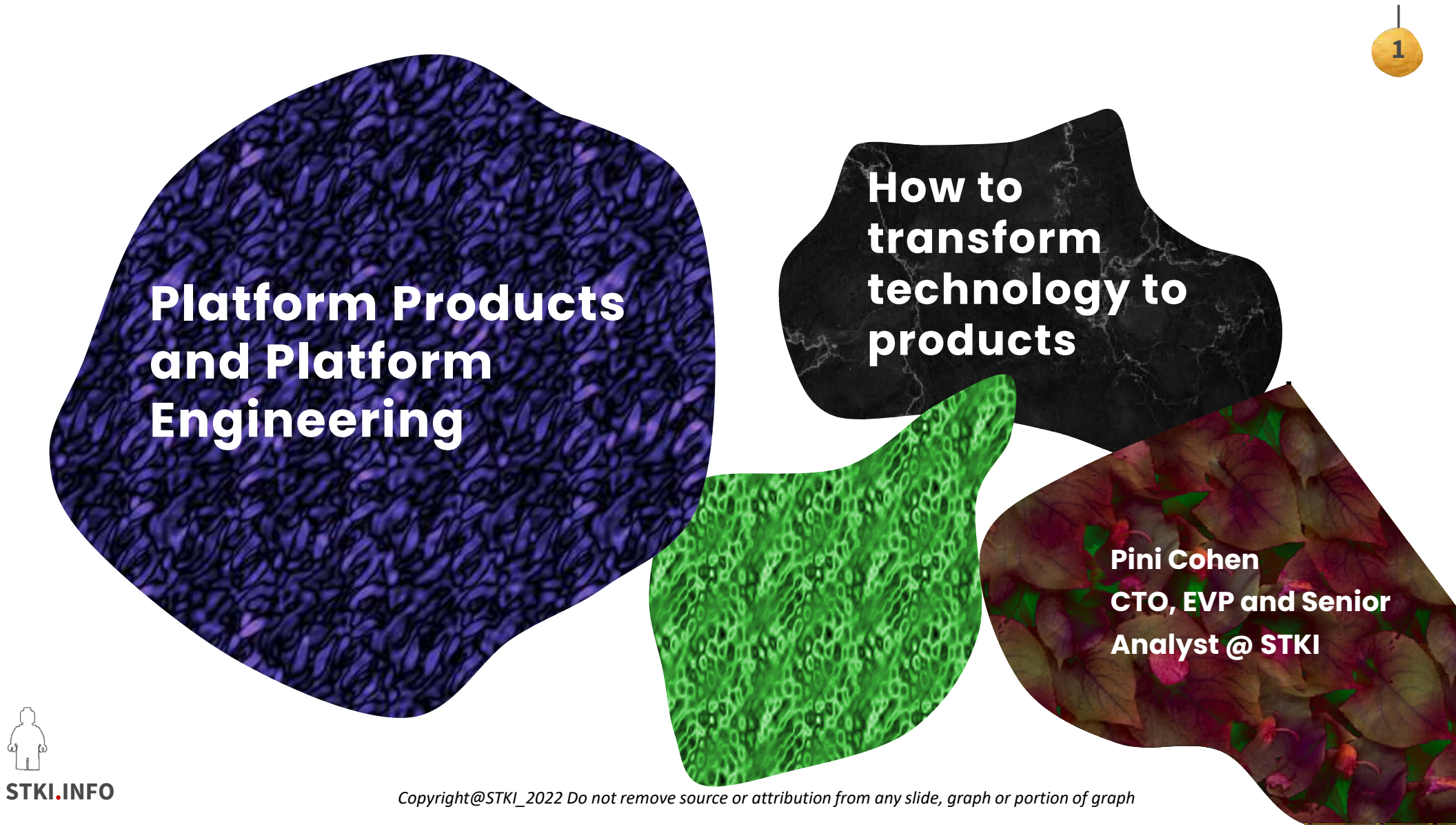

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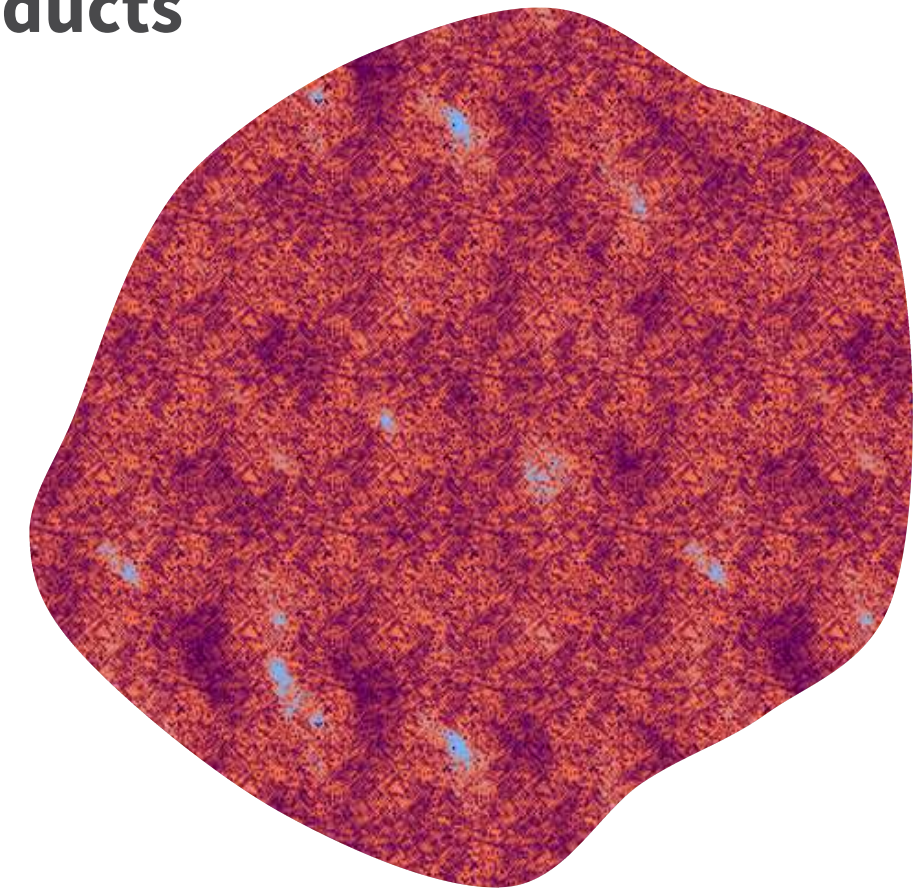
2

Introducing: Platform Products

Products that can be easily used by other teams



Introducing: Platform Engineering

The discipline of designing and building toolchains and workflows that enable self-service capabilities for other teams

Experience Teams vs. Platform Teams

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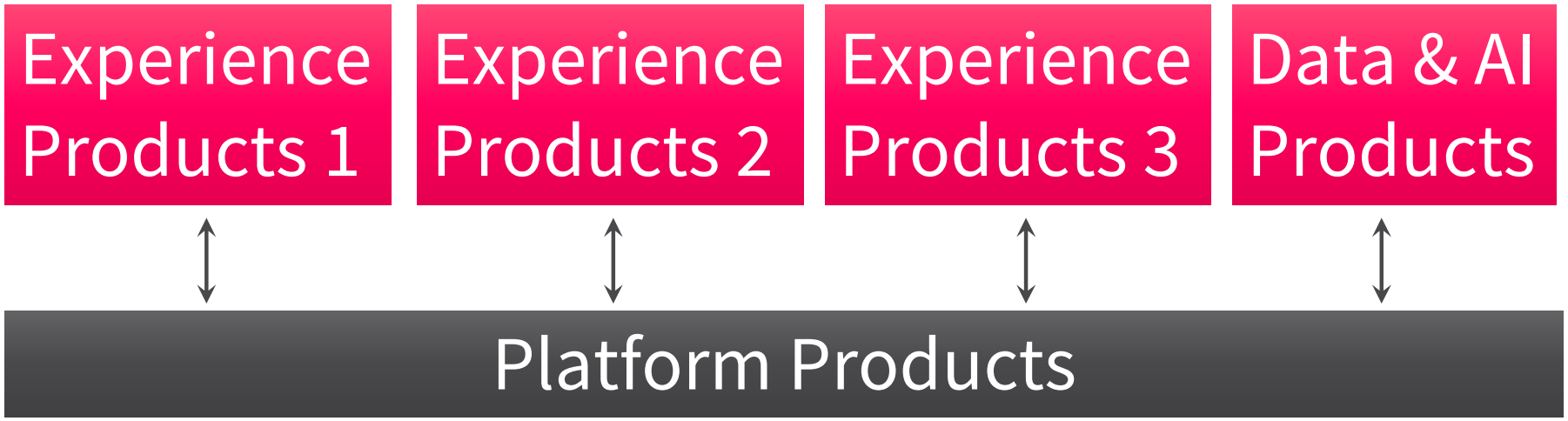
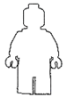
Platform Products:



The **Experience Teams** can use platform products **without having to know** how they are implemented so they could **focus** their energy on the **customer & business problems** while keeping with company **standards**

The platform products details are **invisible** to the experience developers

Source: Marty Cagan STKI modifications



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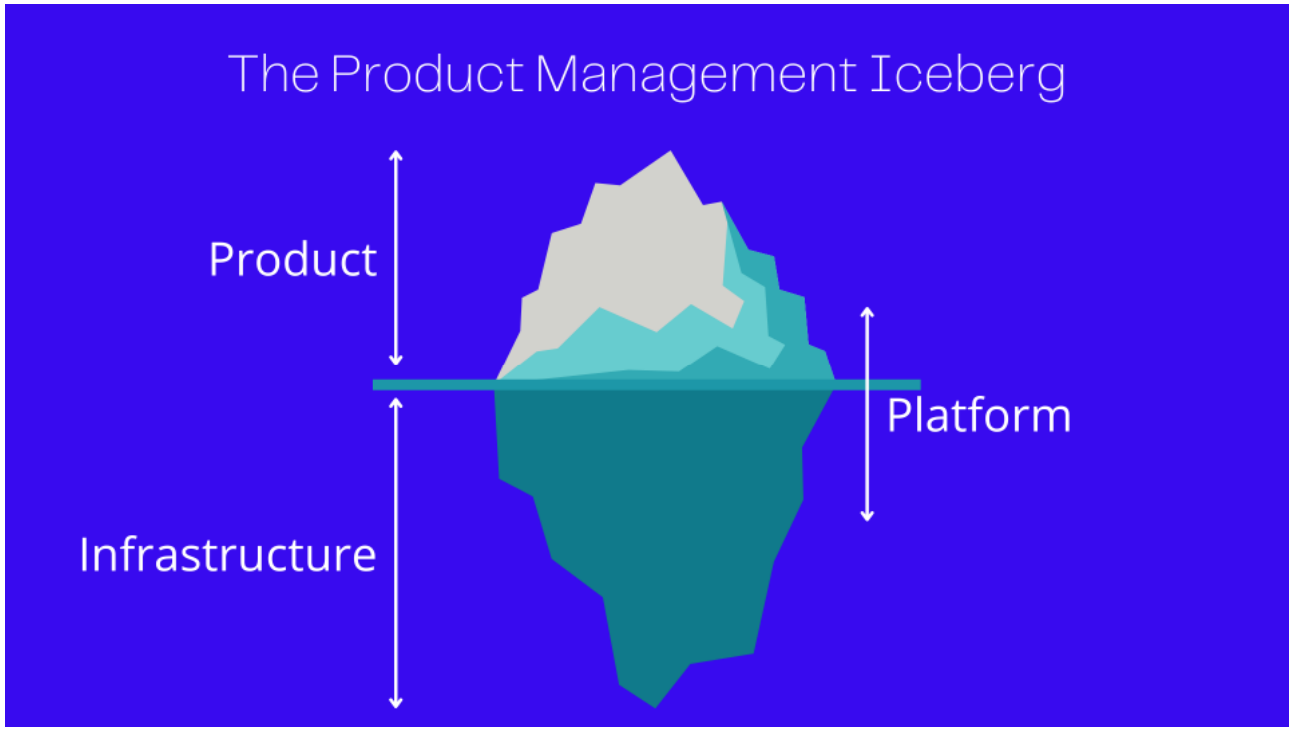
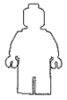
What does it mean : platform products details are **invisible** to the experience developers?

Each Platform Product has two views:
1. Above the surface– the functionality developers gets
2. Below the surface – how it it built - its infrastructure components, architecture and operations



Srouce: https://bootcamp.uxdesign.cc/the-product-management-iceberg-7ed58baf348e



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In my next presentation at 15:30 I will discuss these platform products with their view from above and below

Above the surface

Below the surface

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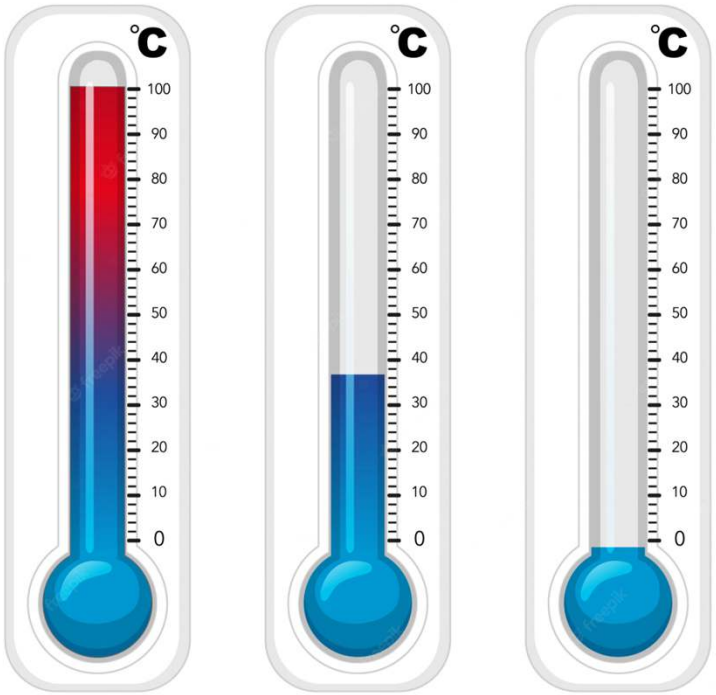
Head of Platform Products goal:

Increase Developer Productivity



Lower Technical Debt

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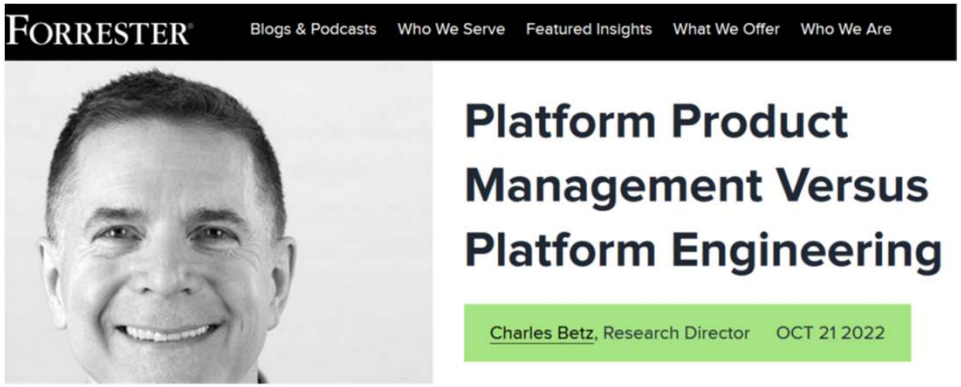
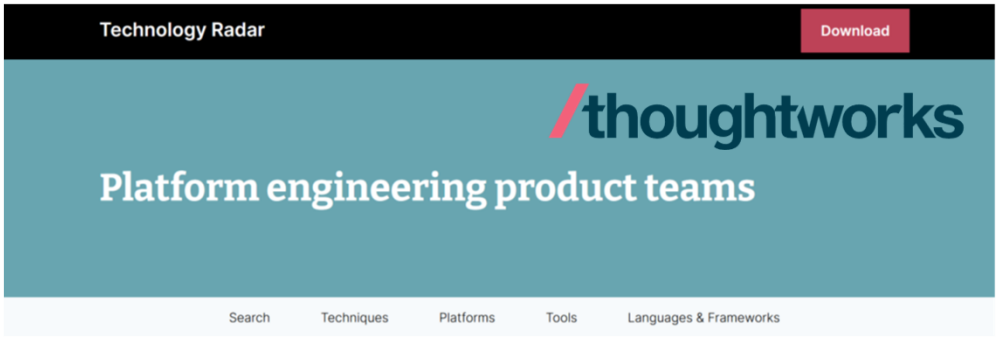
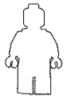
It’s the talk of the day







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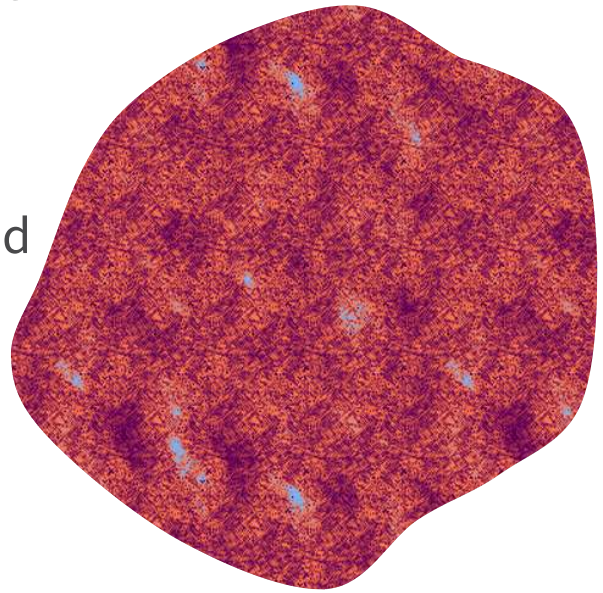
Platform Products types:

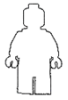
Common **business services platform products**– example – “Payment processing” , “document management” , “specialized tax calculation” “output management”



Common **technology services platforms products** with compute, storage, cyber, identity, CI CD , artifacts, DBMS, etc.

Sometimes called IDP (**Internal Developer Platform**)

Build by **Platform Engineers**



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How Experience Teams use the Platform Products:

- **Embedded in the developer tools (IDE)**
- **Self Service Internal Developer “GIT like” Portal**
- **API calls**

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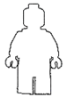
Platform Team OKR (Objective Key Results)

- Treat the (internal) Platform Product OKR as external product:
  - Number of (internal) customers
  - Usage of new capabilities / features
  - **Super important** – How good (frictionless) is the usage?
  - Since Platform Products “live longer” & serve “many other teams” – extra emphasize on:
    - Efficiency
    - Availability
    - Stability
    - Performance
  - **Super important OKR** – lower the level of technical debt
- Share the Experience Team objectives with the Platform Team
  - Example: a business is based on **images** but now there is a new business capability based on **video** so the **shared objective** will be **“increase revenues in 15% with video usage”**



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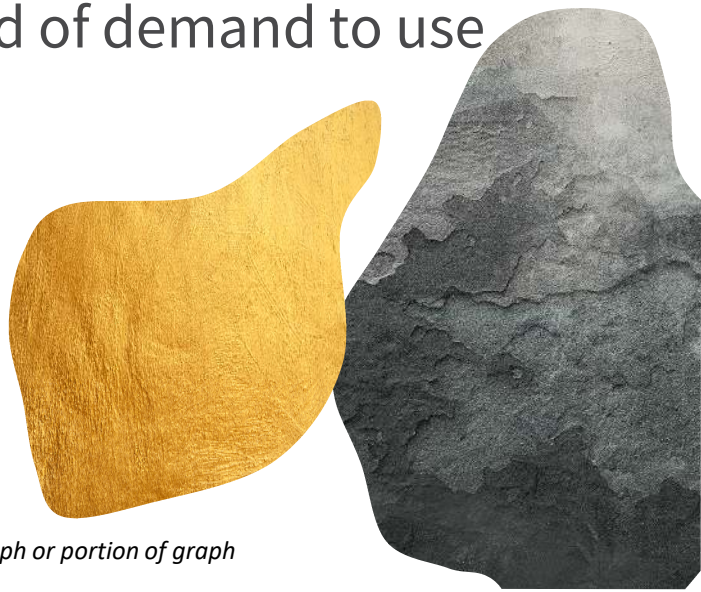
How does the discovery process differ between the Platform Teams and the Experience Teams?

- Discovery of what internal teams are doing
- Discovery of external supplier capabilities (mainly cloud services)
- Look into the future of technology – be ahead of demand to use the technology
- Same discovery of end users / customers



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Platform Products People are the best

Because we influence everybody

Trust is essential

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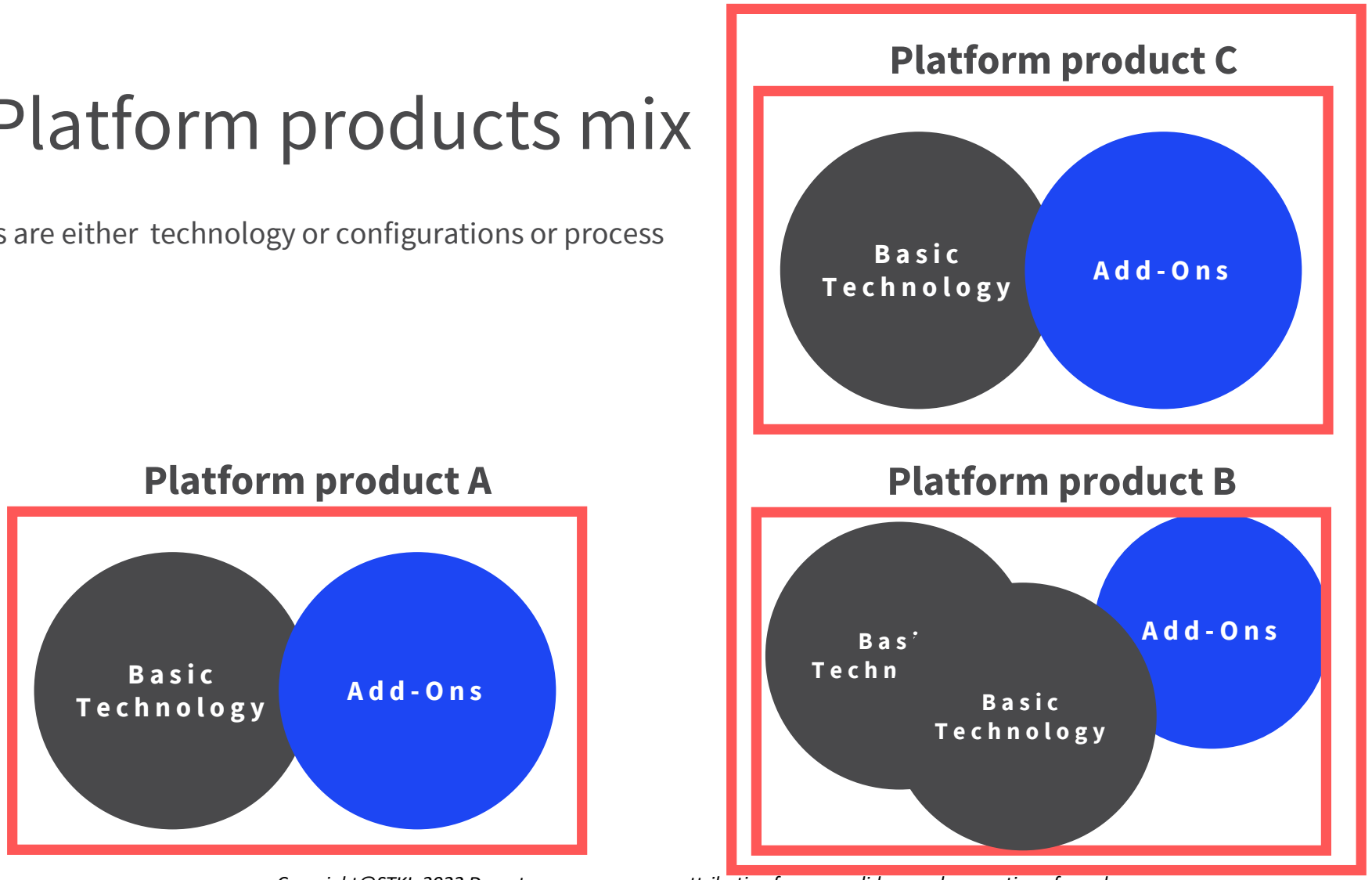
Platform products mix

Add-Ons are either technology or configurations or process



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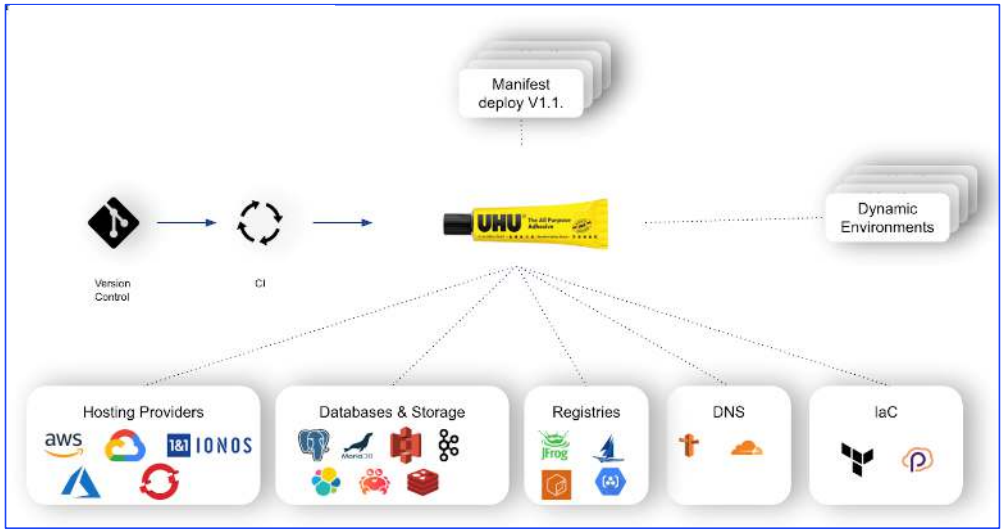
Tools for building Platform Products (commercial and OS):



Backstage

Quali

env0

HashiCorp Terraform Enterprise

humanitec

CLOUDIFY

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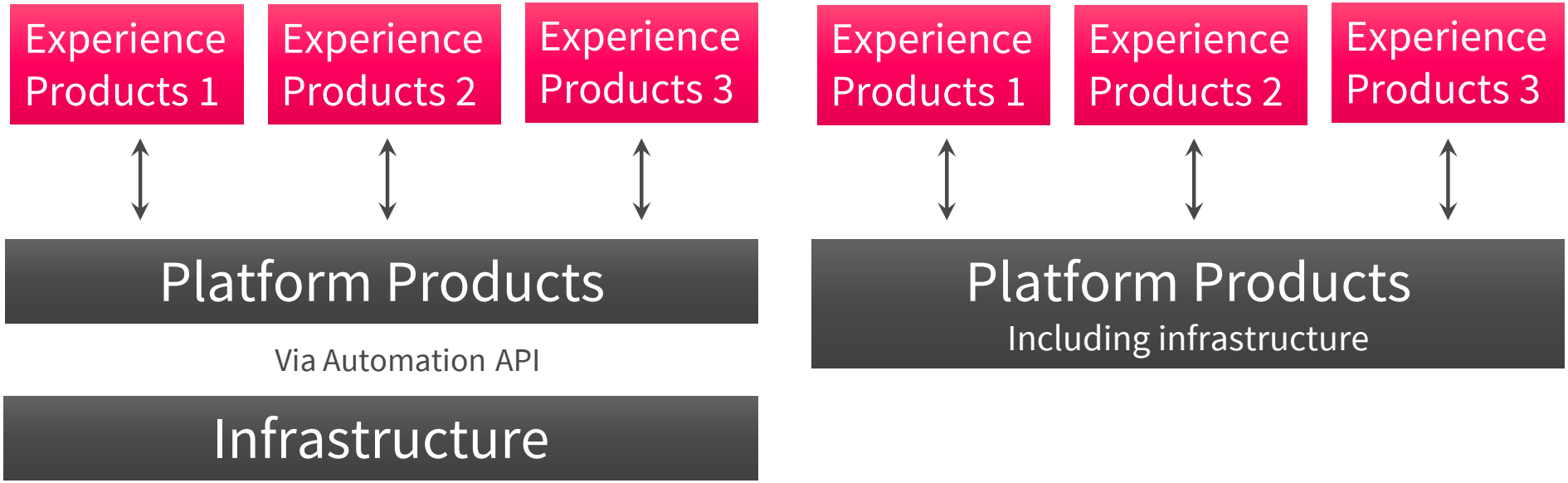
Platform engineering models options:



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Platform Products categories

Outcome for all is increasing developer productivity and improving developer experience while keeping application reliable , standardized & efficient

01 Developer Productivity

CI/CD
Artifact repositories
Developer Tools & environment
Shared code / UI components
Quality & Testing tools

02 HW/Cloud components

VM Docker base images , Storage
Basic Network & Security & regulations
Patches
Tagging procedures
Certification management

03 Platform components

Container platform
Data & data integration platforms
Integration API platforms
Identity (access, authorization) for users and apps

04 Shared Business logics / tools

Shared business logics
Shared application tools : document management, portals technology, Collaboration tools
Automation & Low Code platforms

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Platform Teams Organization + :

01 Developer Productivity

CD/CD
Artifact repositories
Developer Tools & environment
Shared UI components
Testing

02 HW/Cloud components Shared by all podcast

VM Dovker base images , Storage
Basic Network & Security & regulations
Patches
Tagging procedures
Certification management

03 Platform components

Container platform
Data platforms
Integration API platforms

04 Shared Business logics / tools

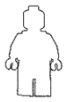
Shared business logics
Shared application tools : document management, portals technology,
Collaboration tools
Automation & Low Code platforms

Platform for Platforms

05 SRE (Site Reliability Engineering)

06 Cyber Security Operations & Guidance

07 Office Support (PC, mail, etc)



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We (the developers) build it (business logic + infra) We (the developers) Run It (operate it)

That means - don't need Infrastructure, don't need operations. Developers do it all!!

Complete freedom , Everything is flexible nothing centralized

The original is "You build it – You run it"

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But the cloud company realized they need:

- Centralized security and compliance
- Centralized financial policy (FinOps)
- Centralized operations (SRE)
- Centralized infrastructure (Platform Engineering)

You build it – you run it

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Please thank the cloud companies for showing us the new way of doing **infrastructure and operations**

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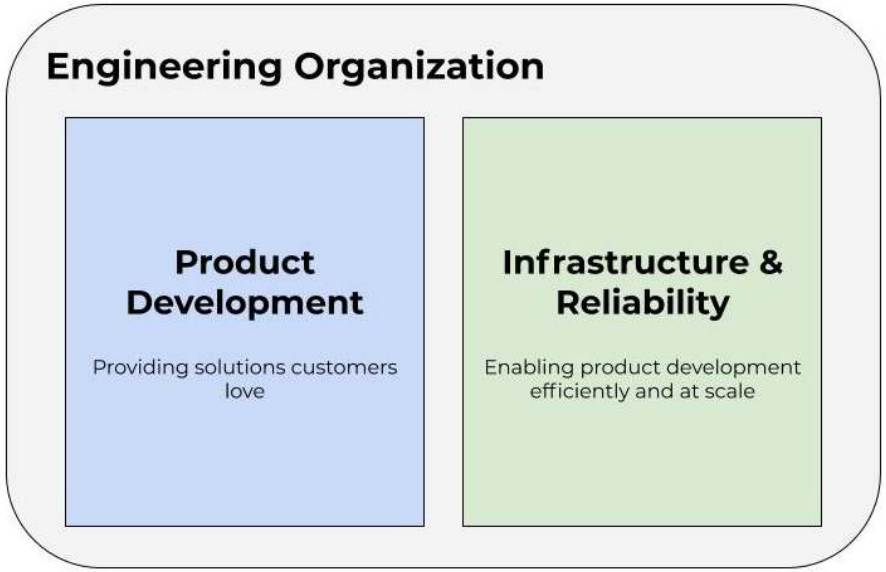
The new “infrastructure cyber & operations”



Reporting to **VP Product and Technology**

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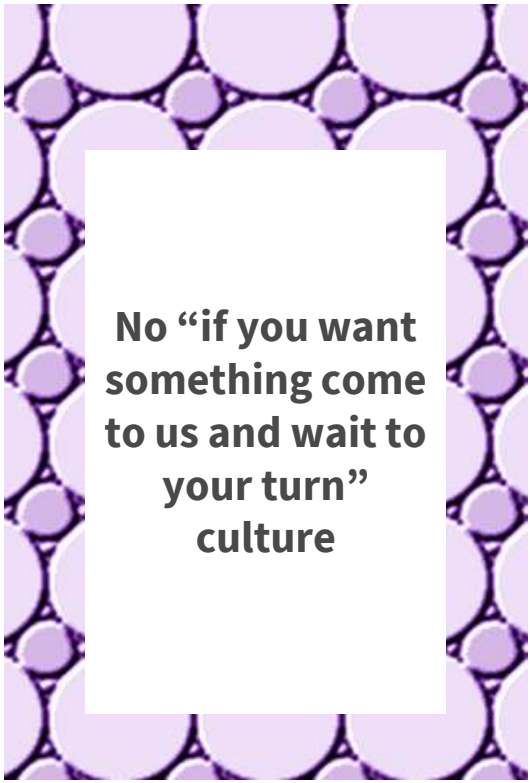
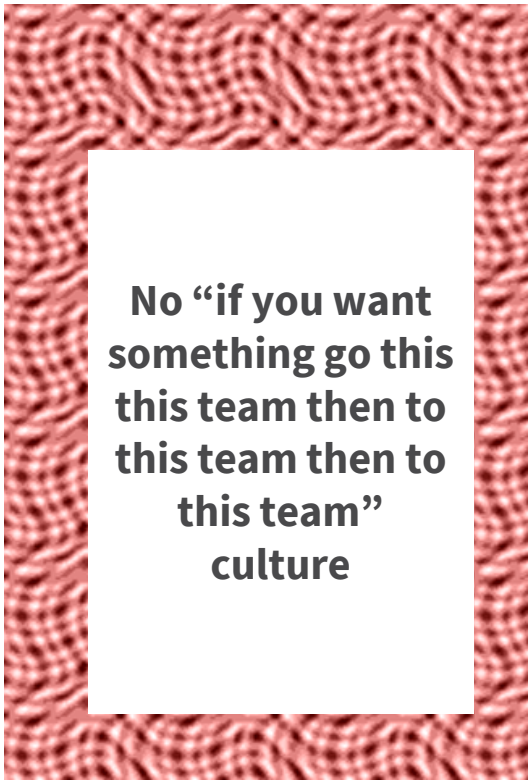
The new “infrastructure cyber & operations”





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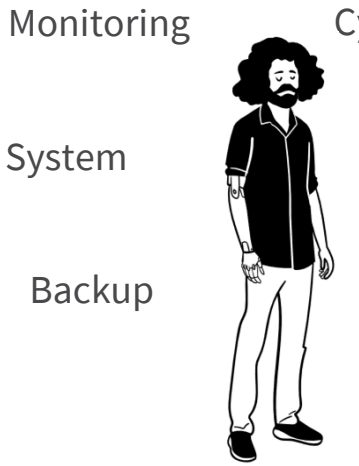
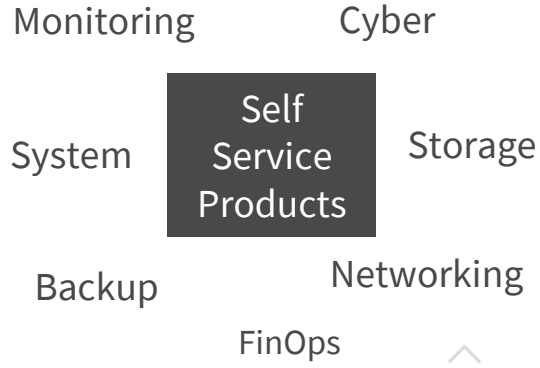
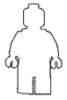
From separate departments to unified self service delivery

If you have four groups working on a compiler, you'll get a 4-pass compiler
Conway's Law







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Recommendations:

Be a "Product", do discovery , place Product Manager, Define OKR

PM Discover, define, priorities and solve problems for the user, Important OKR is "frictionless level" of product usage. Every Activity should be related to OKR.

Everybody are developers doing IaC (no ClickOps) with developers practices

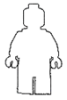
Centralized source control. Automatic testing, test driven, etc.

Experience Teams has (shared) production responsibility as part of their OKR

Every developer must see it's code in production monitoring systems.

The foundation technology teams (Network, Storage, Cyber Compute) should be unified or at least give service as "one unit"

The platform categories are the new organization structure



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Reminder - Product led organization principle:

IT has increased responsibility: define solution and not only build solution

Team is doing Delivery

Team is doing Discovery and than Delivery

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End of Part 1

Please welcome Reust Shefer Bar in “Team Communication and Collaboration”

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Part 2 – Platform Products & complex infrastructure trends :

- Integration
- SRE – Site Reliability Engineering
- SASE – Secure Access Service Edge
- Storage & Backup as security tools
- Micro Frontends

Pini Chen
CTO, EVP and Senior Analyst @ STKI

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Platform products with their view from above and below

Above the surface

Below the surface

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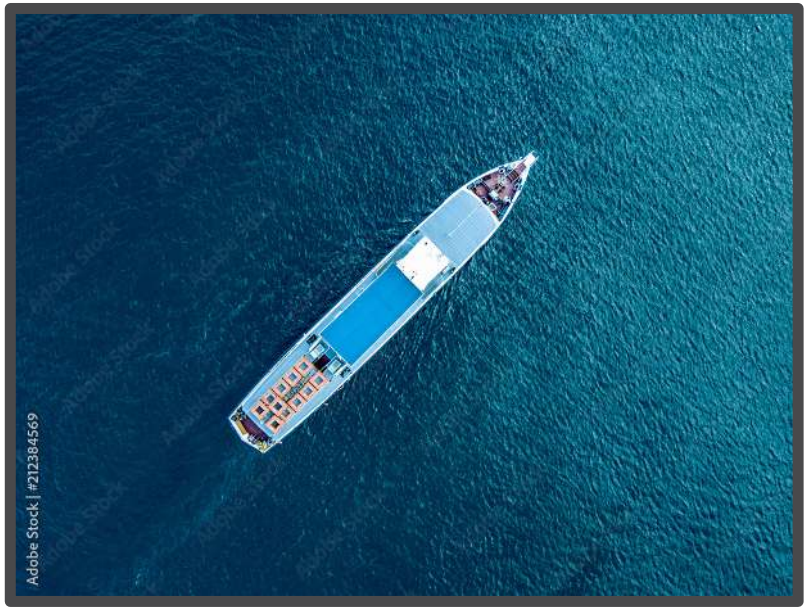
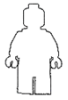
Integration platform – above the surface



Above the surface



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What developers what from API platform:

That supports many SaaS and PaaS events and trigers with self service capabilities

Easy to use cloud integration

01

Internal Integration

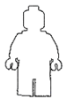
That is not influenced by possible internet latency with sophisticated API orchestration

02

03

Partner integration

Built in catalog, monetization, security , roles and usage statistics



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UK open banking

The importance of open API standards is rising

OPEN BANKING

www.openbanking.org.uk

THE Berlin GROUP
A EUROPEAN STANDARDS INITIATIVE

HL7 FHIR

Fast Healthcare Interoperability Resources

IB1 Icebreaker One

Open Energy standards

dcsa

Open Shipping and Logistics initiative

ODETTE
The collaboration platform for the automotive supply chain

Automotive Supply Chain API for Transport Track & Trace2

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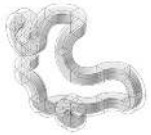
Why Open API are important?



Faster business partnership

"Send/Receive medical documents and data faster"

Enable disruptive business models

"Give better loan if you let me look constantly at your account"

Open Finance

Data is the product

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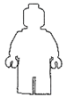
Integration platform – below the surface

Below the surface



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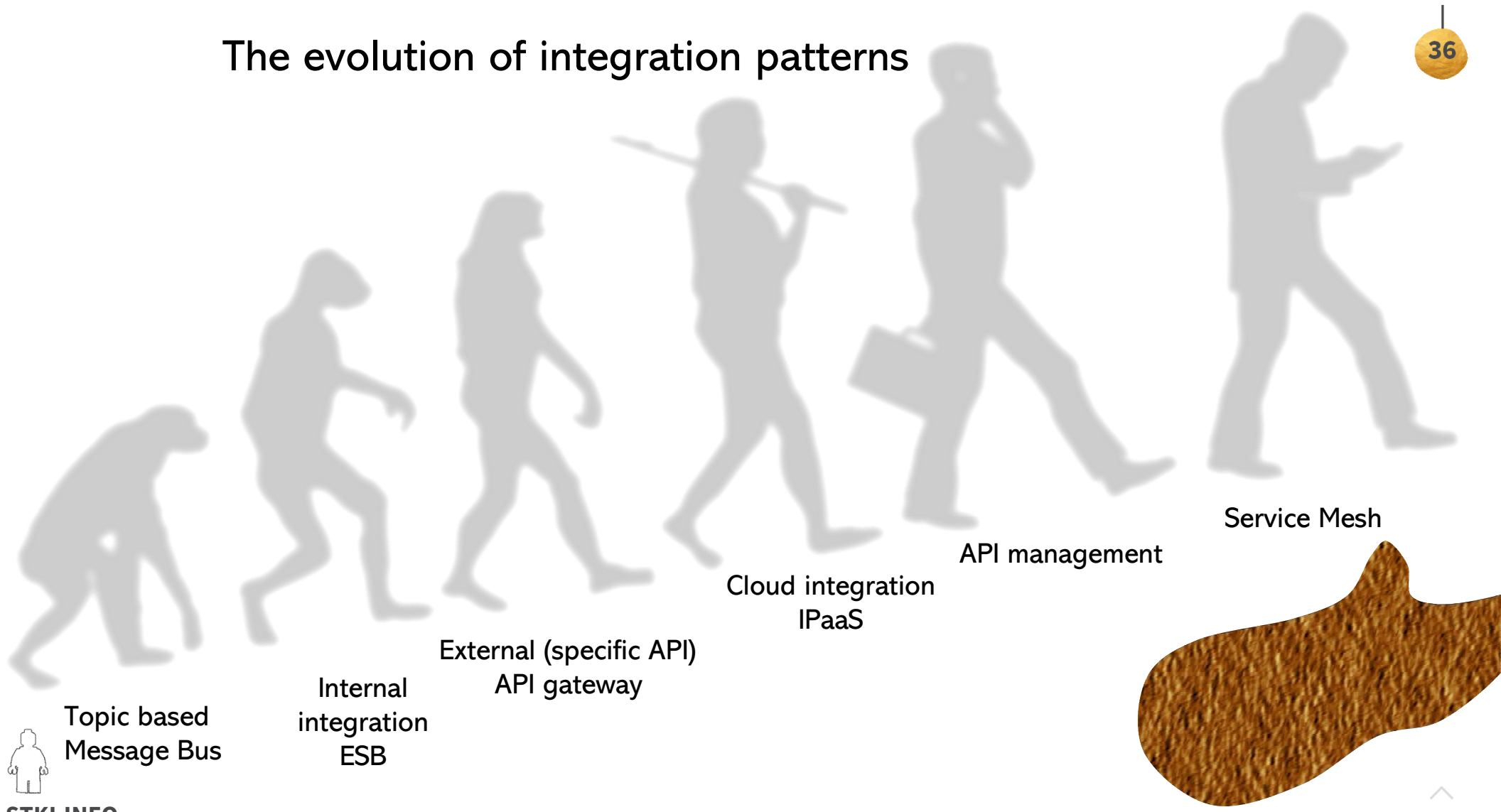
The evolution of integration patterns



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Fierce competition between integration patterns

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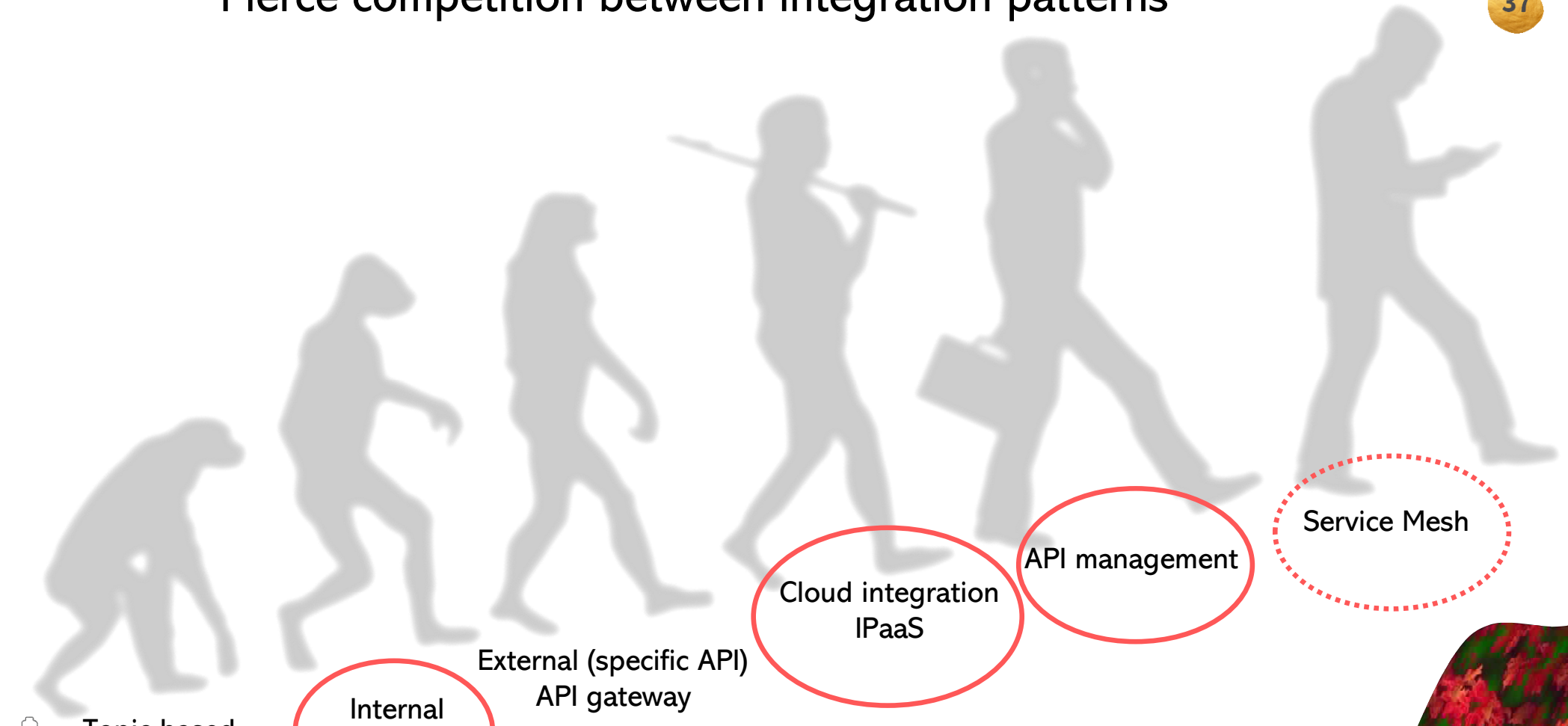

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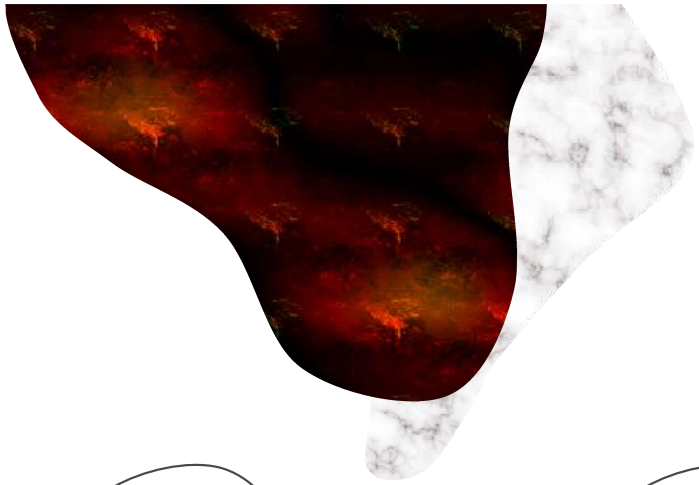
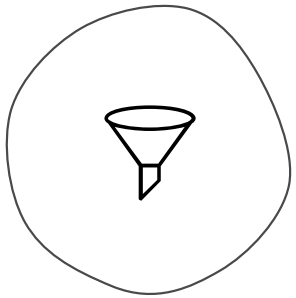
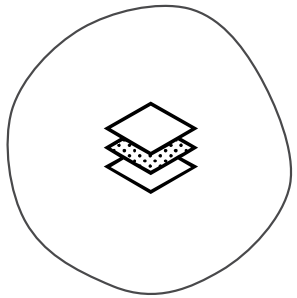
New type of products for enabling open API standards usage : FHIR Server





Scheme validation

For Sending and Receiving messages



Storing messages

For compliance

Updates constantly

With new modification of PHR standard

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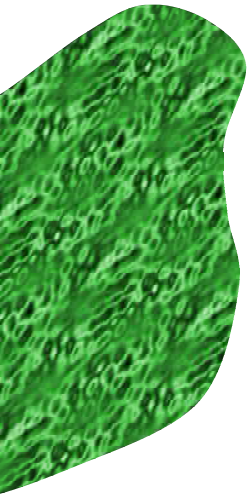
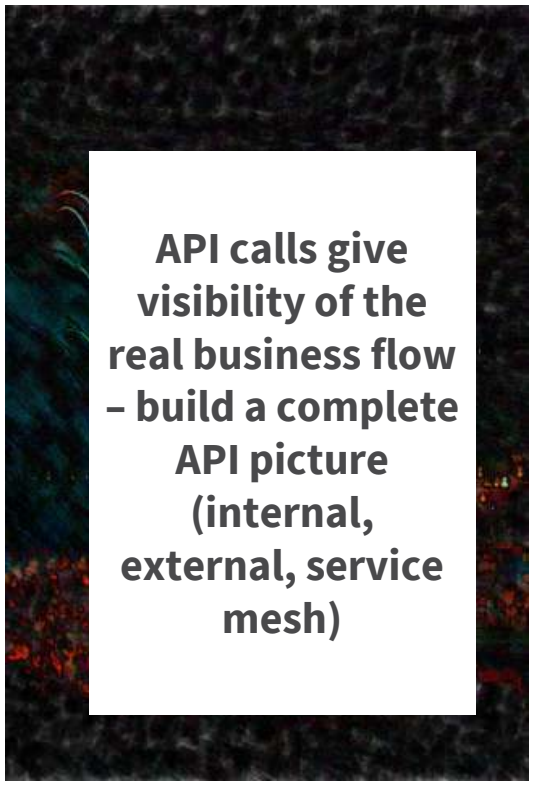
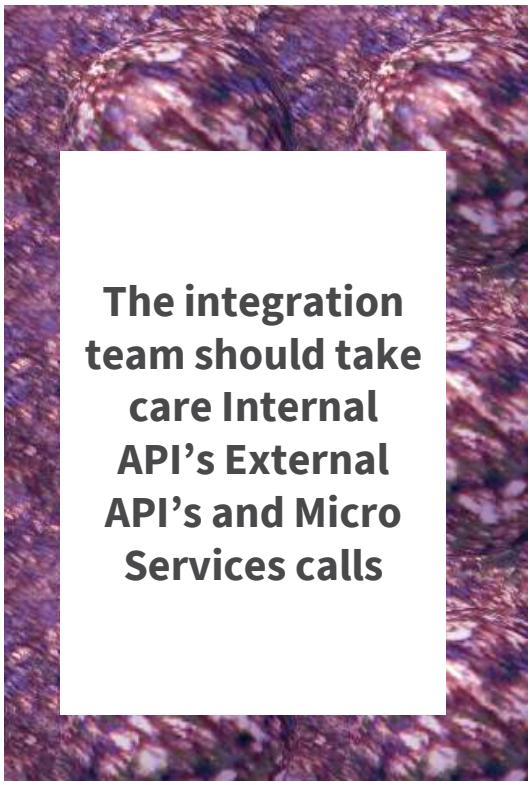
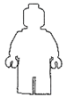
Integration Recommendation









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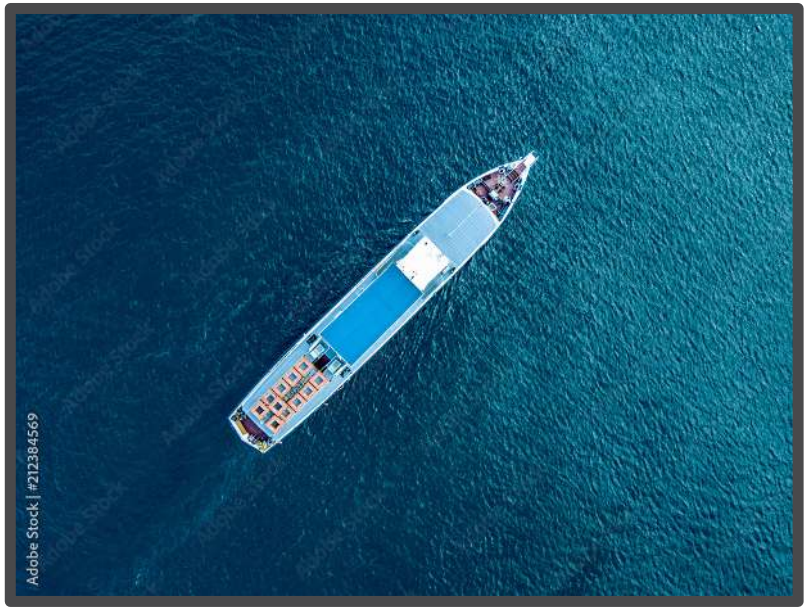
SRE – Site Reliability Engineering– above the surface



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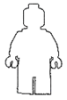

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Platform Teams Organization + :

01 Developer Productivity

CD/CD
Artifact repositories
Developer Tools & environment
Shared UI components
Testing

02 HW/Cloud components Shared by all podcast

VM Dovker base images , Storage
Basic Network & Security & regulations
Patches
Tagging procedures
Certification management

03 Platform components

Container platform
Data platforms
Integration API platforms

04 Shared Business logics / tools

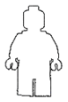
Shared business logics
Shared application tools : document management, portals technology,
Collaboration tools
Automation & Low Code platforms

Platform for Platforms

05 SRE (Site Reliability Engineering)

06 Cyber Security Operations & Guidance

07 Office Support (PC, mail, etc)



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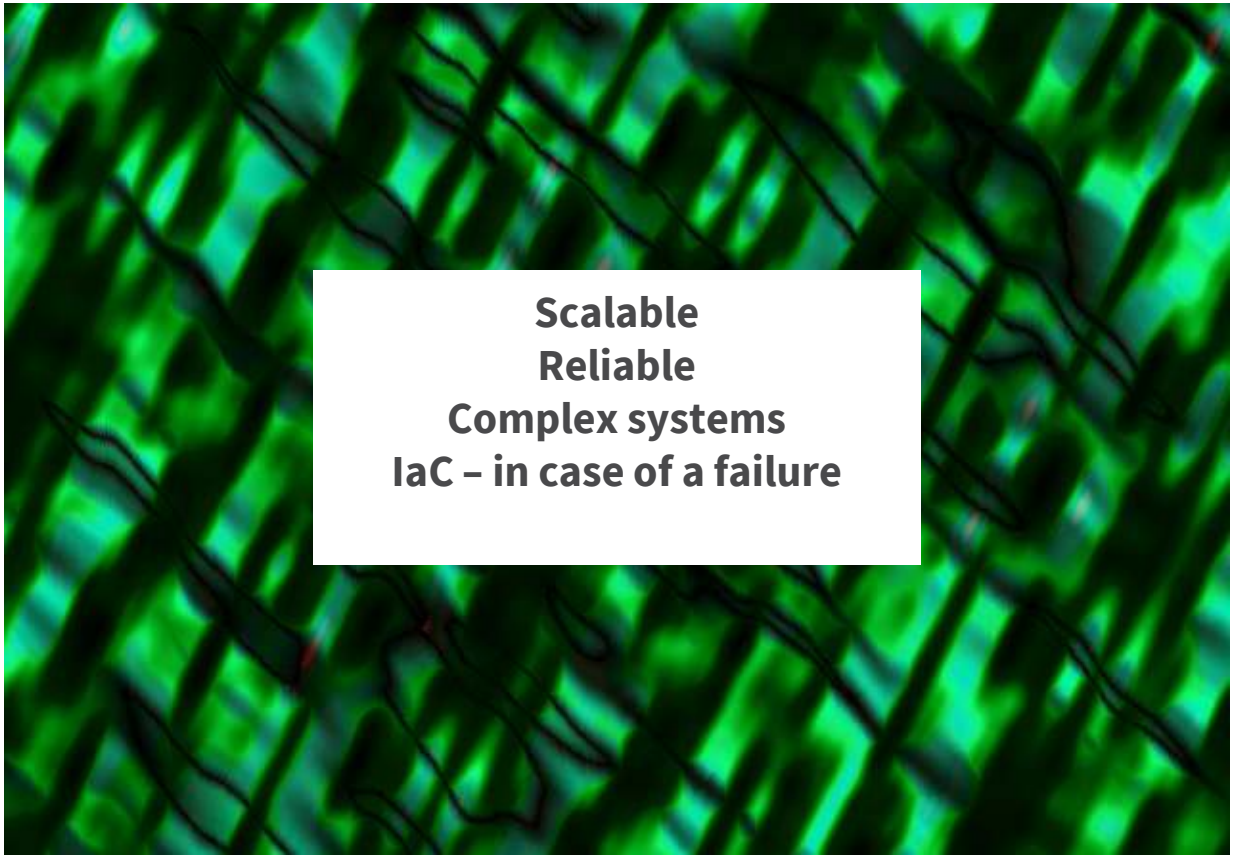
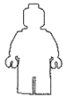
SRE – Site Reliability Engineering

software engineering approach to **IT operations**. SRE teams use **software** as a **tool** to manage systems, solve problems, and automate operations tasks





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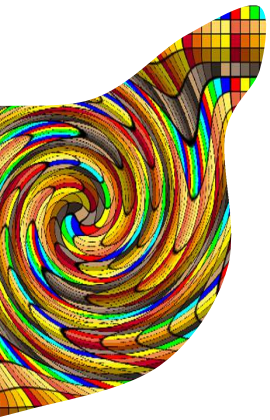
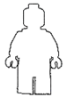
SRE Error Budget

- An error budget is the amount of acceptable unreliability a service can have:
  - Use your Error Budget
  - If you finished your Error Budget you are not allowed to implement new features unless you that you have improved your quality\resilience





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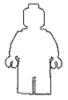
SRE another role : guide the developers to build better apps – like the aDBA

SRE Site Reliability Engineering – below the surface

Below the surface



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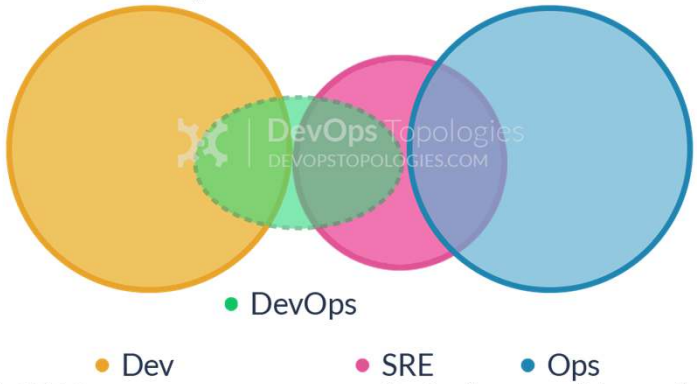
SRE vs. Devop

- Operations
- Incident response
- Post Mortems
- Monitoring, Events, Alertings
- Capacity planning
- Primary focus: Reliability

- Delivery
- Release automation
- Environment builds
- Config management
- Infrastructure as code
- Primary focus: Delivery Speed



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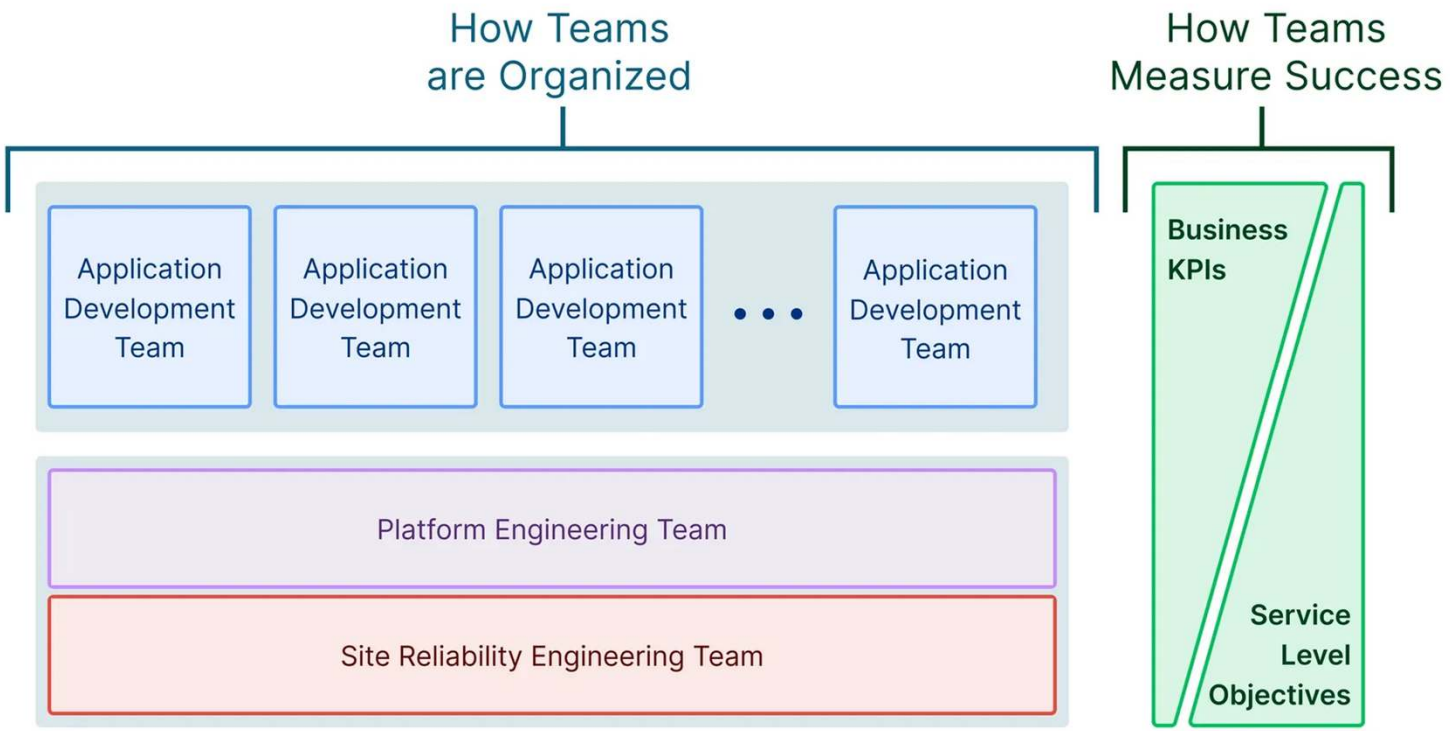
SRE vs. Platform Engineering

The SRE team works to deliver infrastructure for highly reliable applications,

The platform engineering team works to deliver infrastructure for rapid application development



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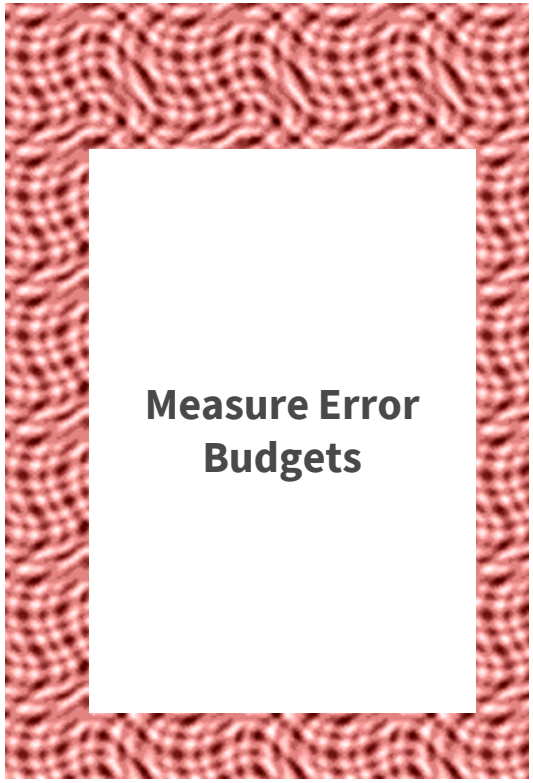
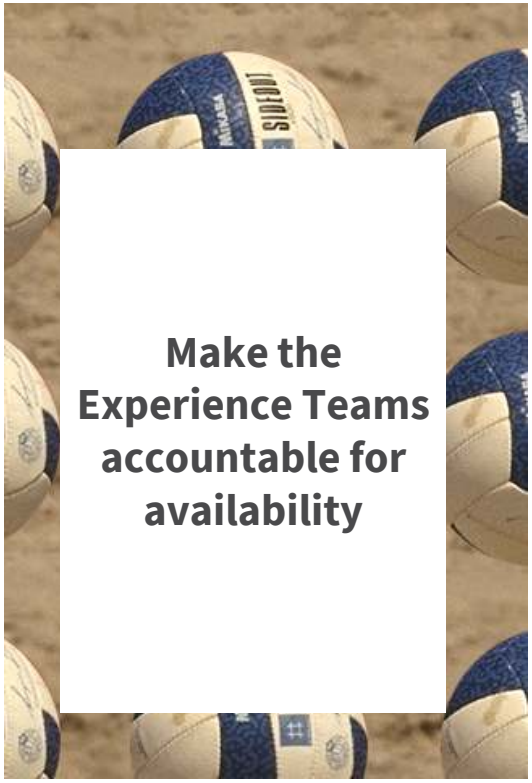
Operations Recommendations





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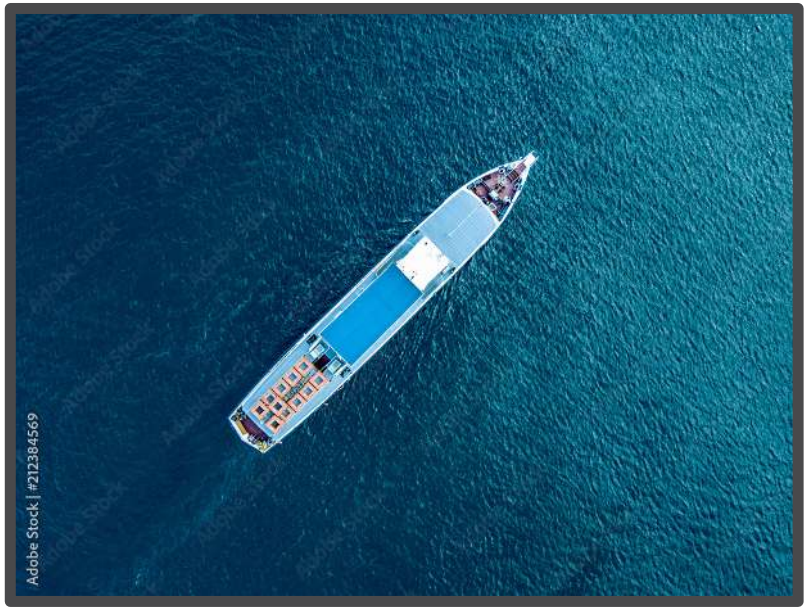
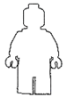
Micro Frontends frontend architecture– above the surface



Above the surface



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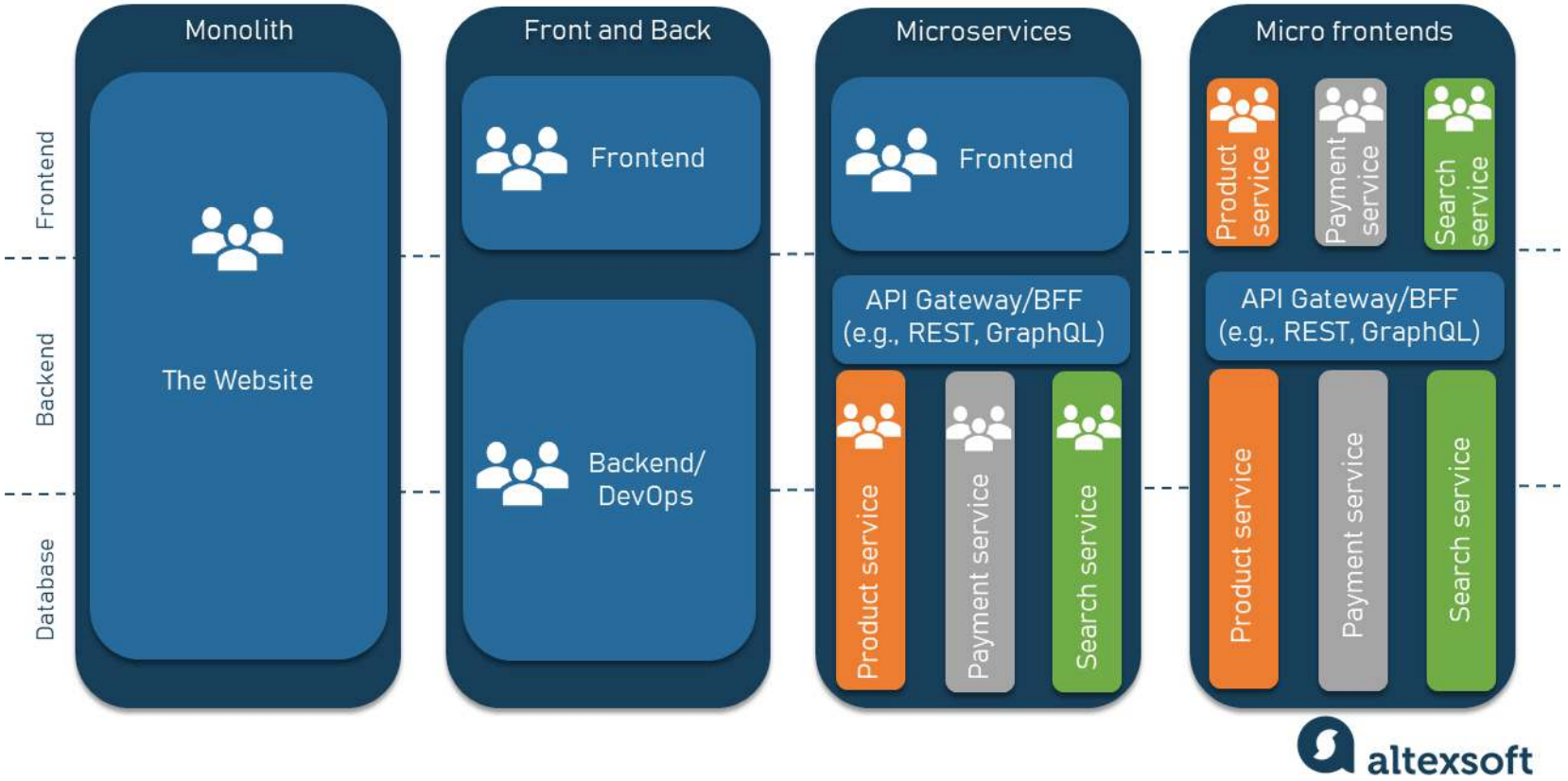
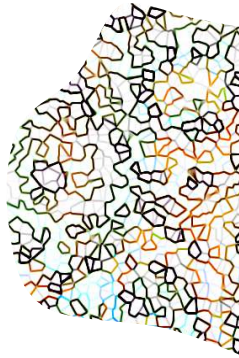
Micro-Frontends Extends the concepts of micro services to the frontend world





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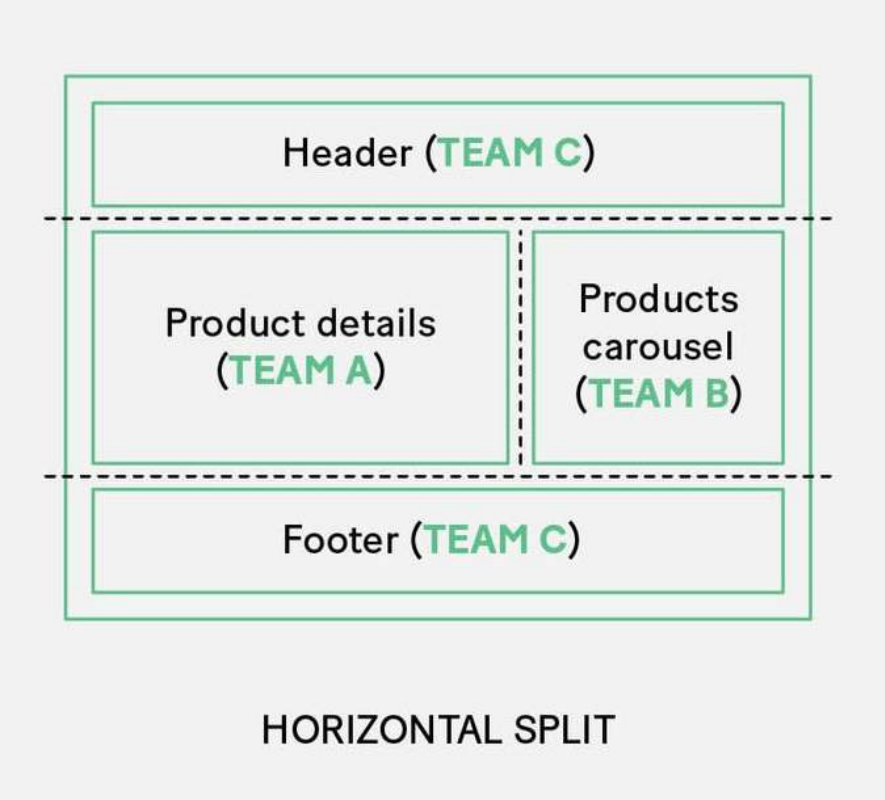
Vertical end to end programming



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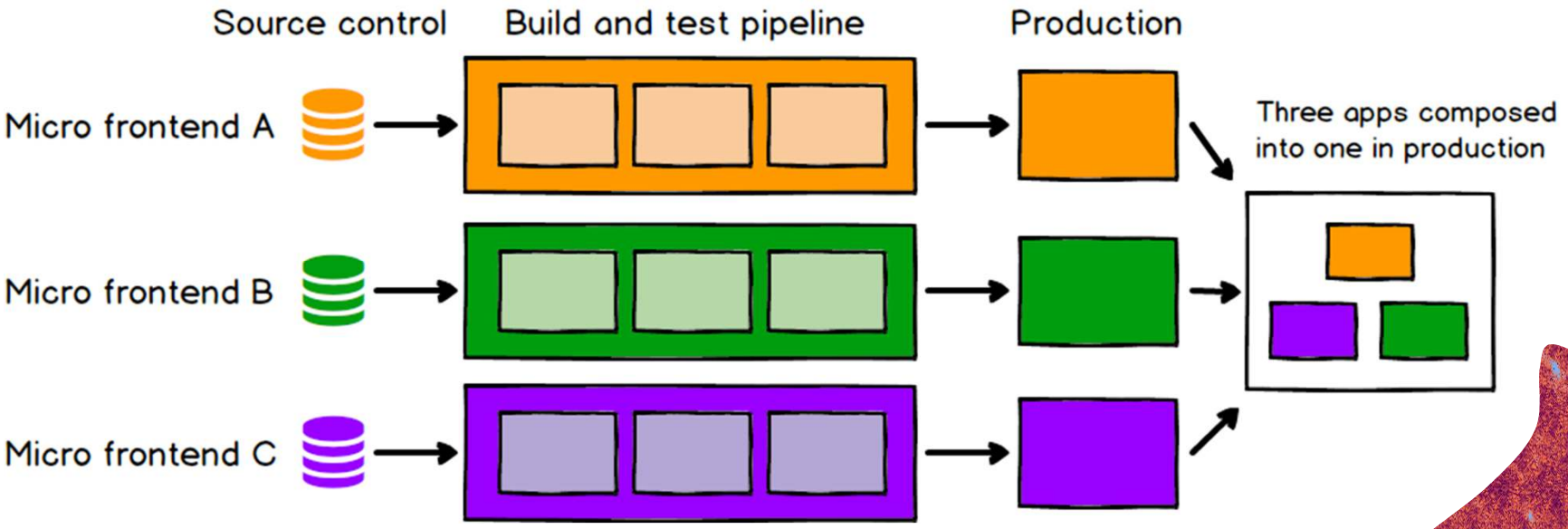
Enables independent CI/CD & support scale and reliability



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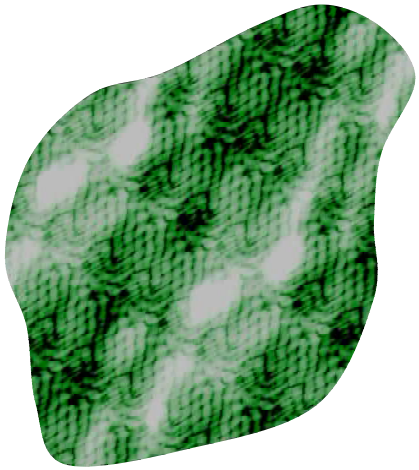
Micro-Frontends challenges

- Achieve a coherent user experience
- Complexity – who sees the big picture
- Lots of moving parts



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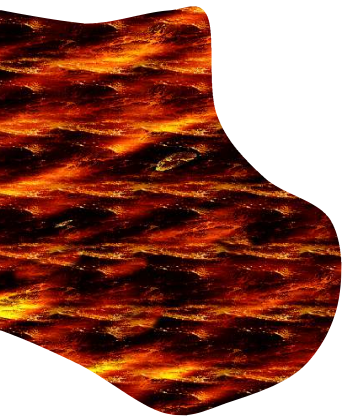
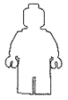
Micro Frontends Recommendations





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SASE Secure Access Service Edge– below the surface

stki.info Moshav Bnei Zion P.O.Box 151, 60910 Israel Tel. 972-9-7907000 Fax. 972-9-7442444

Secure Access Service Edge- SASE שירותי

המהפכה שבדרך

תקציר מנהלים

כחלק מתפיסת ה- Zero Trust שירותי ה- Secure Access Service Edge- SASE הנם שירותים עננים חדשניים שישנו חלקים מרכזיים בתפיסת אבטחת המידע של ארגונים קטנים כגדולים בעיקר באופן החיבור של התקני קצה (מחשבים וטלפונים) למשאבי הארגון – מה שהיה

Below the surface

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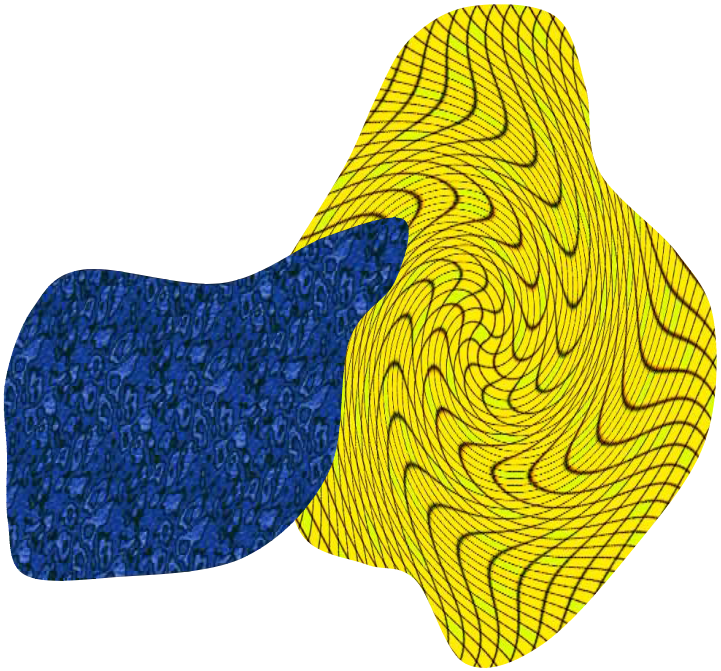
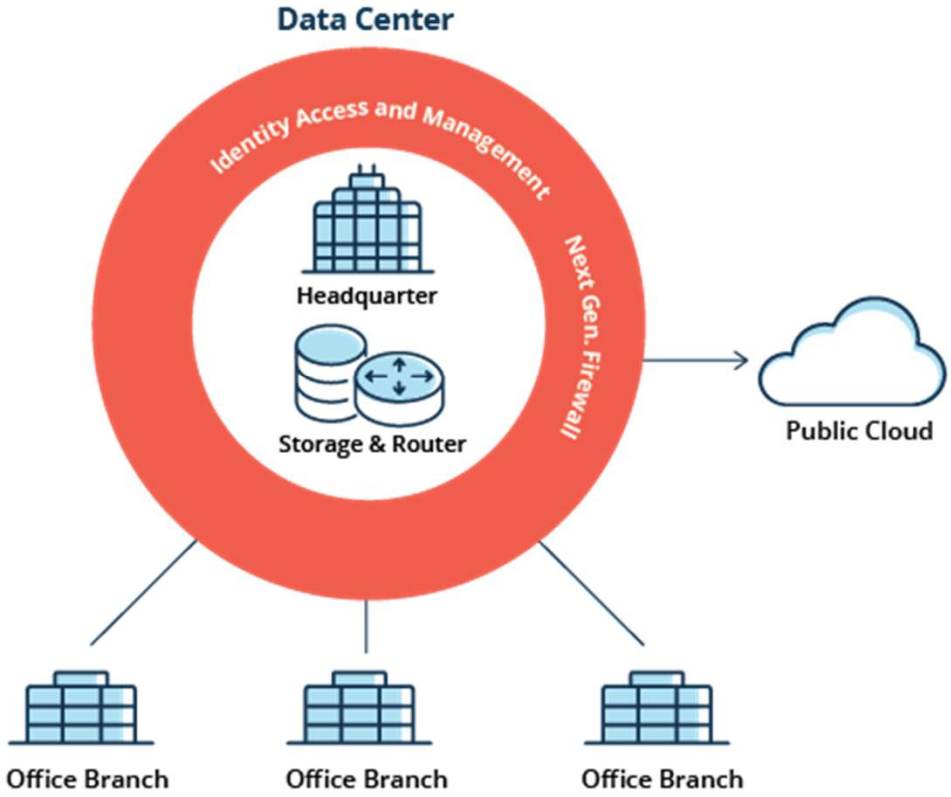
Before:





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Now: Everything is within the internet

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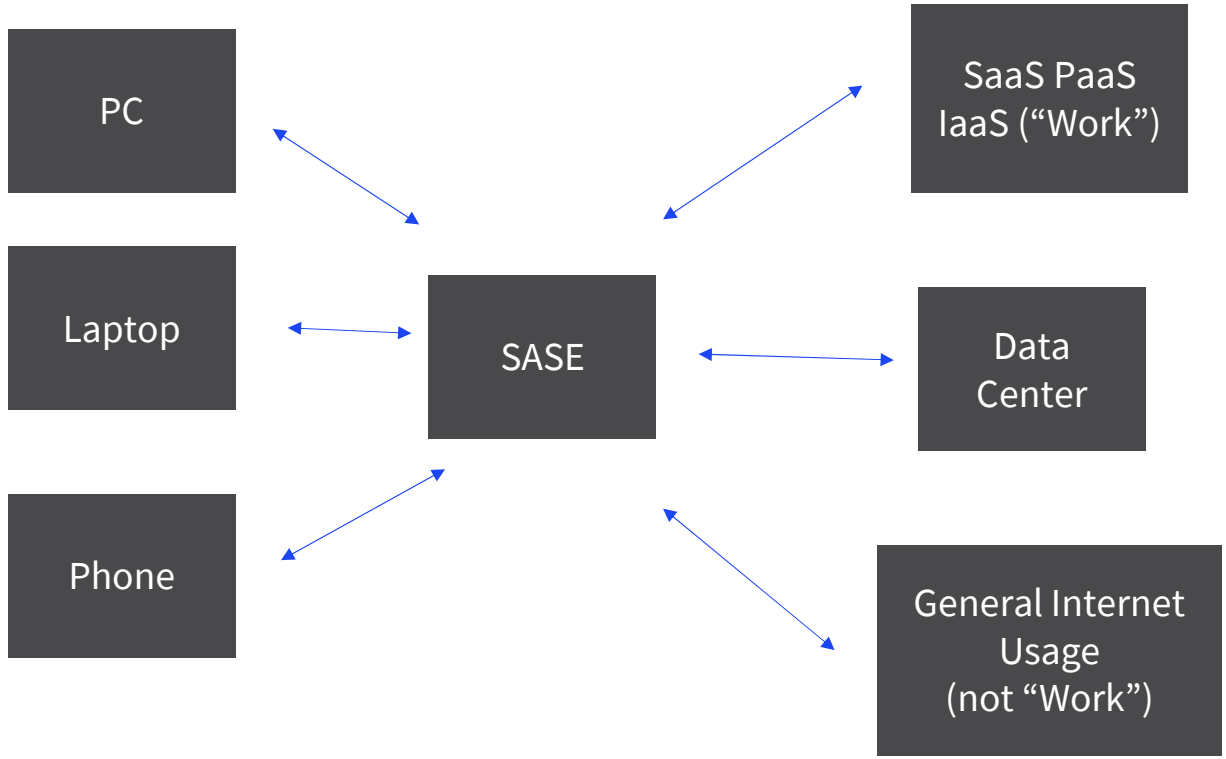
SASE basics – a “VPN as a Service”

- VPN as a Service:
  - User is authenticated,
  - Device is scanned and approved
  - VPN to DC
  - SSO to cloud
- All Traffic is director to the SASE provider
- More services



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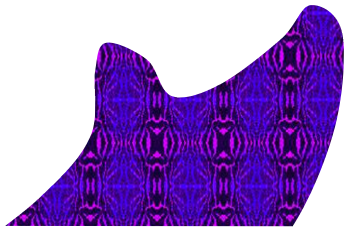

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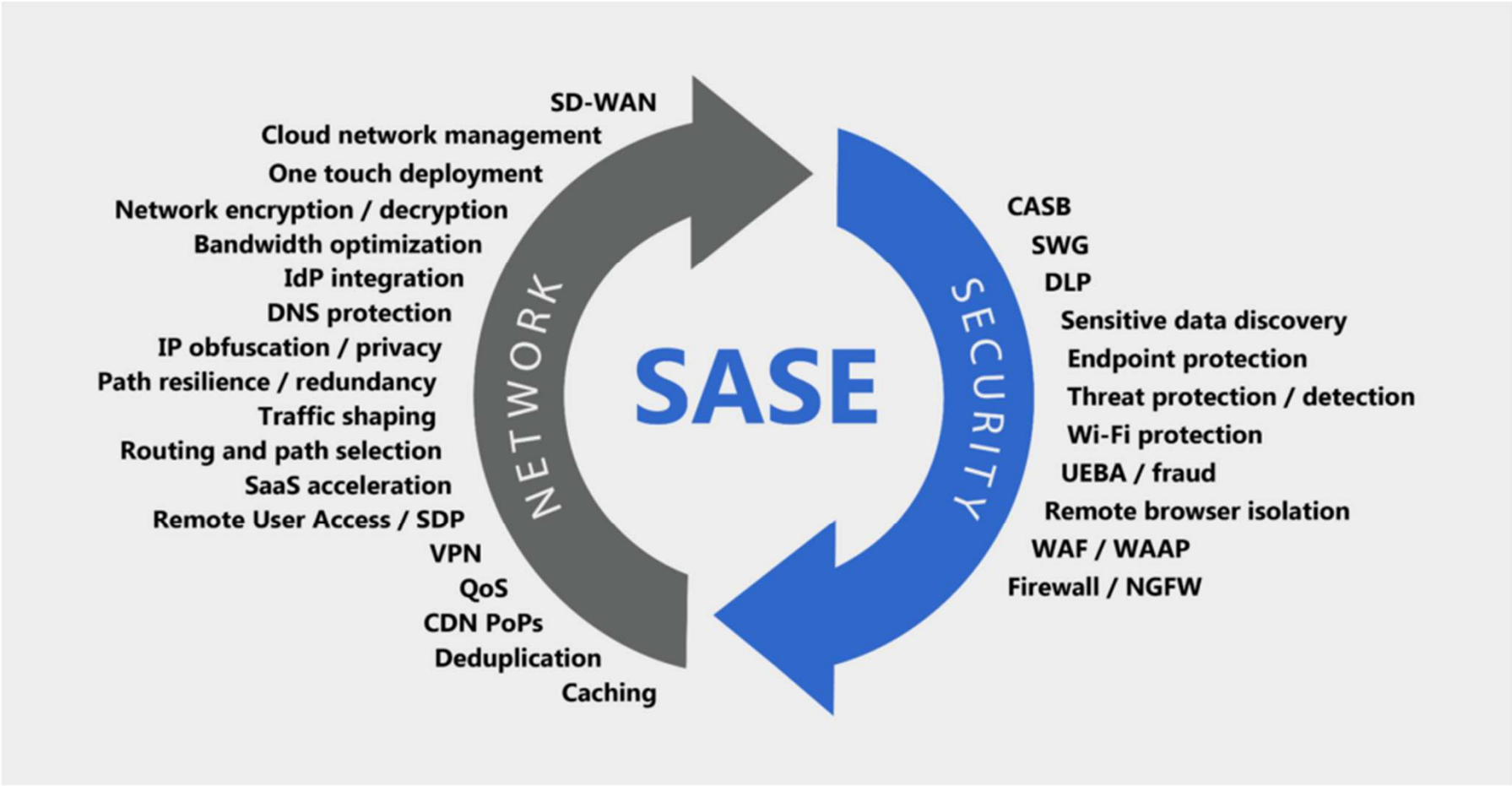
SASE potential functionality



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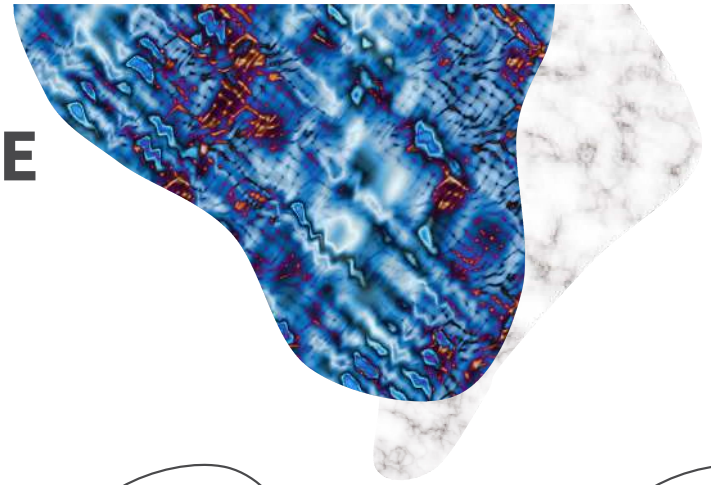
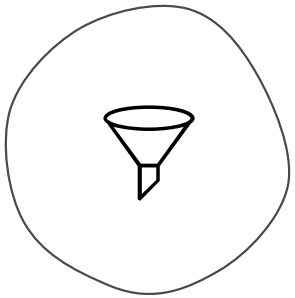
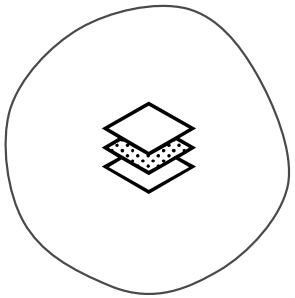
How does the SASE provide functionality?





Owns the technology

The SASE provider has the technology as a separate product

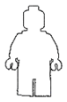


Implements Open Source

The SASE provider is using open source solution for providing the capability

Partner with vendor

The SASE provider partners – OEMing the functionality from another vendor



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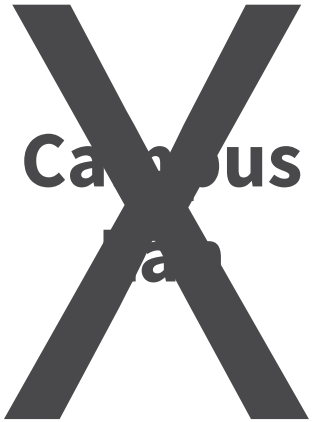
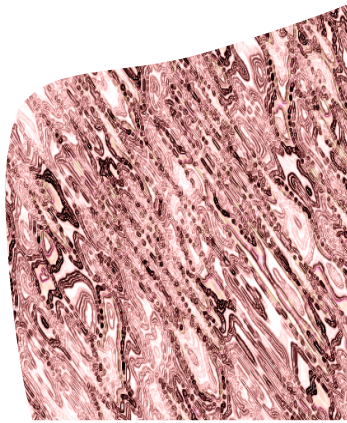
SASE implications – In your campus or branch:



Employee

Employee

Guest



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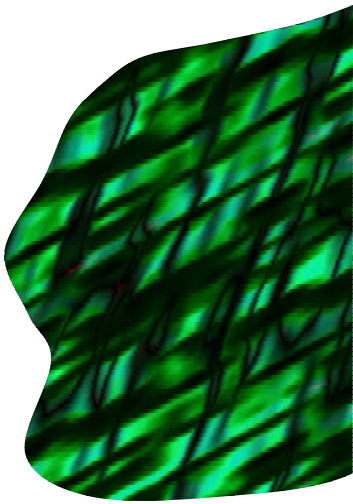
Cyber products CISO must buy and maintain

Before SASE - about 30-40 products

About 10 products
SASE provides lot of functionality



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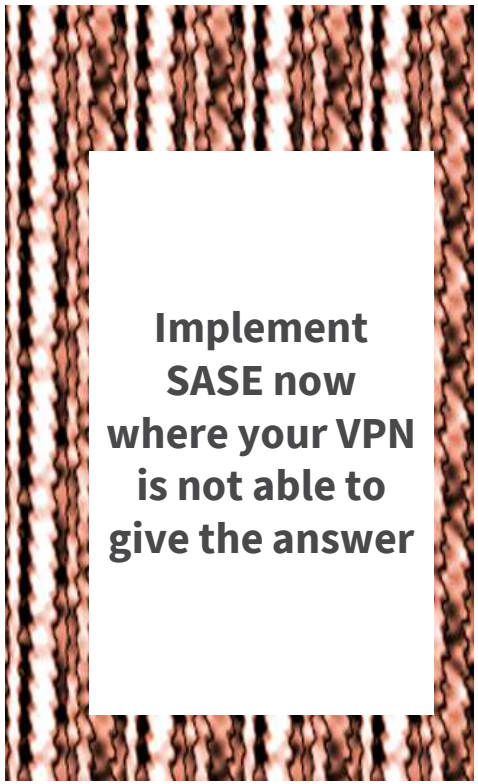
SASE Recommendations



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Storage and Backup as security tools– below the surface

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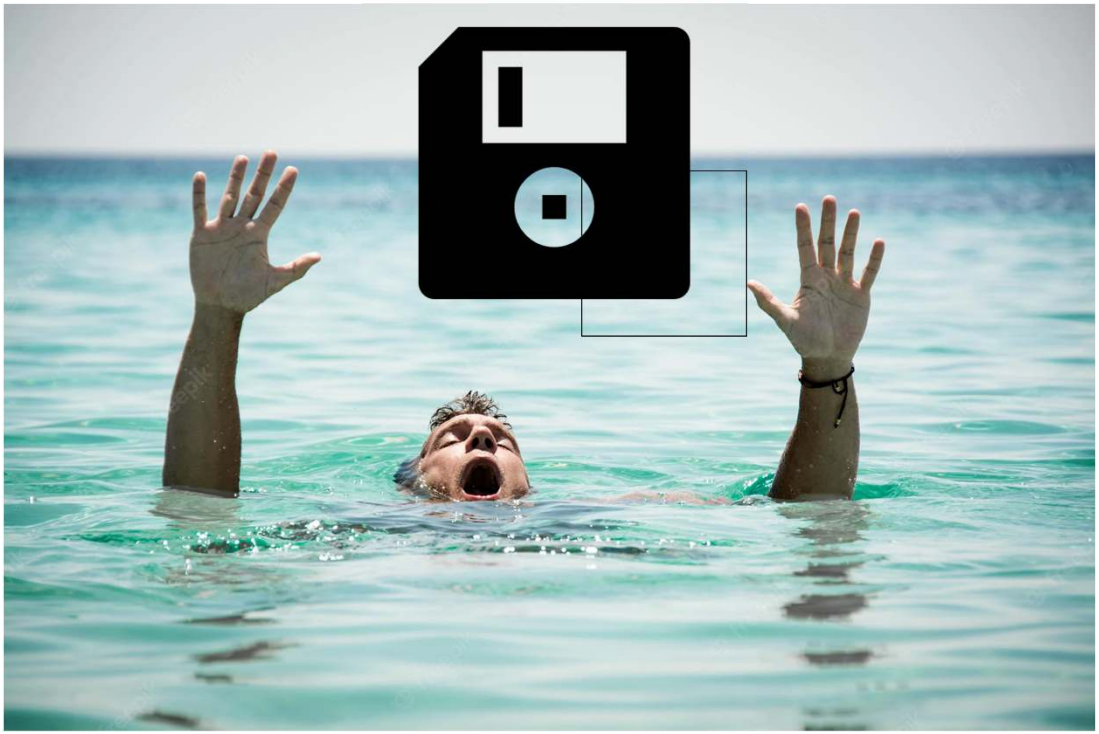
The final frontier before ransomware extinction



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Endless race

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Anomaly detection

01 **Encryption**

Files are being encrypted (before there were not encrypted)

02 **Changed content**

User is changing content of lots of files

03 **Name**

Name or suffix of many files are changed

04 **Volumes**

User is locking volumes

05 **Delete**

User is deleting a lot of files

06 **Attributes**

User is changing attributers of many files

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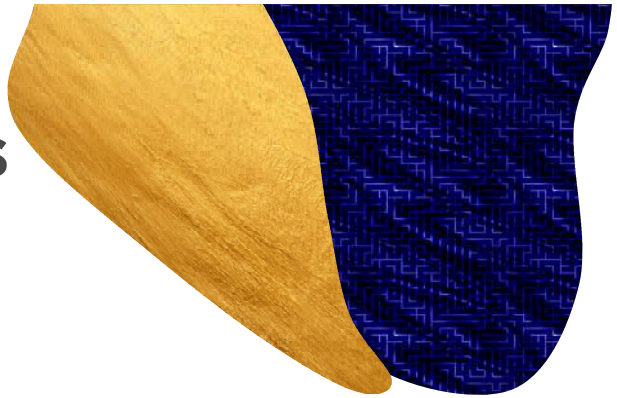
Anomaly detection actions



Stop the operation of the specific user

01

Snapshot

Takes a snapshot of the original environment

Stop

02

03

Alert

Alert both the SOC and the storage team

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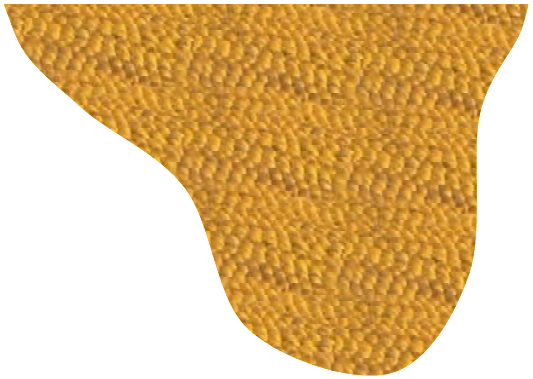
More security features in backup & recovery tools



Proprietary

User proprietary file system and even OS of the appliance

Admin Identification

Use admin and user identification to the storage / backup systems that are not part of the general (AD) identification

Read Only

Read Only file system

Immutability

Not able to reduce # of backups after the initial decision (not directly(

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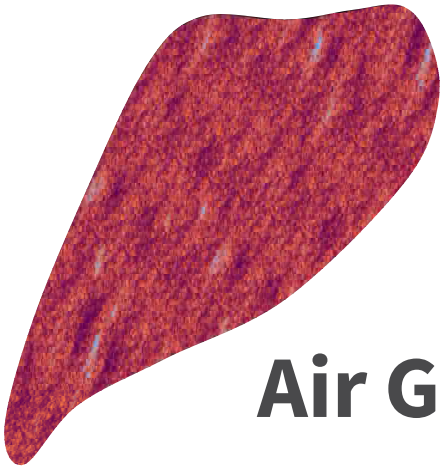
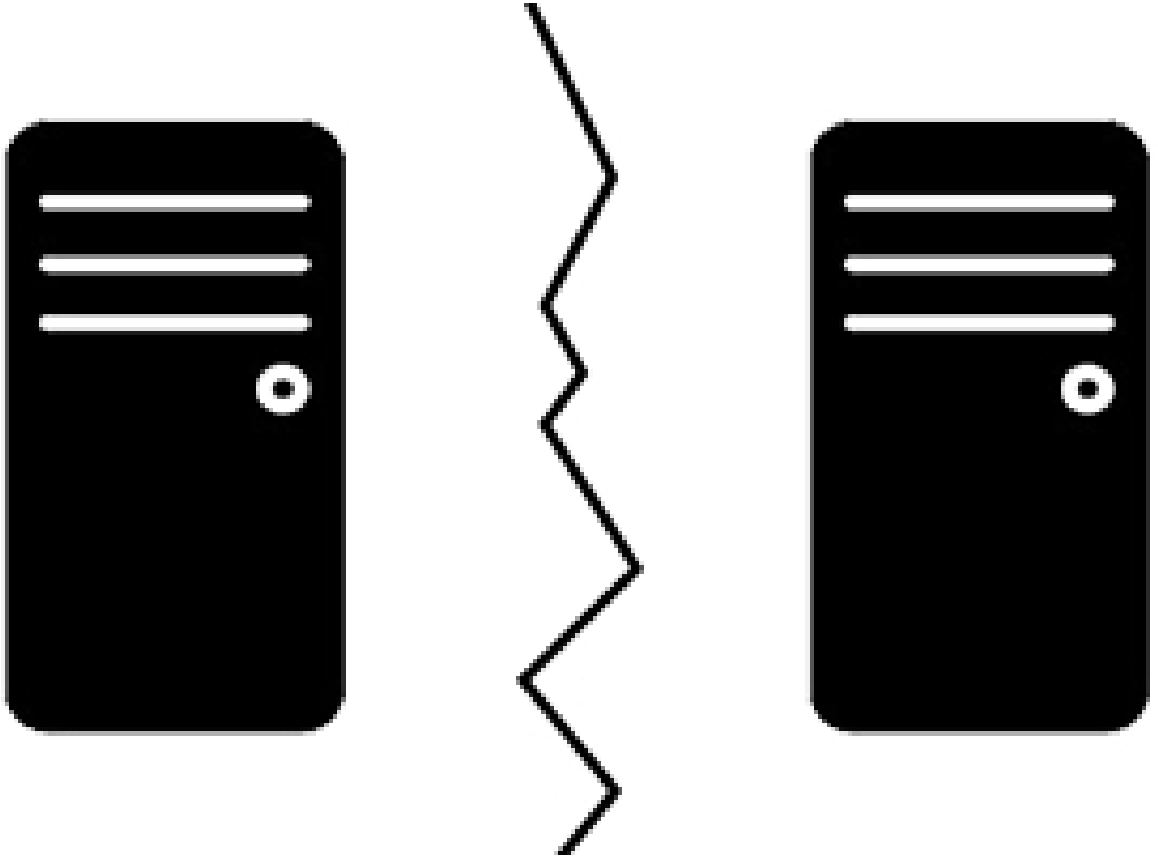
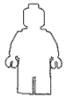


Air Gap

The ransom backup system is not part of the general DC network





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Never Say Never

It can happen to every vendor

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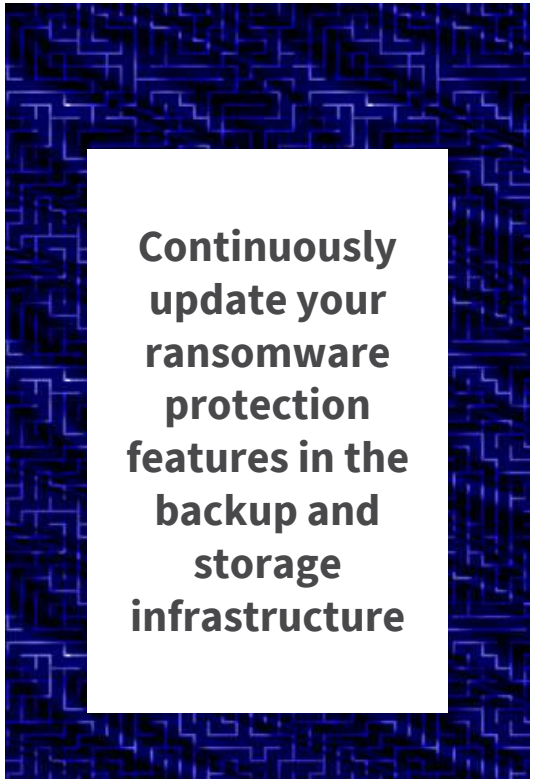
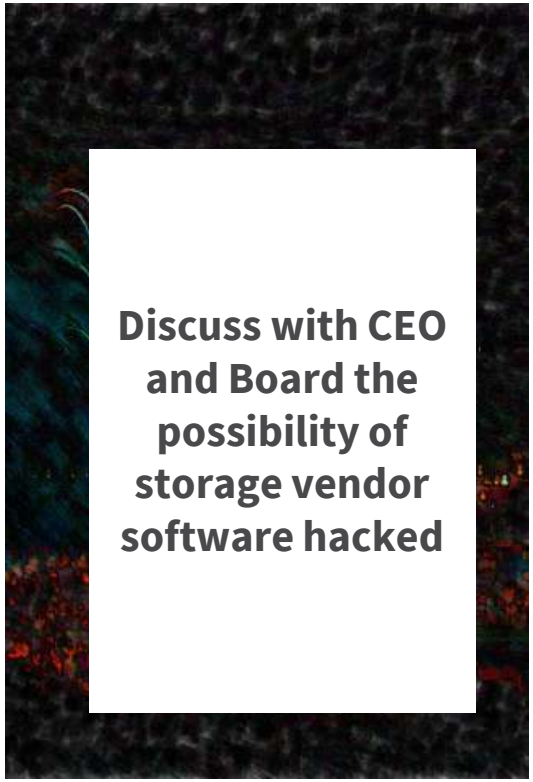
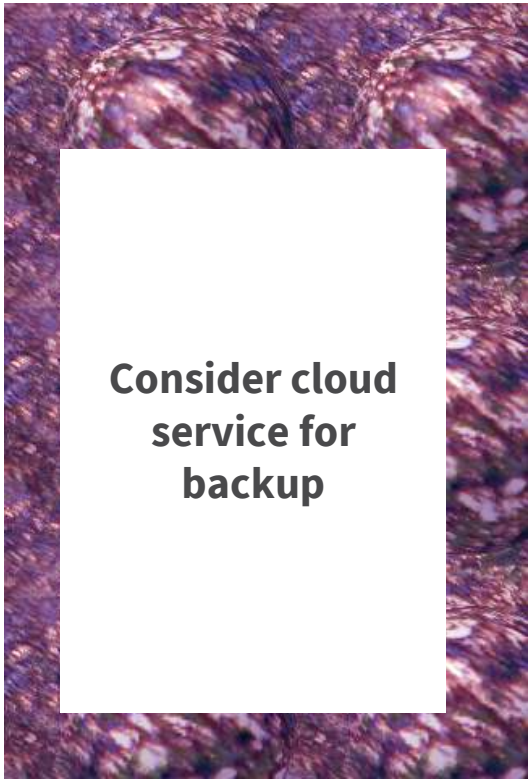
Storage and Backup Recommendations







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Thank you & Good Bye
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