



SRE engagement model transition in building and expanding SRE team

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JCB Co., Ltd.

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NTT DATA Corporation



Speakers



Shimpei Sasano

JCB Co., Ltd.

The product owner of the SRE team at JCB Co., Ltd. In his previous job, he worked as an in-house SE for a retail system, participating in the introduction of public clouds, development of applications for consumers. He joined JCB in 2020, and has been participating in a project to accelerate business construction by utilizing cloud native technology.



Ryotaro Takeda

NTT Data Corporation

Site Reliability Engineer at NTT Data Corporation. He joined NTT Data in 2014, and has been helping customers of retail and financial business to adopt Agile and DevOps practices. Currently, he leads SRE practice for a financial service customer and is also dedicated to promoting SRE culture in NTT Data.

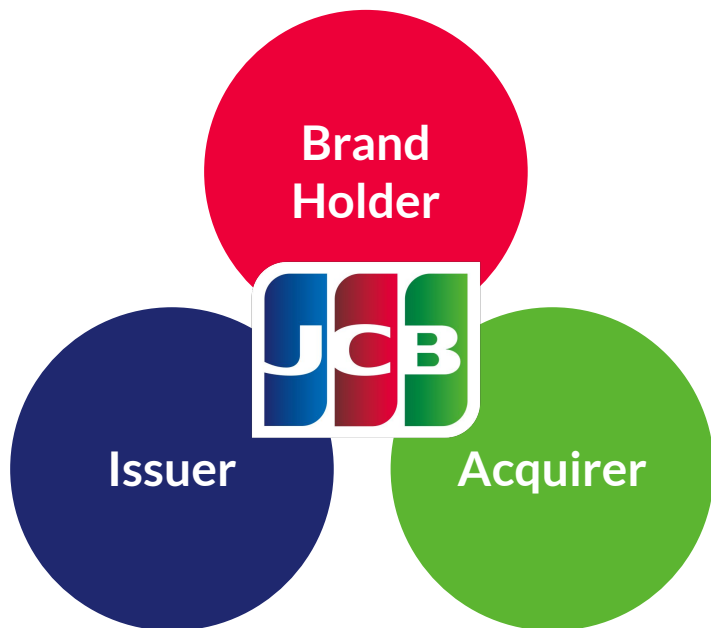
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1. About us



About JCB -International credit card company from Japan-



Brand Holder

JCB is the only international payment brand from Japan.

In addition to developing a network of merchants around the world that accept JCB Cards, JCB is expanding the issuance of JCB cards with partners in Japan and abroad.

Issuer

Recruiting and issuing cardholders and launching new cards, providing cardholders with card ancillary services.

Acquirer

Building and maintaining one of the largest networks of merchants in Japan by leveraging our strength in "single acquiring", which is responsible for merchant agreement.

About NTT DATA

Trusted Global Innovator

NTT DATA NTT DATA is a top 10 global business and IT services provider with business operations in more than 50 countries and regions. The business was established in 1967 as the IT services arm of NTT and became a public company in 1995.

140,000+ Professionals

\$22B in annual revenue

50+ Countries

#8 Most valuable IT services brand

As part of NTT group of companies:

330,000+ NTT employees

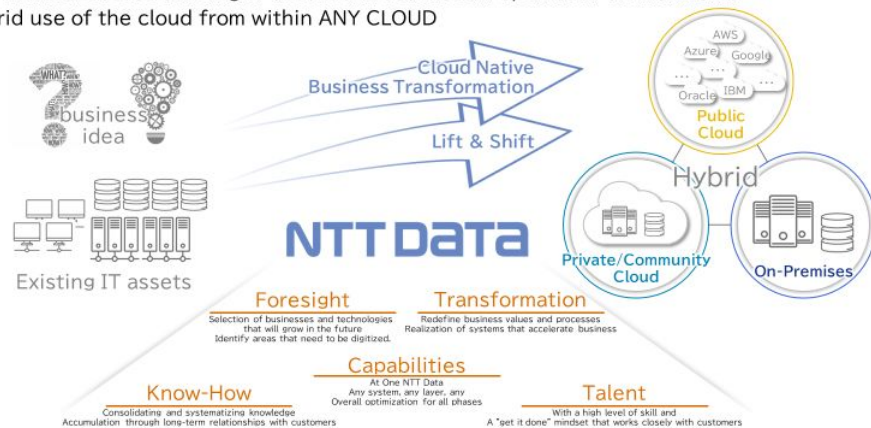
\$112B In annual revenue

80 Fortune Global 100 clients

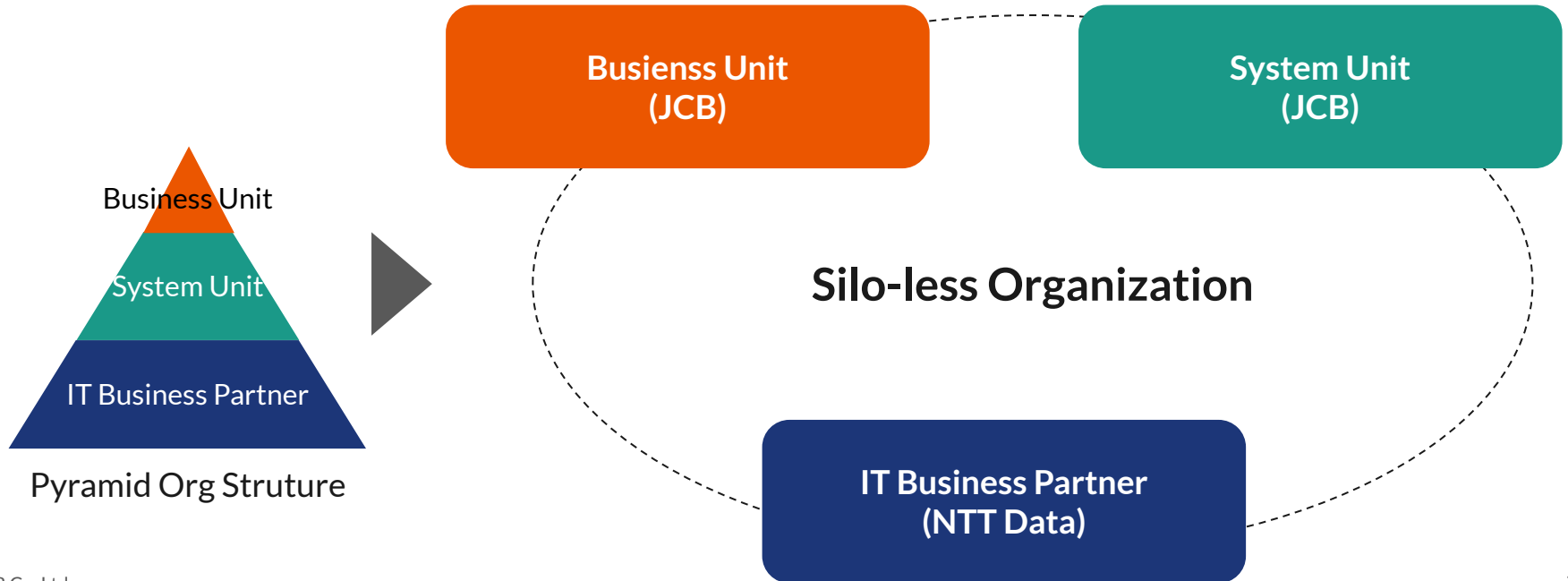
\$3.6B R&D Fortune Global 100 clients

NTT DATA's Strengths in Hybrid Cloud Utilization

NTT DATA assesses existing IT assets and realizes an optimal IT environment. Hybrid use of the cloud from within ANY CLOUD

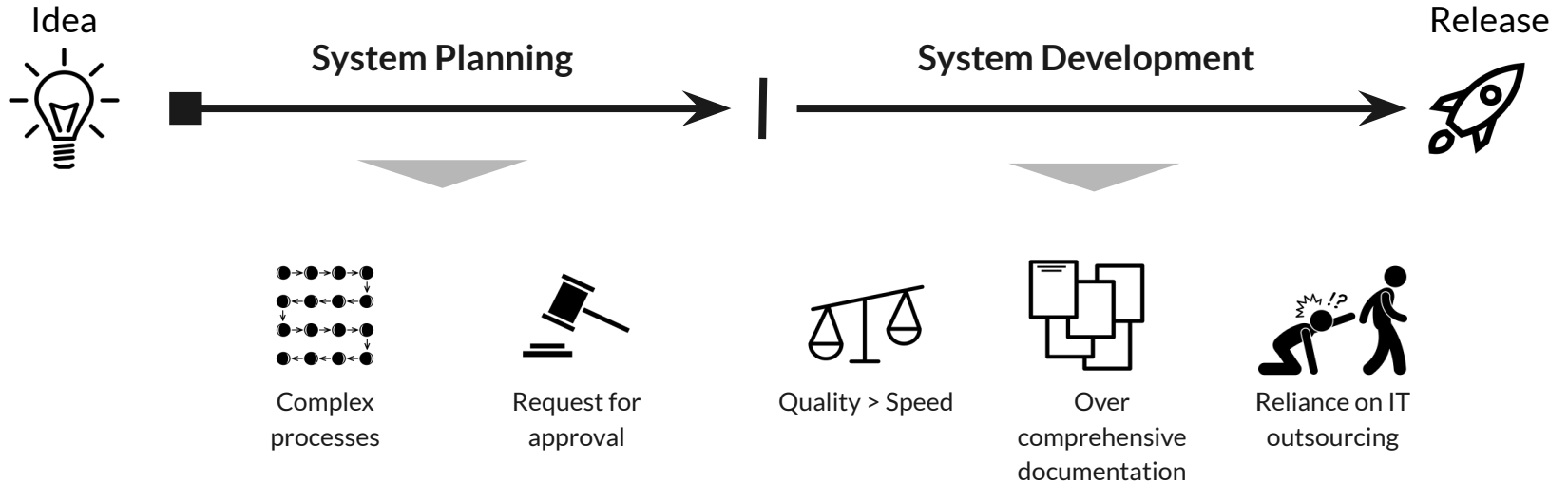


The relationship between JCB and NTT Data



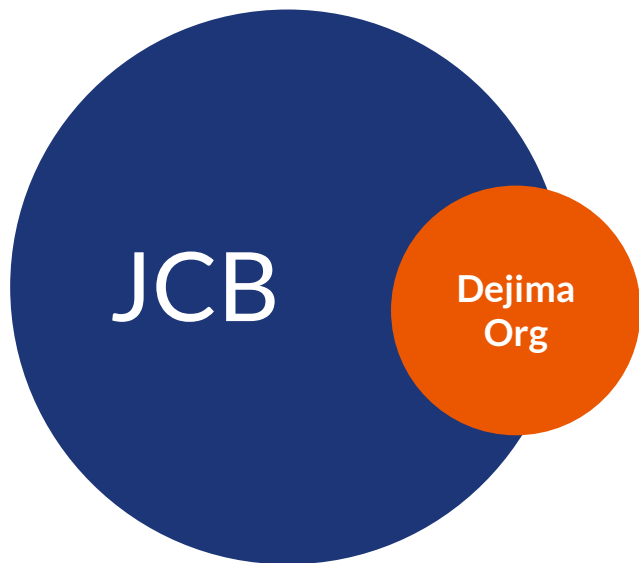
2. Our Project

We needed to **speed up** our business.





Concept of “Dejima”



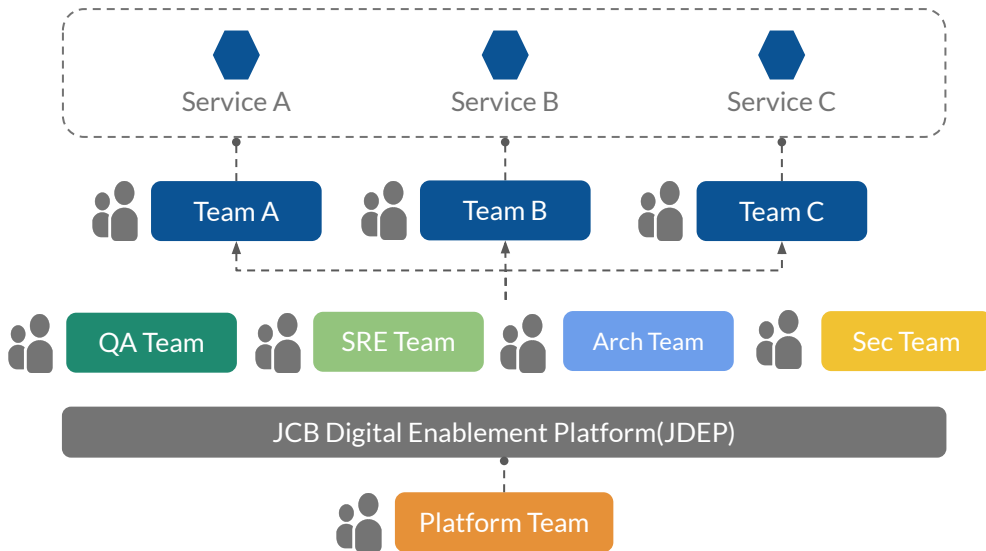
“Dejima” is an artificial island off Nagasaki, Japan.

Dejima was the central conduit for foreign trade and cultural exchange with Japan during the isolationist Edo period, and the only Japanese territory open to non-Japanese.

Concept of “Dejima” is attempt to build a organization independent of the company.

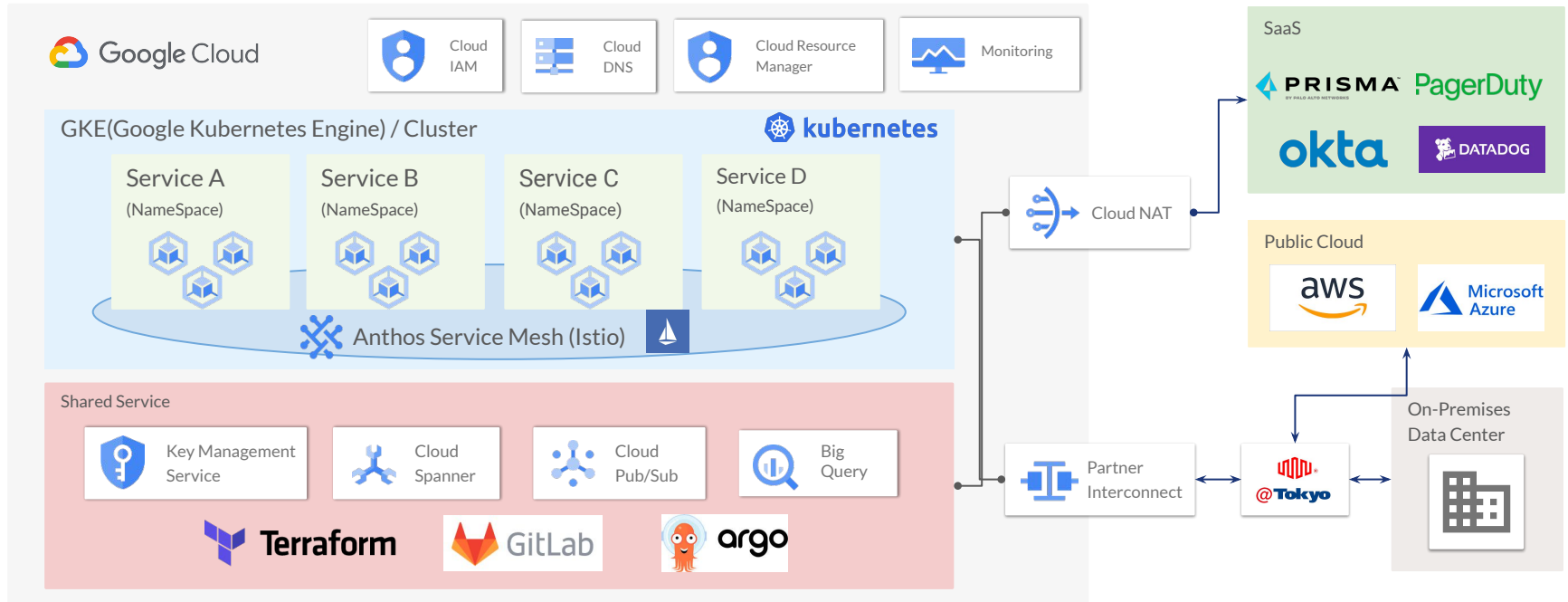
By building a team independent of the existing organization, we are able to move forward quickly and boldly to innovate. The Dejima Org is designed from the ground up and can adopt a different system and development process than the existing organization.

Independent Agile Organization



- Following the “Inverse Conway Maneuver”, we mapped the organizational structure from the system architecture as it should be.
- The organization is currently expanding to a total of **20** teams with over **400** members as of November, 2022
- In addition to building a organizational structure, we created a platform call **JDEP** (JCB Digital Enablement Platform) to achieve the high-speed development of services.

JDEP -Platform for high-speed development-





Why we started SRE?

1

To introduce the concept of system reliability to the services and development team.

2

As the number of development teams using JDEP increased, infrastructure support members are also needed.

3. SRE engagement model transition

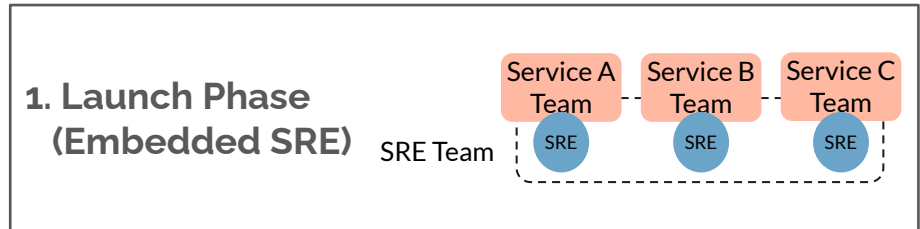
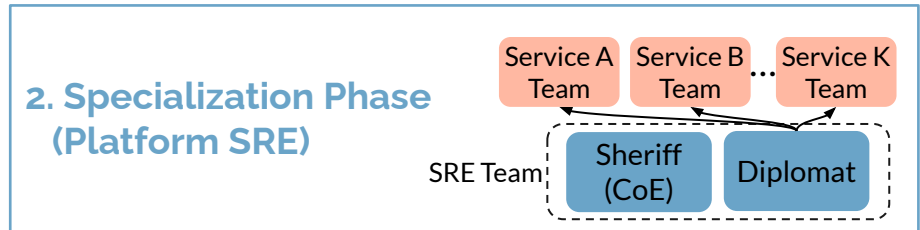
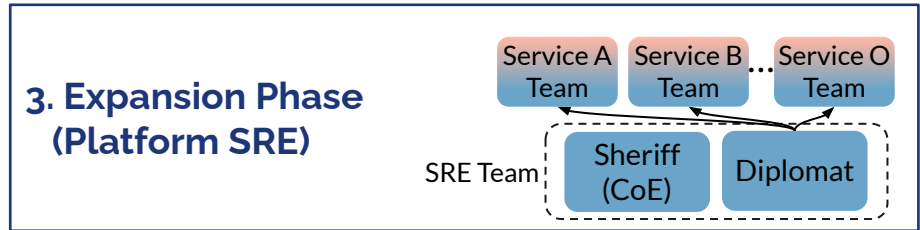
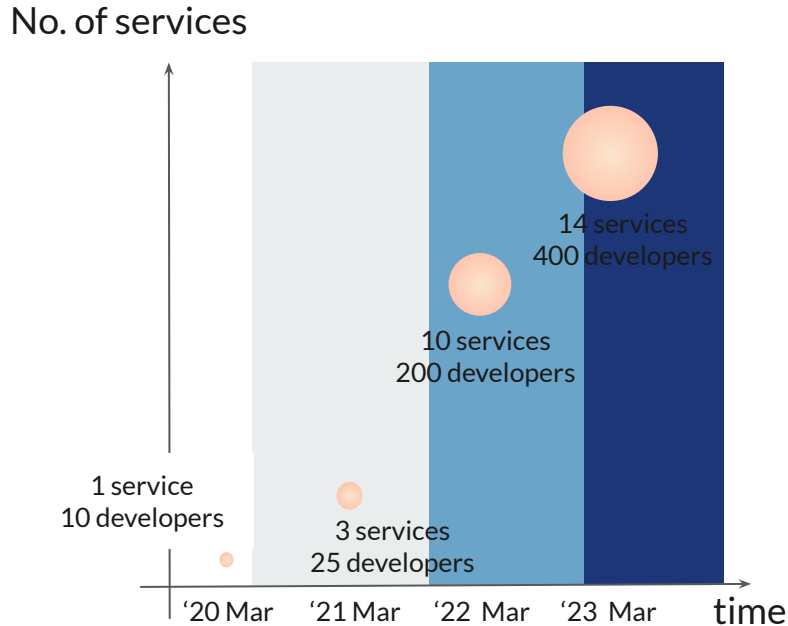


SRE Engagement model

Engagement model	Description
Infrastructure SRE	Focus on infrastructure of specific systems.
Tool SRE	Focus on tools for development/operation.
Product SRE	Specialized for specific applications.
Platform SRE	Provide infrastructure to support multiple services.
Embedded SRE	Join service team to improve reliability.
Consulting SRE	Short-term engagement to improve reliability.

refs: <https://cloud.google.com/blog/products/devops-sre/how-sre-teams-are-organized-and-how-to-get-started?hl=en>

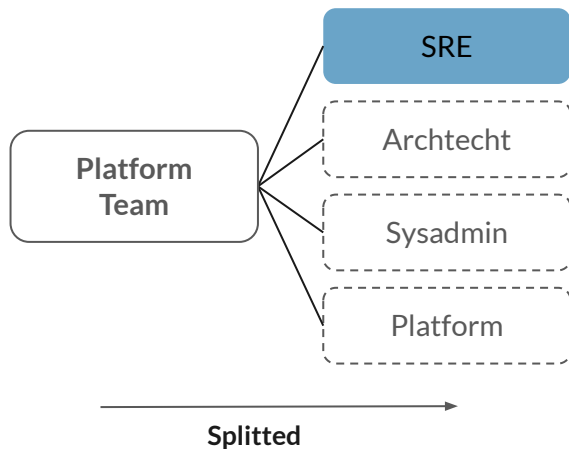
SRE Engagement transition in JCB



Launch phase

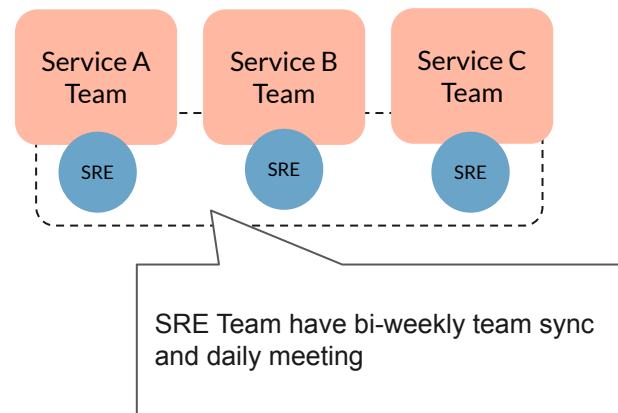
SRE member's capability

Selected from **the platform team that built JDEP**



Adapt "Embedded SRE"

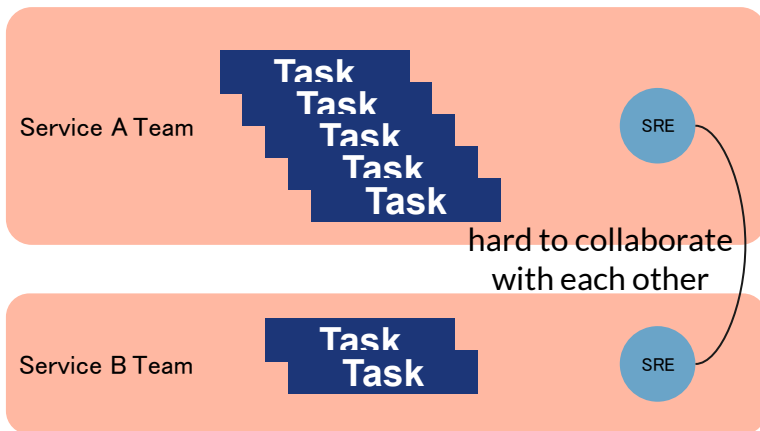
We tried full-time engagement **to all services**



Launch phase issues

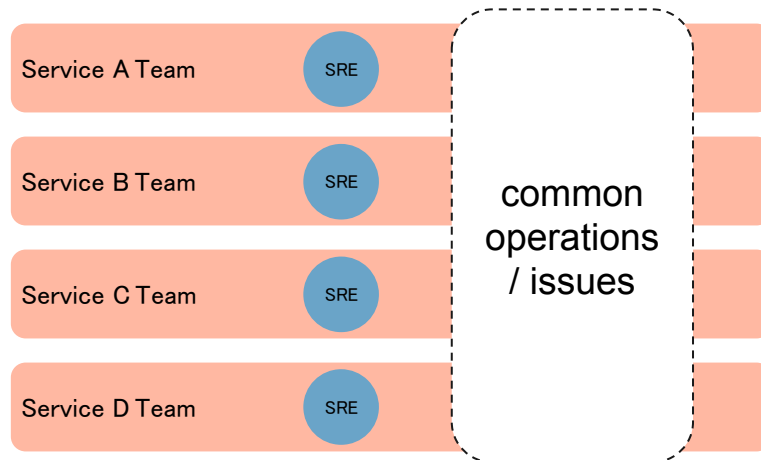
Launch phase issue #1

Inability to meet **the dynamically changing needs** of SRE



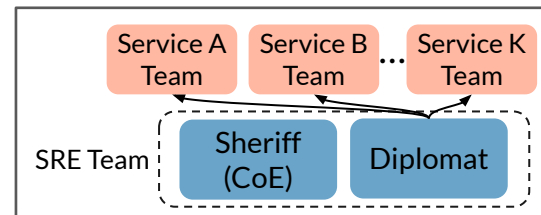
Launch phase issue #2

Lack of **cross-organizational problem solving and operational implementation** capabilities



Specialization phase

We discontinued “Embedded SRE” and established **two teams as “Platform SRE” with different missions** to overcome those issues.



Team	member	Role	Result
Sheriff	5	<ul style="list-style-type: none">Develop cross-organization best practices and solve problems using technology (function as a Center of Excellence).	<ul style="list-style-type: none">Resolve 150+ common issues between 6 months.
Diplomat	8	<ul style="list-style-type: none">Execute SRE for each service team as a team.Support to develop and maintain infrastructure of each services.	<ul style="list-style-type: none">Diplomat team members can be in charge of other teams tasks so that they can focus on high-demand service teams.

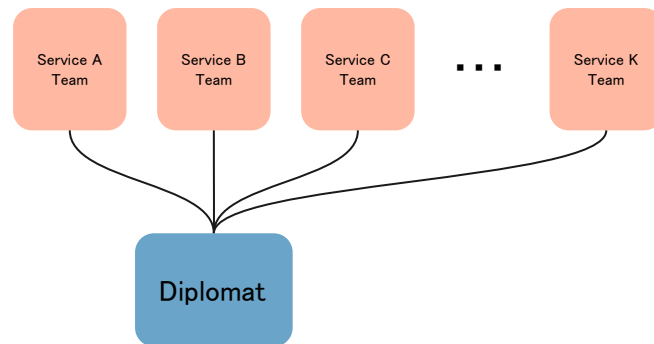
Specialization phase issue

Inability to keep up with **the rapid scale of the organization**

item	Oct, 2021	Mar, 2022
No. of service(*)	5	10
No. of developers	40+	200+
No. of diplomats	8	8

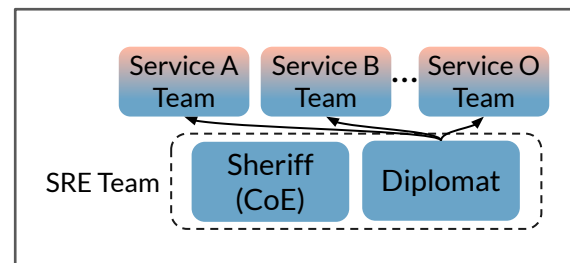
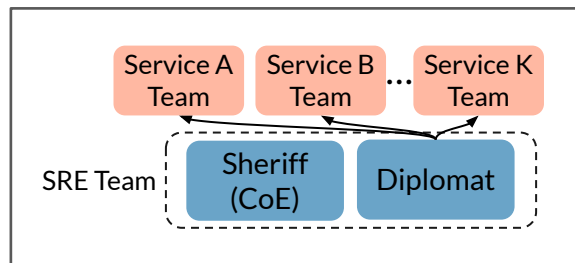
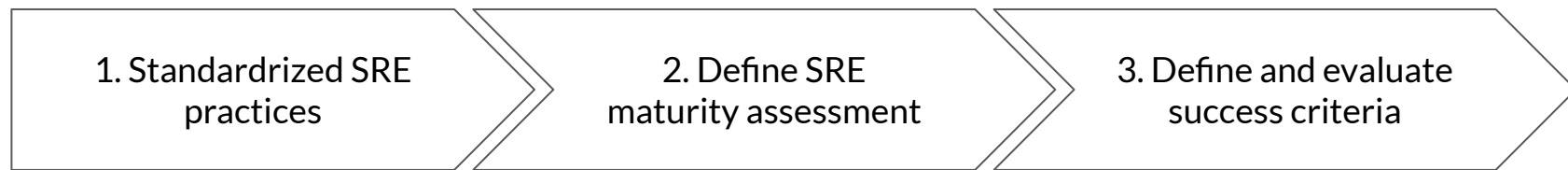
(*) After active development phase product

Larger scale products have also started to join JDEP.



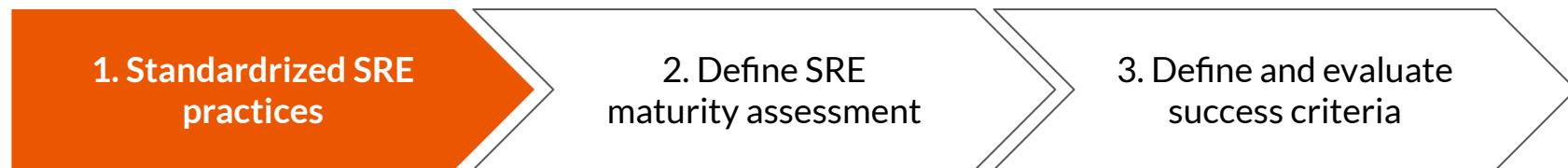
Expansion phase

We updated SRE teams mission **from SRE execution to SRE promotion** through the following **three steps**. As a result, currently **8 diplomats supports 14 services and service teams execute SRE**.



Expansion phase

At first, **we have implemented standardization of SRE practices** so that service team can execute them. Our SRE practices are defined as SRE team policies supported by Google.



Error Budget Policy



Incident Policy



Toil Policy



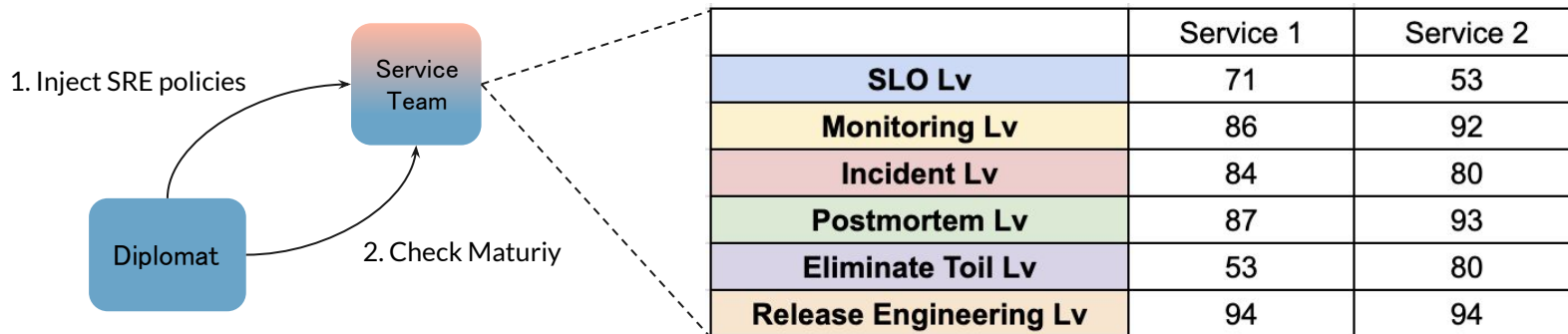
Oncall Policy



Postmortem Policy

Expansion phase

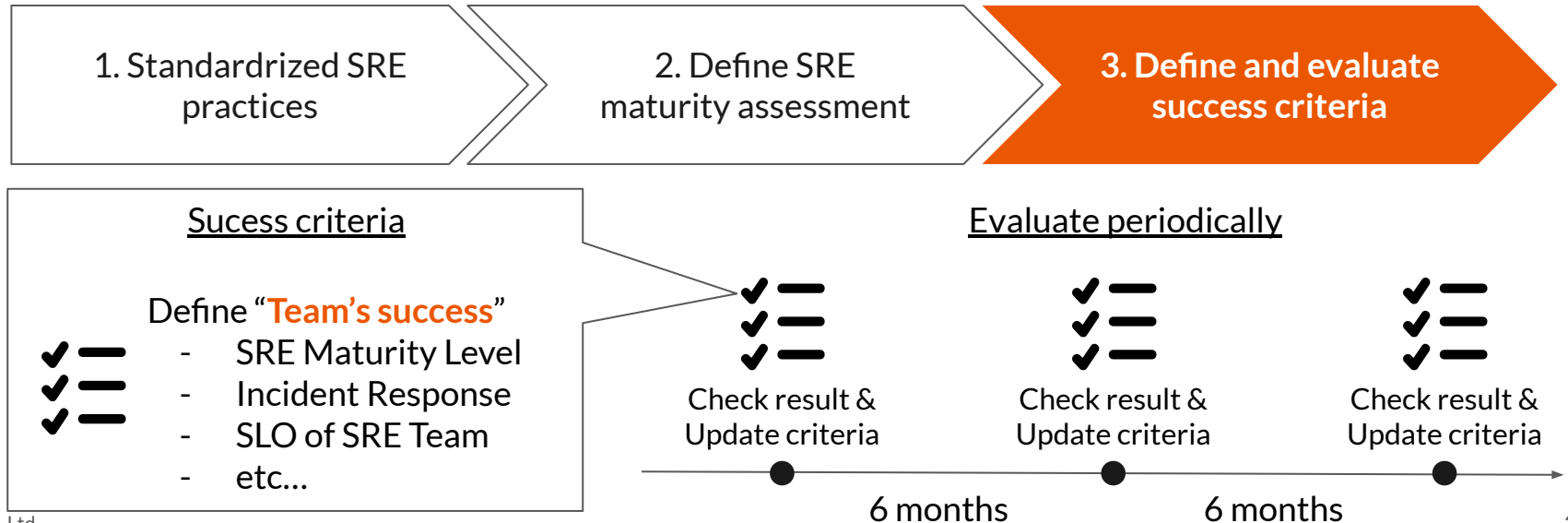
Second, we defined the SRE Maturity Assessment.
It is designed to assess **how well each service team is performing SRE.**



Expansion phase

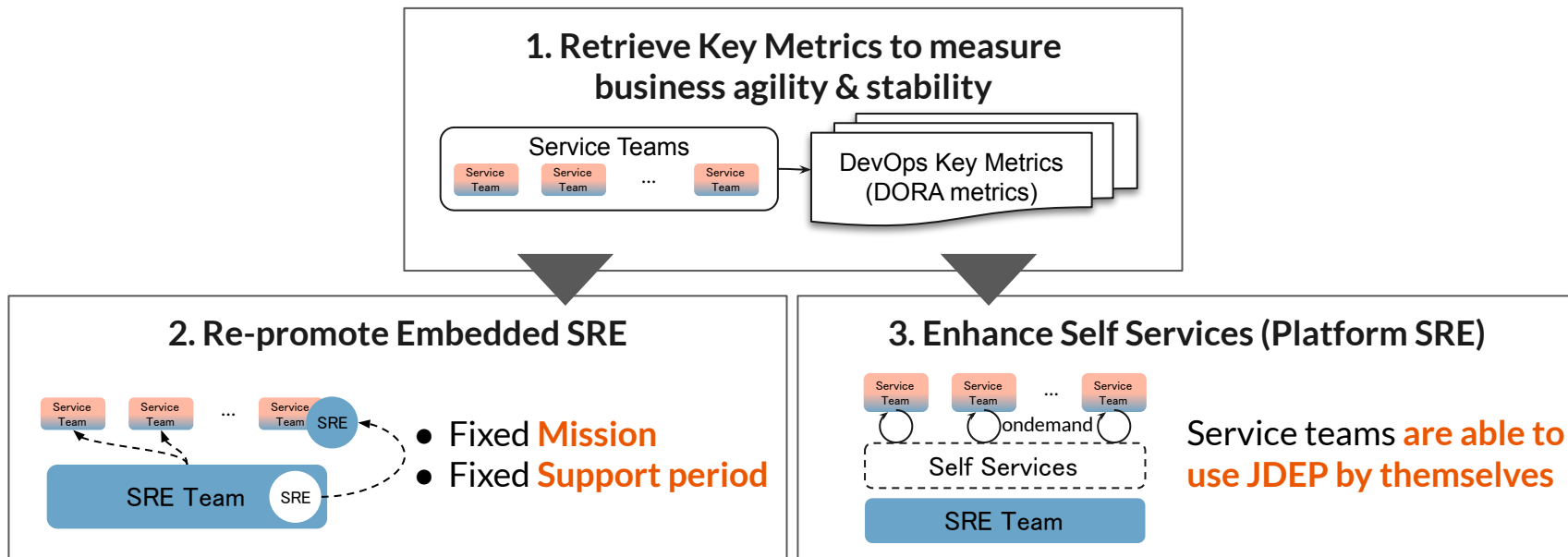
Third, we defined and evaluated the success of the SRE team.

The success criteria includes SRE maturity and other goals, and we conduct an evaluation every 6 months.

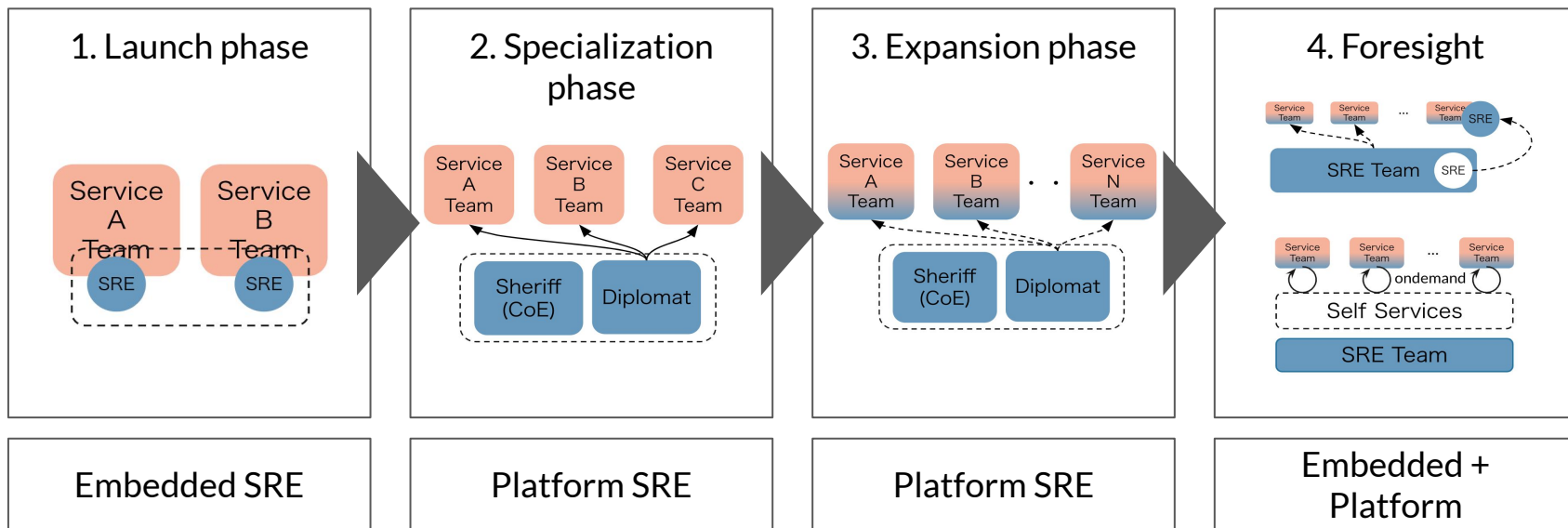


Foresight

We are planning to **re-promote Embedded SRE and Self Services** in order to **optimize business agility and stability**.



Summary



Thank you
ありがとうございました
