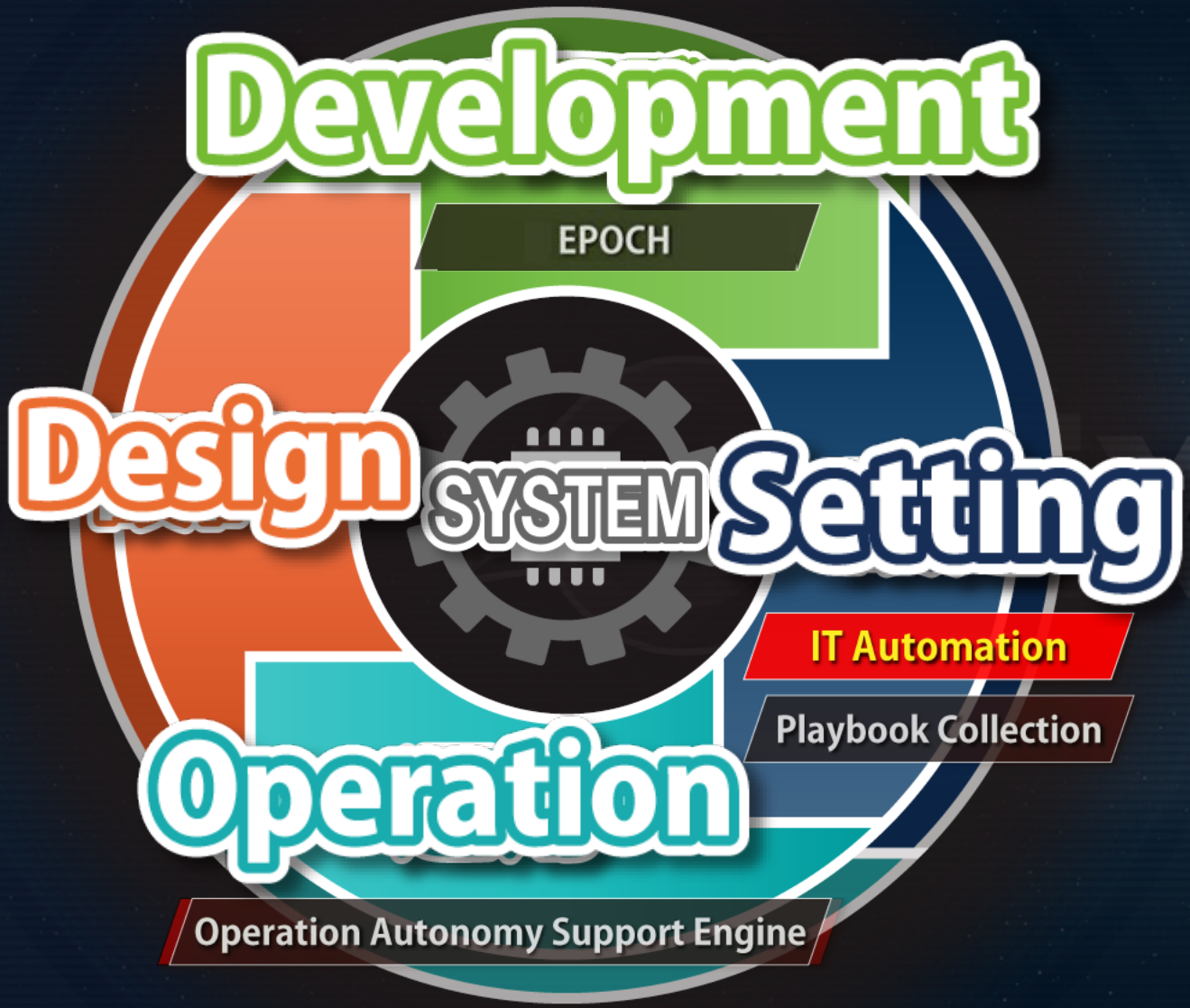
Northeast Asia OSS Promotion forum

Introduction

NEC Service and Platform SI division
Joachim Larsen

What is the Exastro Suite?



Exastro

Exastro is an open source software suite

設計 design | 開発 development | 設定 setting | 運用 operation

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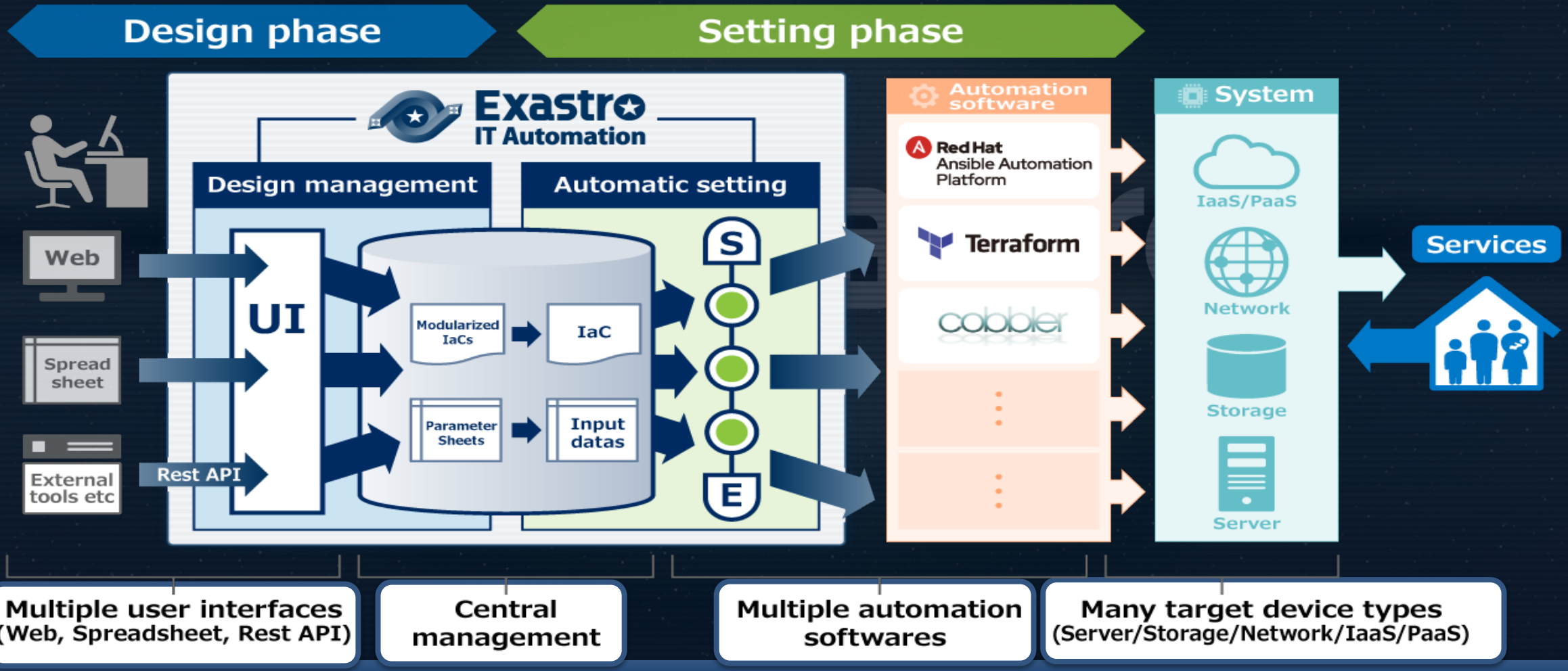
created to digitize data, automate tasks and help saving labor and costs in the System life cycle (design, development, setting and operation)

Exastro Suite roadmap

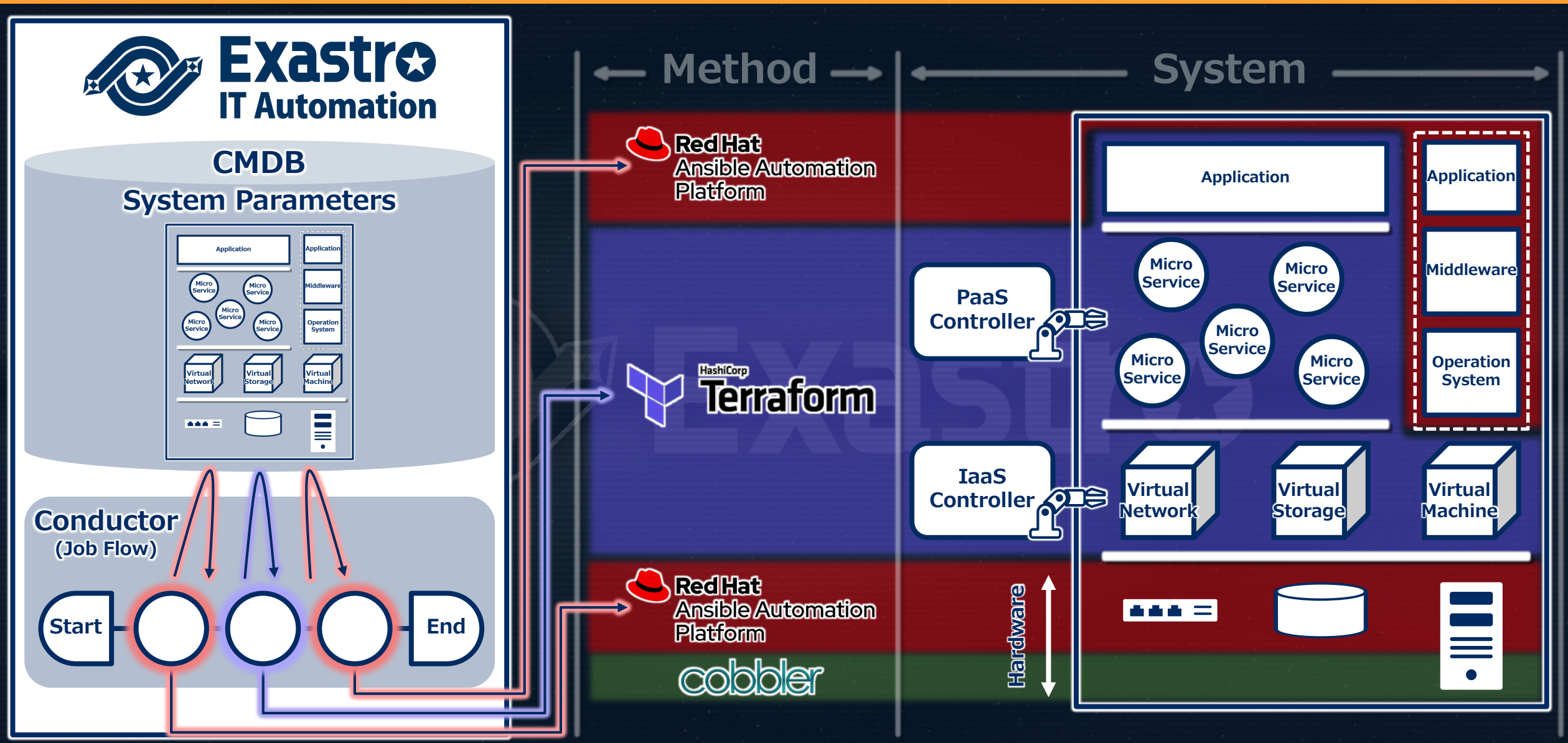
Roadmap of the Automation and Autonomy that Exastro Suite is aiming for

Exastro IT Automation

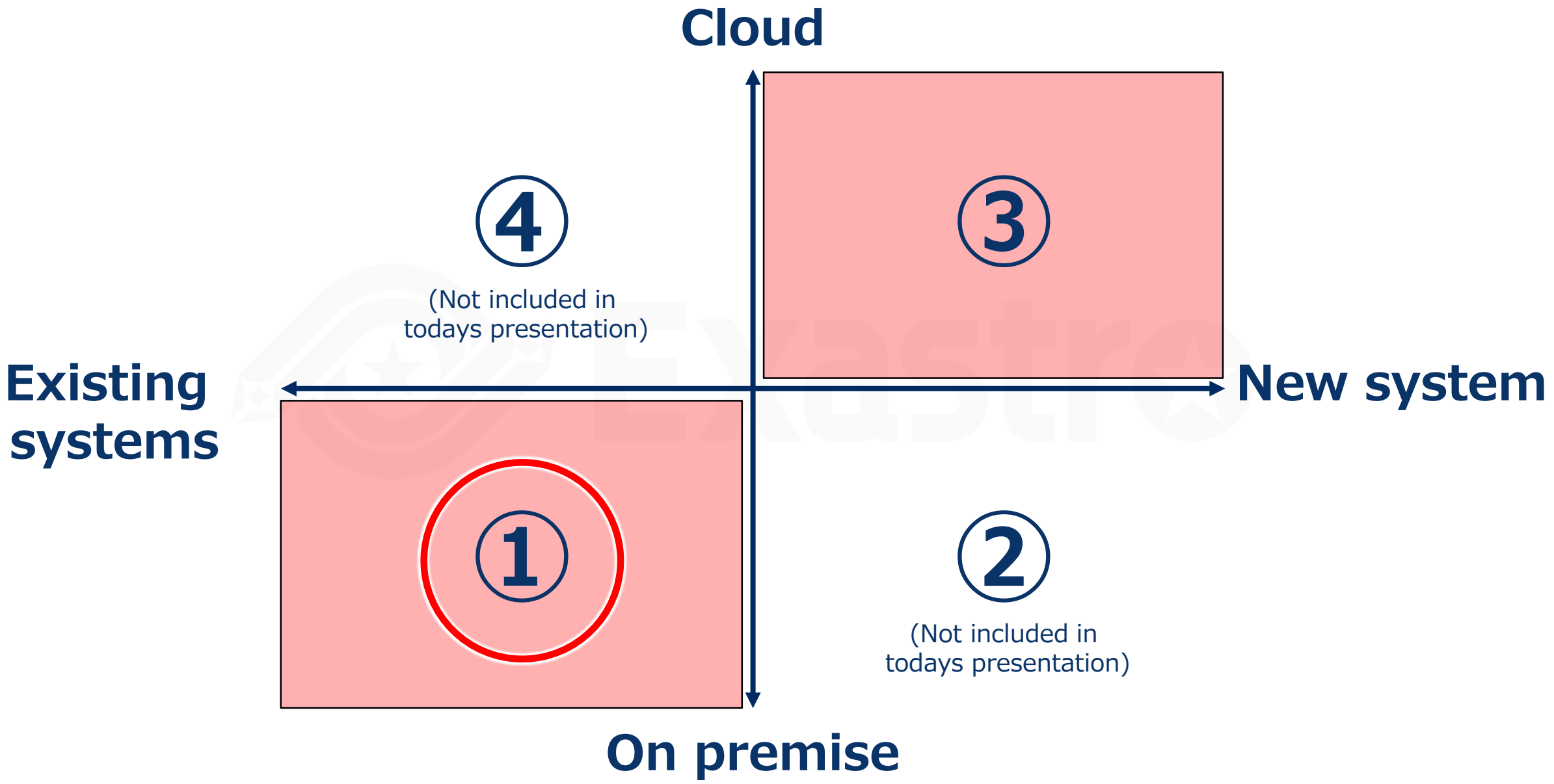
Exastro IT Automation is a framework that manages system construction components (IaC and Parameters)



System stacks and Automation software



About this presentation

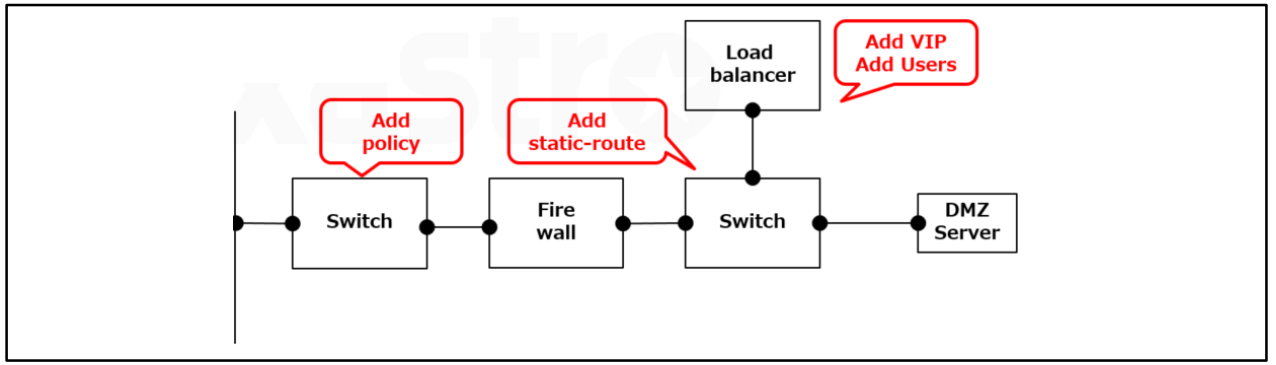


【Area ①】Effects on Automated On-Premise systems

Overview

- Adds new NW devices for carrier-based systems
- Total of 30 NW devices
- Automated addition of virtual IPs
- The design information is configuration managed

POINT Makes it easy to implement Exastro ITA!



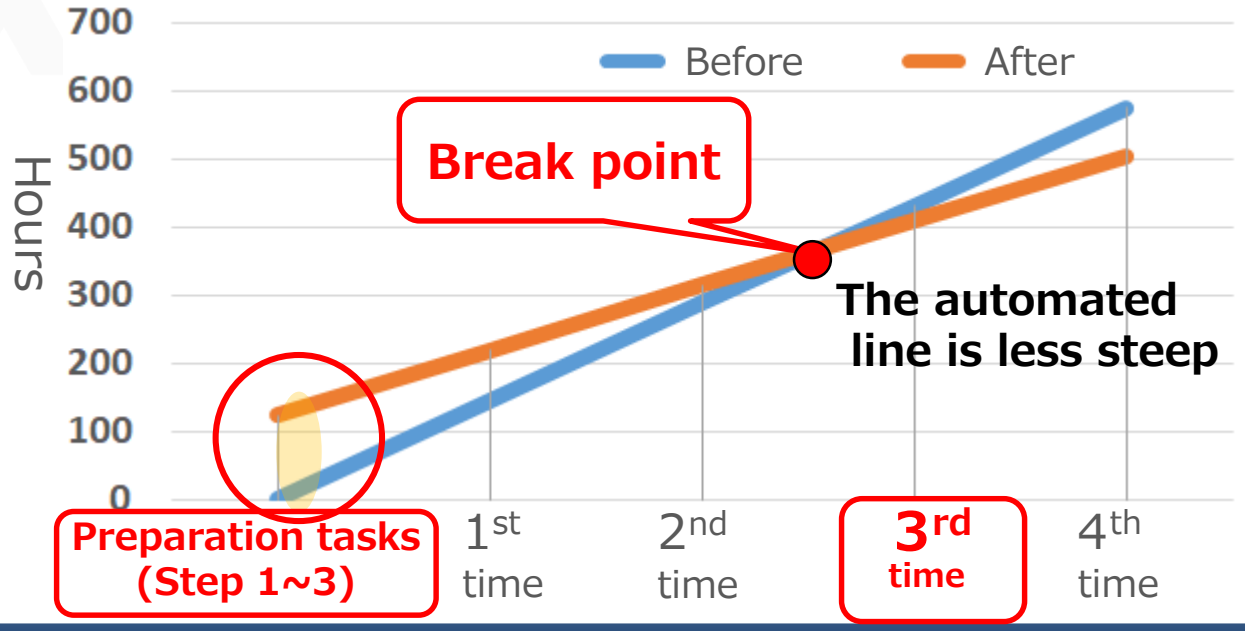
Changes to the workload(hours)

Areas where Exastro IT Automation is applied

	Requirement definition	Design	Production	Valuation	Release	Overall
Before	20.1	33.6	19.7	12	58.4	143.8
After	28.7	40.9	12.1	4	9.5	95.2
Changes	↑43%	↑21%	↓39%	↓67%	↓84%	↓34%

The cost of the whole operation is reduced by 34%

Return on investment

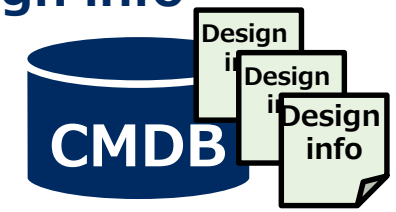


Design, Preparation and Execution can be automated in 3 steps

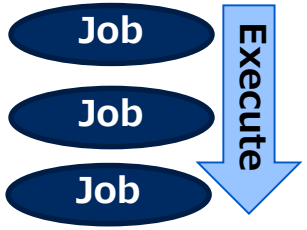
Solution

Solution

Step 1
Centrally manage Design info

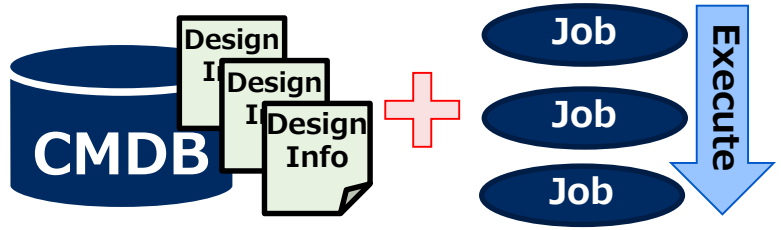


Step 2
Automate jobs

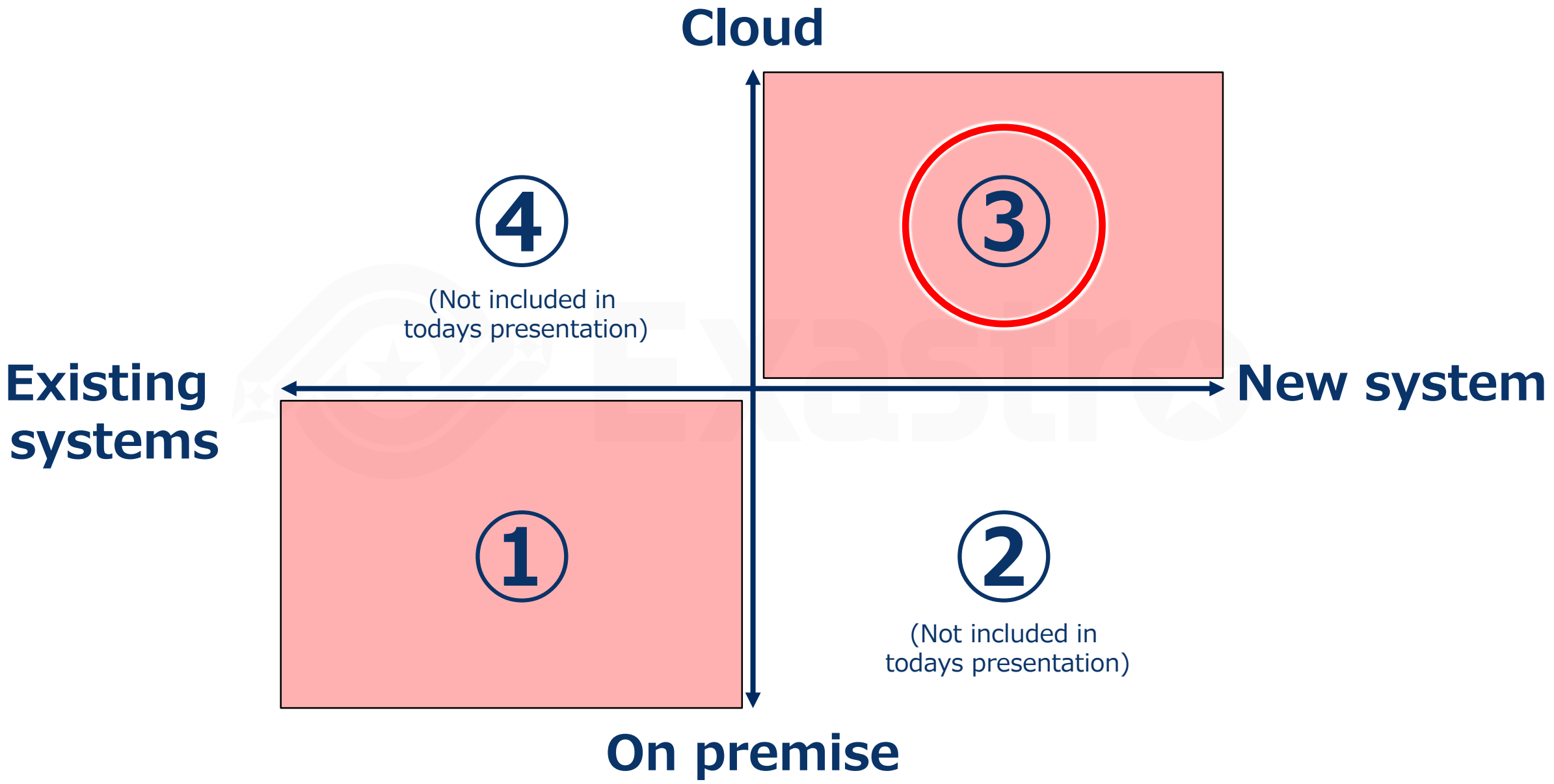


Link

Step 3
Link centrally management and automated execution.



Reducing costs of new cloud systems



【Area③】Reducing costs of new cloud systems

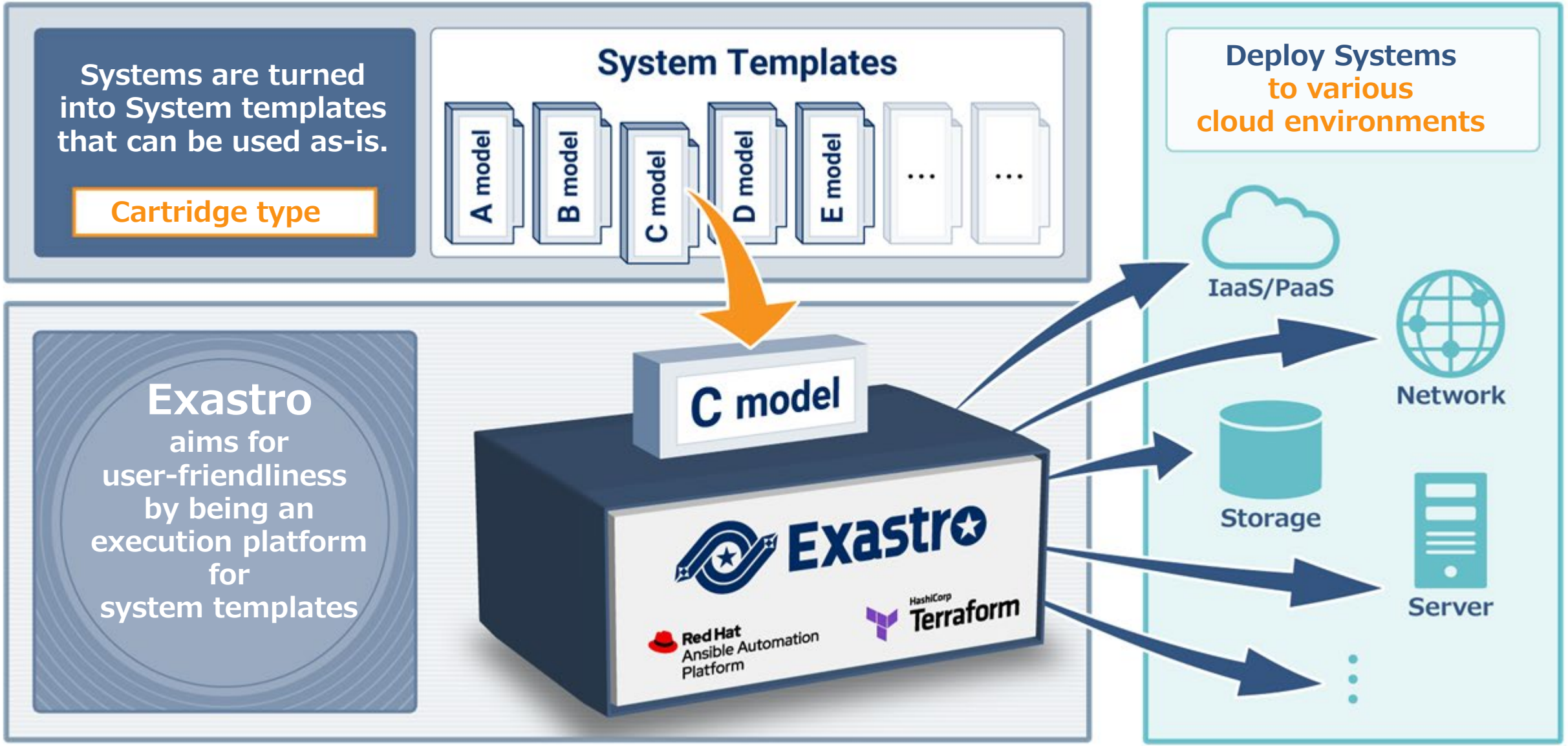
Systems are turned into System templates that can be used as-is.

Cartridge type

System Templates

A model B model C model D model E model ... ...

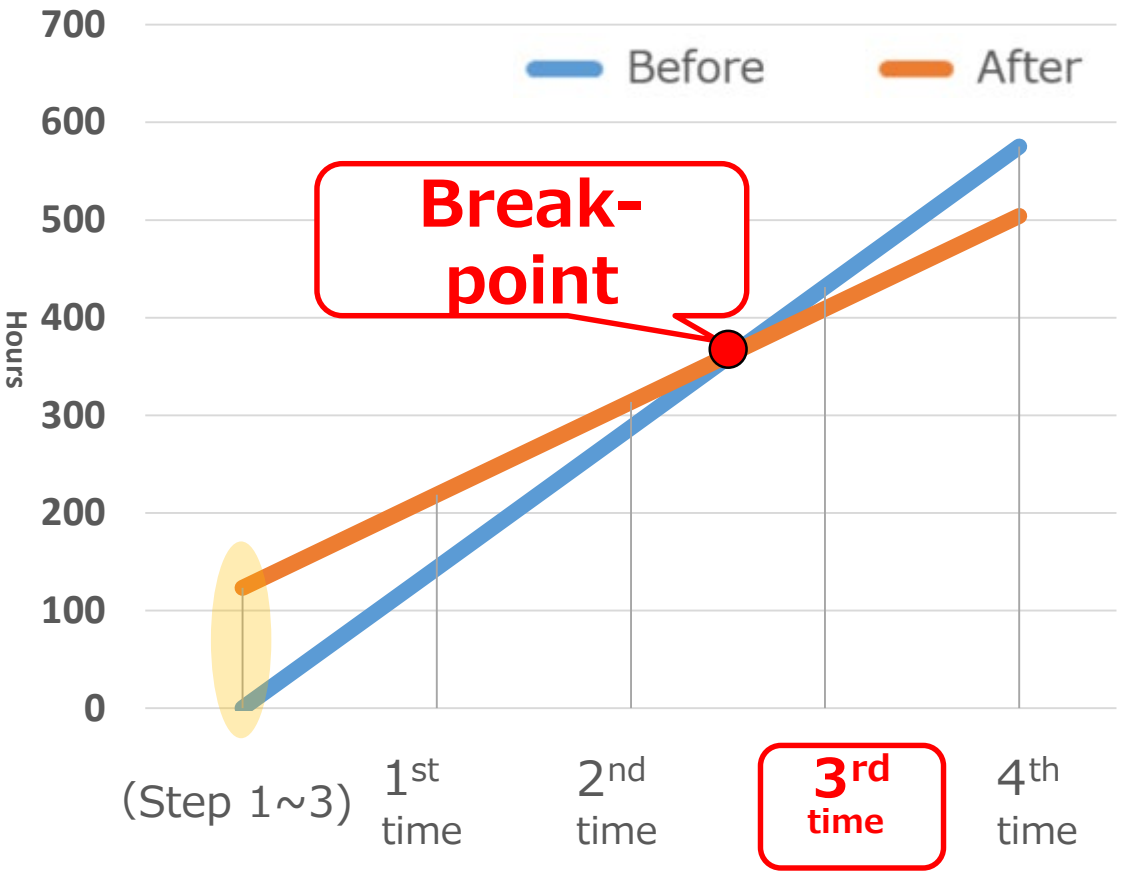
Deploy Systems to various cloud environments



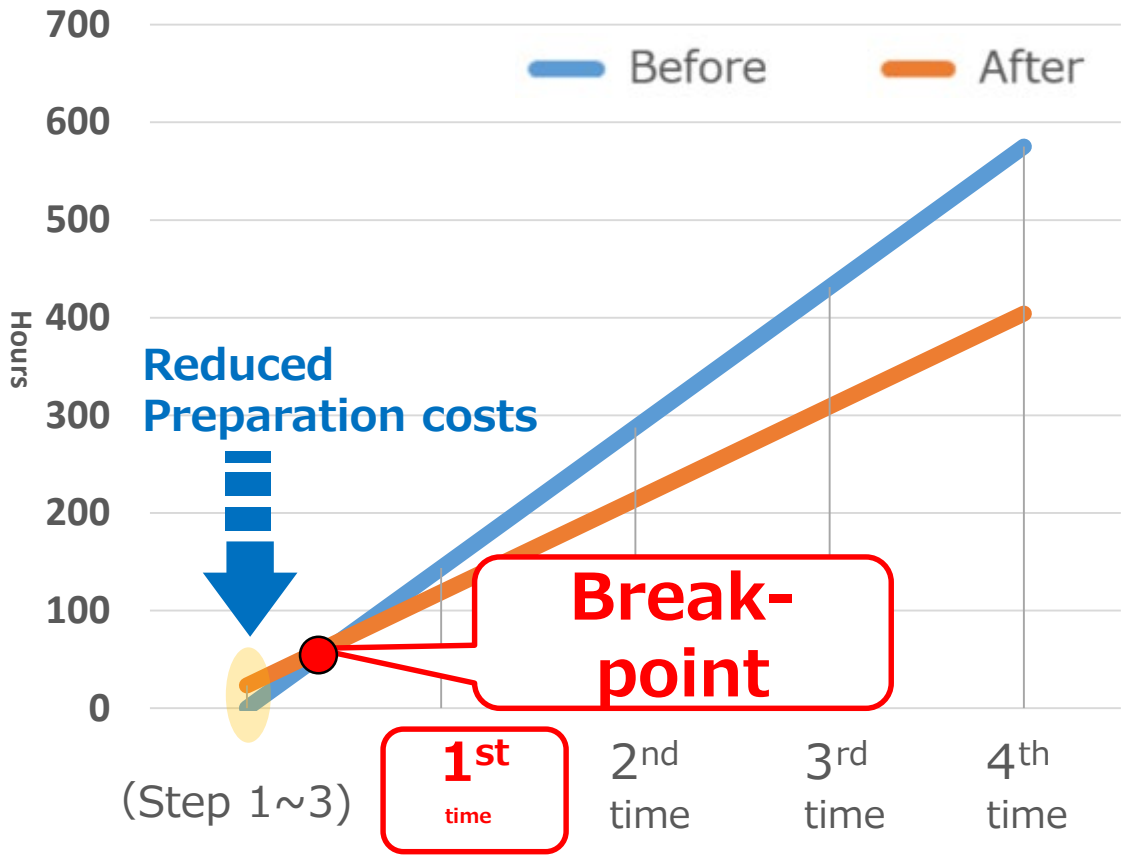
Exastro
aims for user-friendliness by being an execution platform for system templates

Use cloud resources to reduce preparation costs and increase the gross profit

Without system templates

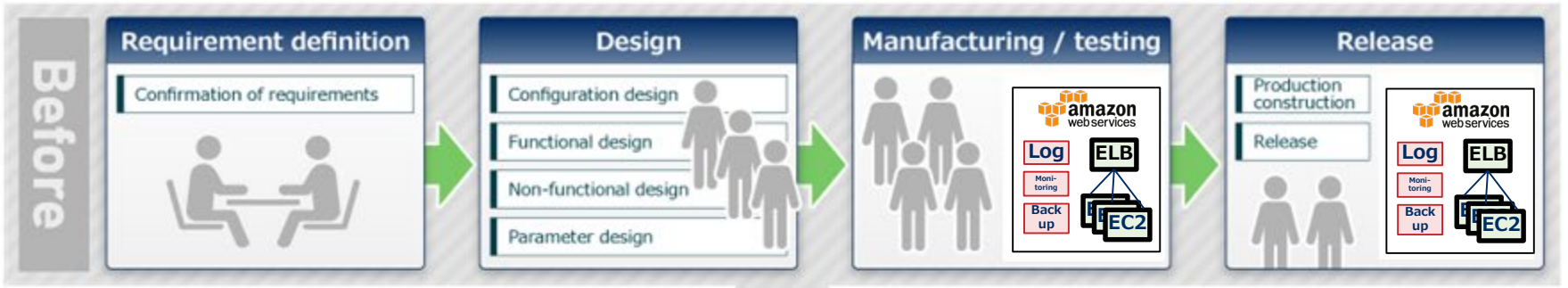


With system templates

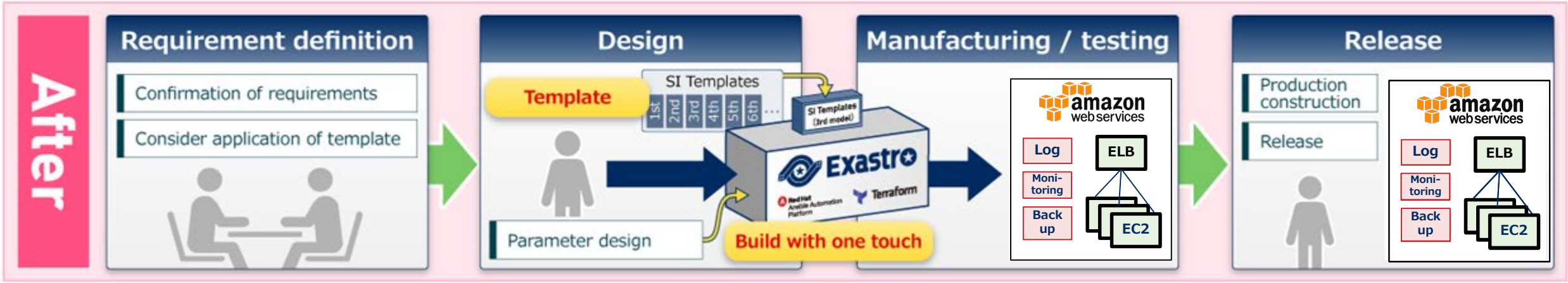


Results of using System Template for AWS Model

The cost and time was reduced by 70%



	Before	After
Cost	35M yen	10M yen
Period	5 months	1.5 months



Cases

【Case 1】Streamlining various operation settings for a large-scale system

Problem

The system parameters are not managed correctly and the Playbooks are not turned into components. The construction and operation tasks are not automated and inefficient.

Solutions

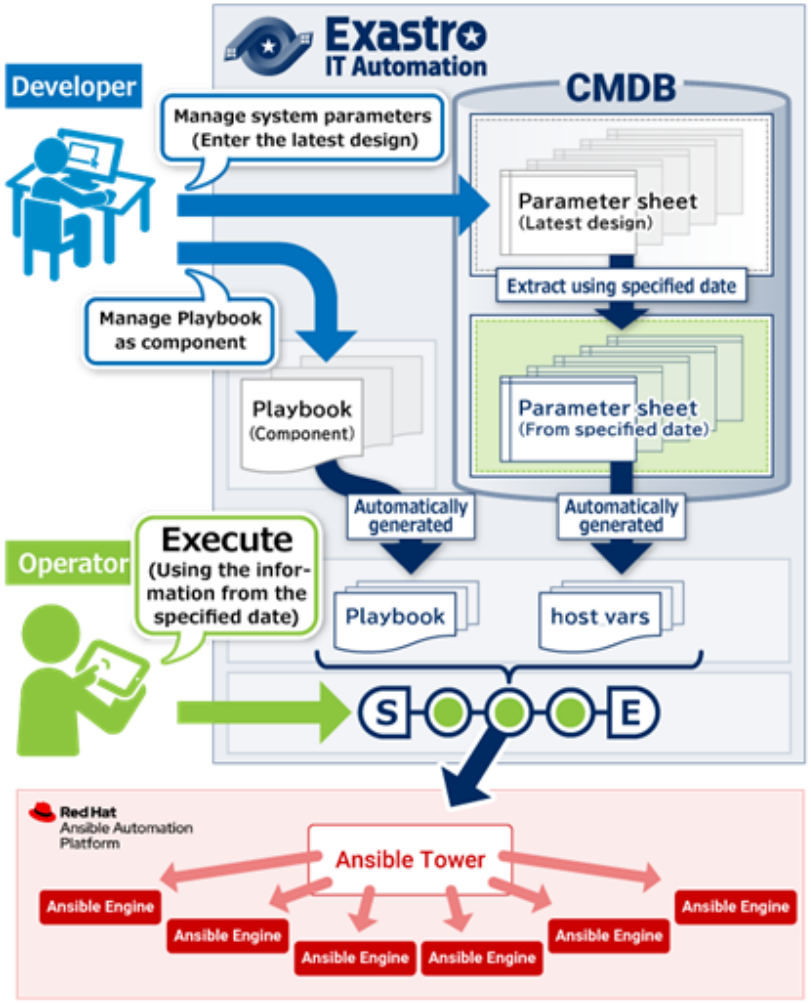
Use the Exastro IT Automation's functions to
- Configuration manage system parameters
- Manage the Ansible Playbooks as components.

By doing so, we can connect the design, construction and operation phases, effectively automating the whole operation.

Effect

Case: Operation monitoring configuration

		Design time	Operation time
Before automated configuration management	239 per year	86	153
After automated configuration management	100 per year (58% reduction)	86	14



【Case 2】Automatically kitting 30 000 devices for a large-scale event

Task

First, they needed to reset
a big amount of network devices.
Doing it manually through a serial console
required a lot of time.
In addition to that, there was also a limit of the amount of
setting values that could be managed using spreadsheets.

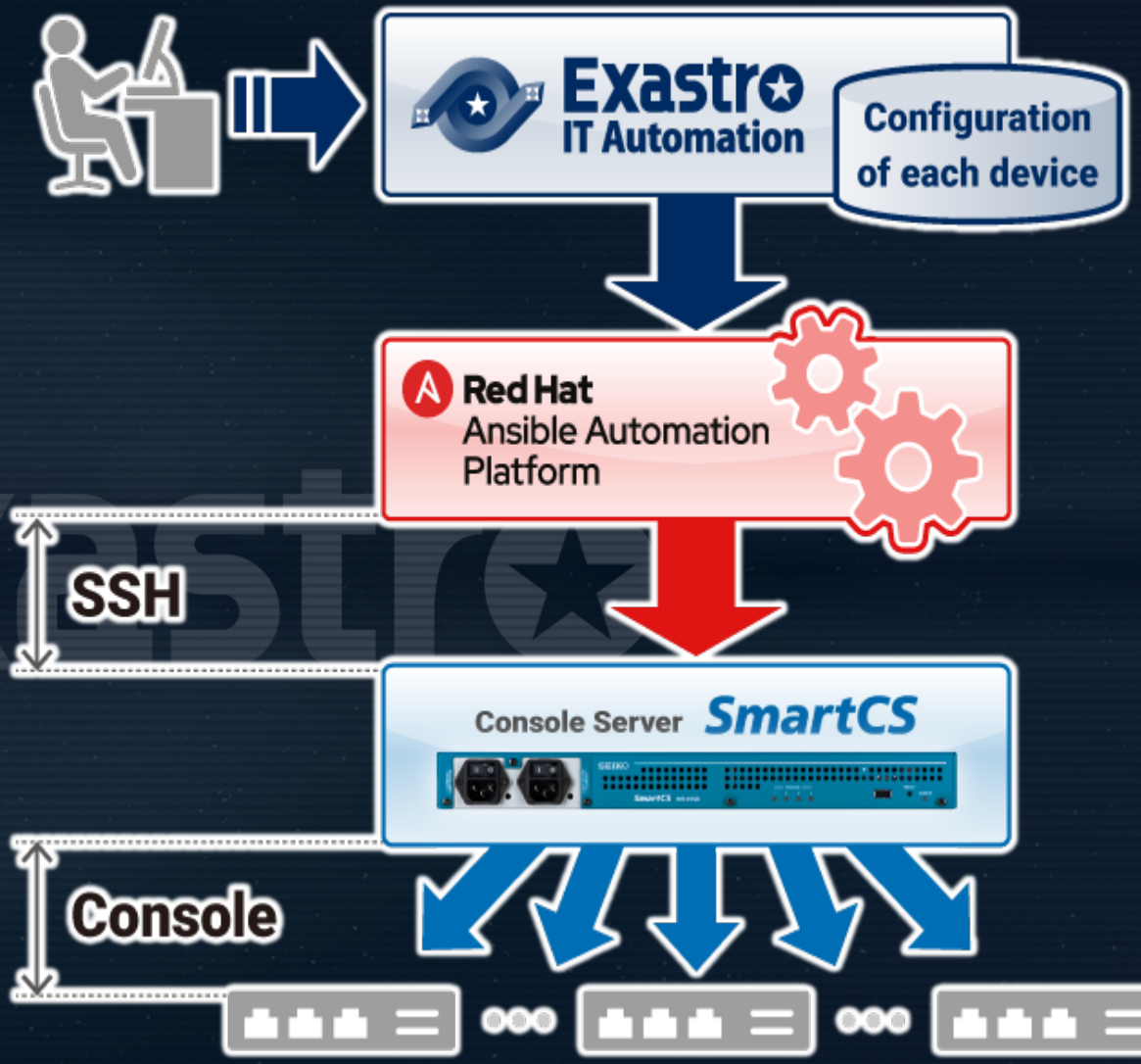
Introduction of IT Automation

Solution

Integrating the serial console with SmartCS
enabled them to configure multiple network
devices at the same time using SSH.
ITA also managed all of the setting values,
allowing them to reset all the devices using Ansible.

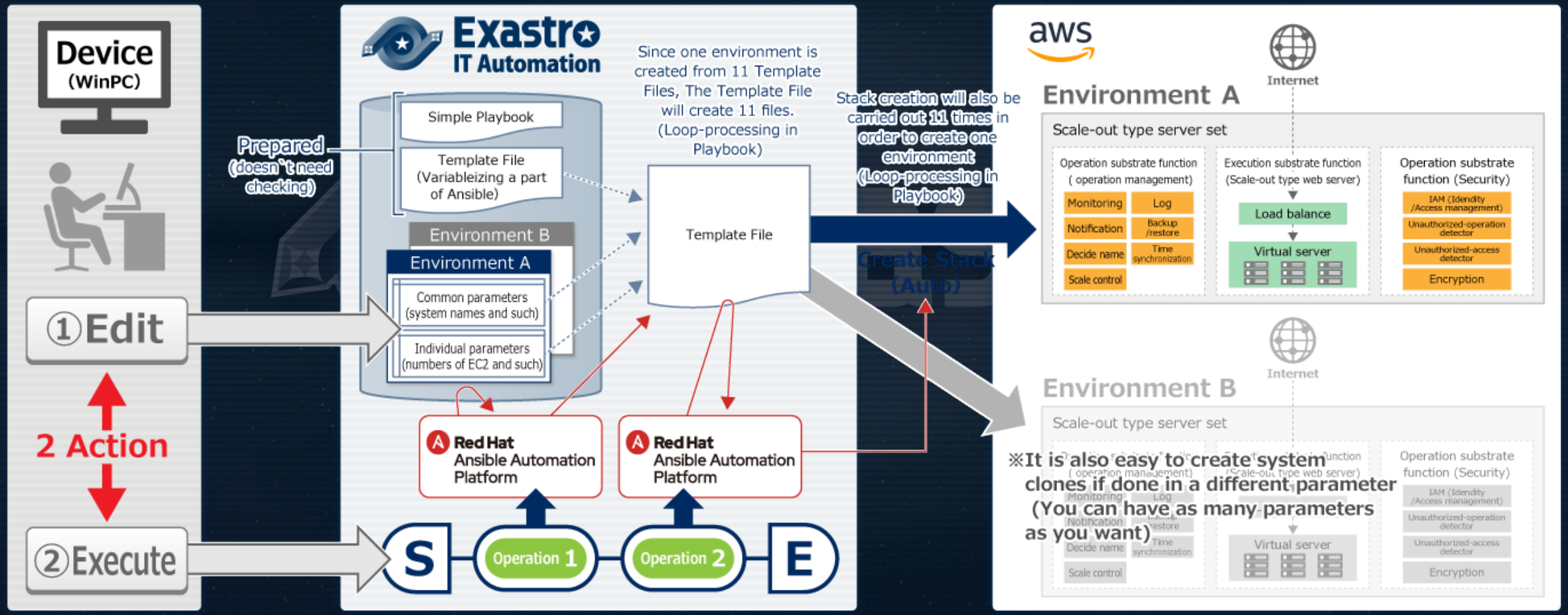
Effects

With the help of Exastro IT automation,
they managed to automate the process of resetting
6 different types of network devices.
They managed to release up to 2 000 devices per month.



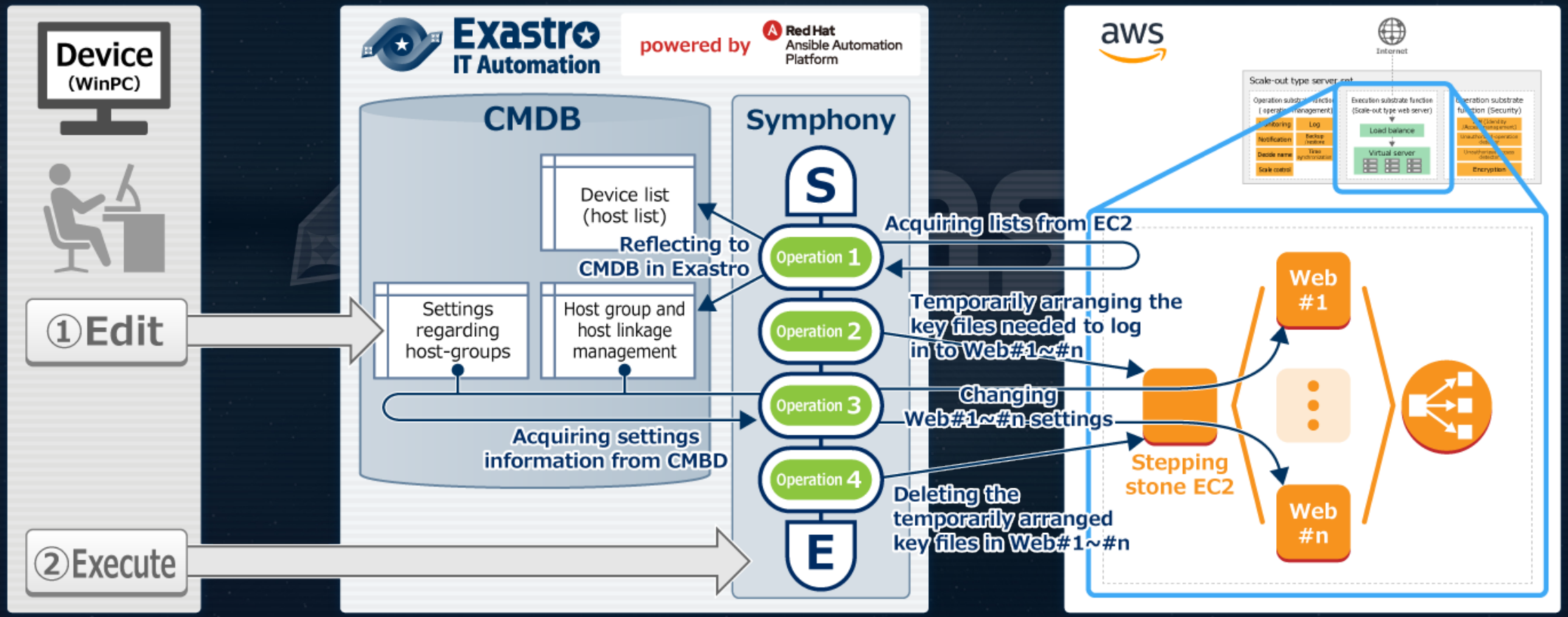
【Case 3】Using Template files to regulate AWS systems. (1/2)

Exastro IT Automation managed a “CloudFormation template” and provided a mechanism that delivers a well-governed AWS environment to each department.



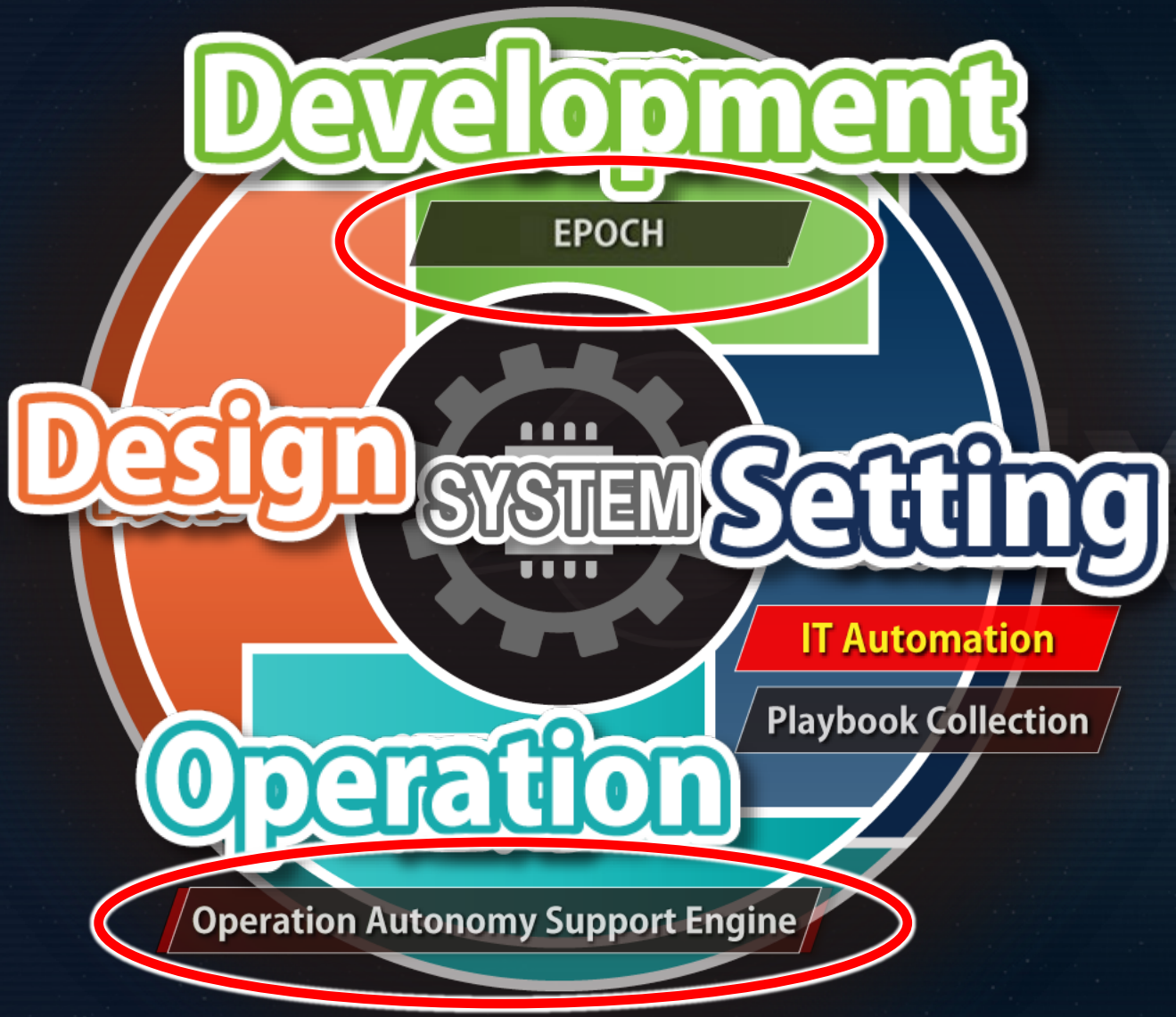
【Case 3】Operation division controlling other division's AWS systems (2/2)

It also provided support for operational scenarios such as emergency patching of an running EC2 (Autoscale)



Other Software

Exastro Suite



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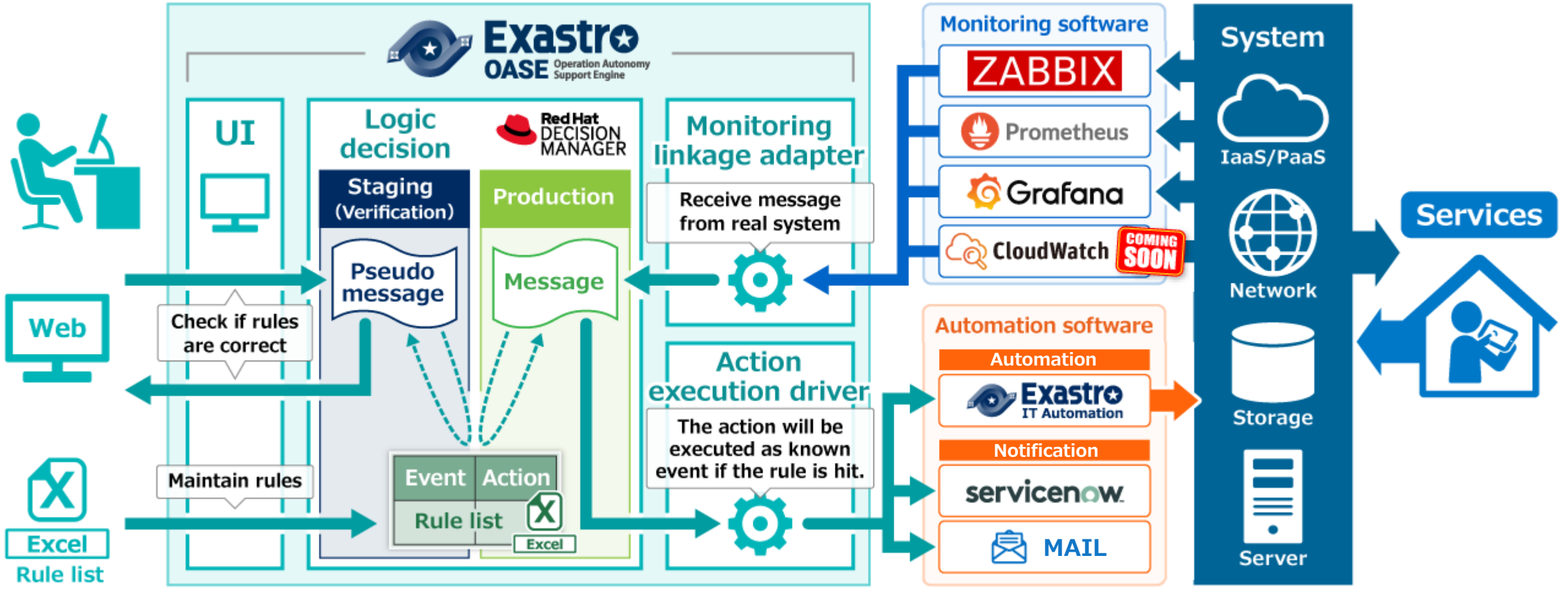
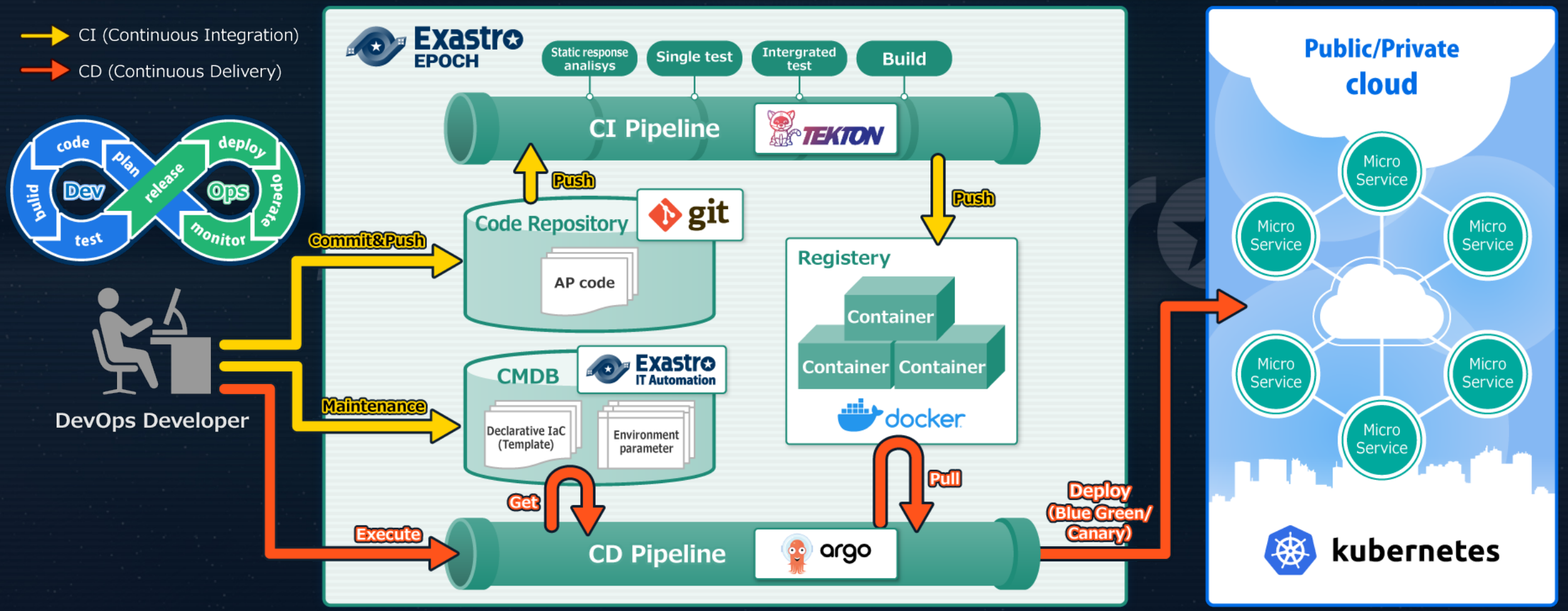
for digitizing, automating and labor saving
the system life cycle
(design, development, setting and operation)

Exastro Operation Autonomy Support Engine (OASE) is a framework created to support the Autonomization of system operations



Exastro EPOCH is a “framework made to accelerate cloud native system development”



More information can be found on the Community site!

Exastro

Search Exastro

https://exastro-suite.github.io/docs/index.html

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