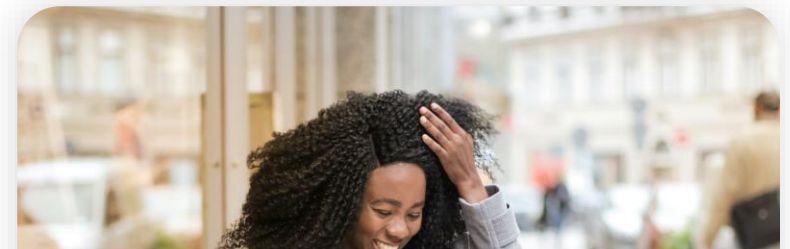
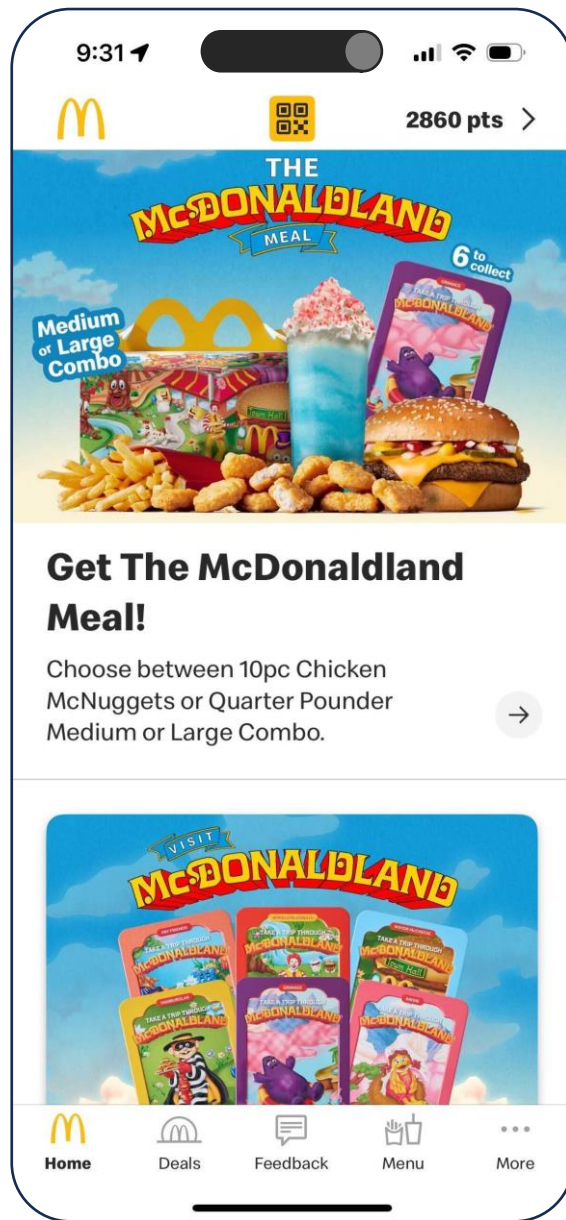


PLEXURE PLATFORM ARCHITECTURE

# Scaling Azure

Lessons learned scaling to tens of millions of MAUs.





# Big numbers.

Tens of millions of monthly active users.

Billions of transactions per month.

We measure our data in terabytes and petabytes.



Plexure Platform Vision

**Any market**

**Any campaign**

**Any time.**

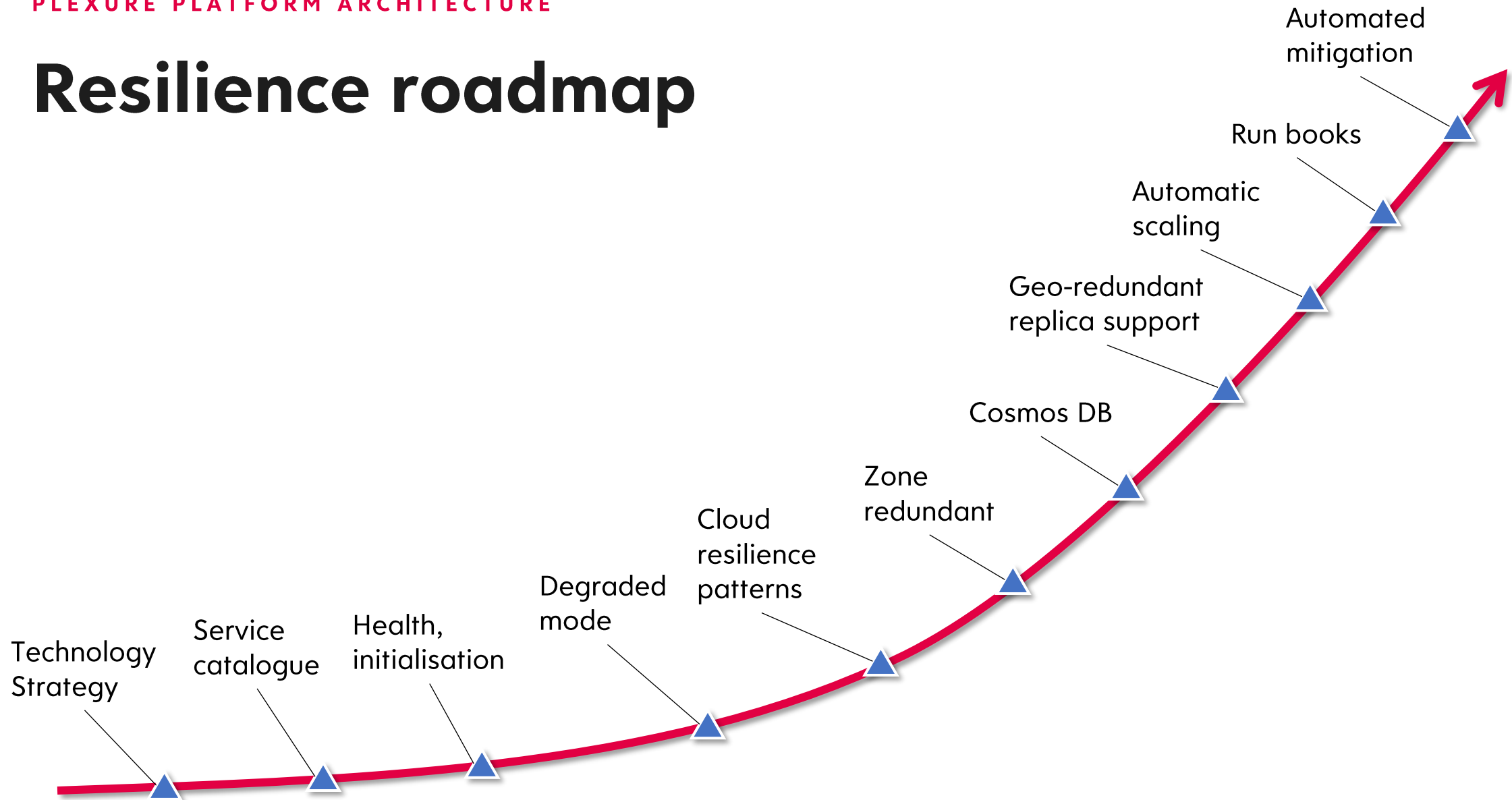
PLEXURE PLATFORM ARCHITECTURE

# Building a resilient platform.

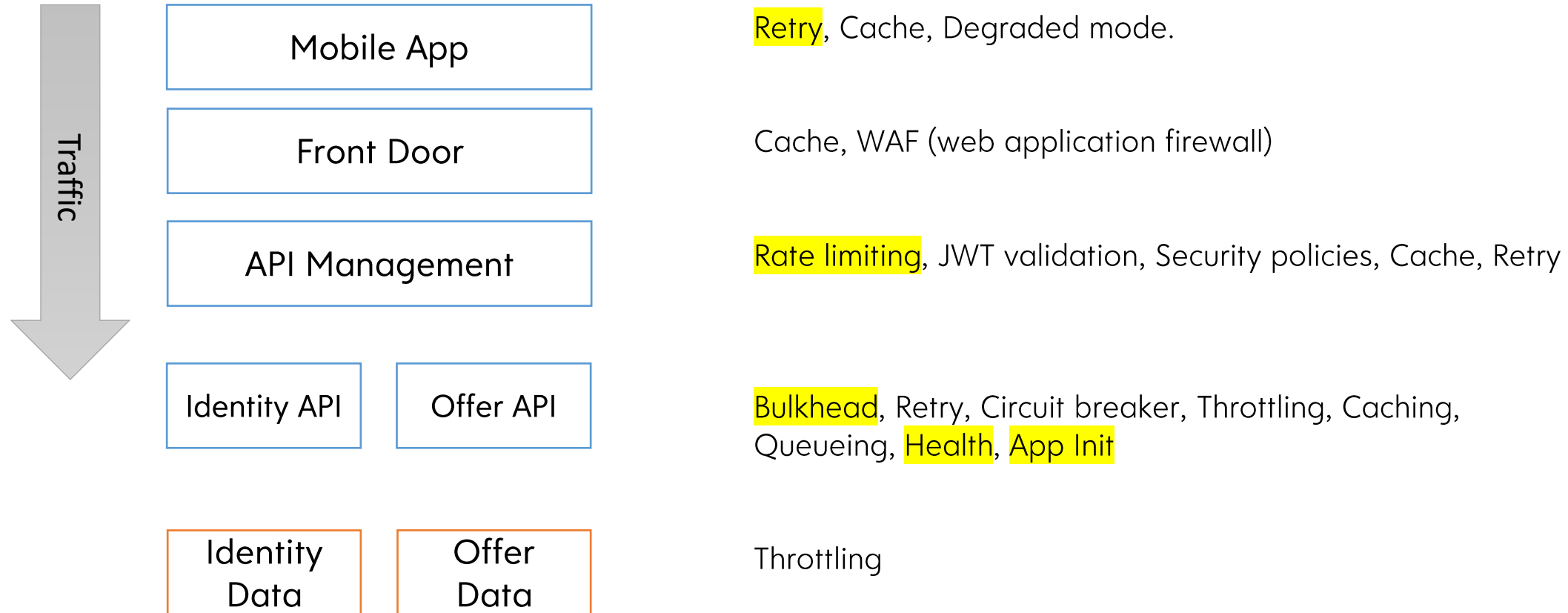
Ensuring reliability at scale



# Resilience roadmap



# Resiliency in depth.



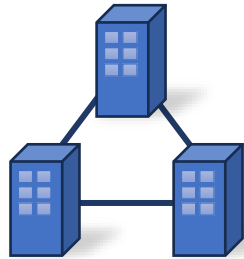
# High availability.



Single region  
locally-redundant

Recovery from  
zone failure:  
**Hours**

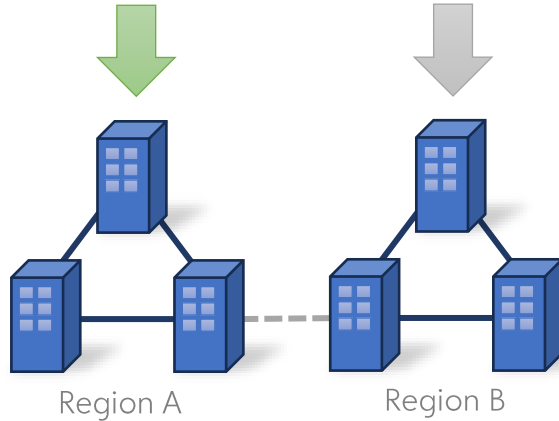
Recovery from  
region failure:  
**Days**



Single region  
zone-redundant

Recovery from  
zone failure:  
**Seconds**

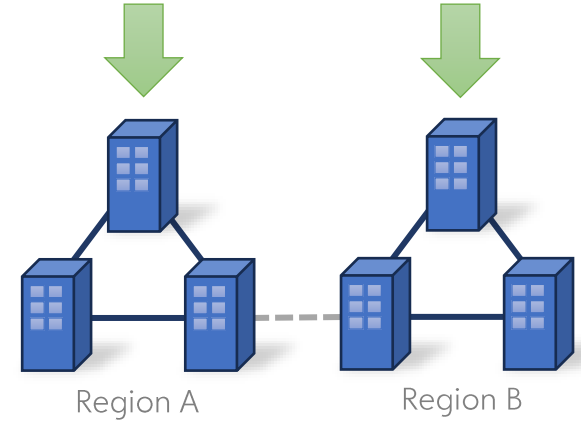
Recovery from  
region failure:  
**Days**



Multi-region  
failover

Recovery from  
zone failure:  
**Seconds**

Recovery from  
region failure:  
**Hours**



Multi-region  
active-active

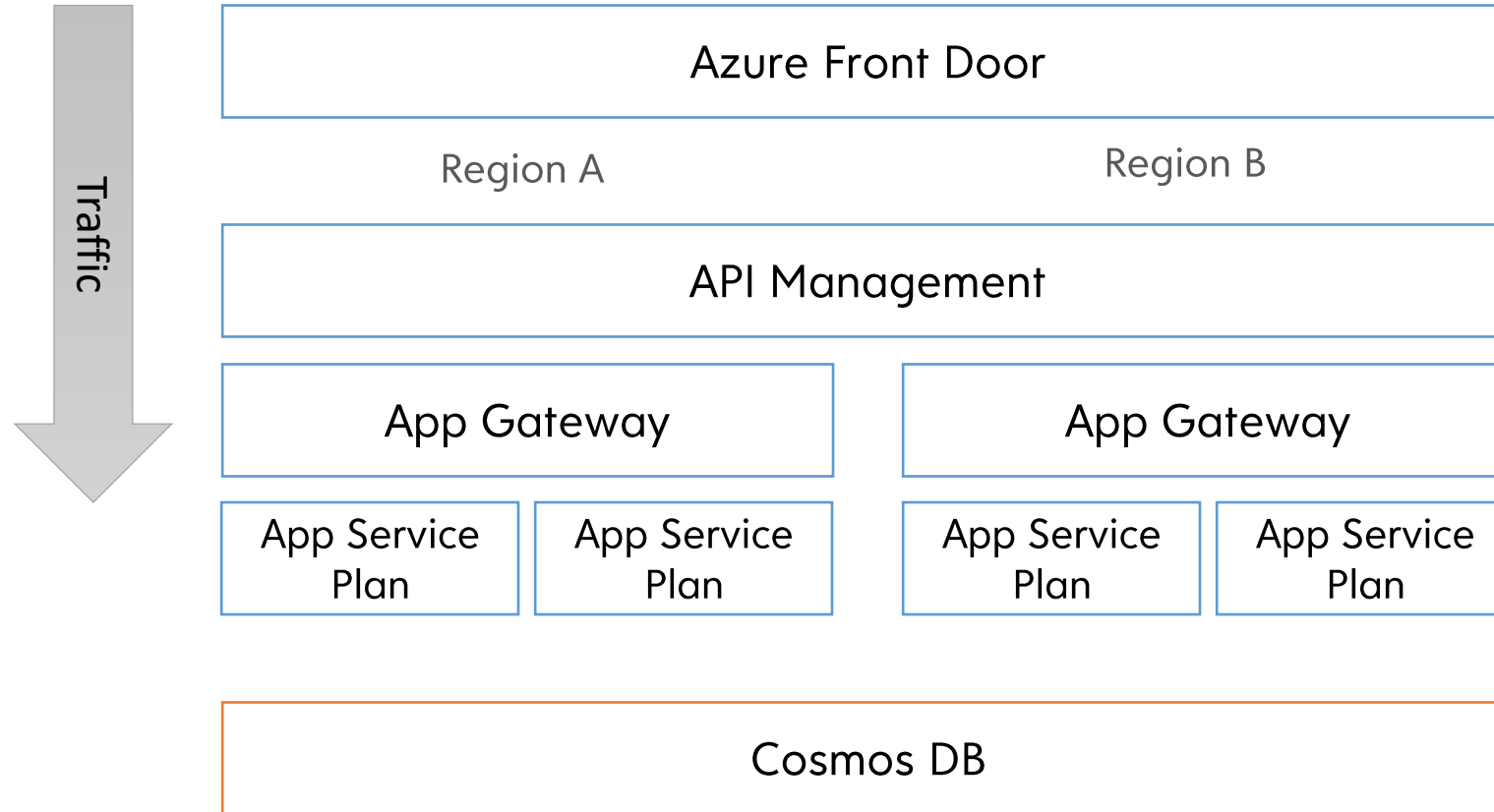
Recovery from  
zone failure:  
**Seconds**

Recovery from  
region failure:  
**Minutes**





# Scaling Azure App Services.



We use zone redundant,  
Premium App Service Plans.

Minimum 3 x instances  
P1v3 (2 cores, 8GB RAM)

Maximum 30 instances per Plan.

We run our dotnetcore instances hot!



PLEXURE PLATFORM ARCHITECTURE

# Instant scale.

Strategies for handling instant demand

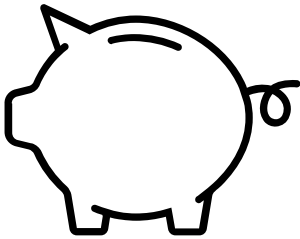
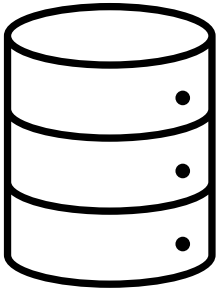
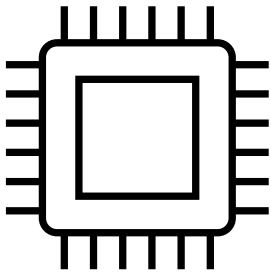
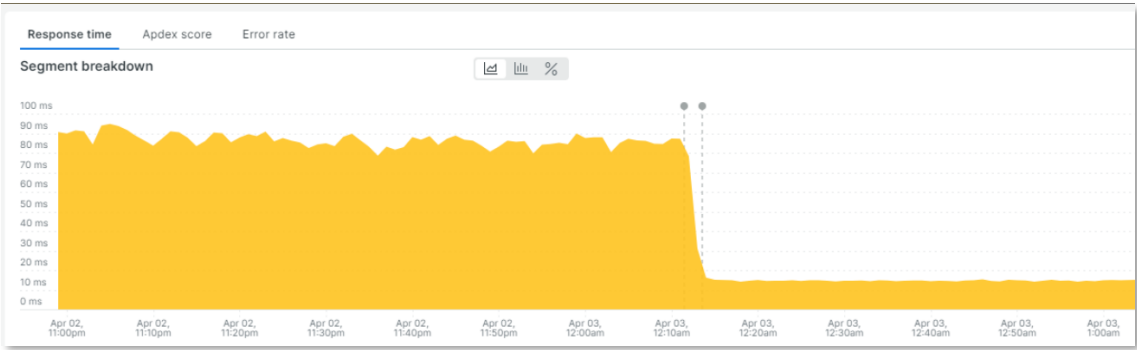


"YOU CAN'T  
**IMPROVE**  
WHAT YOU DON'T  
**MEASURE."**

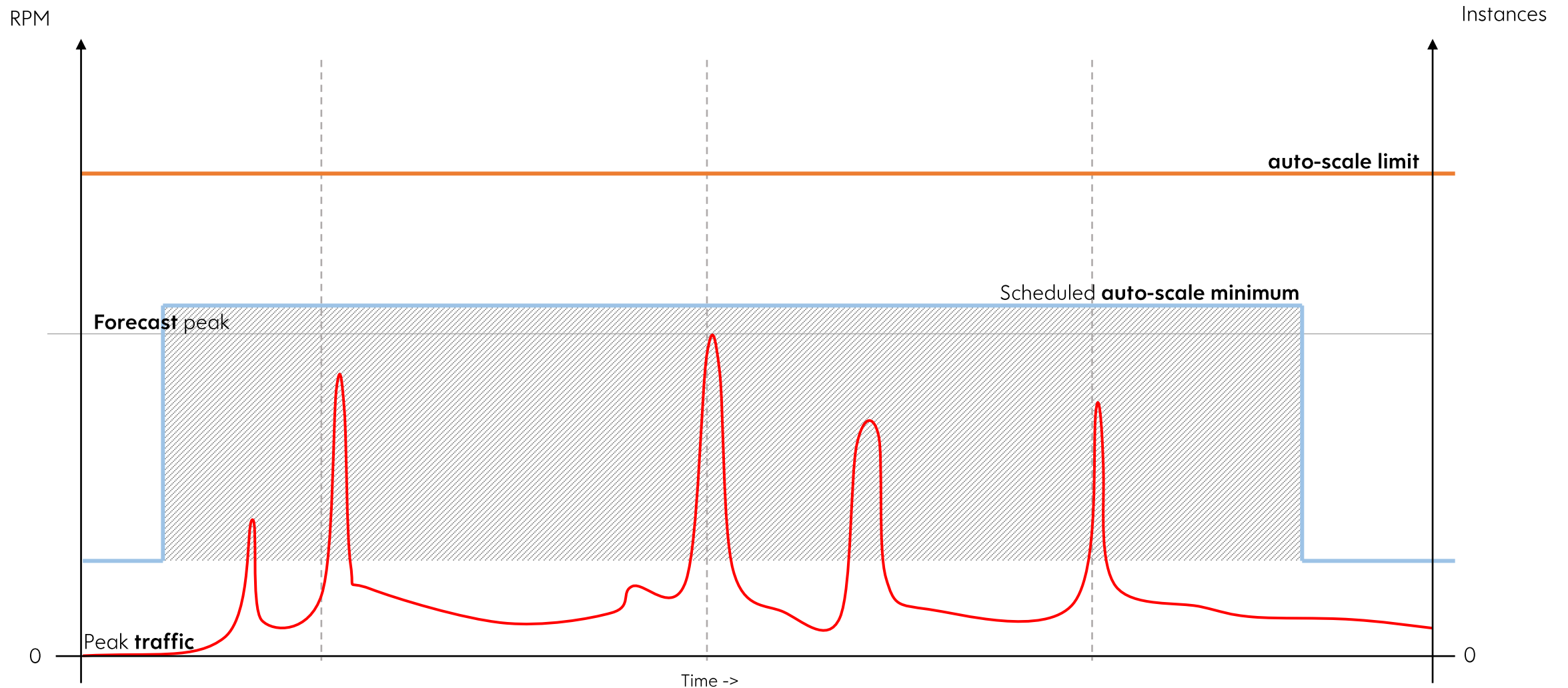
- PETER DRUCKER



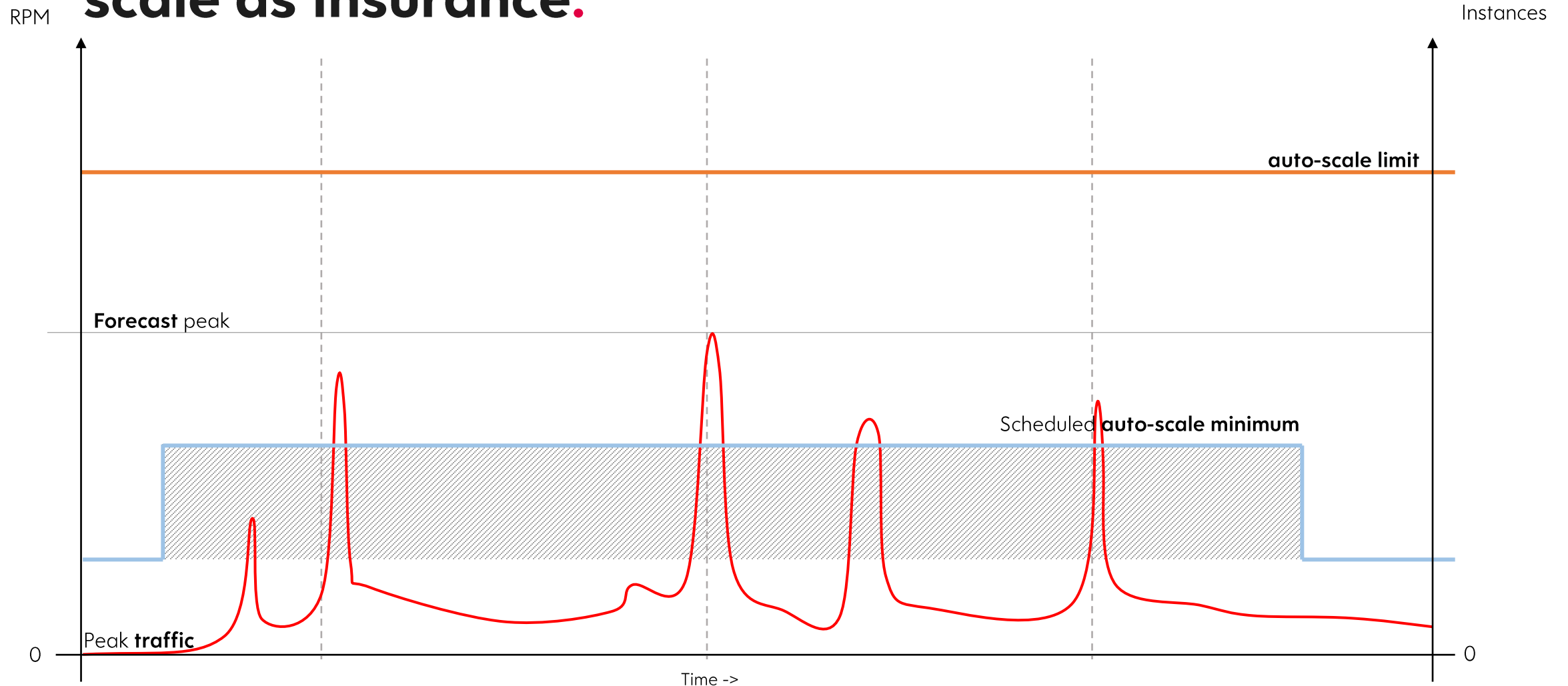
# Continuous performance optimisation.



# Scaling strategy.



# Scaling strategy – adjusting scheduled auto-scale as insurance.



PLEXURE PLATFORM ARCHITECTURE

# Transformation.

Operational excellence and scaling the organisation



# Site Reliability Engineering (SRE)

Embracing risk

Service level objectives

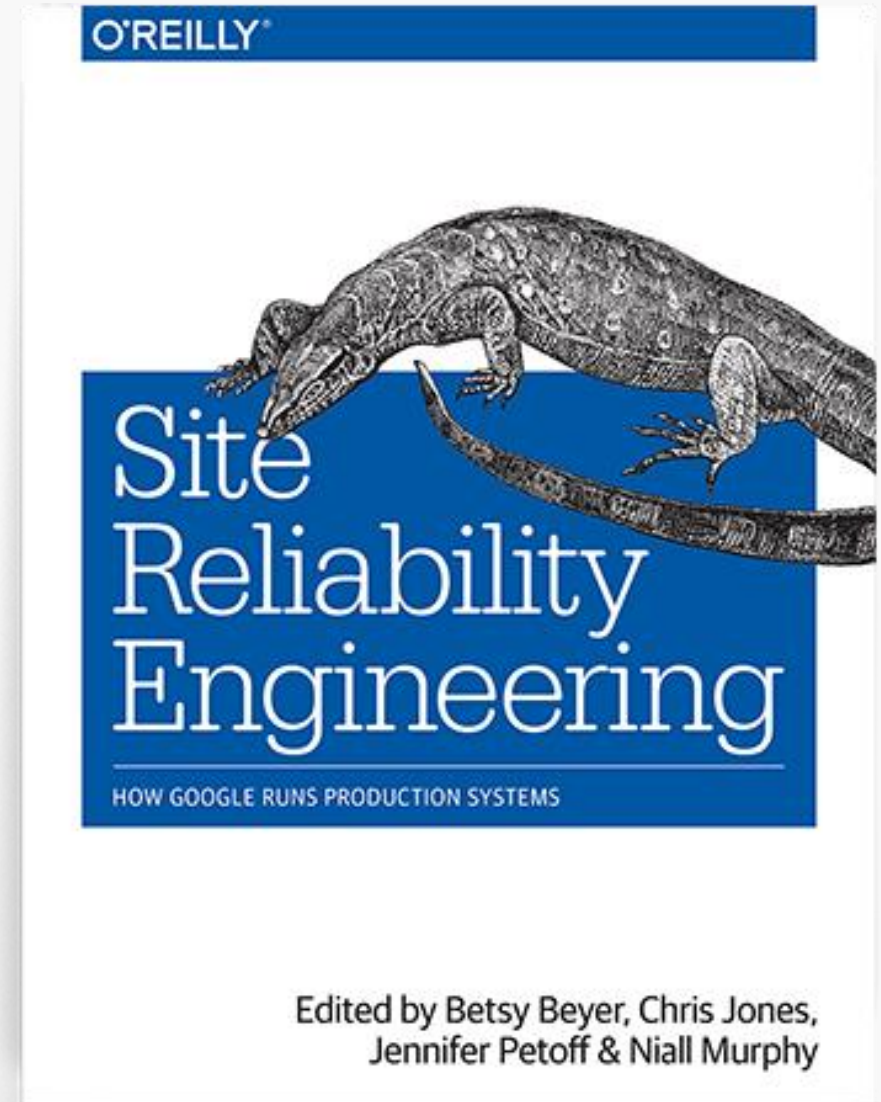
Eliminating toil

Monitoring distributed systems

Automation

Release engineering

Simplicity





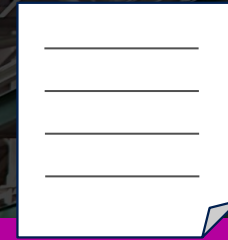
*“The only mitigation is an automated mitigation”*

*- Kumar Srinivasamurthy,  
General Manager Engineering at Bing.*



# Platform team

Playbook



## Core Platform

Identity

Release

Metrics,  
Logging

Deployment,  
Hosting

Shared  
services

Contracts, SLAs

Product Team 1  
Product management  
Definition of Done  
CI/CD

Product Team 2  
Product management  
Definition of Done  
CI/CD



# What works well.

- ✓ Metrics driven decisions
- ✓ Learning to define and measure business value of SRE / Ops / Infrastructure / Security
- ✓ Well Architected Framework
- ✓ Fully managed PaaS services
- ✓ Strong strategic partnership with Microsoft
- ✓ Unified Support and/or Azure Event Management
- ✓ Cosmos DB
- ✓ Performance testing and understanding our throughput/capacity



# What we haven't talked about.

- 🕒 Event streaming architecture
- 🕒 Performance testing
- 🕒 Load testing
- 🕒 Network security and “Private hub”
- 🕒 Tech debt refactoring
- 🕒 Cost analysis
- 🕒 Future plans
- 🕒 We are hiring! 😊





**Thank you.**