POWER BI

PORTFOLIO
& ANALYTICS

Showcasing Dashboard Design, Data Modeling, and Generative AI in Analytics

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Content Overview

Showcasing Dashboard Design, Data Modeling, and Generative AI in Analytics

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Portfolio / Project Samples (Power BI)

Server Backup Monitoring Dashboard

Server Backup Monitoring Dashboard:

Business Context

Situation

- The stakeholders needed a real-time dashboard to track which servers restarted successfully, which ones failed and monitor backup status to ensure availability.

- Their existing reporting tool was limited, required heavy manual effort, and slowed down incident detection for the monitoring team.

My Role

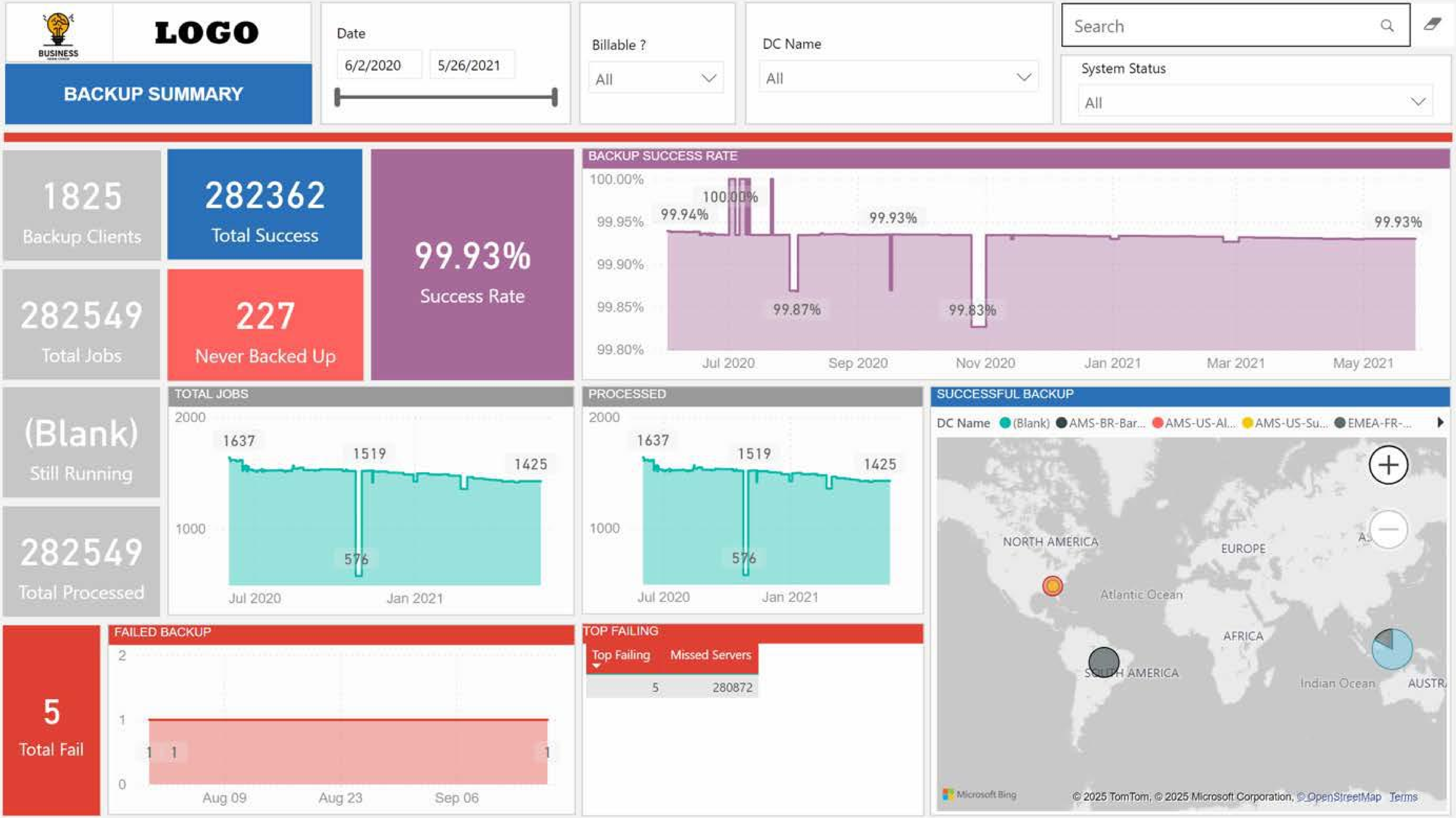
- Designed and developed the dashboard based on client requirements.

- Collaborated with stakeholders to define KPIs for server health and backup availability.

Data Sources / ETL

- SQL database of HP server hosts.

- Connected via DirectQuery for live, dynamic reporting.



BACKUP SUMMARY

Date: 6/2/2020 – 5/26/2021

Billable ?: All

DC Name: All

Search

System Status: All

1825 Backup Clients

282362 Total Success

99.93% Success Rate

282549 Total Jobs

227 Never Backed Up

(Blank) Still Running

282549 Total Processed

5 Total Fail

BACKUP SUCCESS RATE

TOTAL JOBS

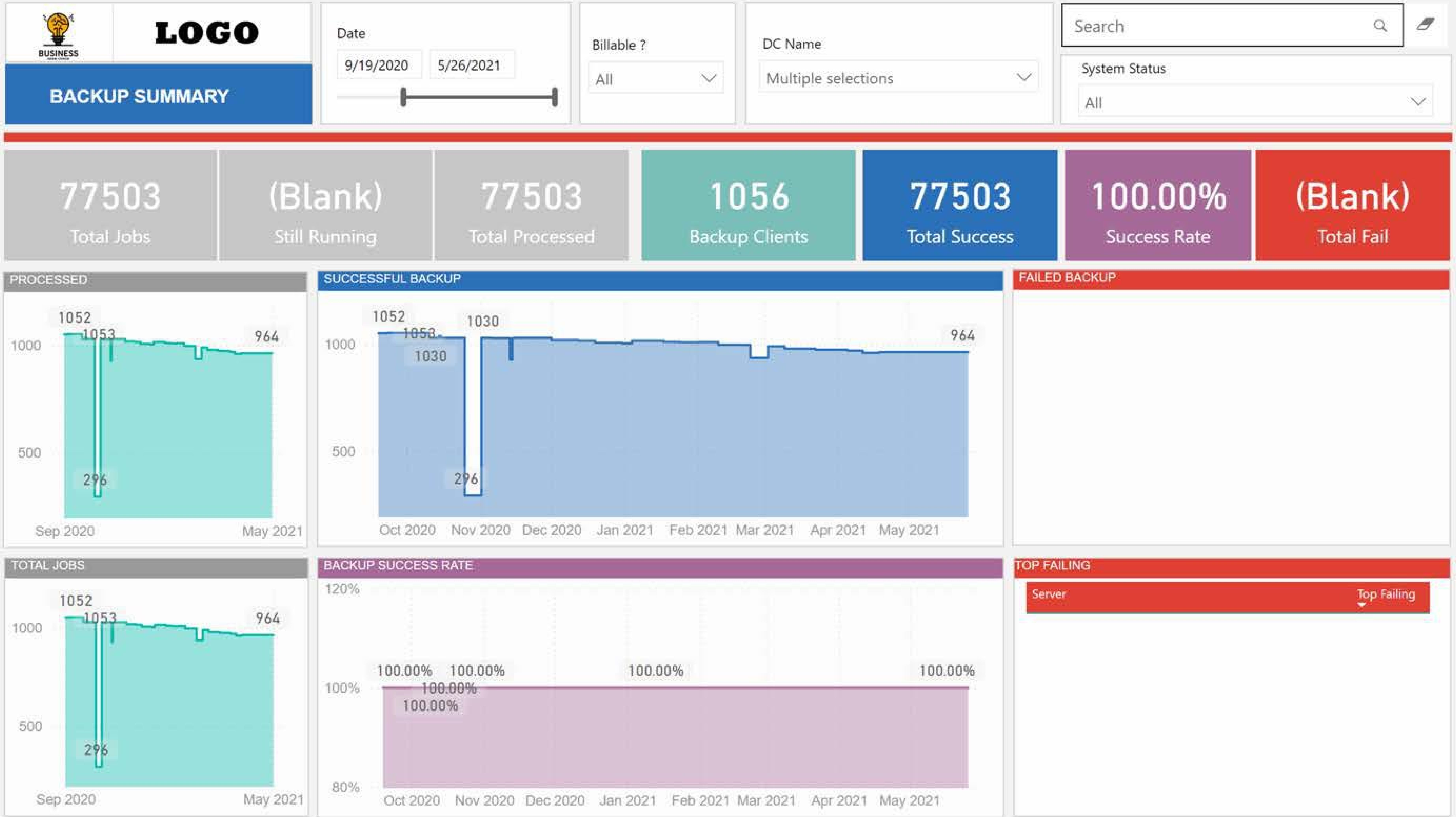
PROCESSED

SUCCESSFUL BACKUP

FAILED BACKUP

TOP FAILING

Top Failing	Missed Servers
5	280872



LOGO

BACKUP SUMMARY

Date: 9/19/2020 – 5/26/2021

Billable ?: All

DC Name: Multiple selections

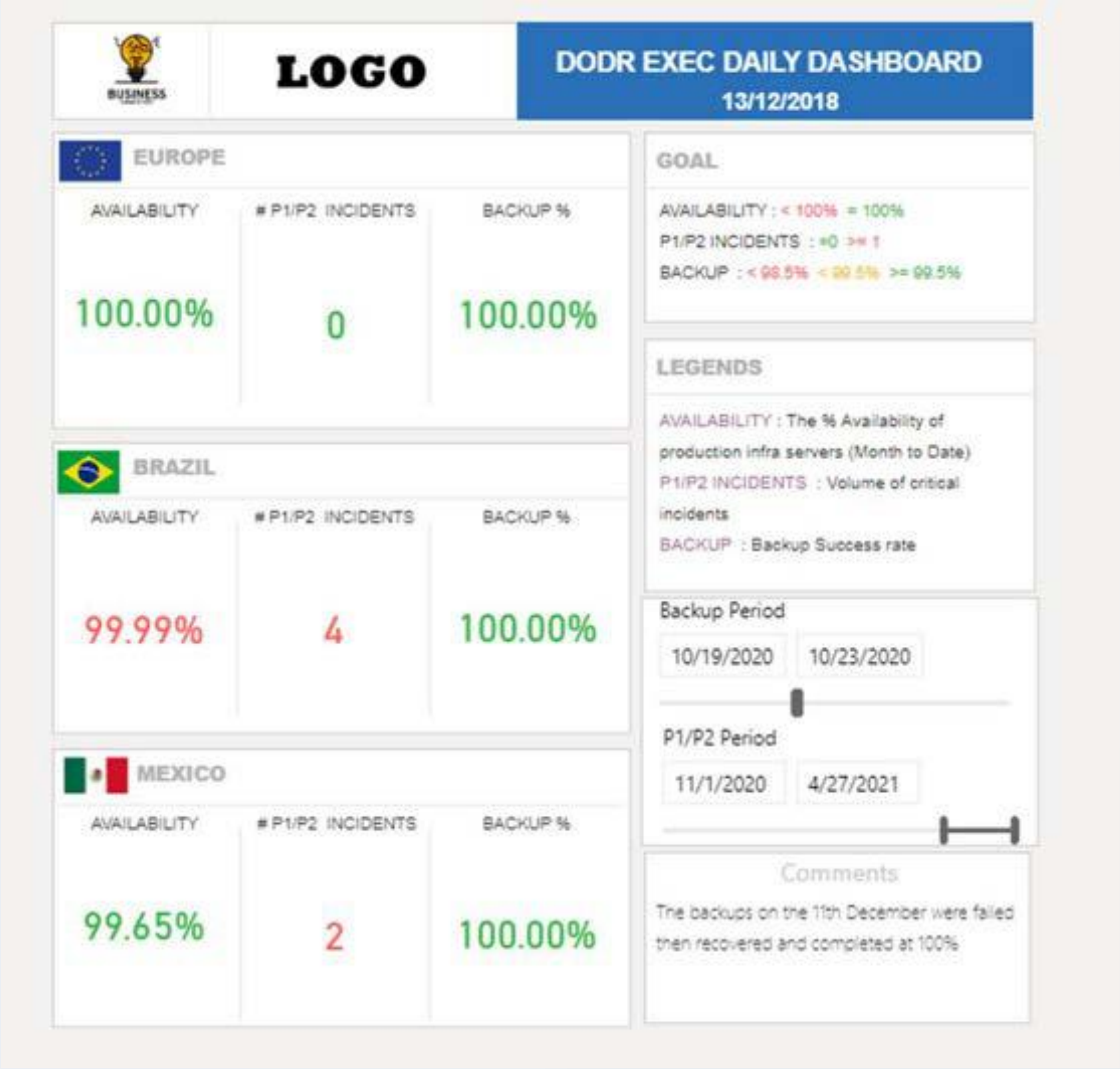
System Status: All

Search

77503	(Blank)	77503	1056	77503	100.00%	(Blank)
Total Jobs	Still Running	Total Processed	Backup Clients	Total Success	Success Rate	Total Fail

Server	Top Failing

Impact / Outcome



DODR EXEC DAILY DASHBOARD
13/12/2018

EUROPE

AVAILABILITY	# P1/P2 INCIDENTS	BACKUP %
100.00%	0	100.00%

BRAZIL

AVAILABILITY	# P1/P2 INCIDENTS	BACKUP %
99.99%	4	100.00%

MEXICO

AVAILABILITY	# P1/P2 INCIDENTS	BACKUP %
99.65%	2	100.00%

GOAL

AVAILABILITY : < 100% = 100%
P1/P2 INCIDENTS : =0 >= 1
BACKUP : < 98.5% < 99.5% >= 99.5%

LEGENDS

AVAILABILITY : The % Availability of production infra servers (Month to Date)
P1/P2 INCIDENTS : Volume of critical incidents
BACKUP : Backup Success rate

Backup Period
10/19/2020 10/23/2020

P1/P2 Period
11/1/2020 4/27/2021

Comments

The backups on the 11th December were failed then recovered and completed at 100%

Delivered

clearer visuals and critical metrics for incident detection.

90%

Reduction in Manual Reporting
Eliminated manual reporting on the whole project

5x

Improved Response
Faster incident detection and resolution compared to previous tools

Security Operations Dashboard

Security Operations Dashboard:

Business Context

Situation

- The security team was responsible for sending monthly reports to executives, but the process was entirely manual. Preparing the slides often took several days of effort.

- The reports were static and lacked flexibility, executives couldn't easily filter by specific months or look back at historical data without requesting additional files.

My Role

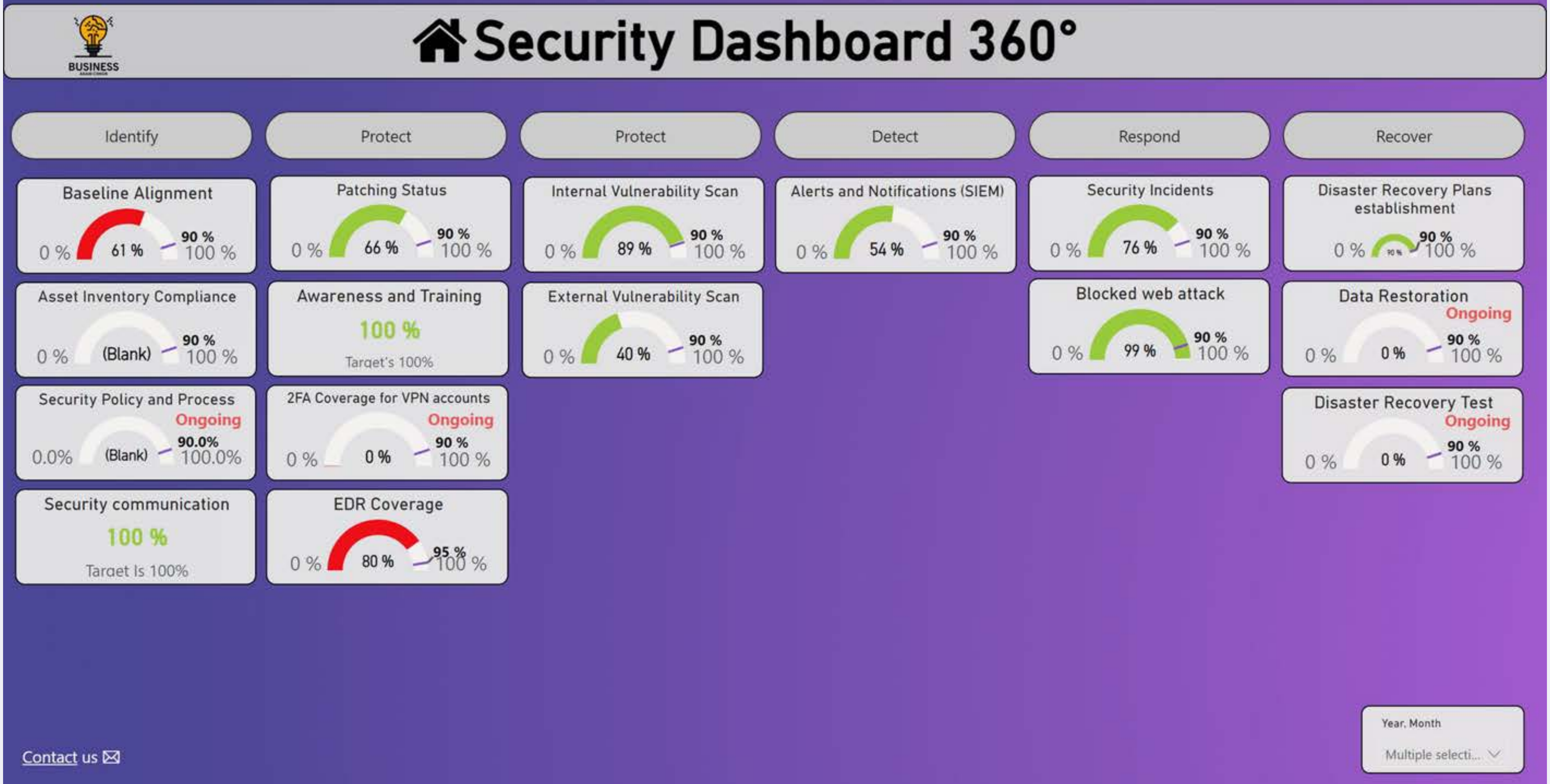
- Designed and developed a new dashboard tailored to the team's reporting needs, focusing on automation and interactivity.

- Optimized an existing dashboard by improving its structure and correcting KPI calculations using DAX measures to ensure data accuracy.

Data Sources / ETL

- Data was provided through monthly Excel extracts sent by the security team.

- The files were cleaned and transformed in Power Query before being modeled in Power BI.



BUSINESS

Security Dashboard 360°

Identify

Baseline Alignment
0 % — 61 % — 90 % — 100 %

Asset Inventory Compliance
0 % — (Blank) — 90 % — 100 %

Security Policy and Process
Ongoing
0.0% — (Blank) — 90.0% — 100.0%

Security communication
100 %
Target Is 100%

Protect

Patching Status
0 % — 66 % — 90 % — 100 %

Awareness and Training
100 %
Target's 100%

2FA Coverage for VPN accounts
Ongoing
0 % — 0 % — 90 % — 100 %

EDR Coverage
0 % — 80 % — 95 % — 100 %

Protect

Internal Vulnerability Scan
0 % — 89 % — 90 % — 100 %

External Vulnerability Scan
0 % — 40 % — 90 % — 100 %

Detect

Alerts and Notifications (SIEM)
0 % — 54 % — 90 % — 100 %

Respond

Security Incidents
0 % — 76 % — 90 % — 100 %

Blocked web attack
0 % — 99 % — 90 % — 100 %

Recover

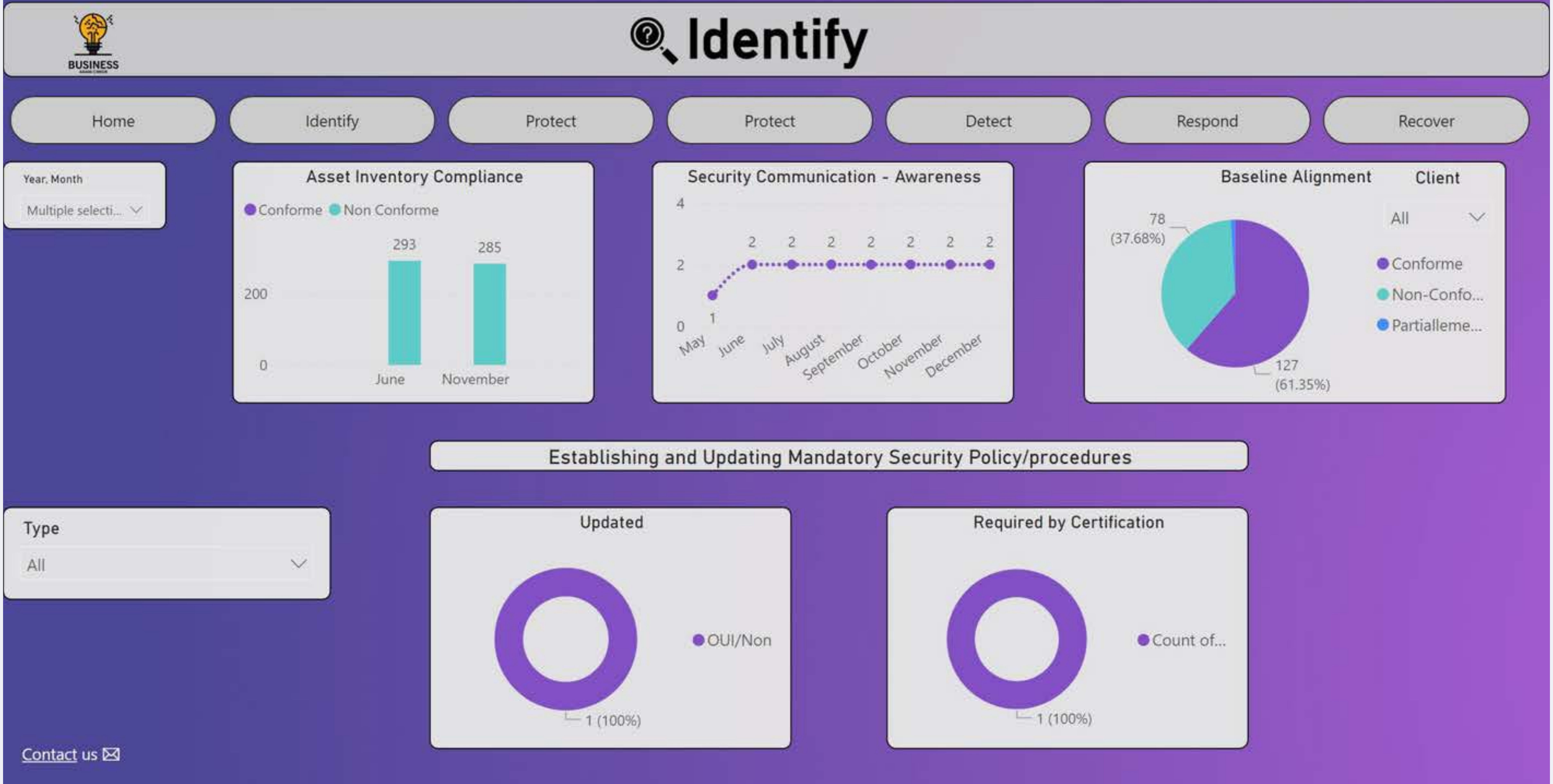
Disaster Recovery Plans establishment
0 % — 90 % — 90 % — 100 %

Data Restoration
Ongoing
0 % — 0 % — 90 % — 100 %

Disaster Recovery Test
Ongoing
0 % — 0 % — 90 % — 100 %

Year, Month
Multiple selecti...

Contact us ✉



Identify

Year, Month: Multiple selecti...

Asset Inventory Compliance

Security Communication - Awareness

Baseline Alignment

Client: All

Establishing and Updating Mandatory Security Policy/procedures

Type: All

Updated

Required by Certification

Contact us ✉

BUSINESS

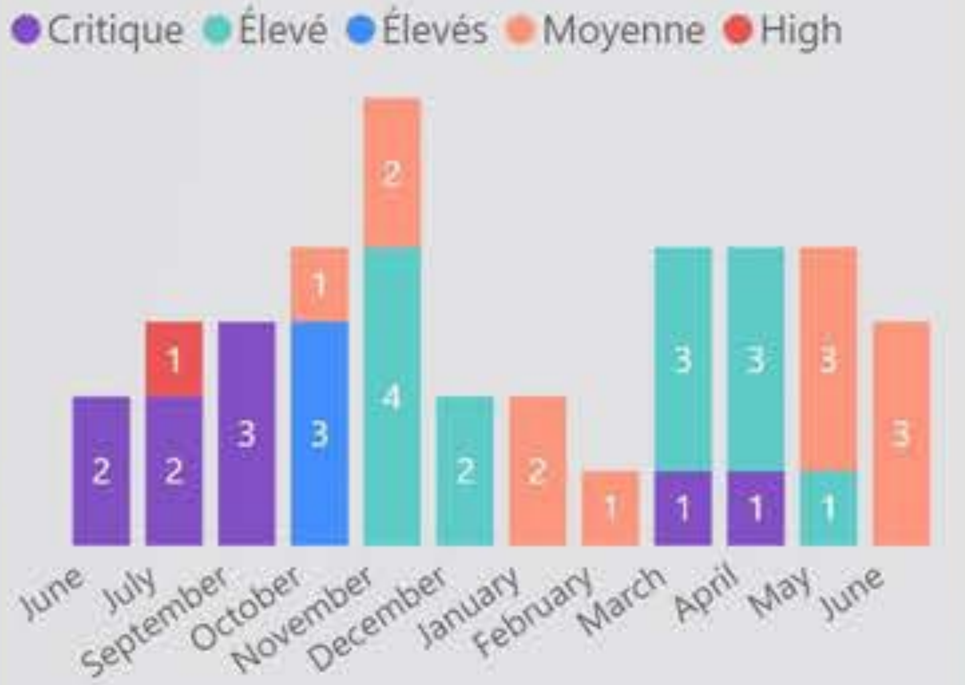
Respond

Home Identify Protect Protect Detect Respond Recover

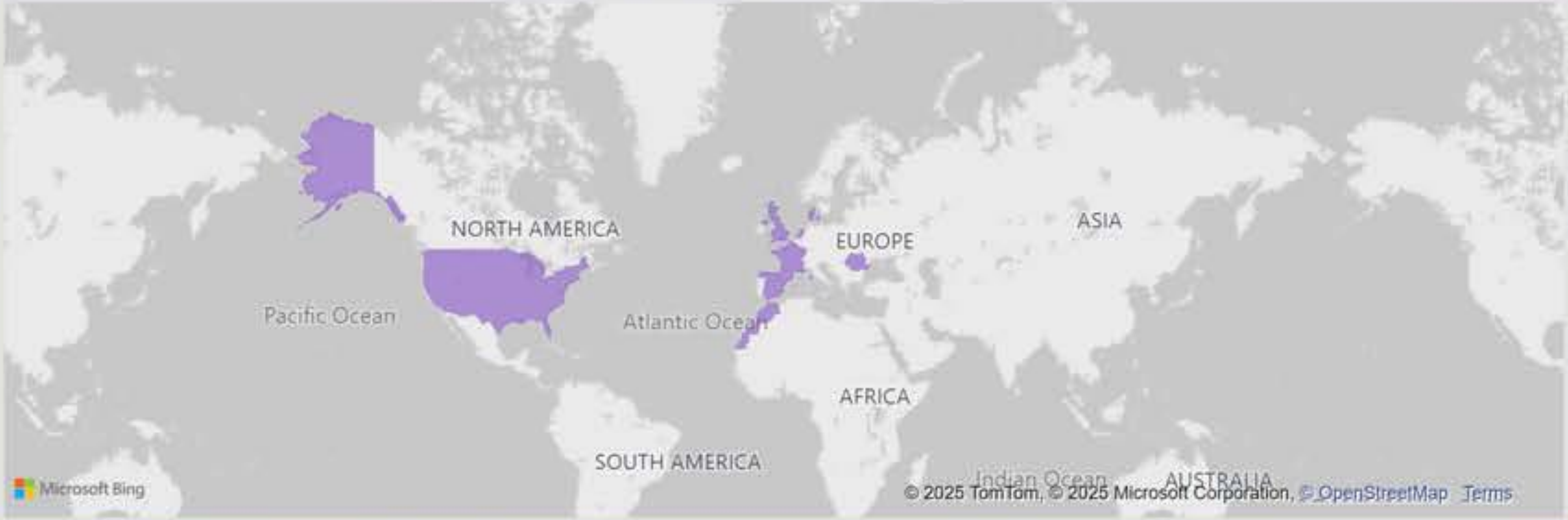
Year, Month
Multiple sele...

Status
All

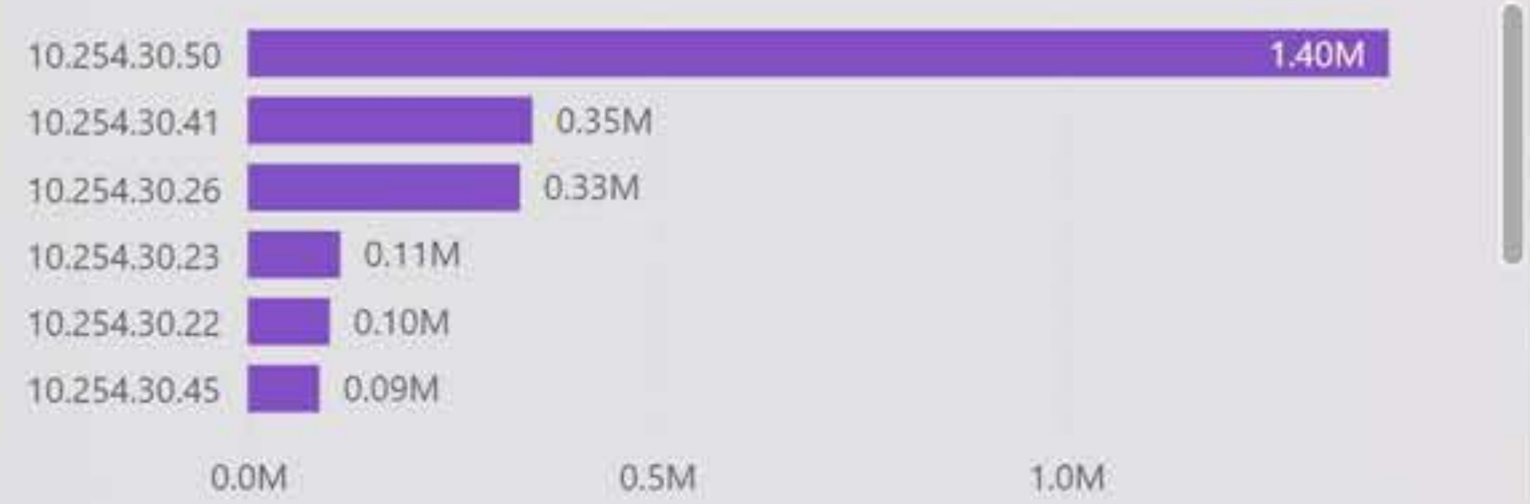
Security Incidents



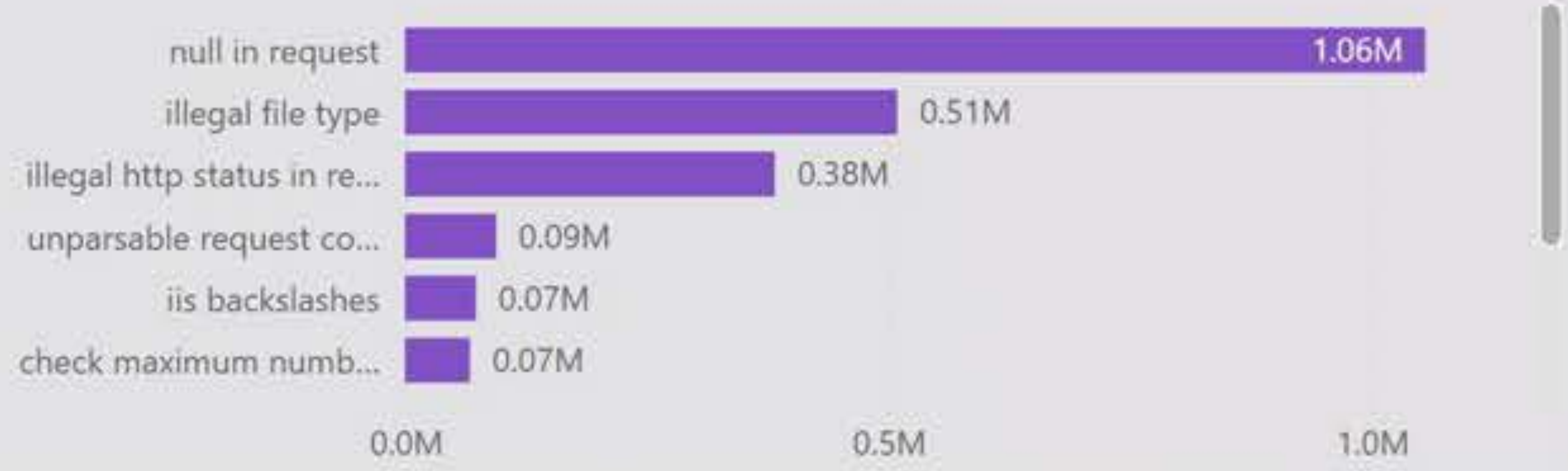
Blocked web attack / Geo



Destination - Blocked web attack / Adress

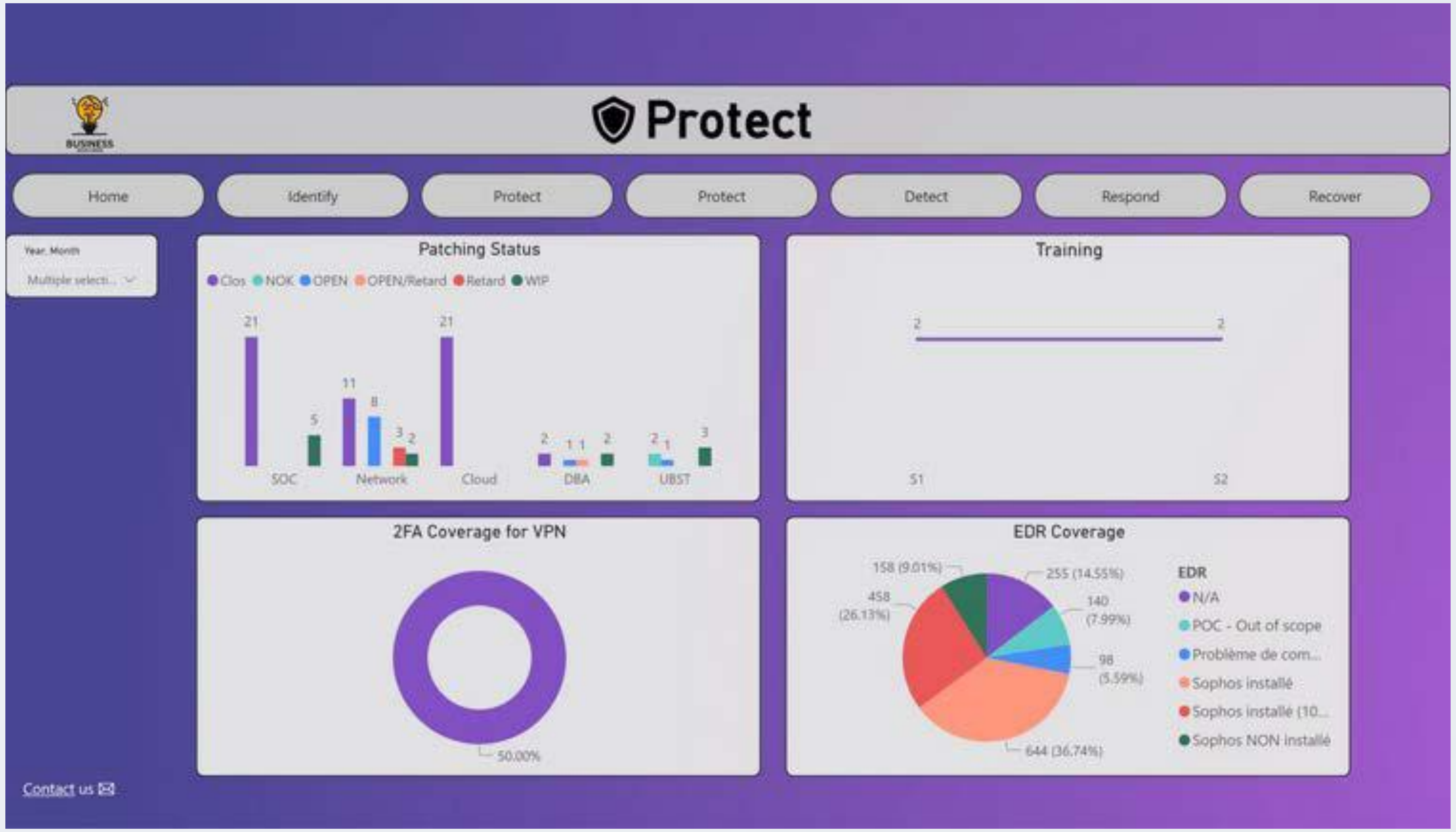


Blocked web attack / Attack



Contact us ✉

Impact / Outcome



50% Automation

Reduced the team's end-of-month reporting workload, allowing them to focus on higher-value security tasks instead of manual reporting.

Introduced

dynamic features such as slicers for date and month selection, enabling executives to easily drill into past performance without needing separate reports.

Improved

overall accessibility, eliminating the inefficiencies of tracking outdated versions of the report.

Incident, Request, Change, SLA & Backlog Dashboard

Incident, Request, Change, SLA & Backlog Dashboard:

Business Context (Problems)

Problem 1

- SLA measurements in ServiceNow were often incorrect because the developers responsible for maintaining them did not implement the necessary adjustments.
- To avoid delays and repeated back-and-forth requests, we needed to create our own accurate version of SLA reporting.

Problems 2 & 3

- Stakeholder teams were not highly communicative or organized, which meant that even small updates could take weeks to be implemented.
- ServiceNow's built-in reporting was too basic and limited, and some required measurements could not be created directly in the tool.

Problem 4

- Stakeholders wanted a more reliable and visually clear reporting solution that allowed them to track SLAs and tickets anytime without depending on manual updates.

Incident, Request, Change, SLA & Backlog Dashboard:

Business Context (Solutions)

My Role

- Designed and developed an intuitive Power BI dashboard to present SLA metrics and KPIs requested by stakeholders.

- Created custom DAX measures to replicate and correct SLA calculations, ensuring data was both accurate and live.

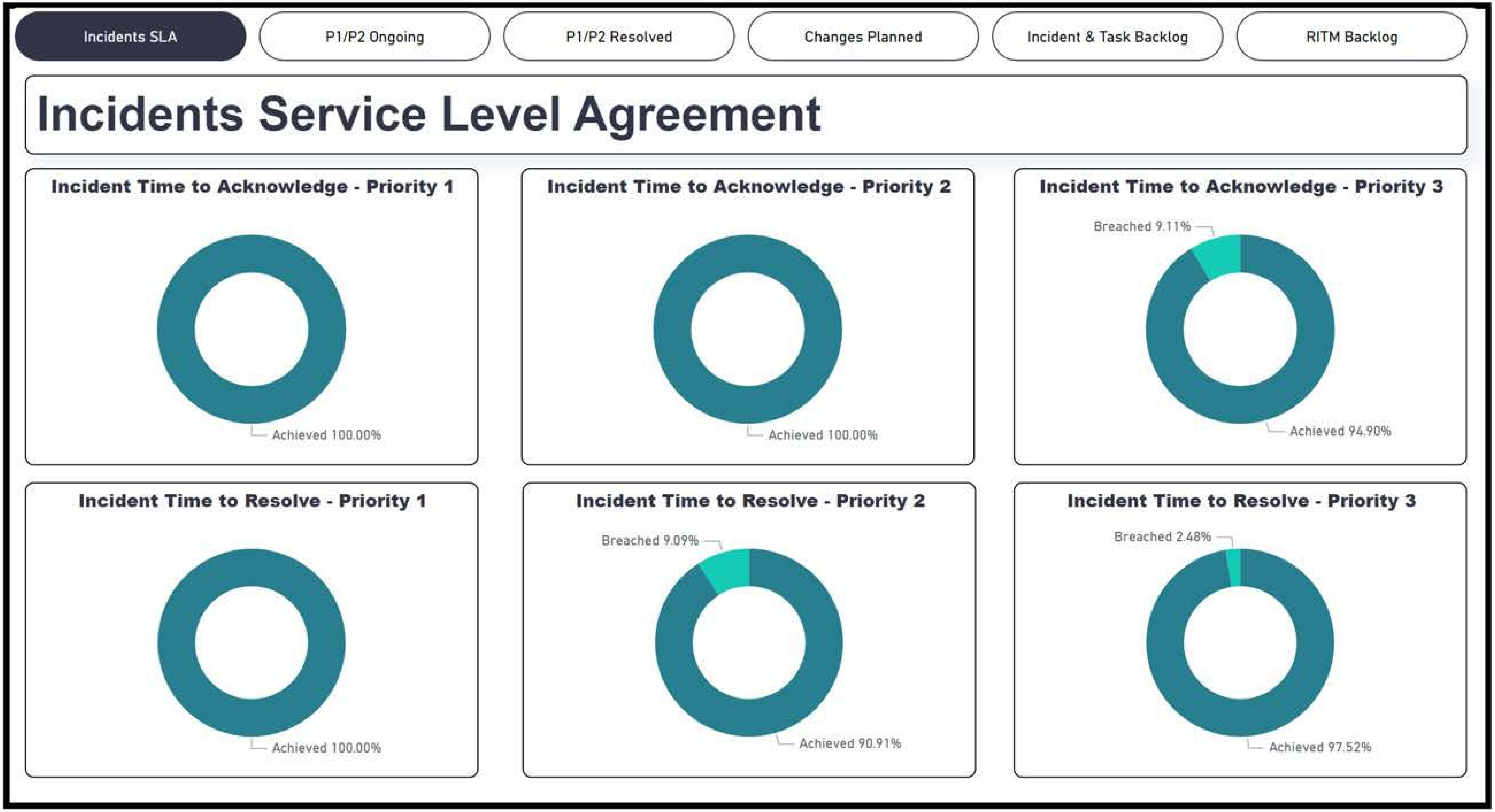
- Adapted the design and color scheme to stakeholder preferences, focusing on simplicity and readability rather than flashy visuals.

Data Sources/ ETL

- Configured scheduled ServiceNow data extractions that were automatically delivered to Outlook.

- Set up Power Automate to sync Outlook with SharePoint, ensuring each new extraction replaced the previous file seamlessly and on daily basis.

- Connected Power BI to SharePoint so the report stayed updated automatically without requiring manual refreshes or SQL/API setup.



Incidents Service Level Agreement

Incident Time to Acknowledge - Priority 1

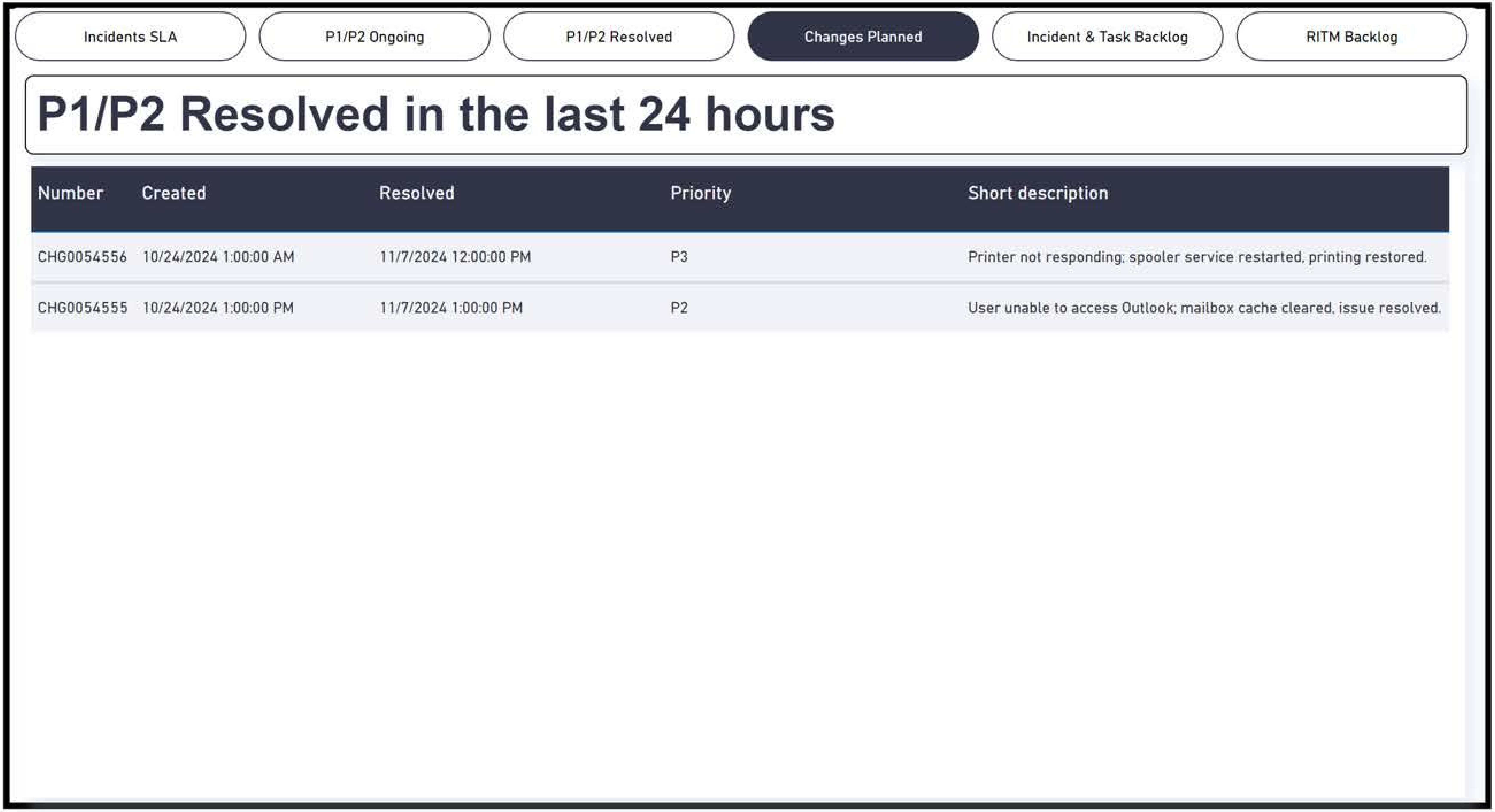
Incident Time to Acknowledge - Priority 2

Incident Time to Acknowledge - Priority 3

Incident Time to Resolve - Priority 1

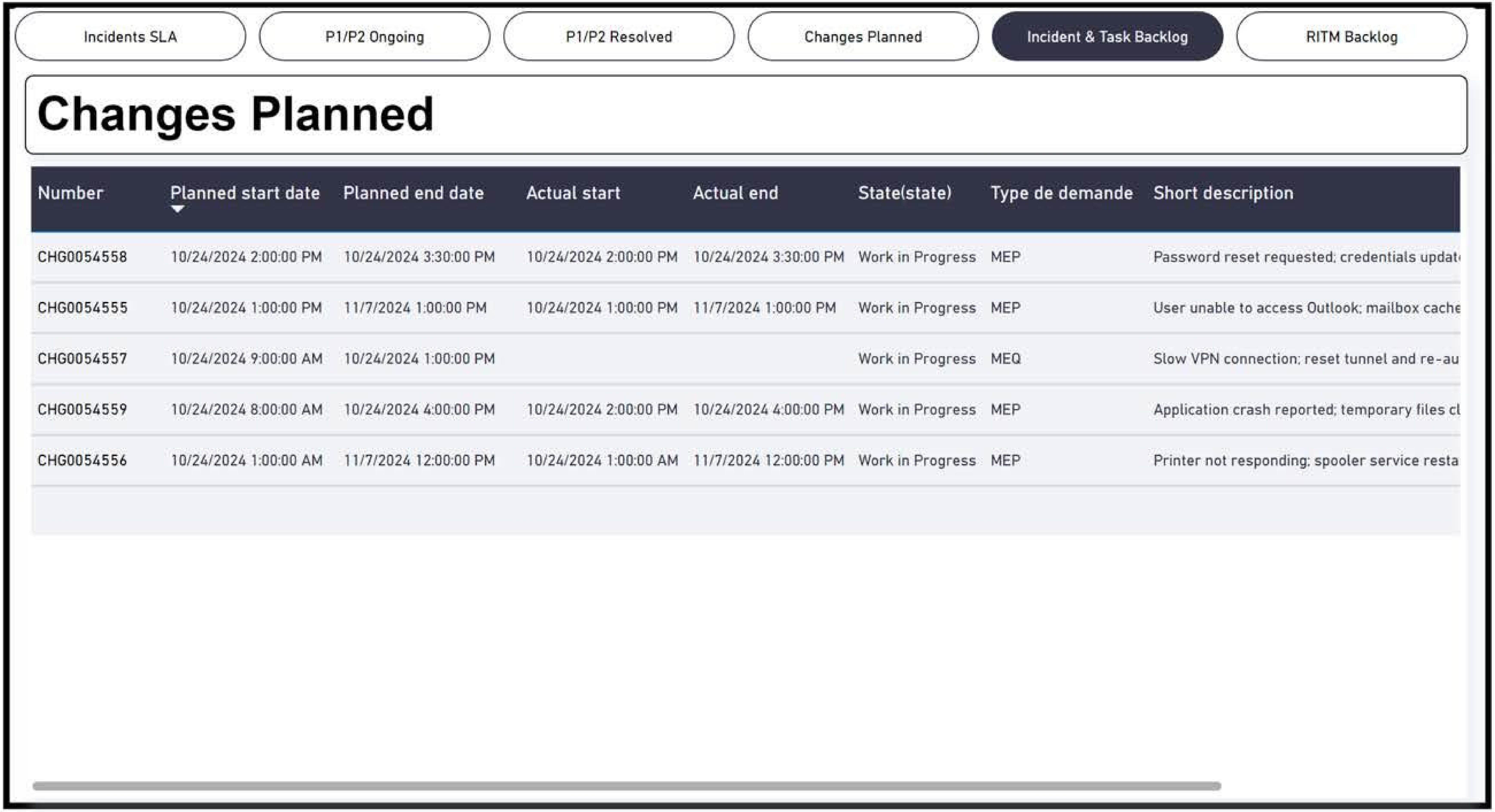
Incident Time to Resolve - Priority 2

Incident Time to Resolve - Priority 3



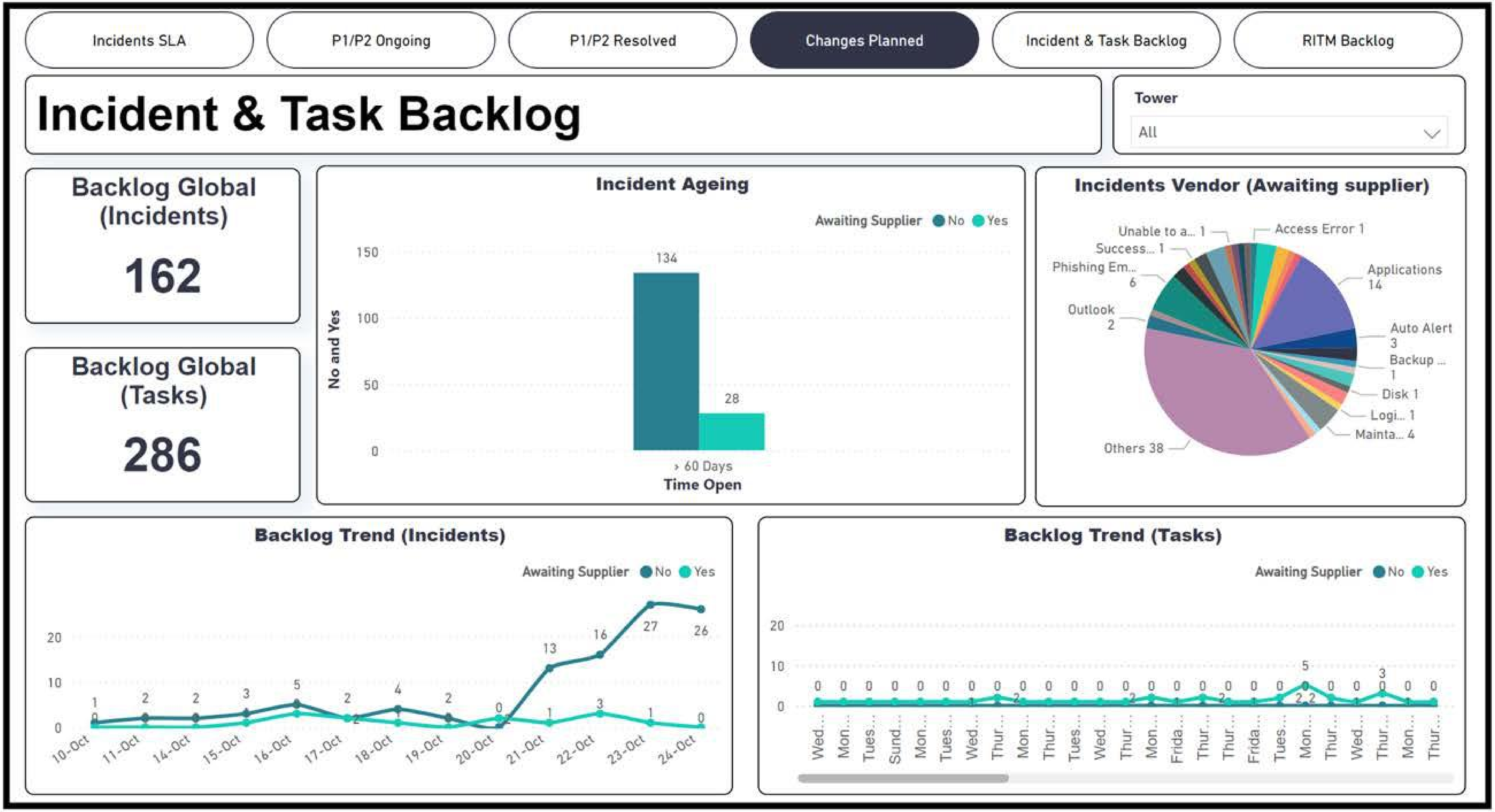
P1/P2 Resolved in the last 24 hours

Number	Created	Resolved	Priority	Short description
CHG0054556	10/24/2024 1:00:00 AM	11/7/2024 12:00:00 PM	P3	Printer not responding; spooler service restarted, printing restored.
CHG0054555	10/24/2024 1:00:00 PM	11/7/2024 1:00:00 PM	P2	User unable to access Outlook; mailbox cache cleared, issue resolved.



Changes Planned

Number	Planned start date	Planned end date	Actual start	Actual end	State(state)	Type de demande	Short description
CHG0054558	10/24/2024 2:00:00 PM	10/24/2024 3:30:00 PM	10/24/2024 2:00:00 PM	10/24/2024 3:30:00 PM	Work in Progress	MEP	Password reset requested; credentials updat
CHG0054555	10/24/2024 1:00:00 PM	11/7/2024 1:00:00 PM	10/24/2024 1:00:00 PM	11/7/2024 1:00:00 PM	Work in Progress	MEP	User unable to access Outlook; mailbox cache
CHG0054557	10/24/2024 9:00:00 AM	10/24/2024 1:00:00 PM			Work in Progress	MEQ	Slow VPN connection; reset tunnel and re-au
CHG0054559	10/24/2024 8:00:00 AM	10/24/2024 4:00:00 PM	10/24/2024 2:00:00 PM	10/24/2024 4:00:00 PM	Work in Progress	MEP	Application crash reported; temporary files cl
CHG0054556	10/24/2024 1:00:00 AM	11/7/2024 12:00:00 PM	10/24/2024 1:00:00 AM	11/7/2024 12:00:00 PM	Work in Progress	MEP	Printer not responding; spooler service resta



Incident & Task Backlog

Tower: All

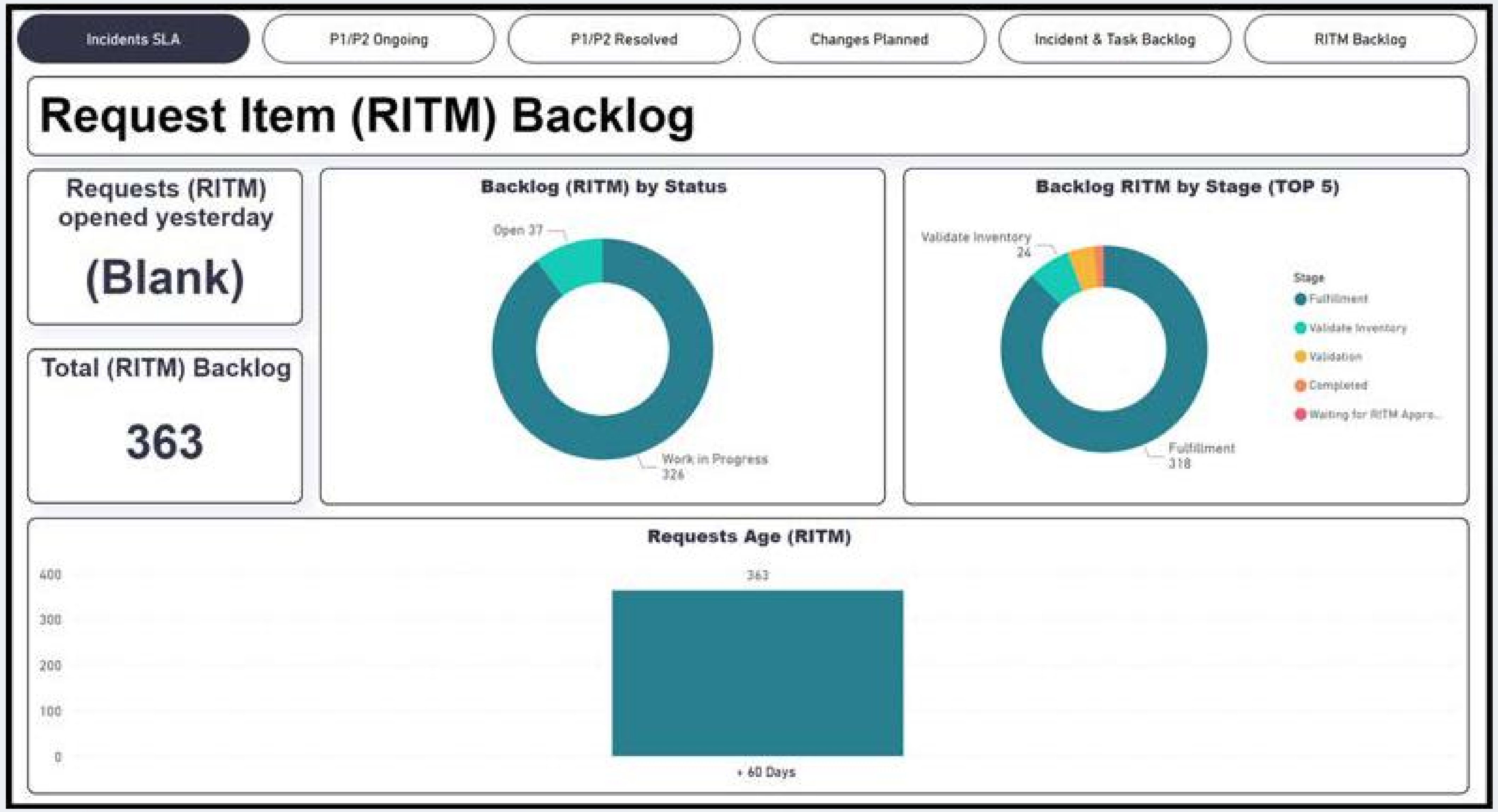
Backlog Global (Incidents)

162

Backlog Global (Tasks)

286

Impact / Outcome



Request Item (RITM) Backlog

Requests (RITM) opened yesterday
(Blank)

Total (RITM) Backlog
363

Delivered

a fully automated reporting process, removing the need for manual intervention or complex SQL/API integrations.

Over <u>10</u> executives

used the dashboard daily, making it a trusted tool for SLA and ticket tracking.

Helped

executives keep weekly meetings on schedule by providing accurate, timely insights, unlike the old static reports that often caused delays.

Incident, Request, Change & SLA Tables Dashboard

Incident, Request, Change & SLA Tables Dashboard:

Business Context (Problems)

Situations 1 & 2

- The IT team needed an automated reporting solution to present accurate metrics to multiple stakeholders.
- All stakeholders used the same ticketing tool, which often caused data overlaps, mixed reports, and in some cases, incorrect information.

Situations 3 & 4

- During monthly reviews, the IT team had to manually prepare over 8 different PowerPoint decks, each tailored to a specific stakeholder's metrics. This was time-consuming and error-prone.
- Stakeholders insisted on reports being presented in table format similar to Excel, even though Power BI is not natively optimized for Excel-style layouts.

Incident, Request, Change & SLA Tables Dashboard:

Business Context (Solutions)

My Role

- Designed and developed an intuitive Power BI dashboard that replicated SLA and KPI reports in a clean, Excel-like format.
- Built a Project slicer to differentiate each stakeholder's company data, ensuring that all visuals, logos, and metrics dynamically adjusted based on the selected project.
- Enabled stakeholders to use the same report but view it in a personalized way depending on the project selection.

Data Sources/ ETL

- Used raw Excel extractions provided by IT teams.
- Cleaned and transformed data in Power Query before building the model in Power BI.

Monthly Report

ⓘ ↺ Reset Filters

Incident Management

BUSINESS
ADAM CHNOK

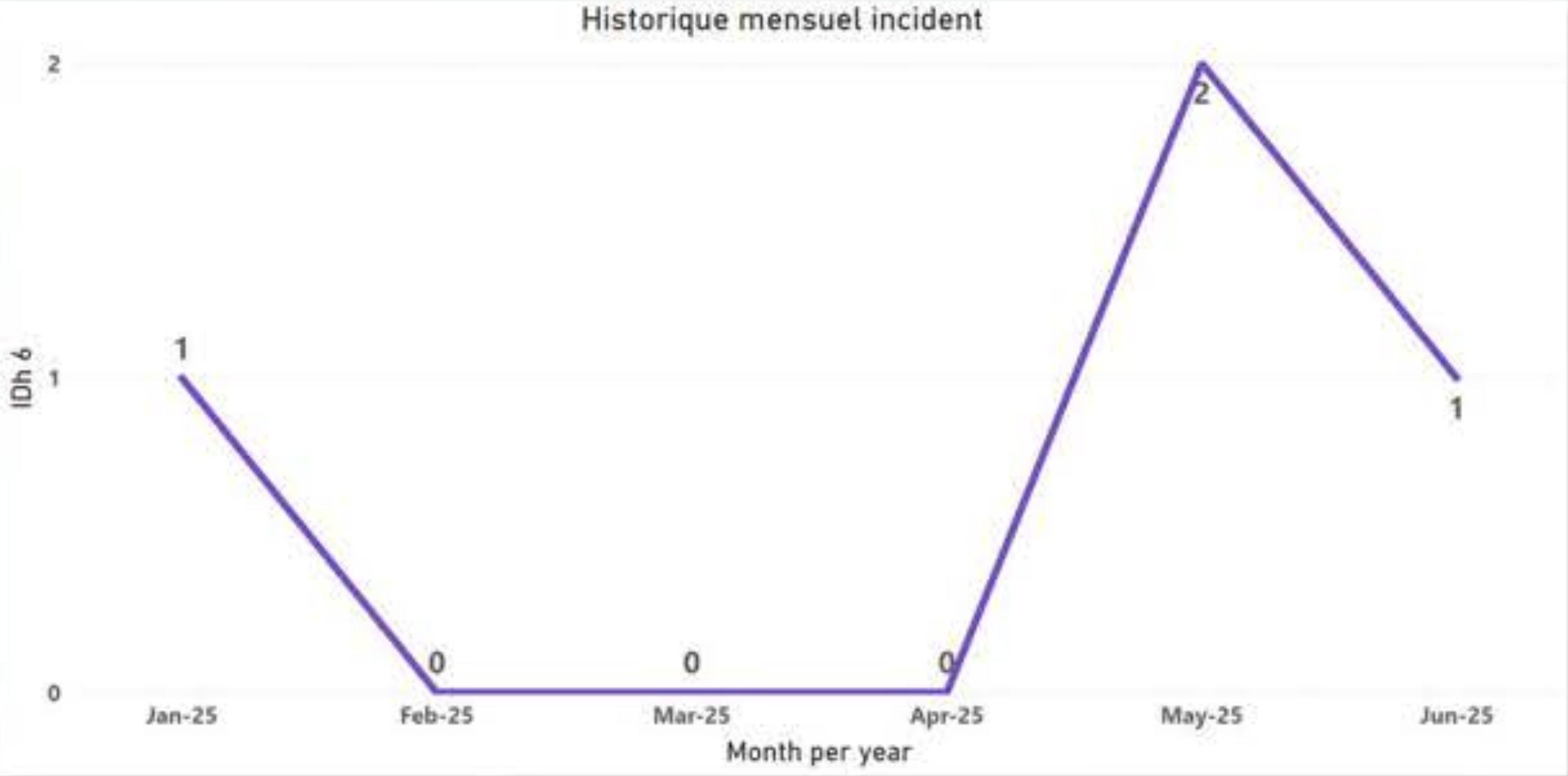
Incident management

Mois	Jan-25		Feb-25		Mar-25		Apr-25		May-25		Jun-25	
▲	Volume	SLA	Volume	SLA	Volume	SLA	Volume	SLA	Volume	SLA	Volume	SLA
SLA P1	-	🟩	-	🟩	1	100%	1	100%	1	100%	2	100%
SLA P2	2	100%	-	🟩	1	100%	3	100%	-	🟩	2	100%
SLA P3	158	97%	57	91%	159	82%	102	79%	80	99%	36	81%
SLA P4	-	🟩	-	🟩	-	🟩	1	100%	1	100%	2	100%

Volume D'incident Crées	160	57	161	107	82	42
Volume D'incident Cloturés	83	2	10	215	125	17

Jun-25 ⌄

All ⌄



Commentaires

Ticket Volume: an incident was created and closed during the month of April

Incident opened and closed:

24,774: Access issue with the back office and extranet of the public employment portal

Commentaires

Backlog:

24,000: Server disk space – Urgent → request to increase the size of the */var* partition on servers **RDAAMNT50** and **RDAMNTwe51**, from **5GB to 20GB**

Monthly Report

Reset Filters

Request Management

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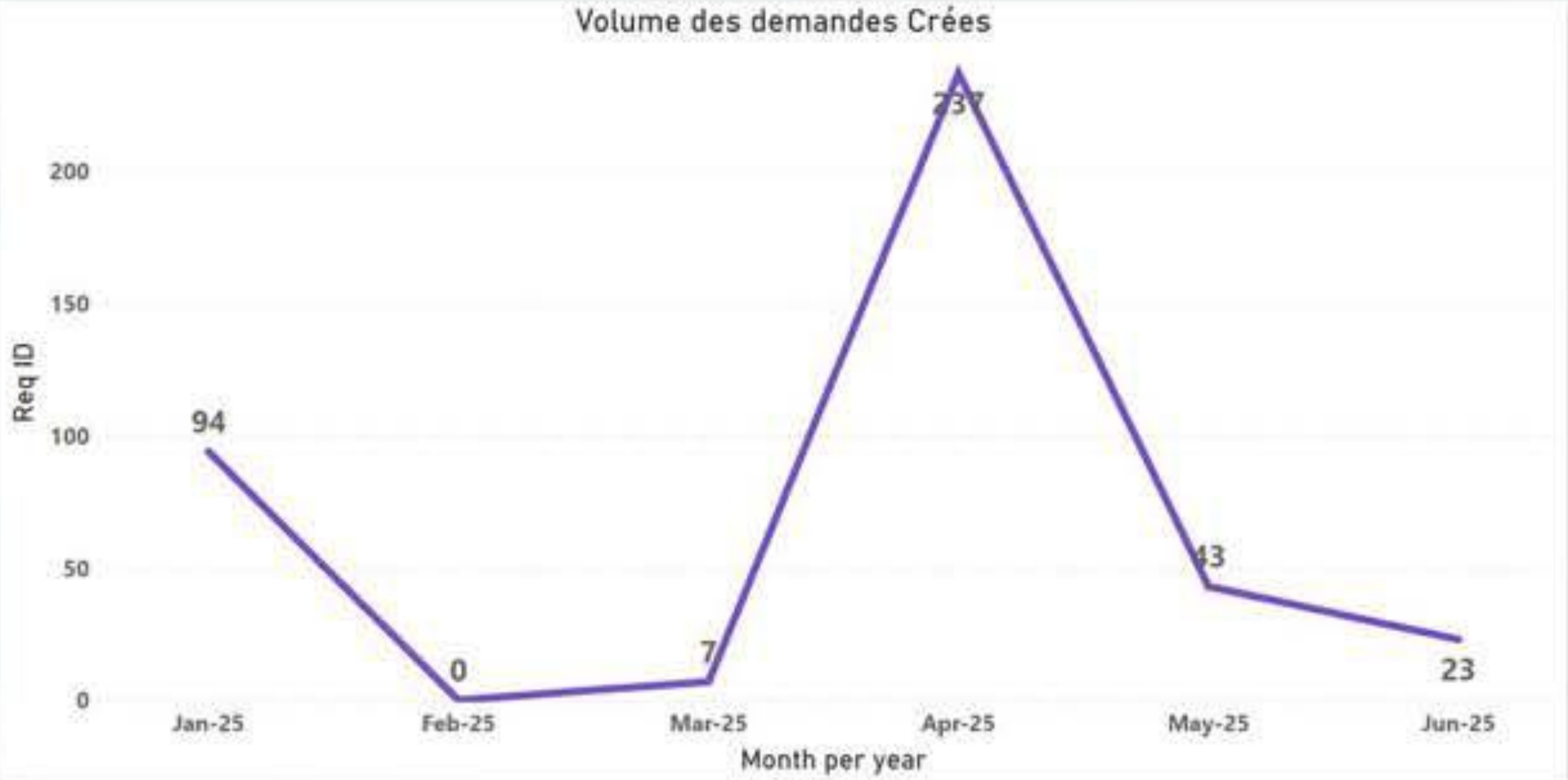
Jun-25

All

Request management

Mois	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
SLA	99%	100%	100%	100%	100%	100%
Volume des demandes Cloturées	94	0	7	237	43	23
Volume des demandes Crées	154	25	127	39	20	29



Volume des demandes Crées

Commentaires

Ticket Volume: an incident was created and closed during the month of April

Incident opened and closed:

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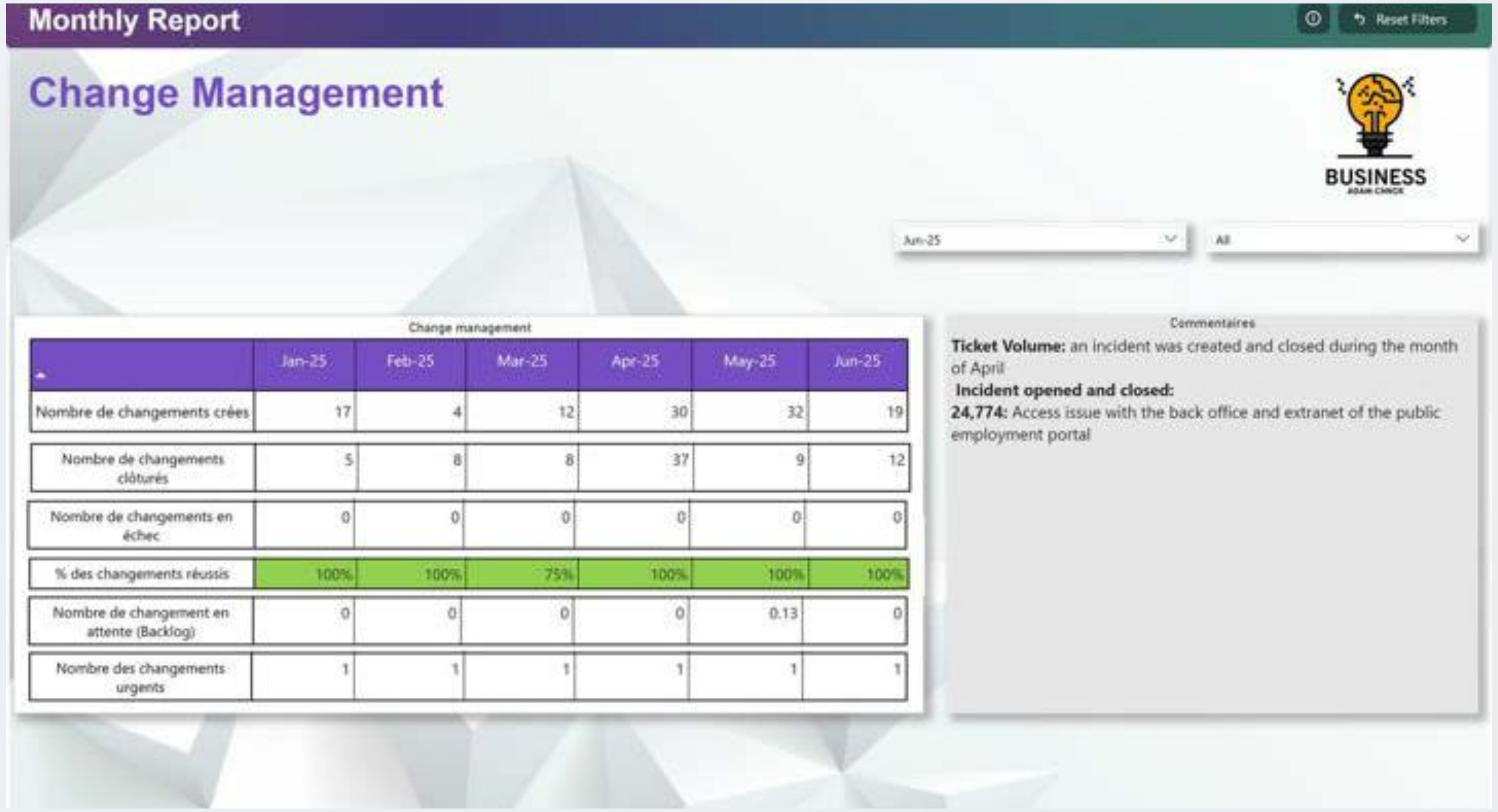
Commentaires

Backlog:

24,000: Server disk space – Urgent → request to increase the size of the */var* partition on servers **RDAAMNT50** and **RDAMNTwe51**, from **5GB to 20GB**

Impact / Outcome



Change management

	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
Nombre de changements crées	17	4	12	30	32	19
Nombre de changements clôturés	5	8	8	37	9	12
Nombre de changements en échec	0	0	0	0	0	0
% des changements réussis	100%	100%	75%	100%	100%	100%
Nombre de changement en attente (Backlog)	0	0	0	0	0.13	0
Nombre des changements urgents	1	1	1	1	1	1

Commentaires

Ticket Volume: an incident was created and closed during the month of April

Incident opened and closed:

24,774: Access issue with the back office and extranet of the public employment portal

Delivered

a simple, user-friendly dashboard that looked and functioned almost exactly like stakeholders' familiar Excel tables by mimicking the pivot tables, easing adoption.

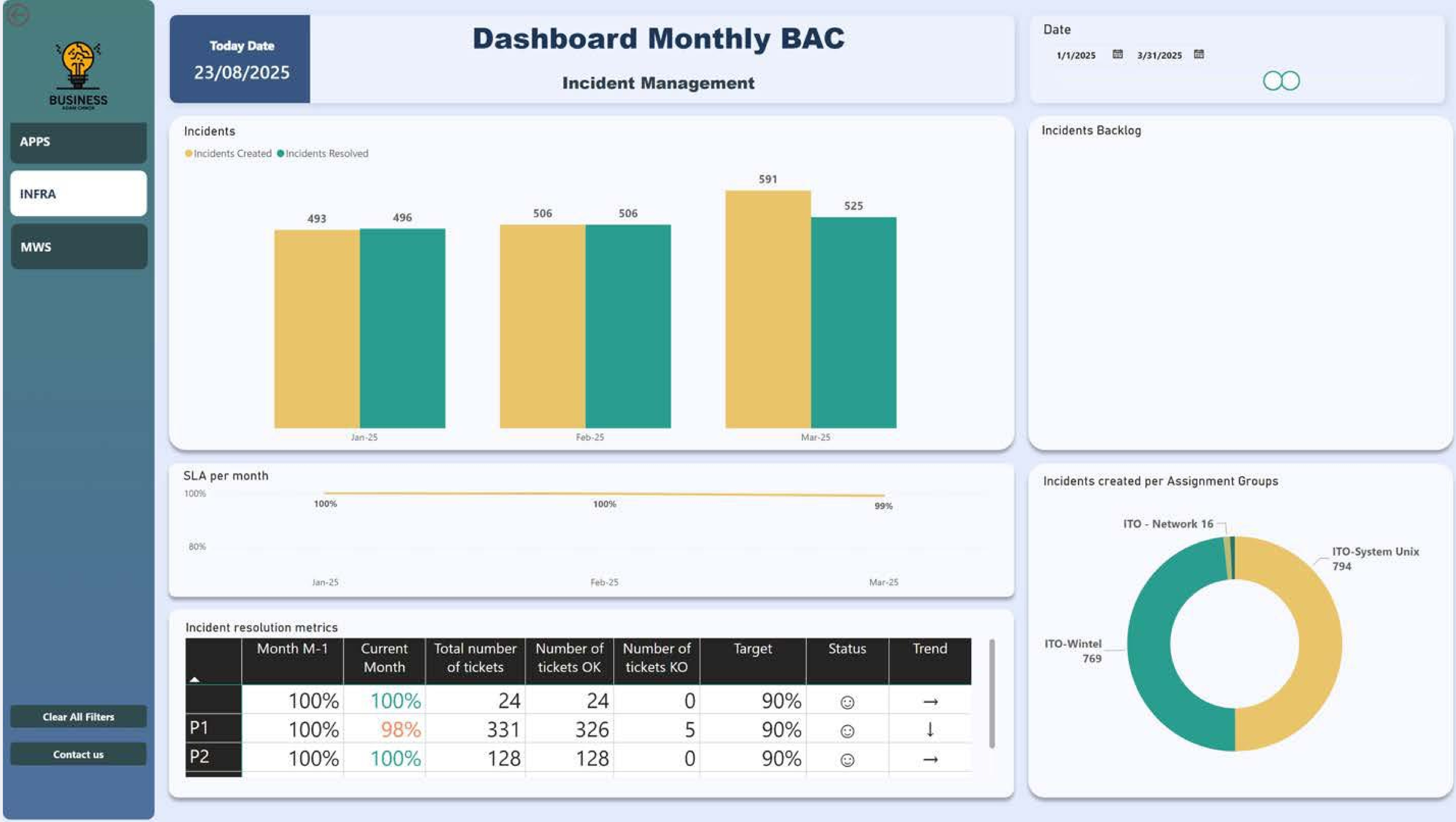
Saved

the IT team hours of manual effort each month by eliminating the need to filter massive Excel extracts and build 8 separate stakeholder-specific versions.

Standardized

reporting timelines and all stakeholders now receive their reports on the same day each month, ensuring consistency and better meeting preparation.

Other Dashboards



Today Date
23/08/2025

Dashboard Monthly BAC

Incident Management

Date
1/1/2025 – 3/31/2025

Incidents

Incidents Backlog

SLA per month

Incidents created per Assignment Groups

Incident resolution metrics

▲	Month M-1	Current Month	Total number of tickets	Number of tickets OK	Number of tickets KO	Target	Status	Trend
	100%	100%	24	24	0	90%	☺	→
P1	100%	98%	331	326	5	90%	☺	↓
P2	100%	100%	128	128	0	90%	☺	→

BUSINESS

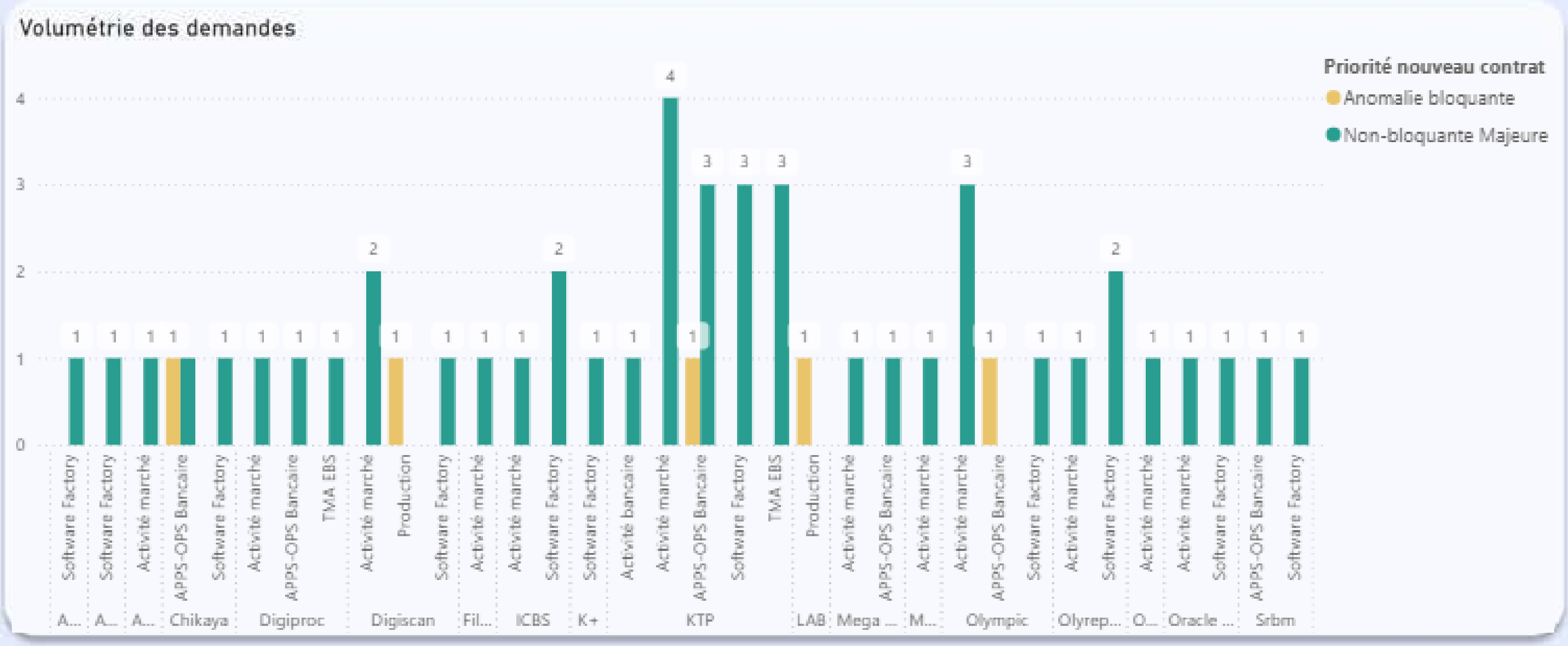
- APPS
- INFRA
- MWS

Today Date
23/08/2025

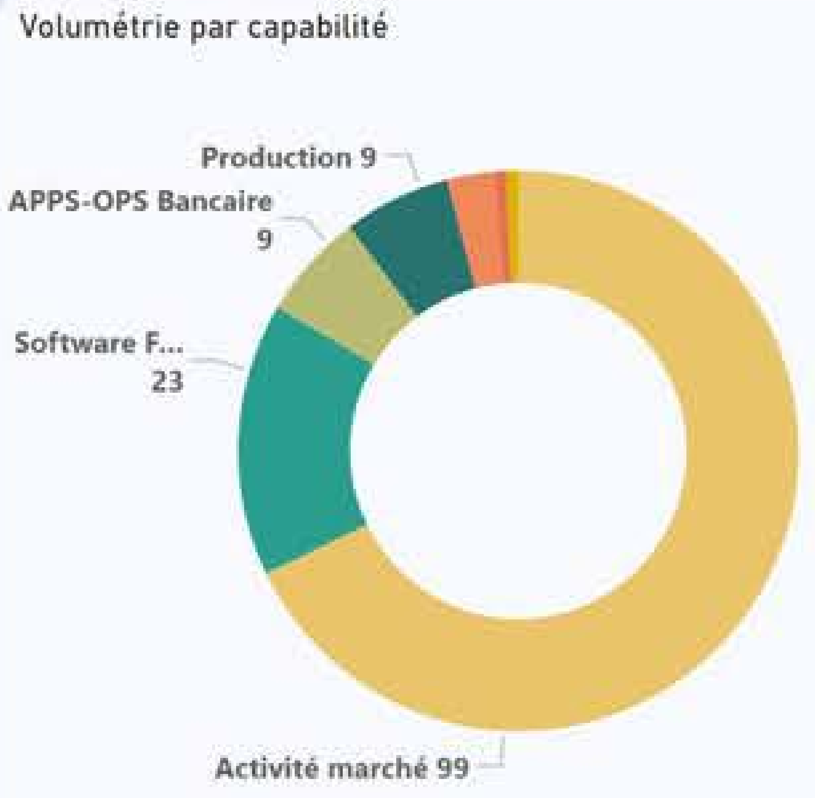
Dashboard Monthly BAC

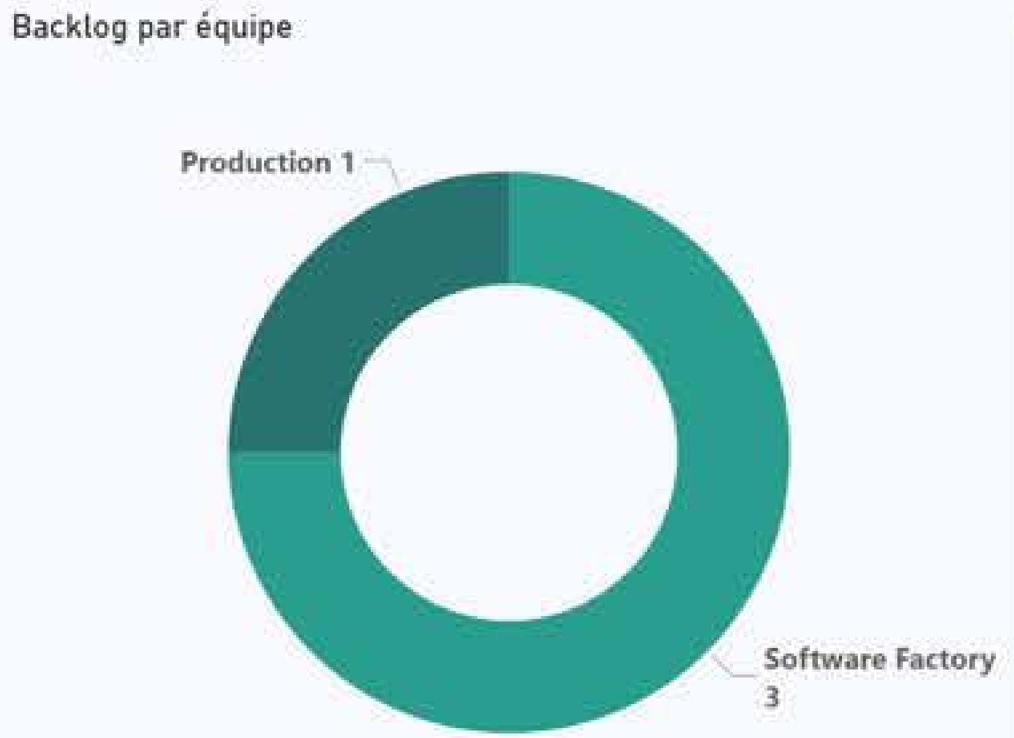
Request Management

Date
1/1/2025 3/31/2025



Commentaire





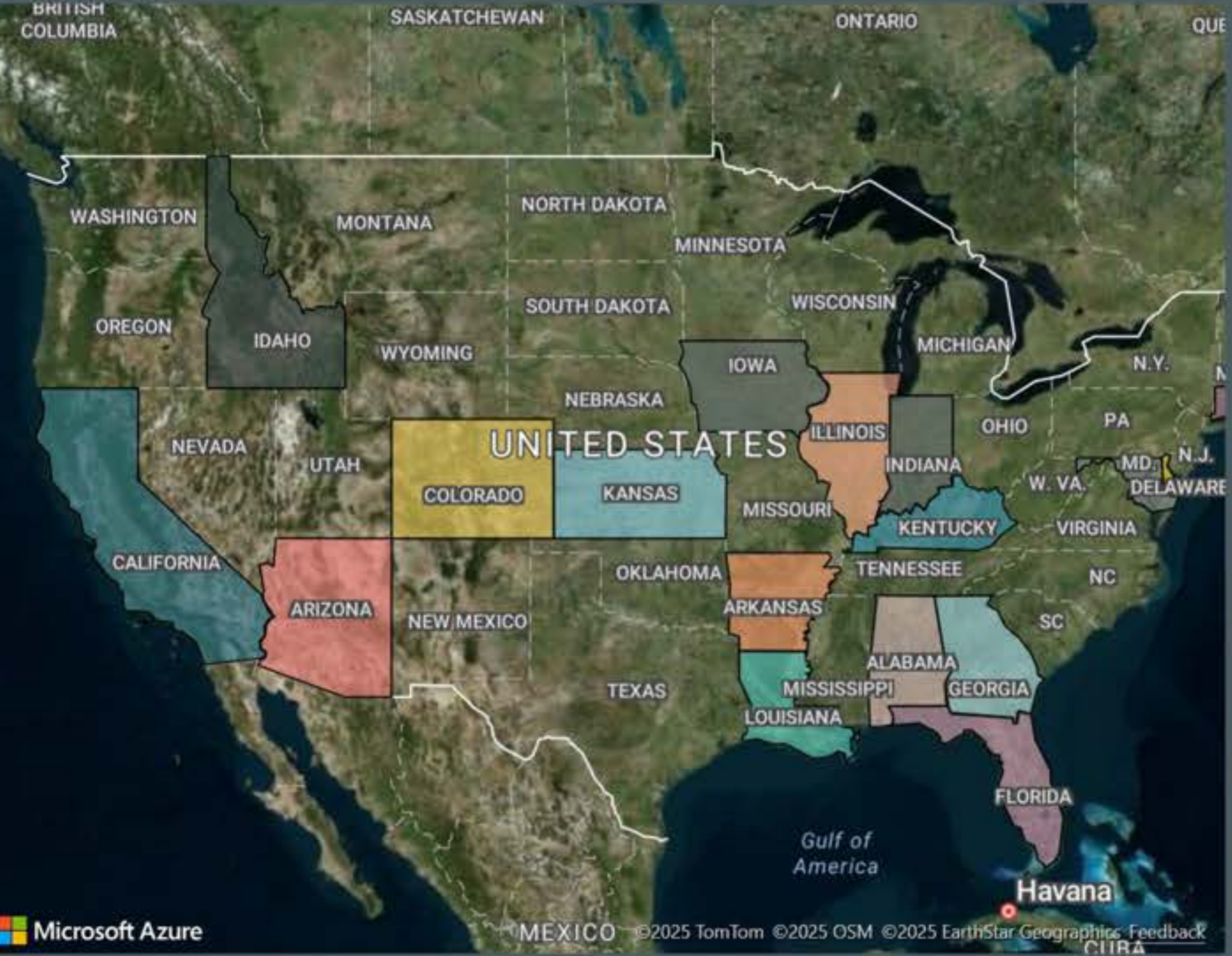
Clear All Filters

Contact us

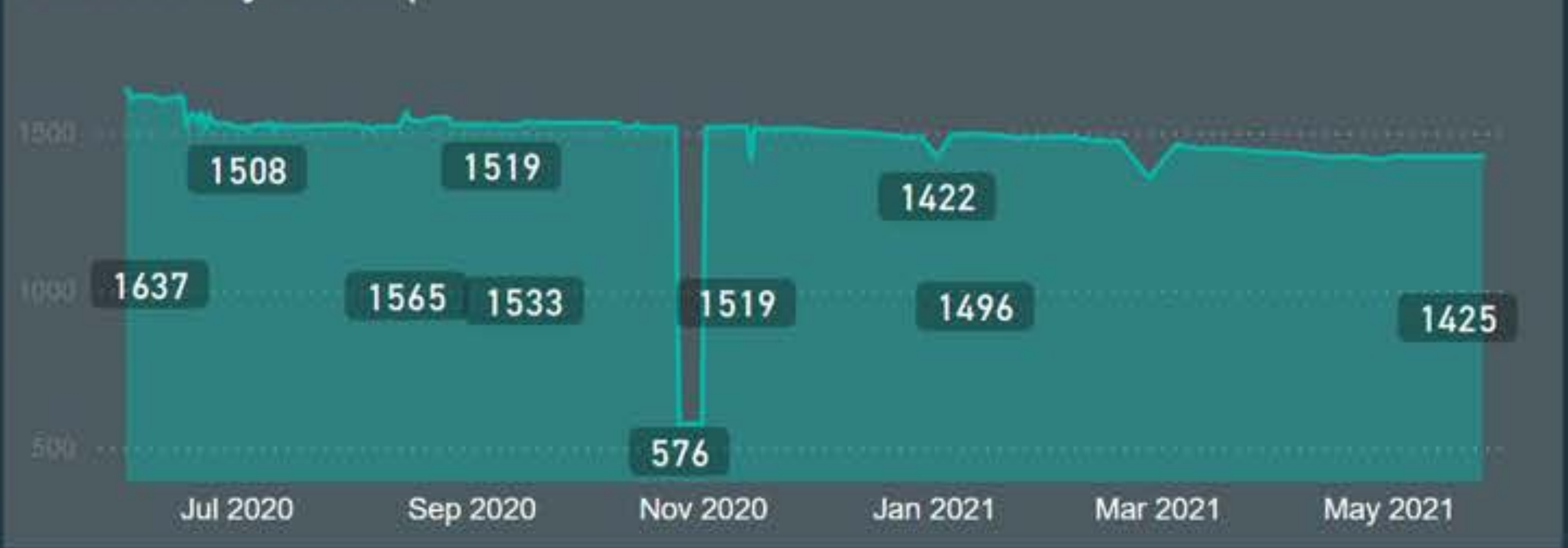
D-1 Backup Overall Status

LOGO

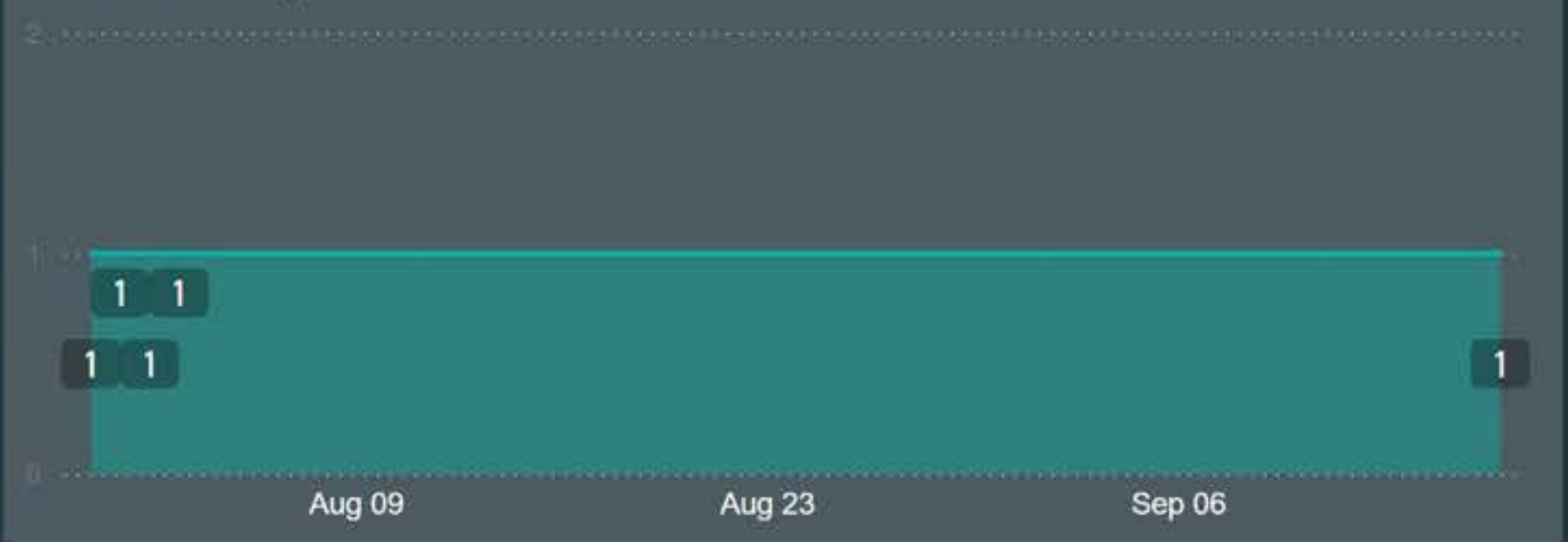
ackups by States



Successfuly Backup



Failed Backup



99.93%	282549	282362	5	280872
SuccessRateBDT	TotalProcessedBDT	TotalSuccessBDT	TotalFailBDT	Missed Servers

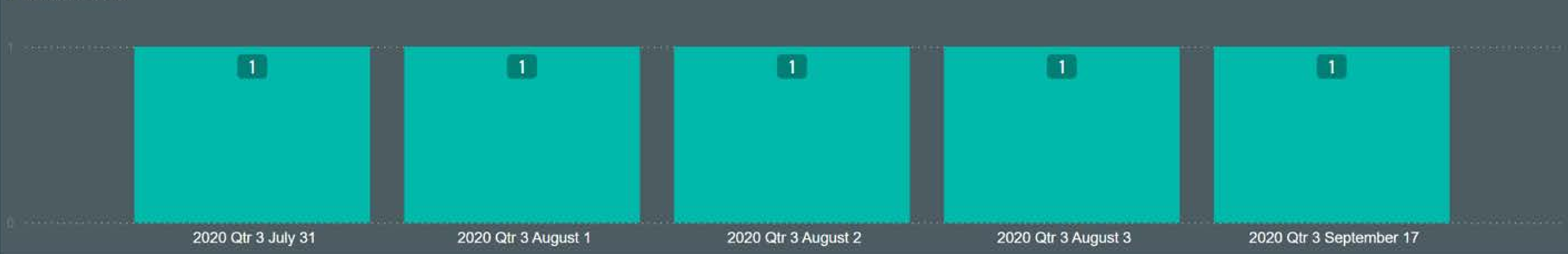
Date

Last ˅ | 1 | Select ˅

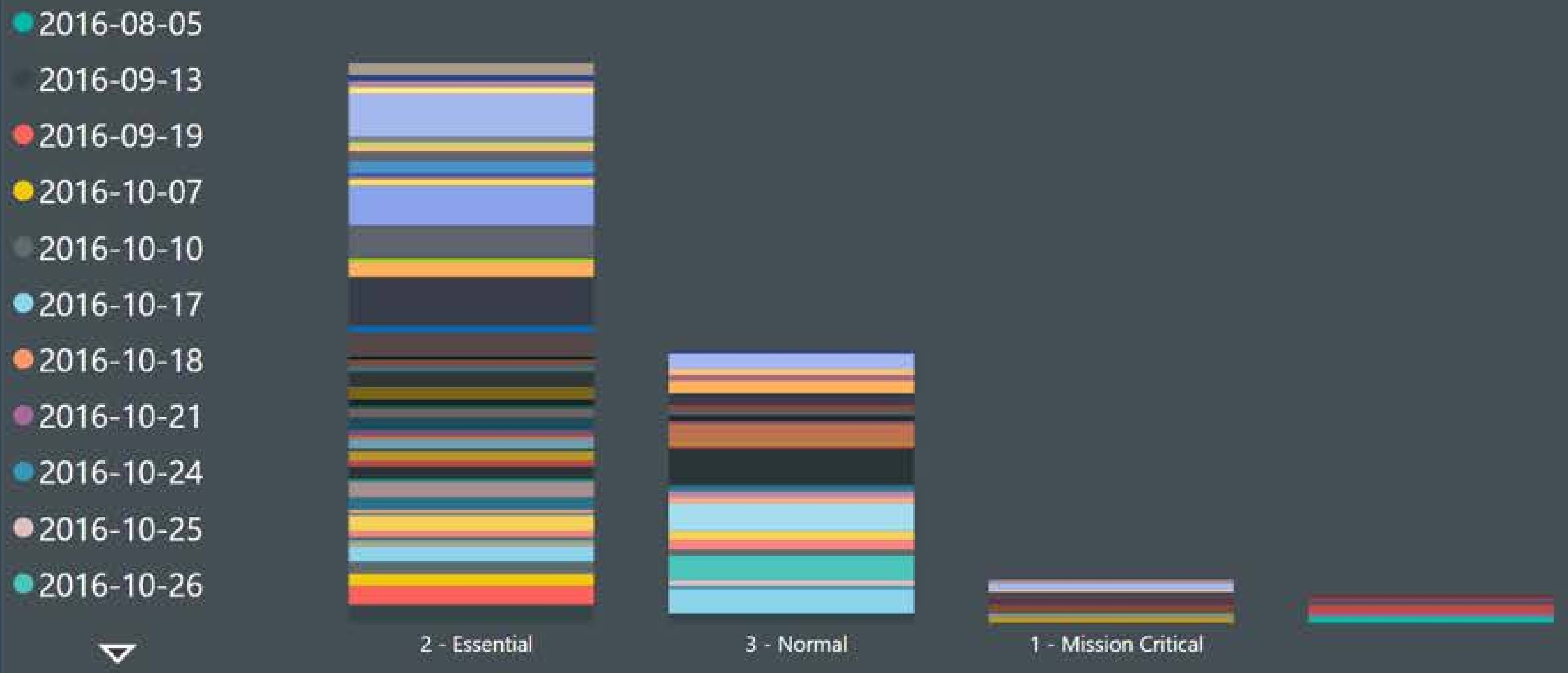
No filters applied

WOR - Top Backup Fails

Failed Jobs



Top Recurring Fails



System Create Date	Installed Memory	Billable ?
2016-08-05	2048	No
2016-09-13	16384	No
2016-09-13	32768	No
2016-09-13	8192	No
2016-09-19	16384	No
2016-09-19	8192	No
2016-10-07	4096	
2016-10-10	32768	
2016-10-10	8192	

Date

Last 7 Days

8/17/2025 - 8/23/2025

Generative AI Familiarity

Proficiency in Using Generative AI

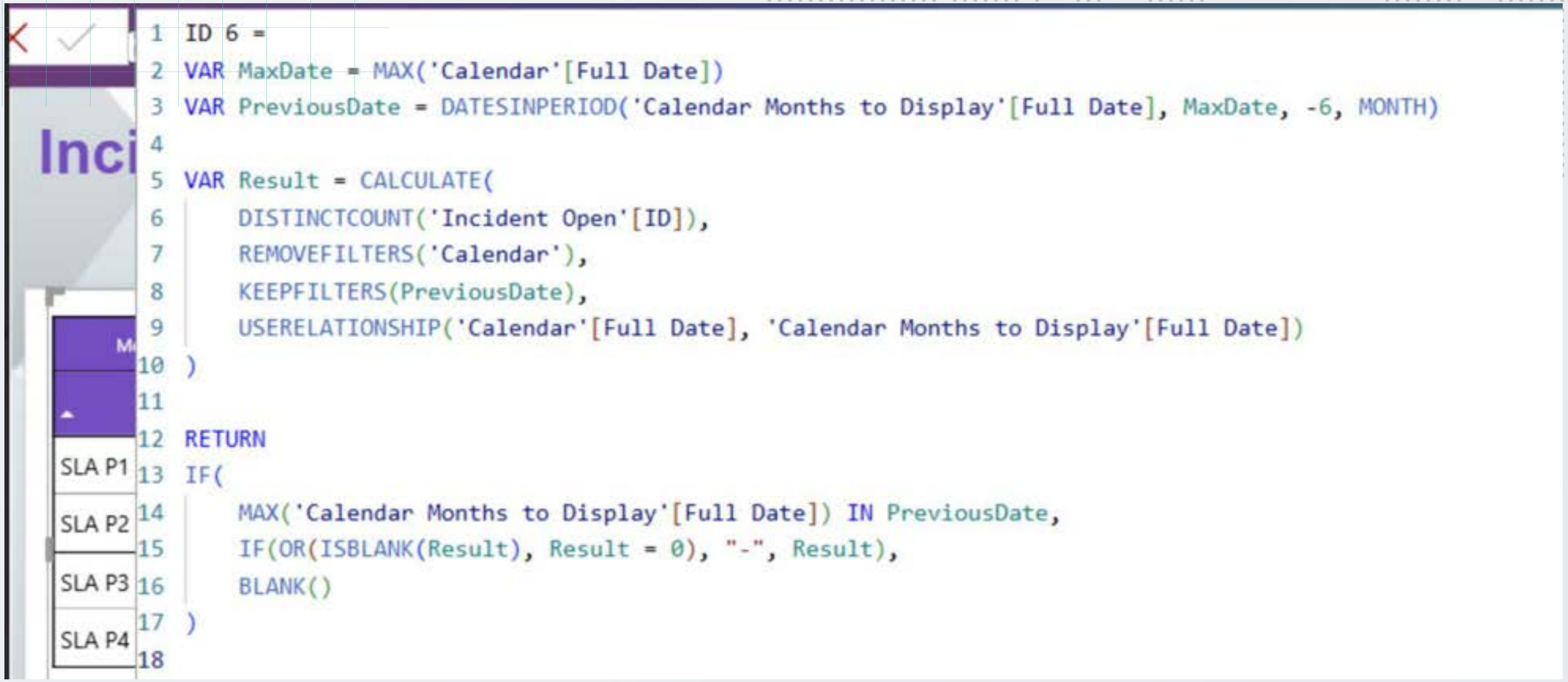
- Proficient use of generative AI tools like ChatGPT and Copilot for analytics and reporting tasks.

- Daily use for creating, troubleshooting, and optimizing DAX measures, SQL queries, and Power BI visuals.

- Effective in prompting AI for both technical solutions (formulas, queries) and business-level explanations or summaries.

- Use AI as a productivity booster to reduce manual effort and accelerate dashboard development.

Use Cases in Analytics & Reporting

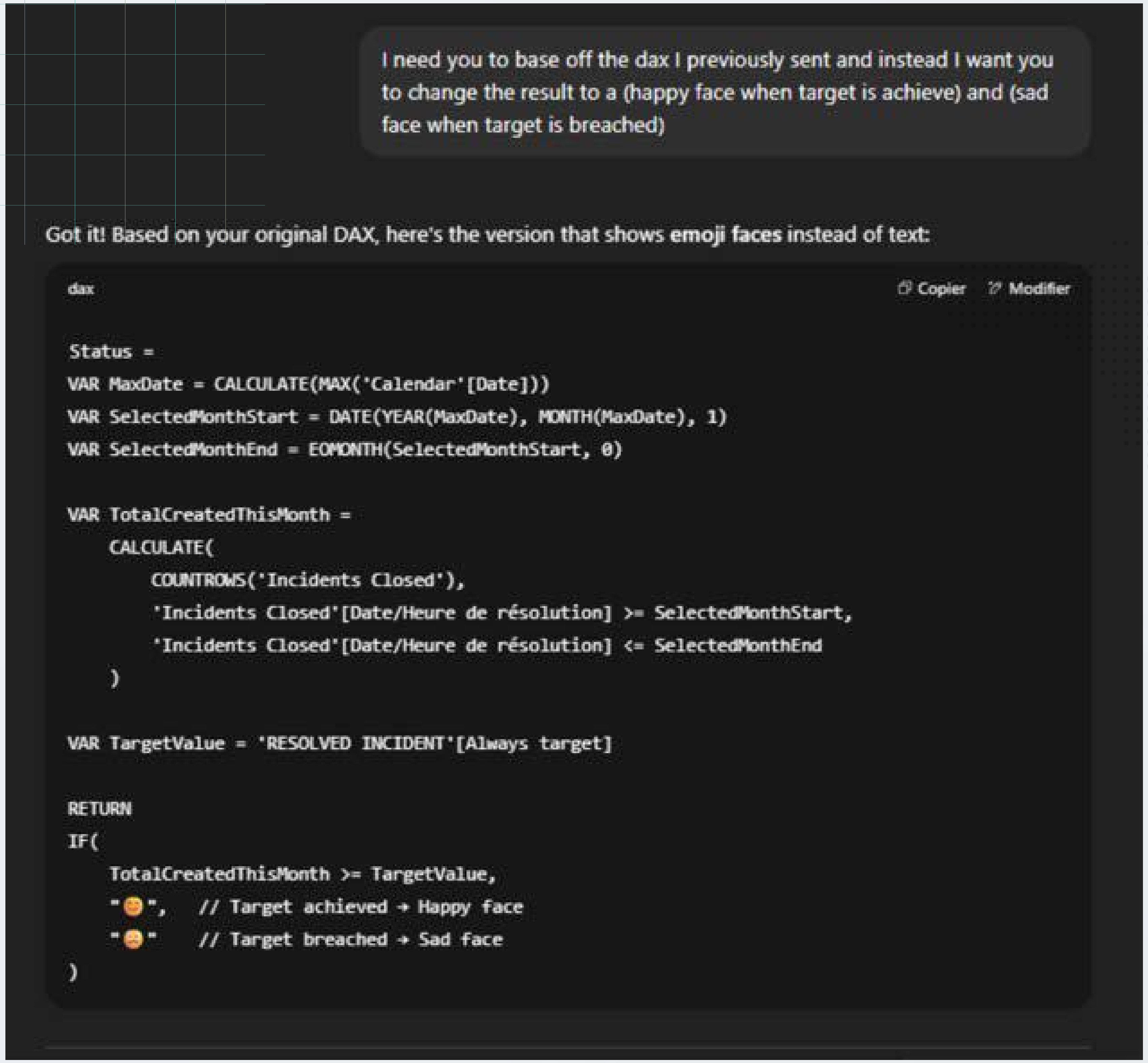


```
ID 6 =
VAR MaxDate = MAX('Calendar'[Full Date])
VAR PreviousDate = DATESINPERIOD('Calendar Months to Display'[Full Date], MaxDate, -6, MONTH)

VAR Result = CALCULATE(
    DISTINCTCOUNT('Incident Open'[ID]),
    REMOVEFILTERS('Calendar'),
    KEEPFILTERS(PreviousDate),
    USERELATIONSHIP('Calendar'[Full Date], 'Calendar Months to Display'[Full Date])
)

RETURN
IF(
    MAX('Calendar Months to Display'[Full Date]) IN PreviousDate,
    IF(OR(ISBLANK(Result), Result = 0), "-", Result),
    BLANK()
)

```

DAX/SQL Help

- Used ChatGPT to troubleshoot complex DAX formulas and optimize SQL queries.

Use Cases in Analytics & Reporting



I need you to base off the dax I previously sent and instead I want you to change the result to a (happy face when target is achieve) and (sad face when target is breached)

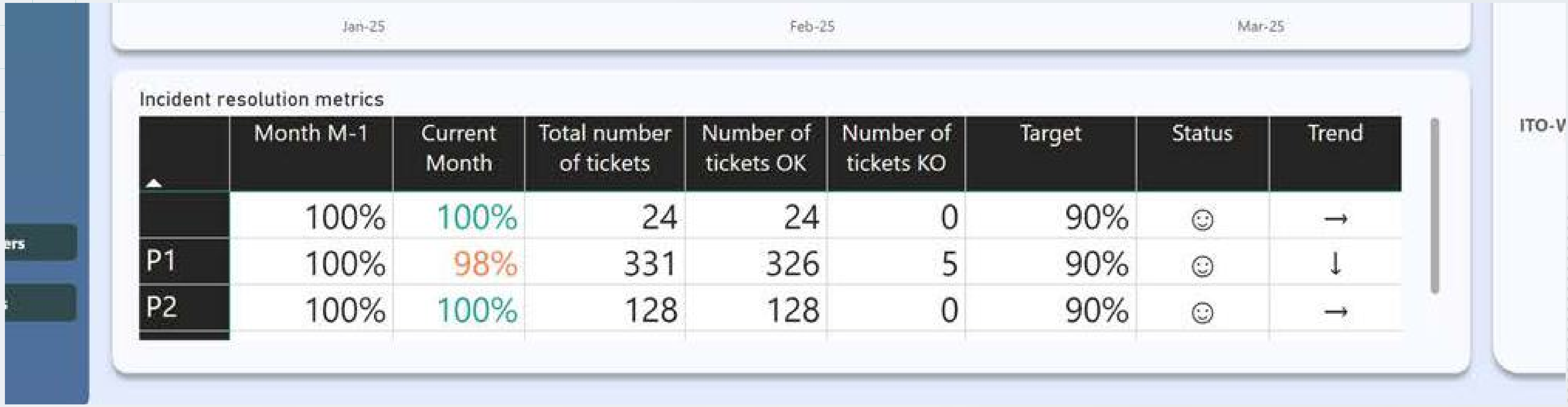
Got it! Based on your original DAX, here's the version that shows **emoji faces** instead of text:

```dax
Status =
VAR MaxDate = CALCULATE(MAX('Calendar'[Date]))
VAR SelectedMonthStart = DATE(YEAR(MaxDate), MONTH(MaxDate), 1)
VAR SelectedMonthEnd = EOMONTH(SelectedMonthStart, 0)

VAR TotalCreatedThisMonth =
    CALCULATE(
        COUNTROWS('Incidents Closed'),
        'Incidents Closed'[Date/Heure de résolution] >= SelectedMonthStart,
        'Incidents Closed'[Date/Heure de résolution] <= SelectedMonthEnd
    )

VAR TargetValue = 'RESOLVED INCIDENT'[Always target]

RETURN
IF(
    TotalCreatedThisMonth >= TargetValue,
    "😊",  // Target achieved → Happy face
    "😞"   // Target breached → Sad face
)
```

Power BI Reports

- AI-assisted generation of measures, KPIs, and visual explanations.

Use Cases in Analytics & Reporting



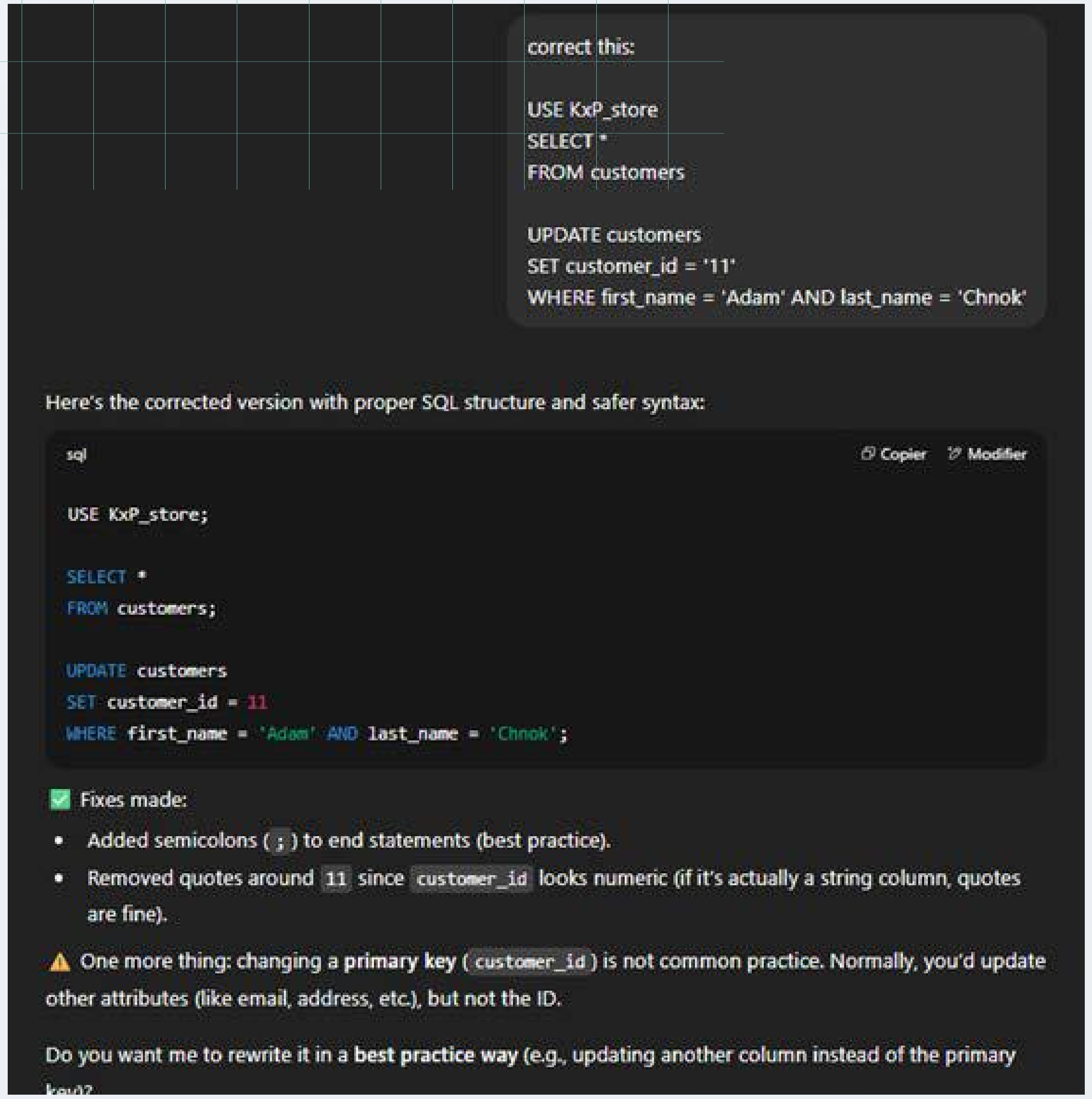
Incident resolution metrics

	Month M-1	Current Month	Total number of tickets	Number of tickets OK	Number of tickets KO	Target	Status	Trend
	100%	100%	24	24	0	90%	☺	→
P1	100%	98%	331	326	5	90%	☺	↓
P2	100%	100%	128	128	0	90%	☺	→

Result

- AI optimized report creation, reduced errors, sped up delivery, and added final touches like formatting, highlighting metrics, and visual indicators (e.g., smiley face for SLA)

Use Cases in Analytics & Reporting



correct this:

```
USE KxP_store
SELECT *
FROM customers

UPDATE customers
SET customer_id = '11'
WHERE first_name = 'Adam' AND last_name = 'Chnok'
```

Here's the corrected version with proper SQL structure and safer syntax:

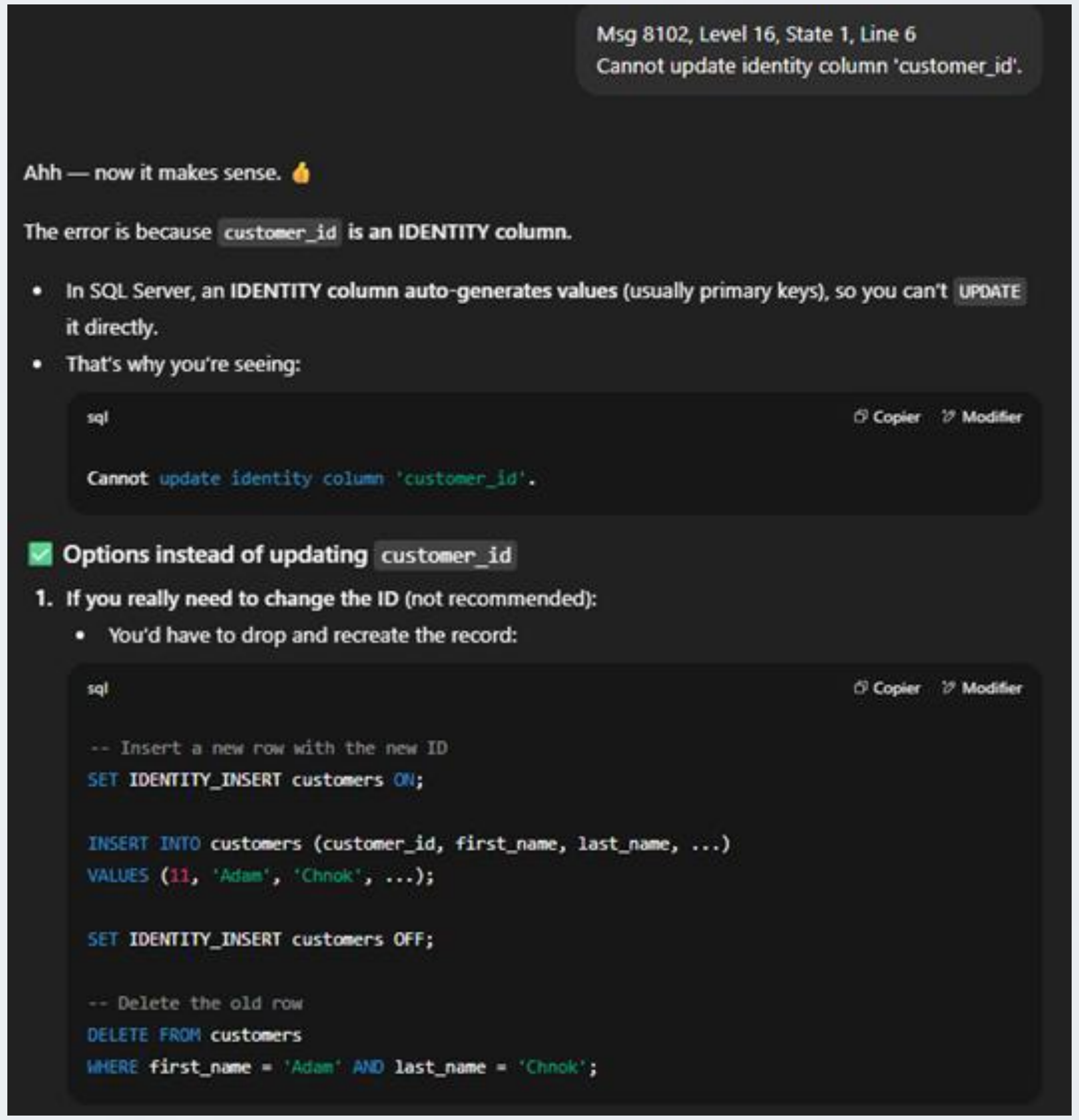
```sql
USE KxP_store;

SELECT *
FROM customers;

UPDATE customers
SET customer_id = 11
WHERE first_name = 'Adam' AND last_name = 'Chnok';
```

✅ Fixes made:

- Added semicolons (`;`) to end statements (best practice).
- Removed quotes around `11` since `customer_id` looks numeric (if it's actually a string column, quotes are fine).

⚠️ One more thing: changing a **primary key** (`customer_id`) is not common practice. Normally, you'd update other attributes (like email, address, etc.), but not the ID.

Do you want me to rewrite it in a **best practice way** (e.g., updating another column instead of the primary key)?



```
Msg 8102, Level 16, State 1, Line 6
Cannot update identity column 'customer_id'.
```

Ahh — now it makes sense. 👍

The error is because `customer_id` **is an IDENTITY column.**

- In SQL Server, an **IDENTITY column auto-generates values** (usually primary keys), so you can't `UPDATE` it directly.
- That's why you're seeing:

```sql
Cannot update identity column 'customer_id'.
```

✅ Options instead of updating `customer_id`

1. **If you really need to change the ID** (not recommended):
   - You'd have to drop and recreate the record:

```sql
-- Insert a new row with the new ID
SET IDENTITY_INSERT customers ON;

INSERT INTO customers (customer_id, first_name, last_name, ...)
VALUES (11, 'Adam', 'Chnok', ...);

SET IDENTITY_INSERT customers OFF;

-- Delete the old row
DELETE FROM customers
WHERE first_name = 'Adam' AND last_name = 'Chnok';
```

Data QA

1 **Data Validation**: Checking source data for completeness, accuracy, and consistency before importing into Power BI.

2 **Logic & Calculation Review**: Verifying DAX measures, SQL queries, and transformations to ensure calculations are correct.

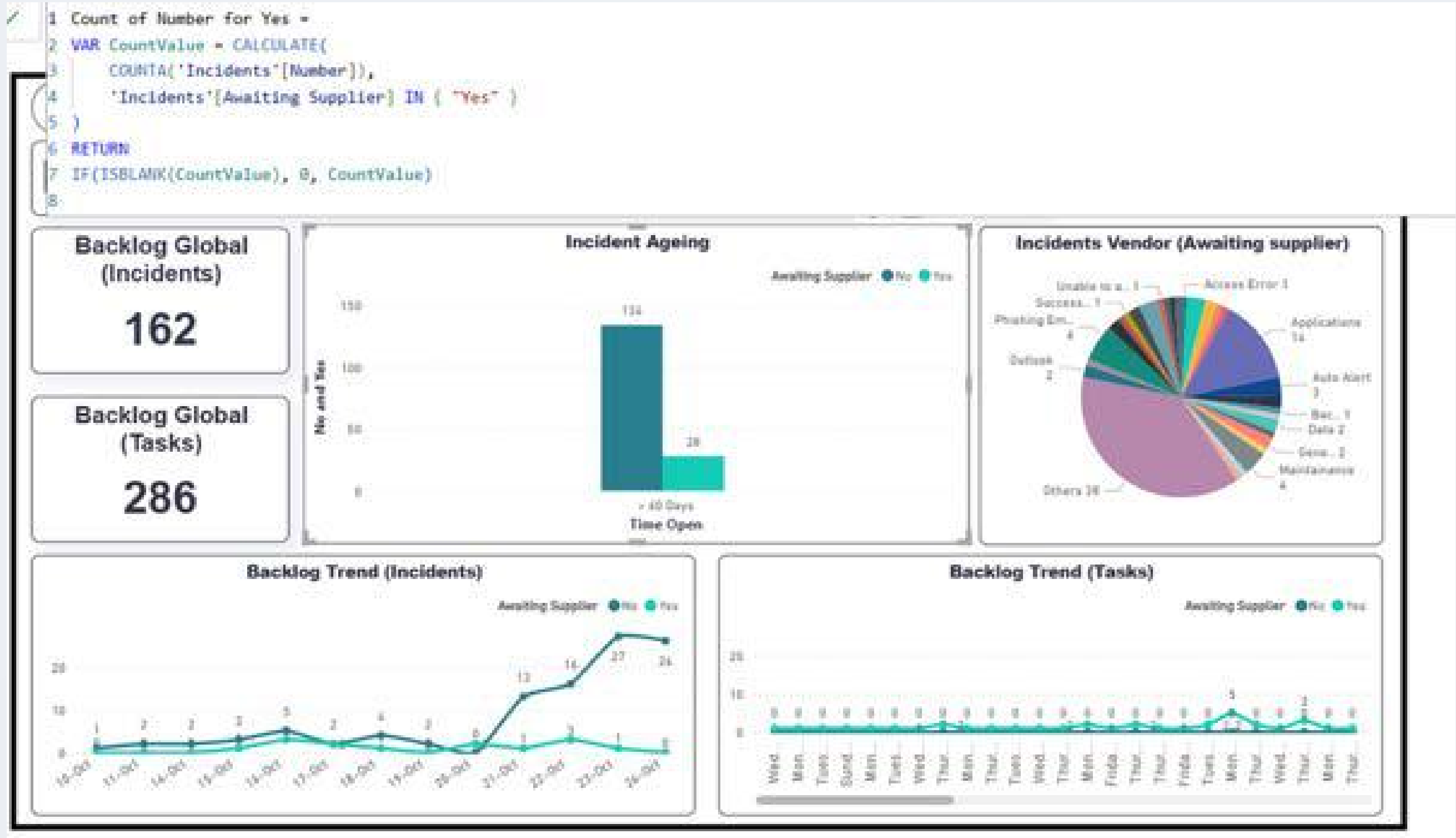
3 **Visual Inspection:** Ensuring charts, tables, and KPIs display accurate values and match source data. Checking that formatting, colors, and labels are consistent and readable.

4 **End-to-End Testing:** Simulating real scenarios with filters, slicers, and dynamic selections to confirm interactivity works as intended. Comparing dashboard results against historical reports or benchmark

Generative AI as a Co-Pilot

Generative AI helps me build dashboards faster,
optimize reports with final touches,
and deliver clearer, more accurate insights with less manual effort.

AI-Assisted Documentation



```
Count of Number for Yes =
VAR CountValue = CALCULATE(
    COUNTA('Incidents'[Number]),
    'Incidents'[Awaiting Supplier] IN { "Yes" }
)
RETURN
IF(ISBLANK(CountValue), 0, CountValue)
```

Backlog Global (Incidents)
162
Backlog Global (Tasks)
286
Incident Ageing
Awaiting Supplier ● No ● Yes
134
28
Time Open
Incidents Vendor (Awaiting supplier)
Backlog Trend (Incidents)
Awaiting Supplier ● No ● Yes
Backlog Trend (Tasks)
Awaiting Supplier ● No ● Yes

Advanced Visualization Features

AI-Assisted Documentation

- **Dashboard Summaries:** AI generates clear, business-friendly explanations of KPIs and metrics for stakeholders.
- **Process Guides:** Drafts step-by-step instructions for maintaining or refreshing dashboards.
- **Internal SOPs:** Quickly creates standardized procedures for repetitive tasks.
- **Training Support:** Produces onboarding materials or FAQs for team members.

AI-assisted documentation can help create and improve emails, notes, checklists, step-by-step guides, and flowcharts, turning technical work into clear, actionable information for stakeholders and team members.

Thank you for your time

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