

Incident Management

A Logistics Problem





Jonas Cronholm Lundin
Head of Platform



Agenda

1

Where it all started

2

Laying the foundations

3

Building for chaos

4

The next step

What is **Swish**?

- Sweden's leading mobile real-time payment system
- Launched in 2012 by a collaboration of major Swedish banks
- Enables instant account-to-account payments using a mobile number or QR code



One simple experience **wherever** **you pay**

Person-to-Person



P2P

Person-to-Business (P2B)



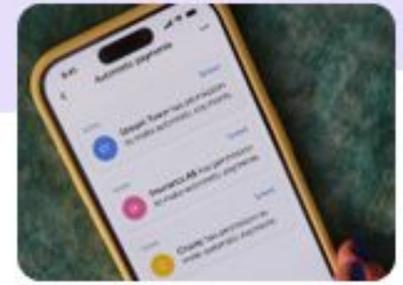
Micro Merchants



Online



In-store/POS



**Recurring
("Direct Debit")**

Business-to-Person



Payouts



Self-scanning



Payment cards

Sweden's strongest brand – five years in a row

YouGov best brand rankings 2026
Top 10 ranked: Sweden

Rank	Brand name	Score
1	Swish	43,9
2	IKEA	42,7
3	Volvo	39,4
4	SVT Play	37,3
5	Wasabröd	36,2
6	ICA	33,6
7	Arla	32,5
8	Systembolaget	31,7
9	Pågen	31,7
10	Kungsörnen	30,8



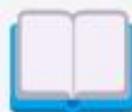
88 % of Swedes would recommend Swish

Source: Novus on behalf of Swish, 2025



**The second most trusted digital service
in Sweden – after BankID**

Source: Insight Intelligence, 2023



”To swish” quickly became so common it was added
to the Swedish dictionary in 2015.

Where it all started

Where it all started

The year was 2021

- Outsourced
- Media before response
- No clear root-cause
- "Hit-and-miss" remediation
- Rollbacks

AFTONBLADET MÅNDAG 3 FEBRUARI 2025
Dagens namn: Disa, Hjördis

START SPORT PLUS UPPTÄCK NÖJE TIPSA KULTUR LEDARE TV

Nyheter

Julstrul för Swish i 13 timmar

TT-Aftonbladet >

Uppdaterad 2024-12-25 | Publicerad 2024-12-24

Dela Spara



Det är problem för Swish-användare att betala. Arkivbild.
Foto: Henrik Montgomery/TT

Dagen då många svenskar skickar pengar till nära och kära har betaltjänsten stora tekniska problem.

Julstrulet för Swish pågick i 13 timmar.

SVT NYHETER Nyheter Lokalt Sport SVT Play Barn

/ EKONOMI



Under en intervju med SVT beskriver Elin Ritola, enhetschef för betalningsanalys på Riksbanken, problematiken med de hackerattacker som skett mot Swish, något som enligt henne bankerna bör arbeta för att lösa. Foto: SVT

Bank-id och Swishs dominans ifrågasätts efter störningsattacker

UPPDATERAD 26 MAJ 2025 PUBLICERAD 25 MAJ 2025

Digitala tjänster som Bank-id och Swish har blivit en central del av vardagen för miljontals svenskar. Över 180 incidenter har drabbat Swish det senaste året som påverkat kunders tillgång till tjänsten, enligt en sammanställning från SVT – och oro väcks över bristen på alternativ. – Svensk betalningsmarknad behöver stappa upp kring ökad konkurrens, säger Elin Ritola, enhetschef för betalningsanalys på Riksbanken.

Where it all started

The Chasm

RISK ASSESSMENT TEMPLATE						
RISK LIST						
Hazard	Who is at risk?	Severity	Likelihood	Risk Impact	Responsible	Recommended Action
Food left over after meals	2nd floor staff	Negligible injuries	Likely	Medium	John Smith	Everyone will be responsible for clearing their left over.
Slippery stairs after the rain	All the company employees	Major injuries	Unlikely	Medium	John Smith	(social) non-slippery materials will be put on the stairs.
Slippery slopes during the winter season	All the company employees	Fatality	Likely	High	John Smith	Slopes must be cleared in the morning and in the evening.
Maintenance forgets to put caution signs while cleaning	All the company employees	Major injuries	Likely	High	John Smith	Orientation must be made to inform our employees.

PROBABILITY	Incident severity				
	1	2	3	4	5
	Very low	Low	Medium	High	Very high
5 Permanently to happen	Medium	Medium	High	High	High
4 Very probably to happen	Medium	Medium	Medium	High	High
3 Probably to happen	Low	Medium	Medium	Medium	High
2 Unlikely to happen	Low	Low	Medium	Medium	High
1 Randomly to happen	Low	Low	Low	Medium	Medium

=/=

AFTONBLADET MANDAG 3 FEBRUARI 2025
Dagens namn: Disa, Hjärdås

START SPORT PLUS UPPTÄCK NÖJE TIPSA KULTUR LEDARE TV

Nyheter

Julstrul för Swish i 13 timmar

svt NYHETER Nyheter Lokalt Sport SVT Play Barn

EKONOMI

TT-Aftonbladet
Uppdaterad 2024-12-25 | Publicerad 2




Det är problem för Swish-användare att...
Foto: Henrik Montgomery/TT

Dagen då många svenskar ska...
stora tekniska problem.
Julstrulet för Swish pågick i 13 timmar.

Under en intervju med SVT beskriver Elin Ritola, enhetschef för betalningsanalys på Riksbanken, problematiken med de hackerattacker som skett mot Swish, något som enligt henne bankerna bör arbeta för att lösa. Foto: SVT

Bank-id och Swishs dominans ifrågasätts efter störningsattacker

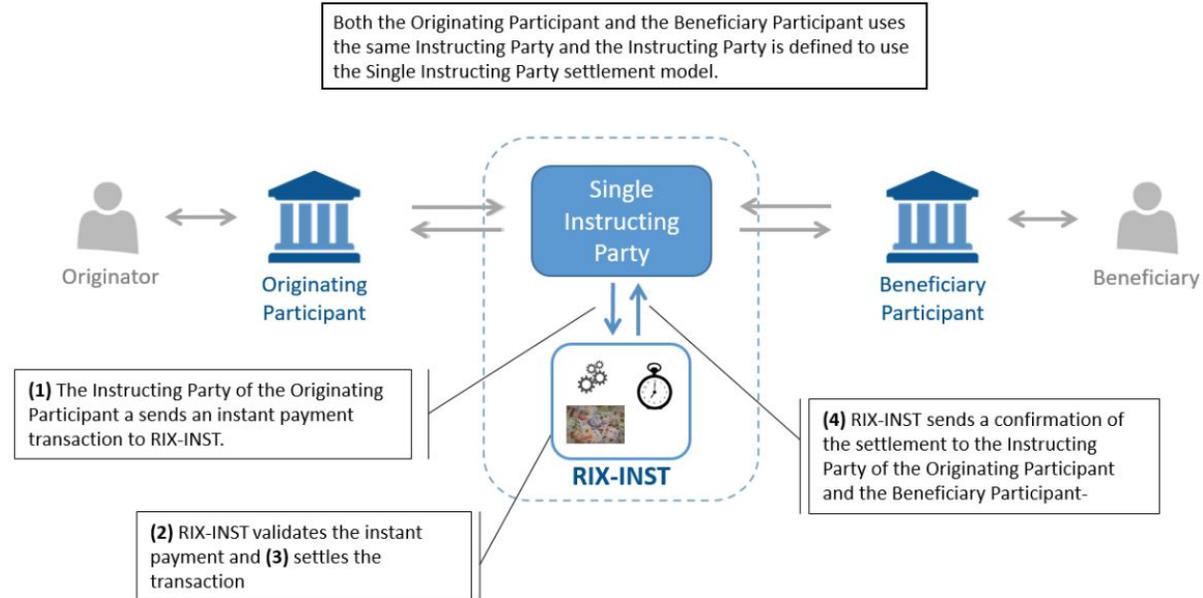
UPPDATERAD 26 MAJ 2025 PUBLICERAD 25 MAJ 2025

Digitala tjänster som Bank-id och Swish har blivit en central del av vardagen för miljontals svenskar. Över 180 incidenter har drabbat Swish det senaste året som påverkat kunders tillgång till tjänsten, enligt en sammanställning från SVT – och oro väcks över bristen på alternativ. – Svensk betalningsmarknad behöver stegpa upp kring ökad konkurrens, säger Elin Ritola, enhetschef för betalningsanalys på Riksbanken.

Where it all started

The Operational Landscape

Illustration 2: Single Instructing Party Settlement Model



Source: The Eurosystem and the Riksbank

Where it all started

The year was 2021

- Outsourced
- Media before response
- No clear root-cause
- "Hit-and-miss" remediation
- Rollbacks

Broken Logistics!

- Where are the problems?
- What information is needed?
- Who can fix it?

Laying the foundation

Establishing Principles

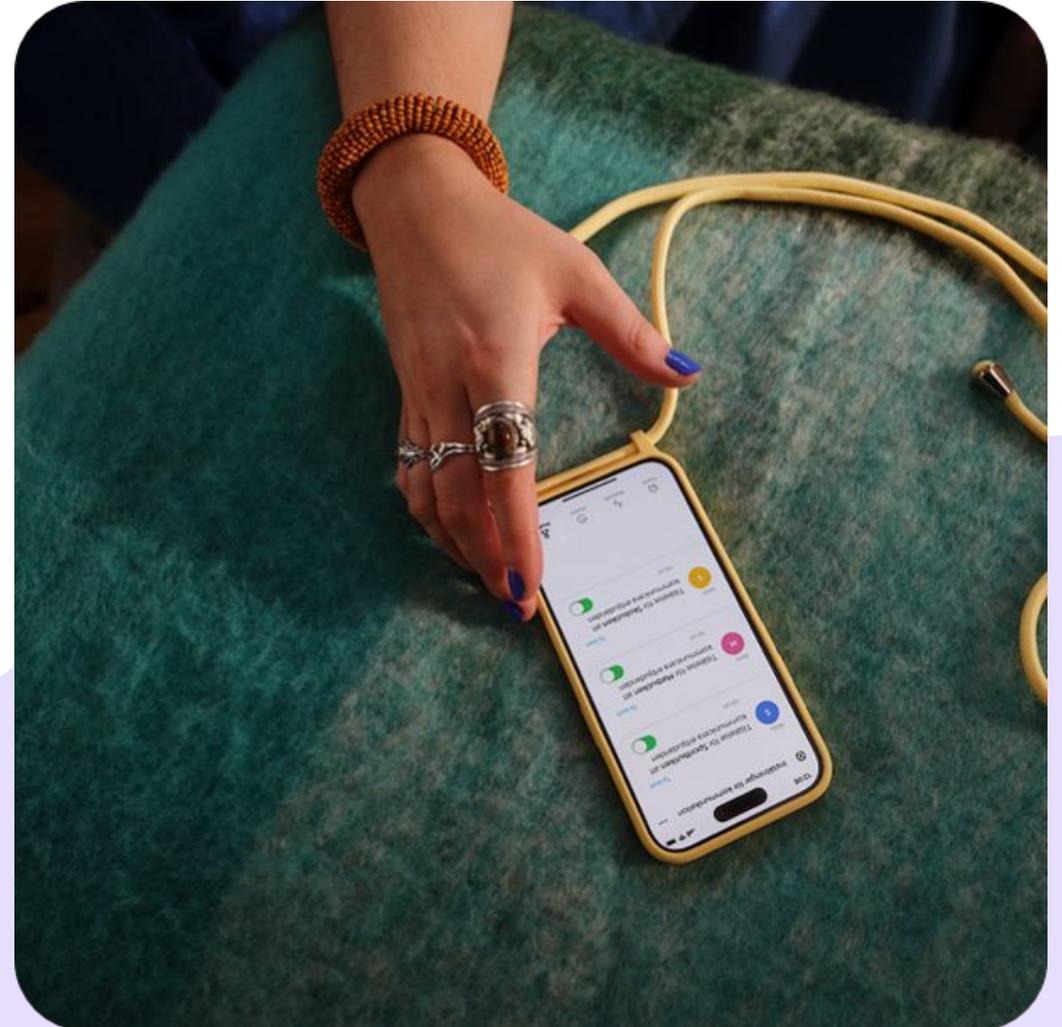
GitOps – Our opinionated approach on how to manage the system

Site Reliability Engineering – Our view on operations management and risk appetite

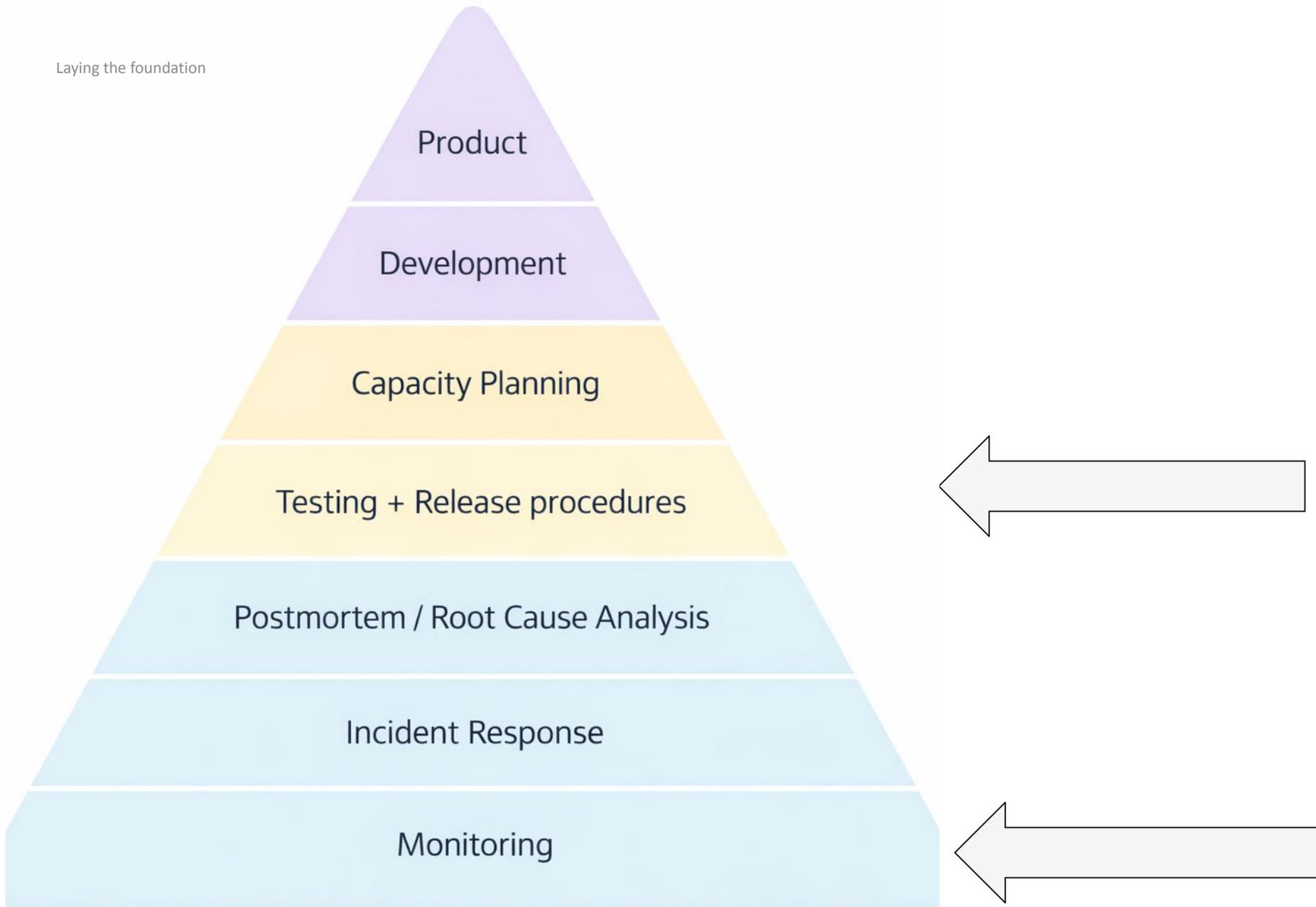
- Continuous Integration and Shift-Left – Our view on how to achieve early feedback loops
- Vendor Agnosticity and Cloud - Our approach on where to build dependence and where not to
- Cognitive Load and Platform Consolidation – Our view on how to reason about tools to use
- Treat Services like Cattle and not Pets – Our view on how to handle our infrastructure
- Four Key Metrics – Our way of measuring ourselves

Laying the foundation

- SLSA for **everyone**
 - Our view of software supply chain security and compliance
- Design for **Auditability**
 - Build for Transparency – Our view on how to make compliance built in and not bolt-on



Laying the foundation



* Adapted from <https://sre.google/sre-book/table-of-contents/>

Building for chaos

Rolling out **Observability**

- End-to-end Tracing
- Payment Conversion
- Immediate feedback on incidents and releases



```
incident_response.md 22.79 KIB
```

Code Preview

System Runbook: Incident Response

Table of Contents

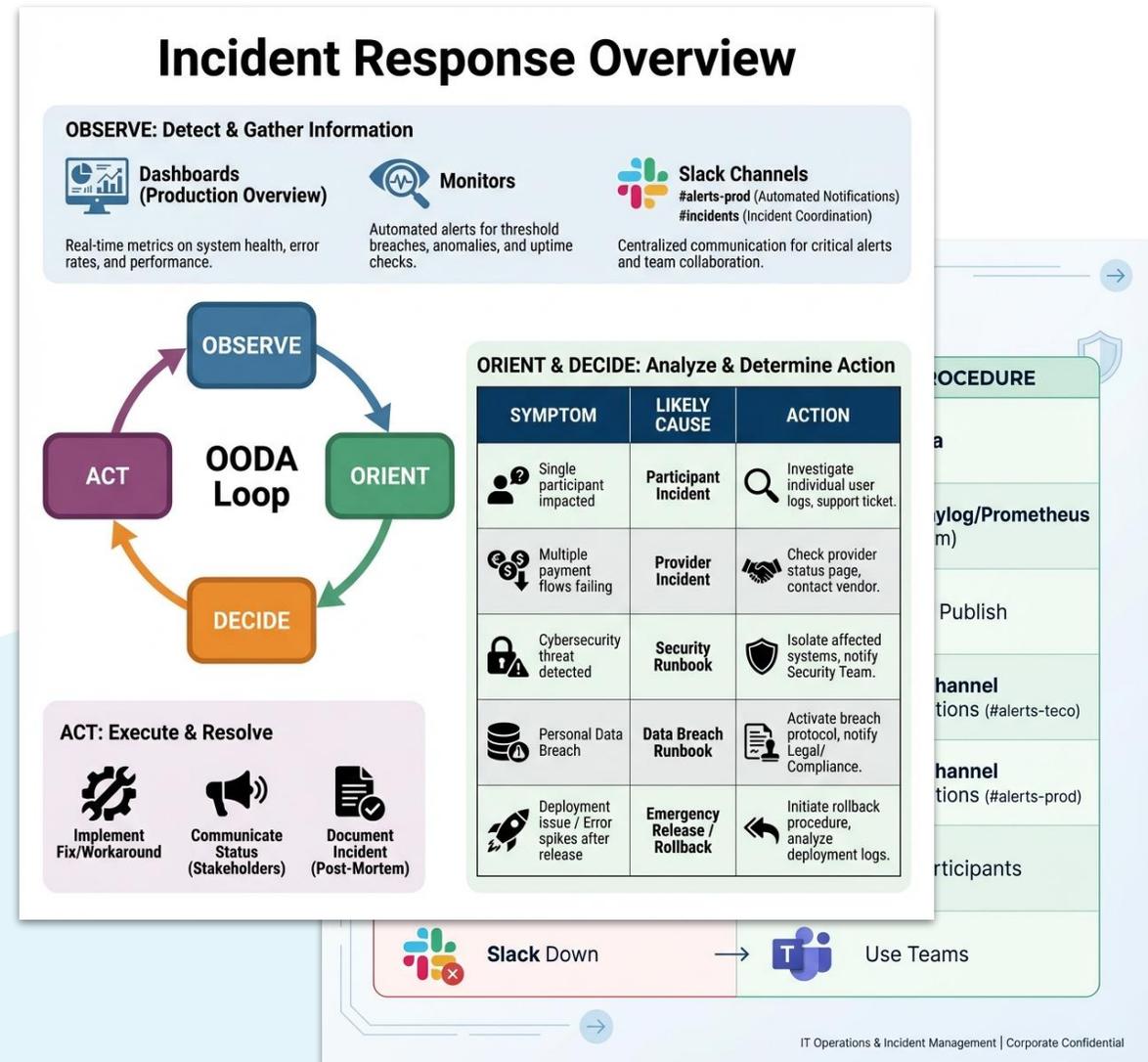
- System Runbook: Incident Response
 - Table of Contents
 - Purpose
 - Observe
 - Orient and Decide
 - Act
 - Participant Incident
 - Notes
 - Provider Incident
 - Notes
 - Escalation
 - Emergency release and rollback
 - Other
 - Automatic circuit breaker
 - Break-glass key usage
 - Scheduled service window with circuit breaker
 - References
- Appendices
 - Appendix A: Operational Incident Severity Levels

Purpose

This runbook provides the organization-wide process for incident response. It explains where to gather observations, how to orient and decide using the OODA loop, and which actions/runbooks to execute. It serves as the central system runbook for incidents and links to reusable action runbooks.

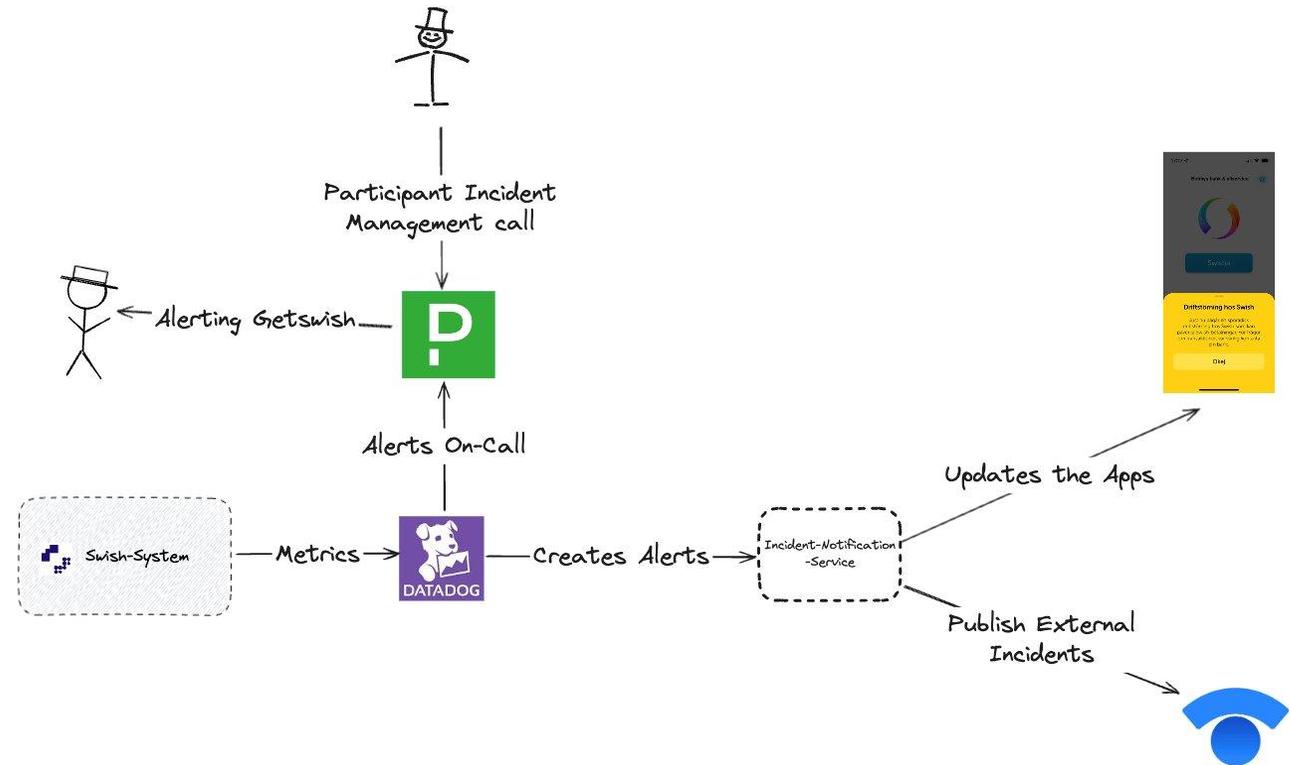
Start building **Runbooks**

- When SHTF large word documents will not save you
- The above sets the mandate - runbooks is what you do
- Runbooks according to OODA:
 - Observe
 - Orient
 - Decide
 - Act



Automating Incident Management

- Automatic alerting
 - On-call rotations
- Automatic incident notifications
 - Apps and Statuspage
- Automatic calling
 - Calls banks



Structured Follow-Up

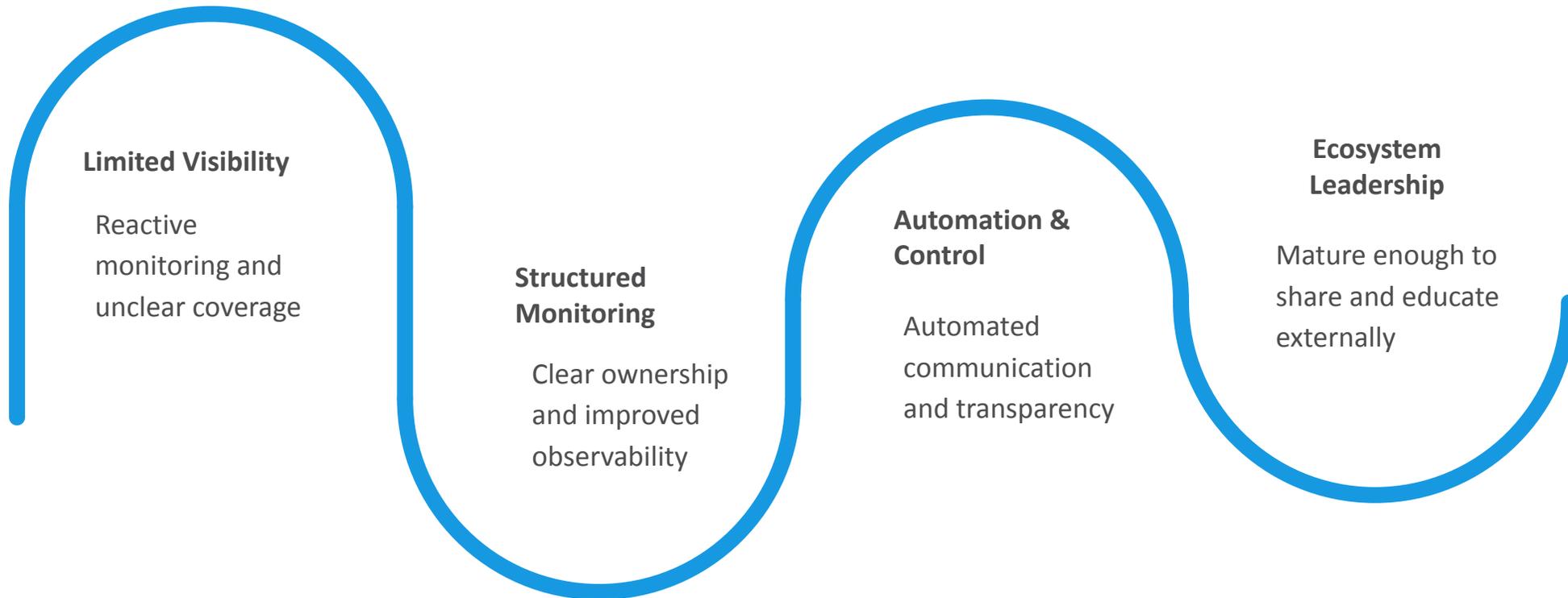
- Datadog Incidents
 - Slack Integration
- Postmortems
- Weekly Production Meetings

The screenshot displays the Datadog Incidents interface. At the top, an incident titled "IR-332: Platform incident 401 unauthorized requests towards Statuspage API" is shown as "COMPLETED" with a severity of "SEV-3 (Moderate)". It took 42 minutes to resolve and had 20 minutes of customer impact. The incident was last updated on Feb 12, 2026, at 9:18 am by Simon Lindroos. Below the incident header, there are tabs for Overview, Timeline, Post-Incident, Response Team, Pages, Notifications, and Automations. The "Overview" tab is active, showing a timeline of the incident: "Customer impact start" at 9:44 am, "DECLARED" at 9:50 am, "Customer impact end" at 10:04 am, "STABLE" at 10:15 am, "RESOLVED" at 10:33 am, and "COMPLETED" at Feb 12, 9:18 am. To the right, the "What happened" section shows the detection method as "Monitor" and the incident commander as Simon Lindroos. Below this, a postmortem report titled "Postmortem IR-335: Broken participant integration for fetching reports" is displayed. The postmortem was updated about 20 hours ago by Andreas Olausson. The "Overview" section of the postmortem provides details: Incident IR-335, Commander Andreas Olausson, Severity SEV-4, and Status COMPLETED. It also shows the incident duration (Feb 5, 2026, 3:03 pm - Feb 5, 2026, 3:03 pm) and customer impact (Feb 5, 2026, 11:00 am - Feb 5, 2026, 1:50 pm). The "What Happened?" section includes a summary: "Participants were unable to fetch transaction monitoring reports containing transactions with the model phonenummer_abuse_1_v1 due to the field associationId being empty string when we expected null value. This error was identified and hotfixed. One participant is continuously fetching the report every hour, which made it clear that the hotfix worked as expected." A timeline of events follows, starting from Feb 05 2026 at 3:03 pm GMT+1 and ending at 3:23 pm GMT+1.

Where are we **Now**?

The next step

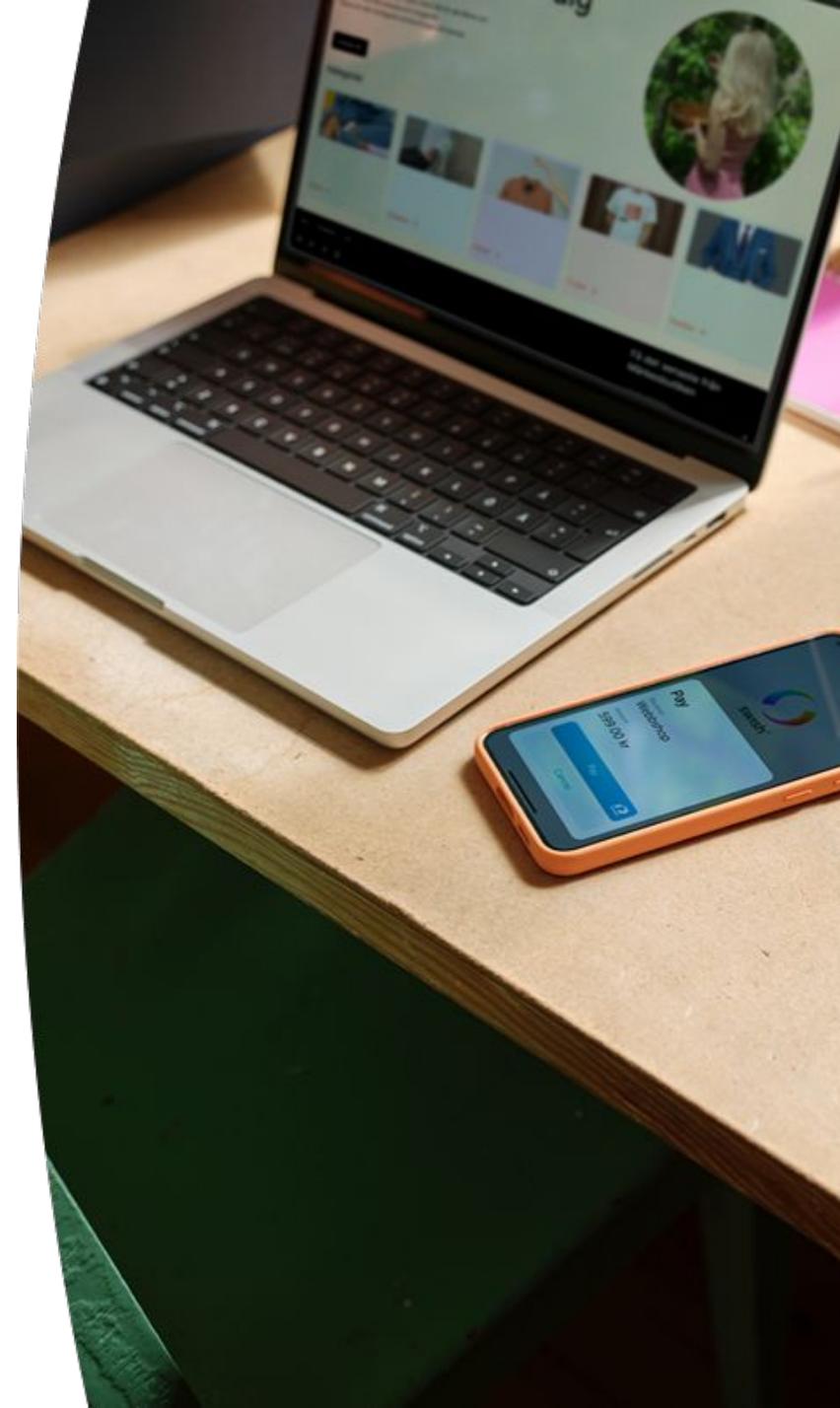
From Uncertainty to Operational Maturity



The next step

Expanding Observability Across the Ecosystem

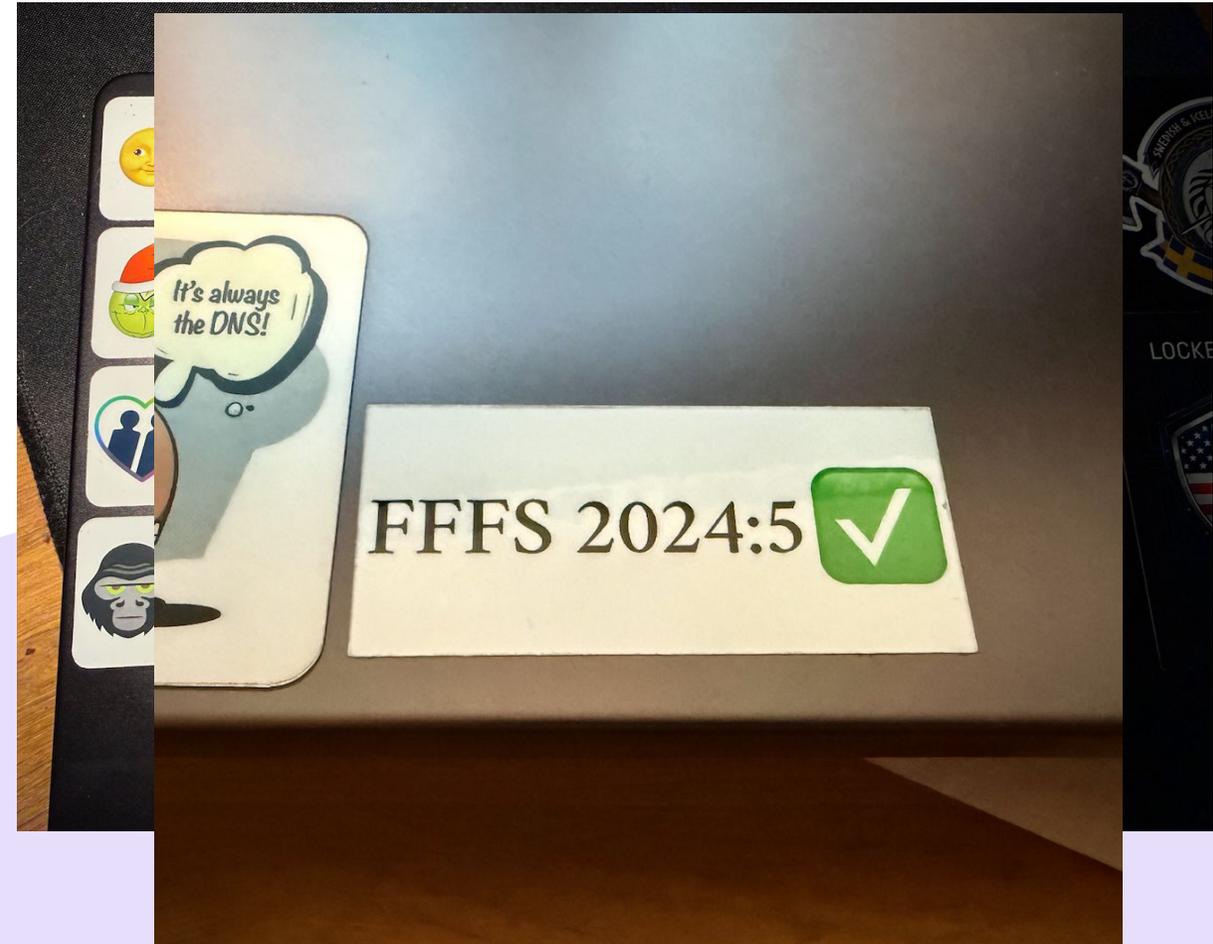
- Moving beyond internal system visibility
- Exploring how to share operational insights with participants
- Enabling participants to understand their own operational health
- Increasing transparency around how incidents impact the broader ecosystem
- Strengthening collective resilience through shared situational awareness



Laying the foundation

We are **Proud** of what we do and we build **Culture** around it

- Stickers for **everyone**
 - Our way of showing our “battle scars”
- That goes for **compliance battles** too



Thanks for listening!



Jonas Cronholm Lundin
jonas.cronholm-lundin@getswish.se
Head of Platform



Questions?