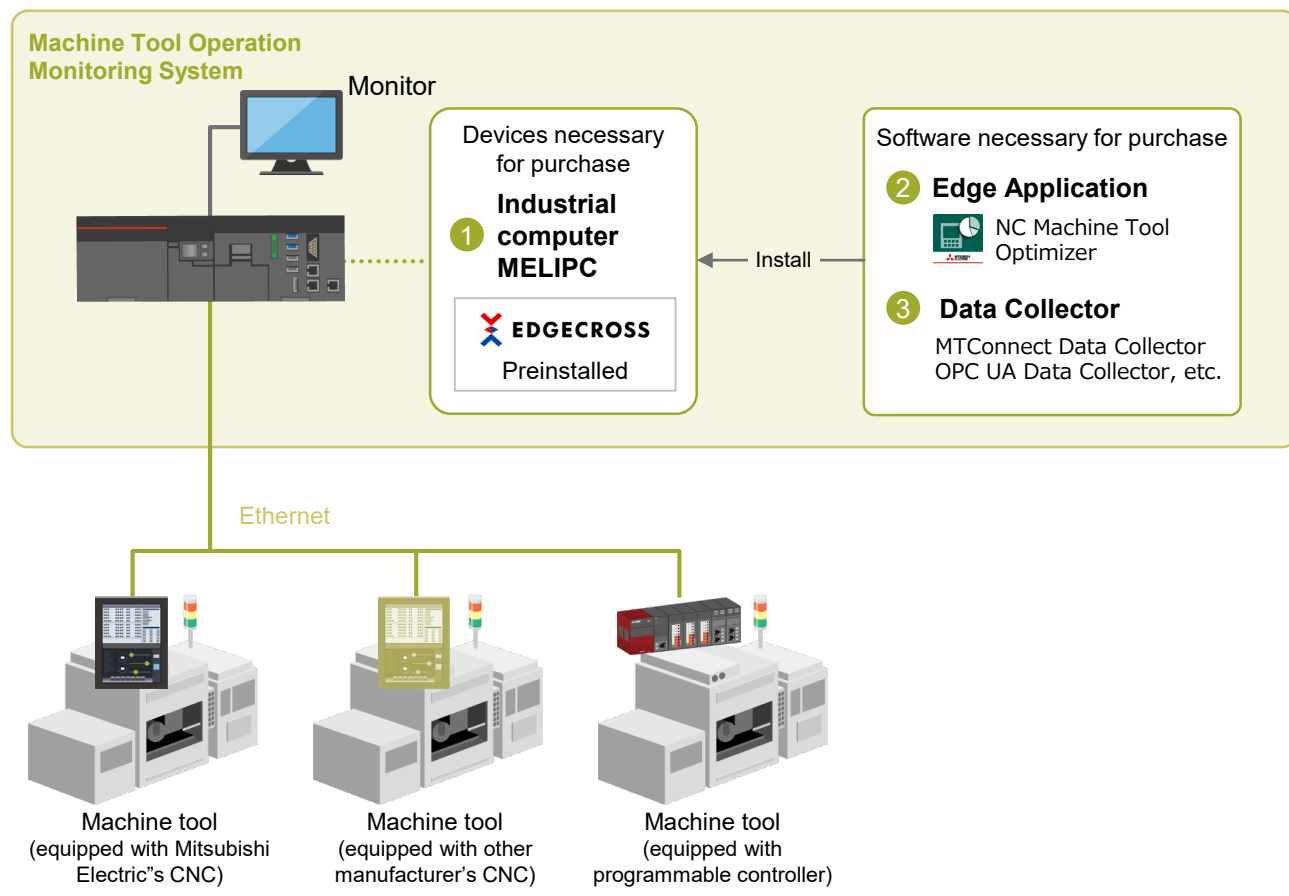
Payout period

Approx. **1 year 8 months**  
\* When compared with operation monitoring systems of other factories

\*Interpretation of payout period Assuming a depreciation period of around 5 years, the amortization cost for the operation monitoring system (12 million yen) at the other factory was 12 million yen ÷ 5 years = 2.4 million yen. In the case of the system introduced this time, the amortization cost for one year is 3 million yen ÷ 5 years = 600,000 yen, therefore the return over one year will be 2.4 million yen - 600,000 yen = 1.8 million yen. Converted to months, the return will be 1.8 million yen ÷ 12 months = 150,000 yen. Therefore, the recovery period of the construction cost of 3 million yen will be 300 ÷ 15 = 20 months (= 1 year and 8 months).

# Overview of the Operations Monitoring System

The Machine Tool Operation Monitoring System introduced in this example comprises Mitsubishi Electric's industrial PC, **MELIPC**, and edge application, **NC Machine Tool Optimizer**, and streamlines the production shop floor through visualization and analysis of operational information collected from manufacturers' machine tools and peripheral devices.



## Equipment Configuration (example)

Please separately prepare cables for connection to devices other than the major devices listed below.

Type	Model	Overview	Standard price (yen)
<b>1 Industrial Computer MELIPC</b>			
MELIPC Main Unit	Mi5122-VW	Industrial computer to execute edge applications.	Open
<b>2 Edge Application</b>			
NC Machine Tool Optimizer	FCSB1813W001	Software collecting operational information from NC machine tools and periphery equipment to utilize in visualization of operating status, and other improvement activities on the production shop floor aimed at increasing productivity.	500,000
<b>3 Data Collector</b>			
MTConnect Data Collector	FCSB1810W001	Software to collect data from machine tools supporting MTConnect communication.	60,000
OPC UA Data Collector	SW1DND-DCOPCUA-MD	Software to collect data from equipment supporting OPC UA communication.	60,000
SLMP Data Collector	SW1DND-DCSLMP-MD	Preinstalled on MELIPC.	60,000 *
Data Collector by other manufacturer	-	Please prepare to suit your machine tools' communication interface.	-

\* MELIPC users do not need to purchase separately as it is preinstalled

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### ⚠ Safety precautions

To use the products listed in this publication properly, be sure to read the relevant manuals before use.