



**CLAVISTER®**  
CONNECT • PROTECT



**Cloud Security in Telecom Networks**  
John Vestberg, President and CEO

# Clavister is...



...a provider of network security products  
to tier-1 clients across the globe

**180 employees**  
**SEK 1b** in revenues to date  
**+18 000** active contracts  
Customers in **+150** countries  
**20** years of development

Founded in **1997** as an IT  
consultant in Örnsköldsvik  
Sweden

Developed security  
products since **1998**

Started telecommunications  
initiative in **2007** to meet  
security needs for next  
generation of networks

Listed on NASDAQ  
First North **2014**

CLAV SS

Acquisition of  
PhenixID **2016**



# Verticals



Education & Public  
Sector



Retail & Distributed  
offices



Critical  
Infrastructure



Industrial IoT &  
Transportation



Communication  
Service Providers

# Channel



MSSP



System Integrator



OEM



## NEWS

**T-Mobile  
arverted  
significantly  
stronger  
DDOS  
attacks  
last year**

## CYBERSPACE

**WannaCry  
a wake-up  
even for  
data giants  
such as  
Telefónica**

THE DAILY NEWS

**Portugal  
Telecom  
says hit by  
CYBER  
ATTACK**

THE DAILY NEWS

newWeekend  
**CHARLIE**ENFIN UNE A  
QUI NOUS RIL'histoire de la démission  
de Ferrand • Trois min  
**Le C  
onch****Le Monde**

Herald Tribune

Frankfurter Allgemeine

EL PAÍS

SAMSDAG 24 JUNI 2017

**Bild**EL GIGANTE  
OPERA  
PRIMERA  
24 JUNI  
2017

Süddeutsche Zeitung

AN WOCHESTAG



The New York Times



Herald Tribune

THE GIGANTE  
OPERA  
PRIMERA  
24 JUNI  
2017



# Cybercrime's **negative impact...**

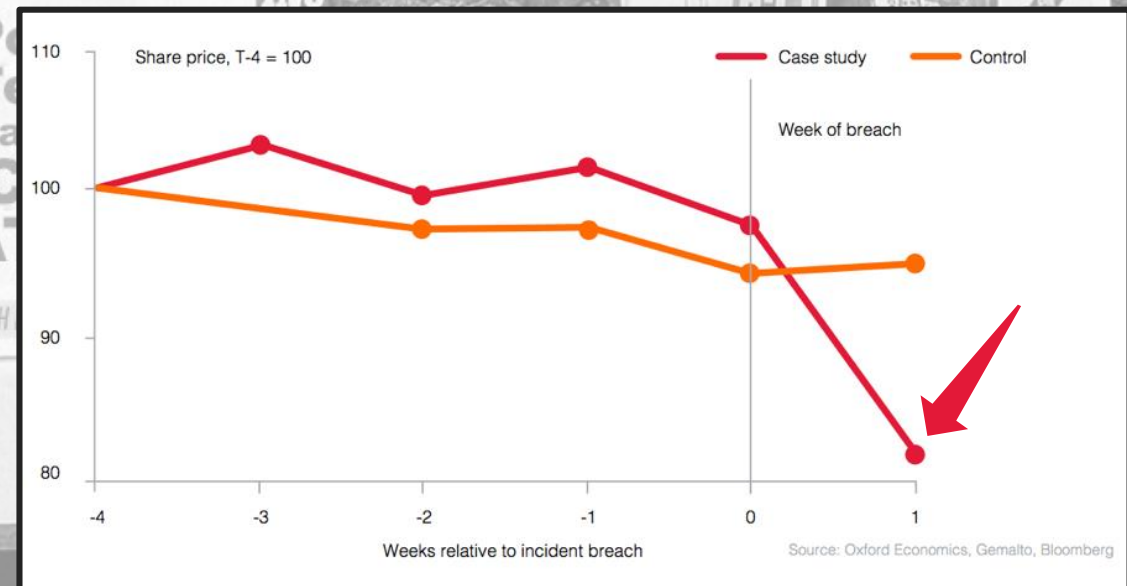
...on the **brand value** and  
**share price** can be  
**devastating**

NEWS

**T-Mobile  
arverted  
significantly  
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CYBERSPACE

**WannaCry  
a wake-up  
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data giants  
such as  
Telefónica**







**KEEP  
GATE  
CLOSED**



# CLAVISTER® – Leading virtualized security



**Our mission is  
to secure  
business  
continuity and  
protect brand  
integrity.**

# The road to 5G....



**vEPC**

**NGC**

**MEC**



vEPC

# Virtualization rollout is **a reality**

“

Five years ago virtualization was just  
a dream –

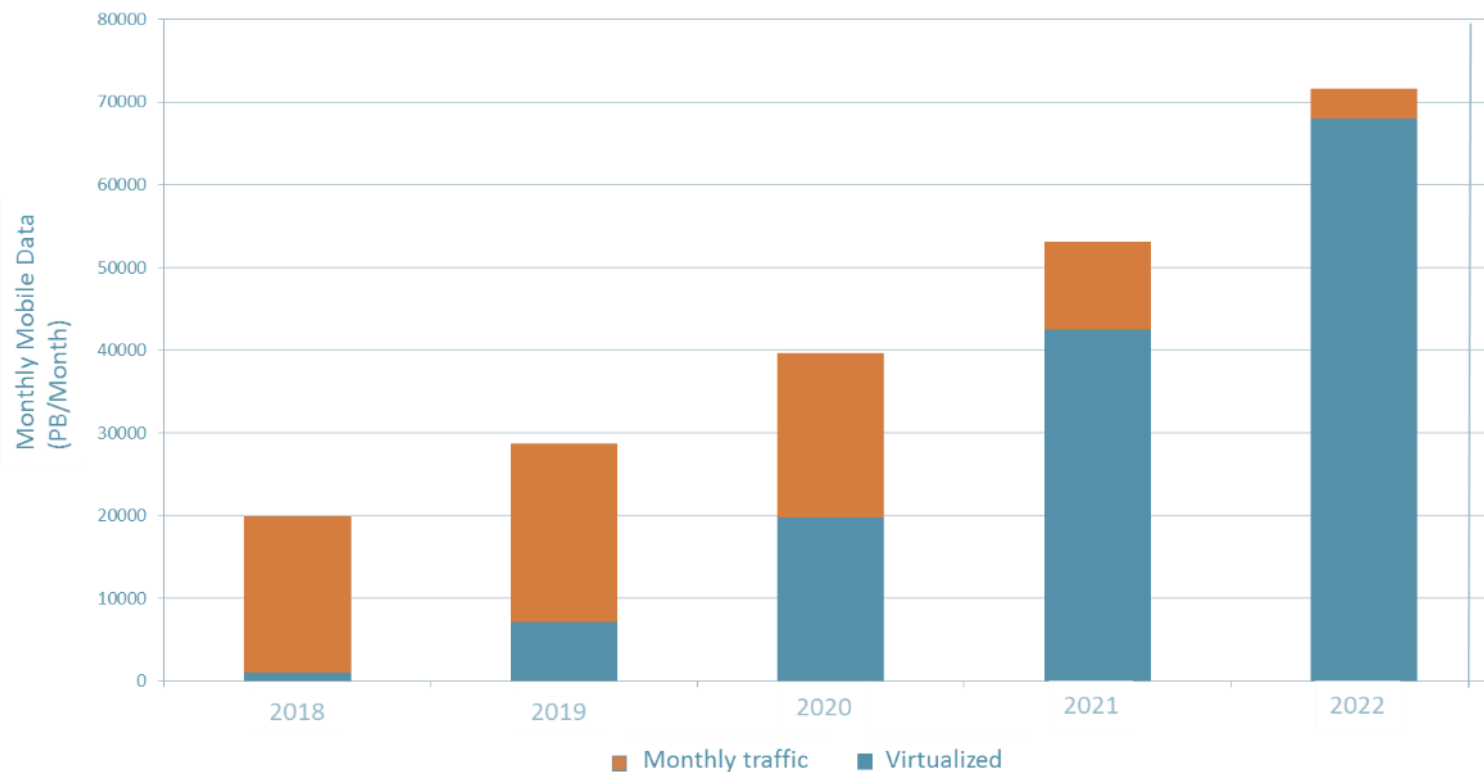
now it's a fact ”

- Telefónica's CTO Enrique Blanco Feb -18

“

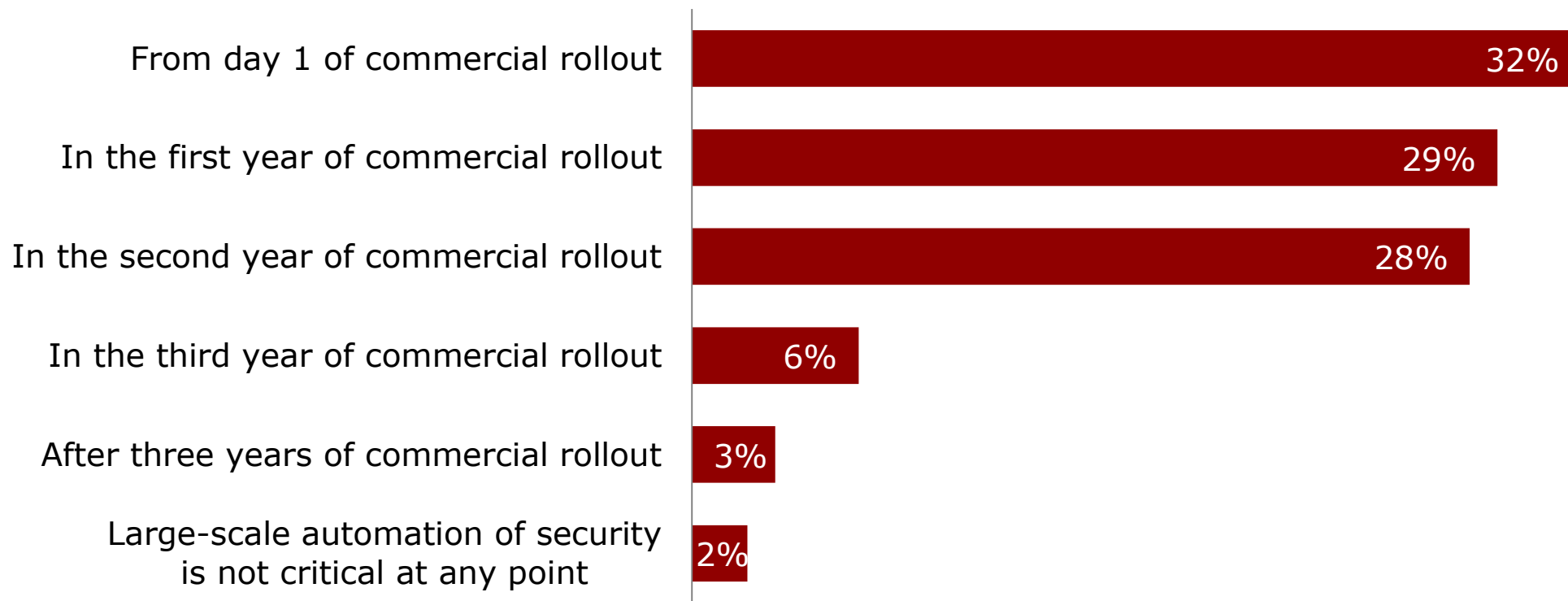
Virtualization will enable it to  
reduce \$10B in  
costs ”

- Verizon CEO Lowell McAdam Sep -17





# When does NFV/SDN Security become critical?



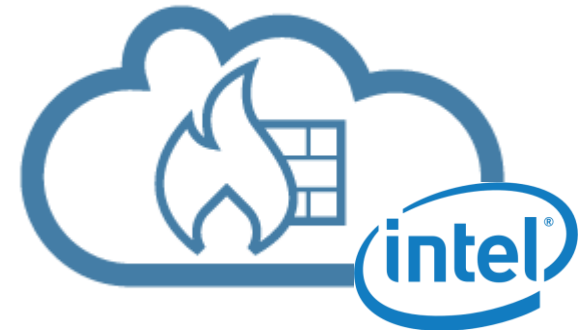
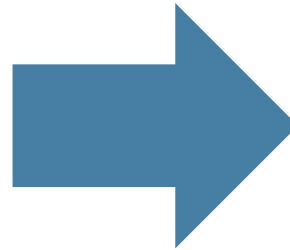
At what point in your company's commercial rollout of virtualized offerings using NFV/SDN/cloud technologies does large-scale automation of security become critical?

Source: Heavy Reading Security Perception Study 4Q17 (N=100)



vEPC

# Virtualise Security

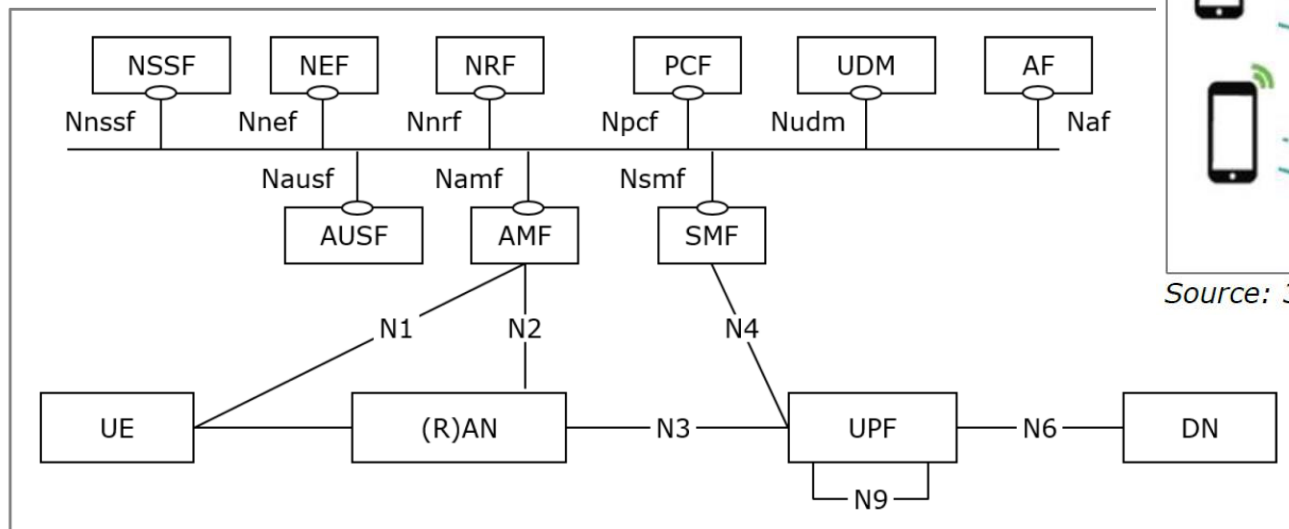




NGC

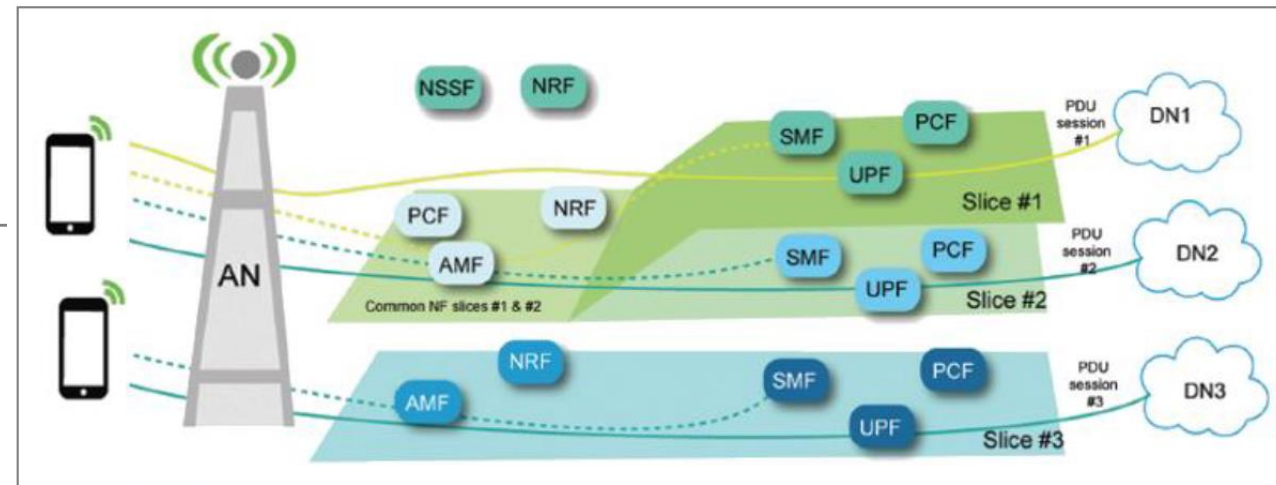
# Next Generation Core

## Services Based Architecture



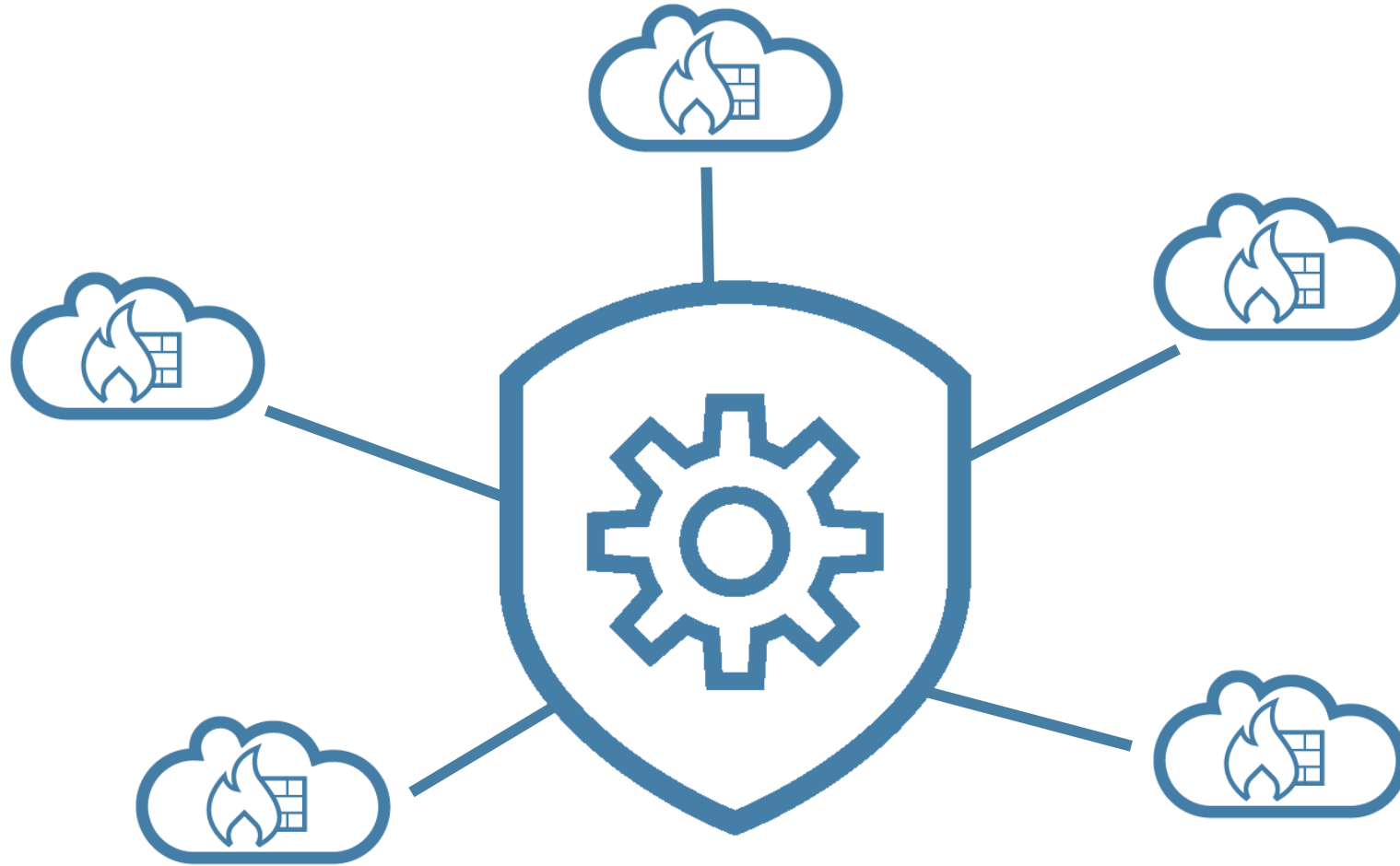
Source: 3GPP TS23.501 V15.2.0 (2018-06)

## Network Slicing



Source: 3GPP

# The emergence of the Services-Based Firewall





NGC

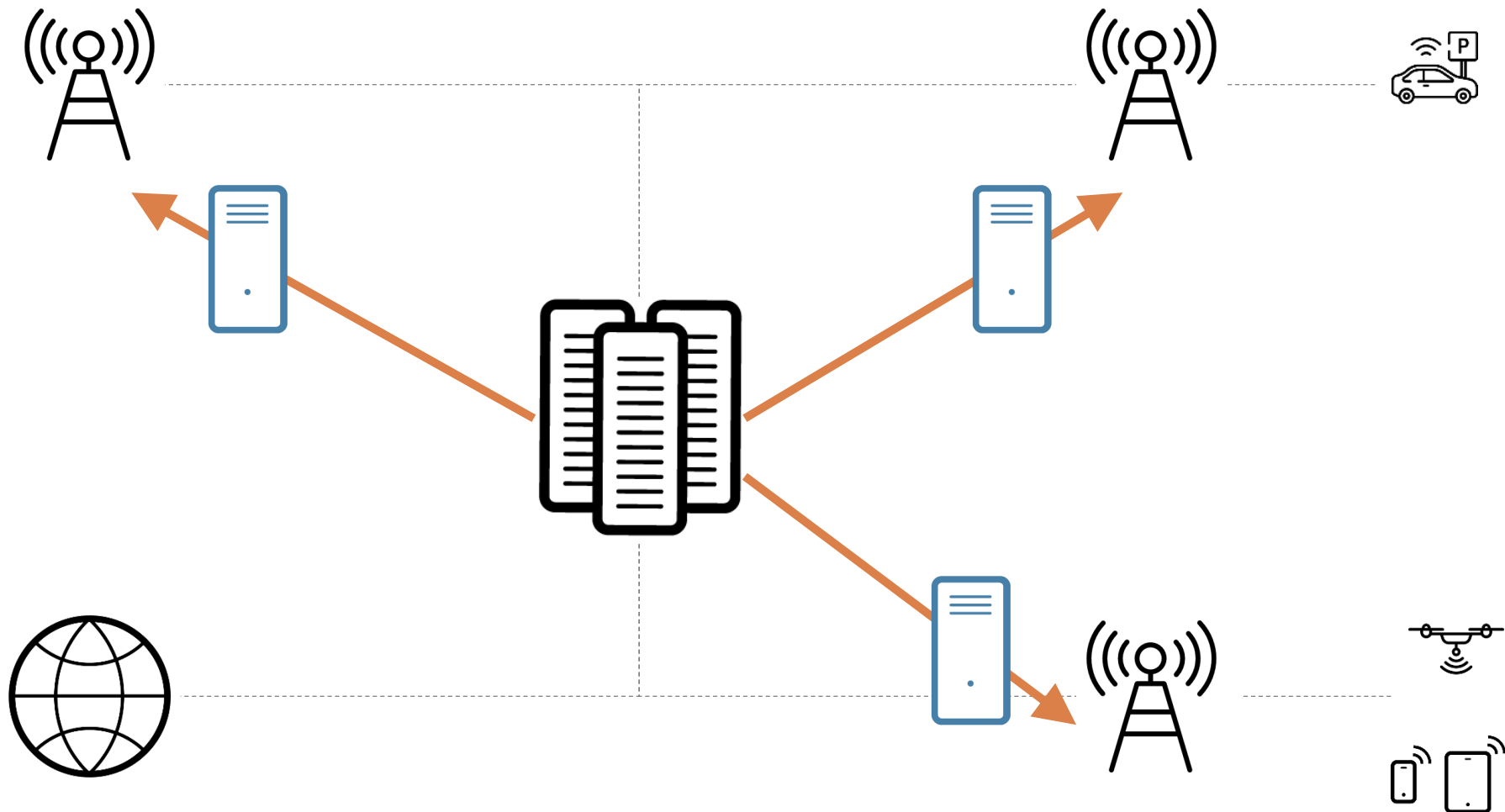
## NGFW vs. SFW

Attribute	NGFW	SFW
Virtualized firewall	☐	☐
DPI	☐	☐
IDS	☐	☐
IPSec	☐	☐
Automated security policy	✖	☐
Software configurable at the edge	✖	☐
Security analytics integration	Limited	☐
5G SBA architecture optimized	✖	☐
Effective 5G security slice enforcement	✖	☐
API exposure support	Limited	☐
Advanced control plane signaling validation	✖	☐
Orchestration of security VNFs at the edge	✖	☐
Identity-driven policy enforcement	Limited	☐

*Source: Heavy Reading*

MEC

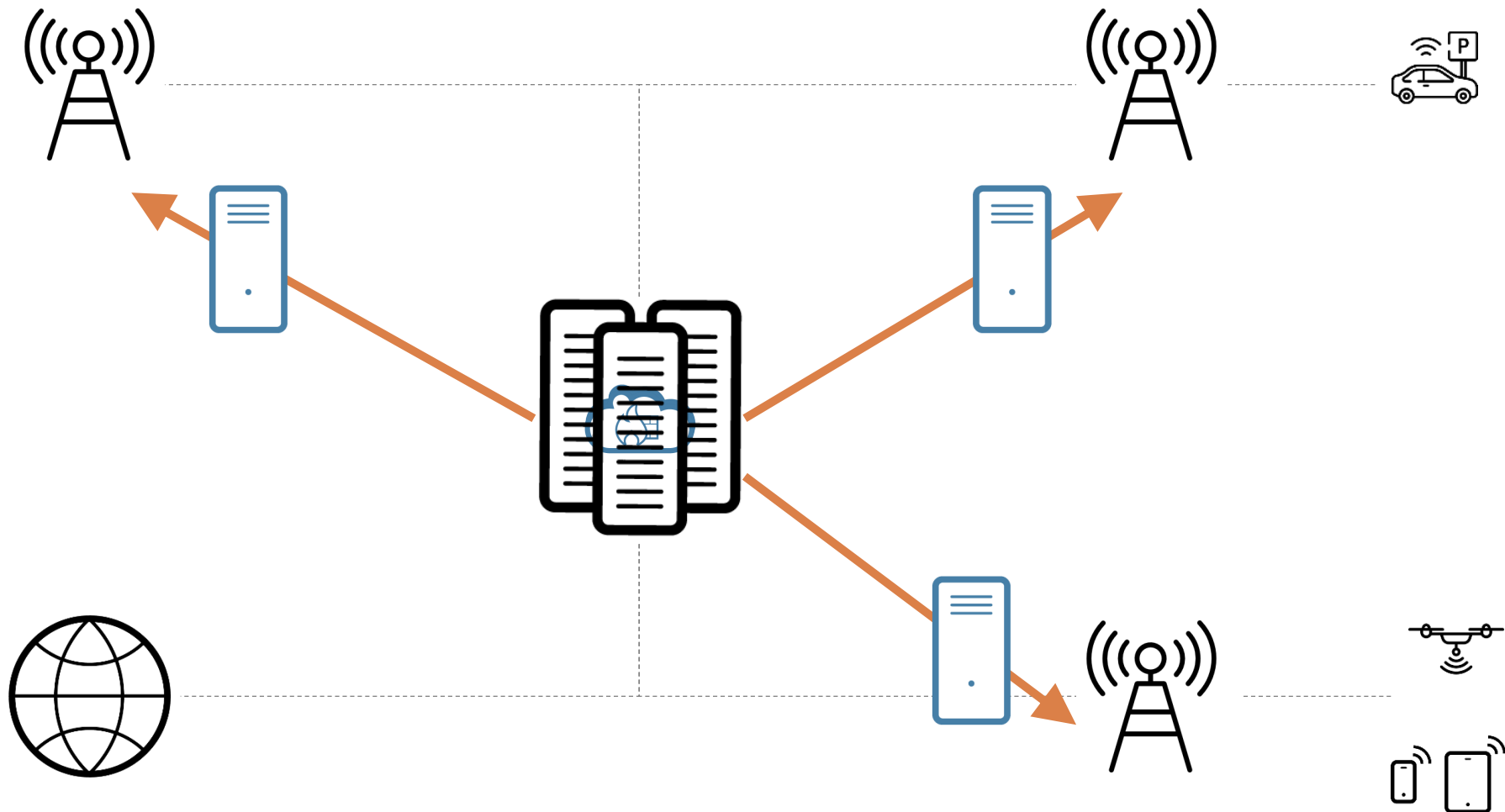
# Mobile Edge Computing





MEC

# Security must follow...



# The road to 5G....

## vEPC

Start virtualizing  
now!

## NGC

Services-based  
firewall meeting  
network slicing  
needs.

## MEC

Low latency in  
your edge  
security.



The background of the entire image is a photograph of the Golden Gate Bridge in San Francisco, taken during sunset. The bridge's iconic orange-red color is visible, and the sky is a mix of orange, pink, and purple. The bridge spans across the water, with hills and trees visible in the distance and foreground.

**CLAVISTER®**

Read the latest Heavy Reading white paper sponsored by Clavister:

# 5G Security VNFs

and the Emergence of the  
Services Based Firewall

Download your copy:  
<https://www.clavister.com/SBFW>

