

Pursuing hyperscale economics: What's the role of disaggregation and cloud native?

Webinar

9th September 2021

In partnership with:

DRIVENETS

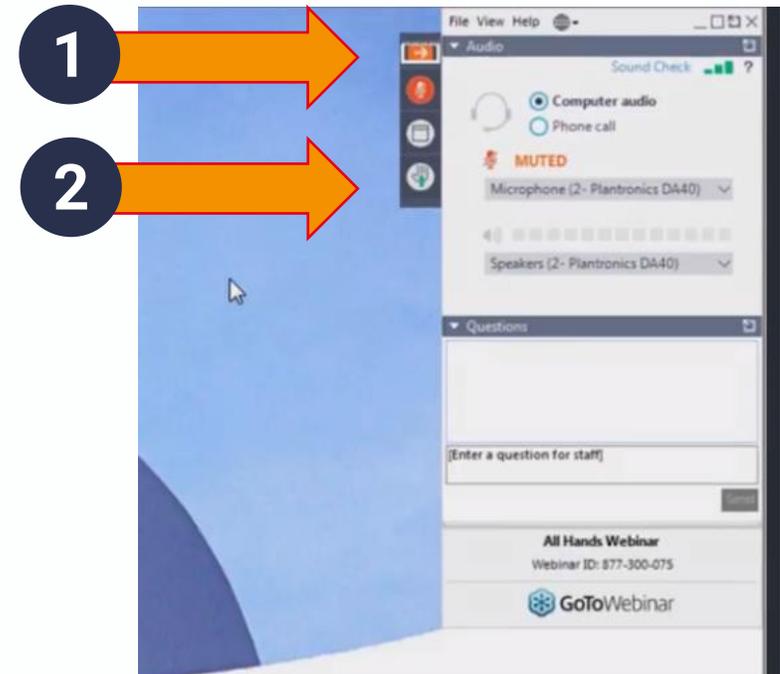
STL PARTNERS

Agenda

1	Introductions	16:00 – 16:05
2	Pursuing hyperscale economics: The role of disaggregation and cloud native	16:05 – 16:20
3	The right way to pursue hyperscale economics	16:20 – 16:30
4	Panel session and Q&A	16:30 – 17:00

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Our presenters and panellists



Phil Laidler
Managing Director,
Consulting
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Engineering
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Joe Baeumel
VP, Business Development
& Partner Strategy
KGPCo



Inbar Lasser-Raab
Chief Marketing
Officer
DriveNets

Agenda

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The pursuit of hyperscale economics

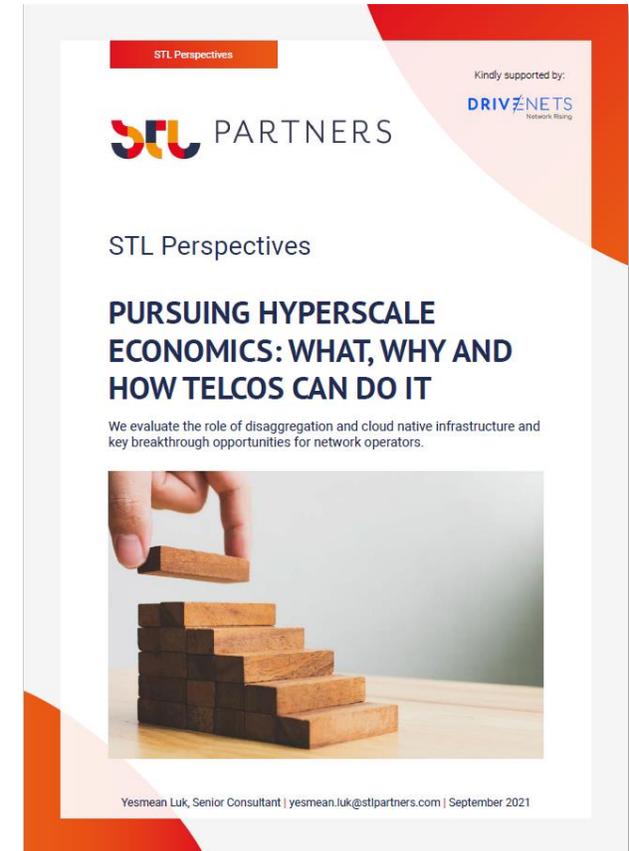
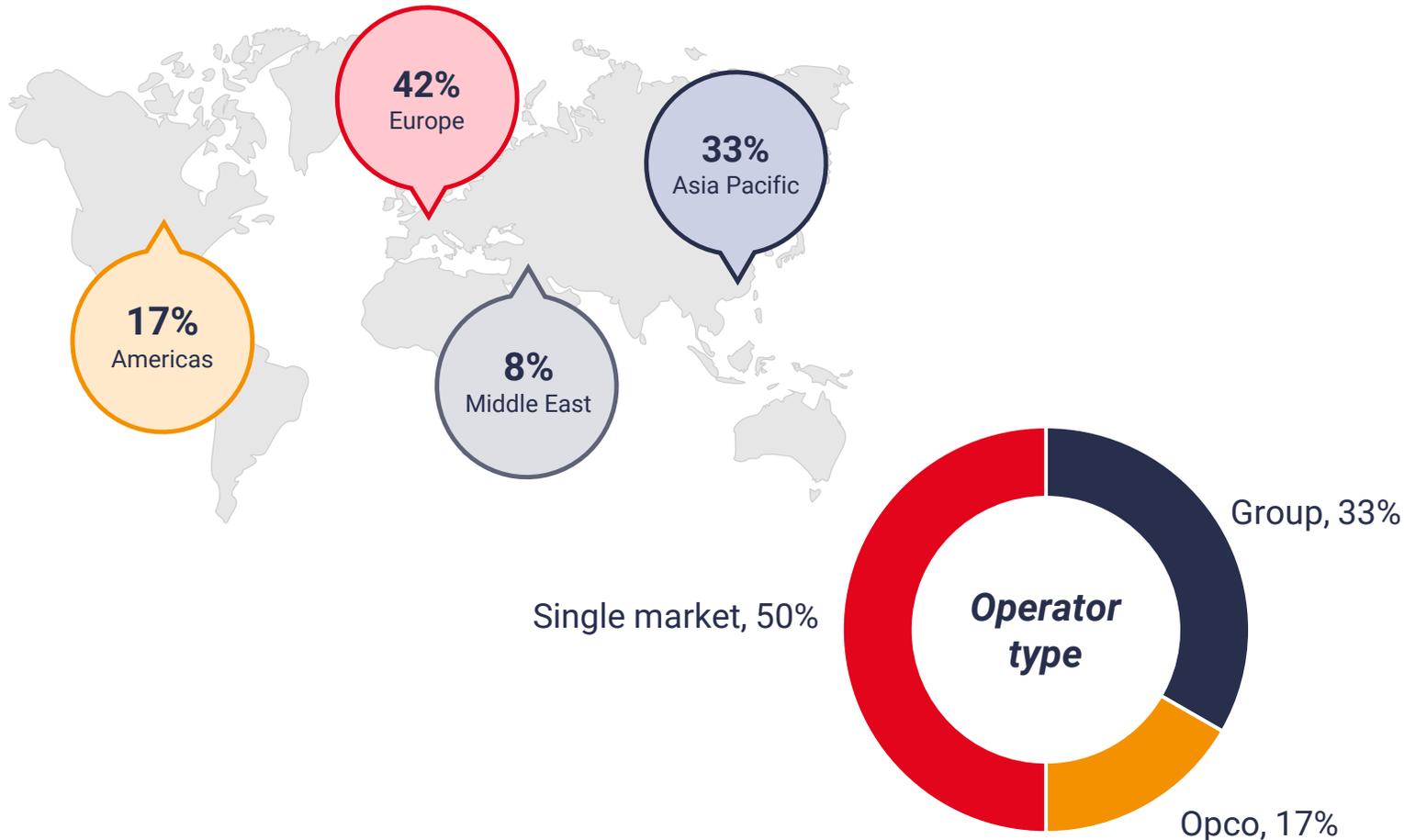
What does it mean and what is the role of disaggregation and cloud native?

Yesmean Luk, Senior Consultant & Telco Cloud Practice Lead

Miran Gilmore, Consultant

Our findings are based on a research programme with 14 senior executives from telcos operators globally...

Our research interviewees spanned across multiple regions and types...



...to understand how operators are pursuing hyperscale economics and the associated challenges

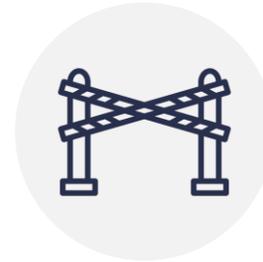
We highlight four key findings:



The concept of hyperscale economics resonates with telcos, but in slightly different ways



Disaggregation and cloud native change what's possible with hyperscale from a cost, capability *and* revenue perspective

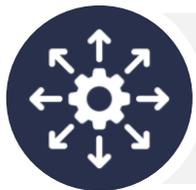
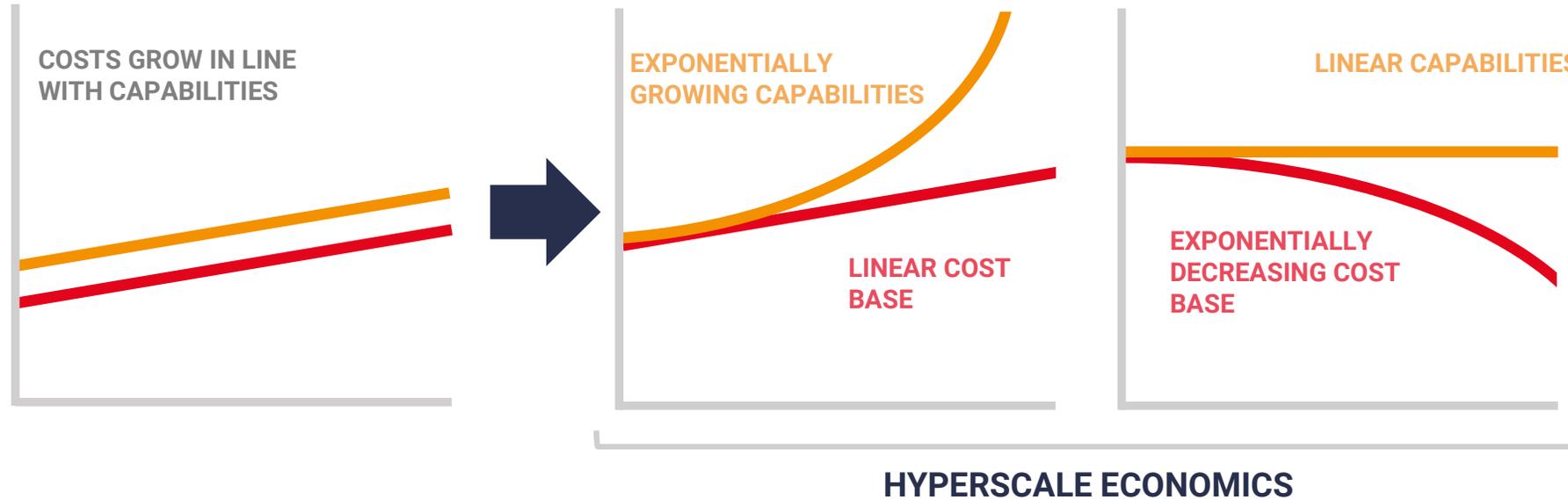


...but not all telcos think that hyperscale economics is applicable or achievable for them



Hyperscale economics should be seen as an ongoing pursuit and a means of realigning key stakeholders

Hyperscale economics is not about extreme scale: it is about detaching the cost base of the network from its capabilities



Optimal scalability

Infrastructure scales in an intelligent, cost-efficient manner



Flexibility and optionality

The need to be infrastructure- and vendor-agnostic



Faster innovation

More agile service development, quicker time to market



Resilience to shocks

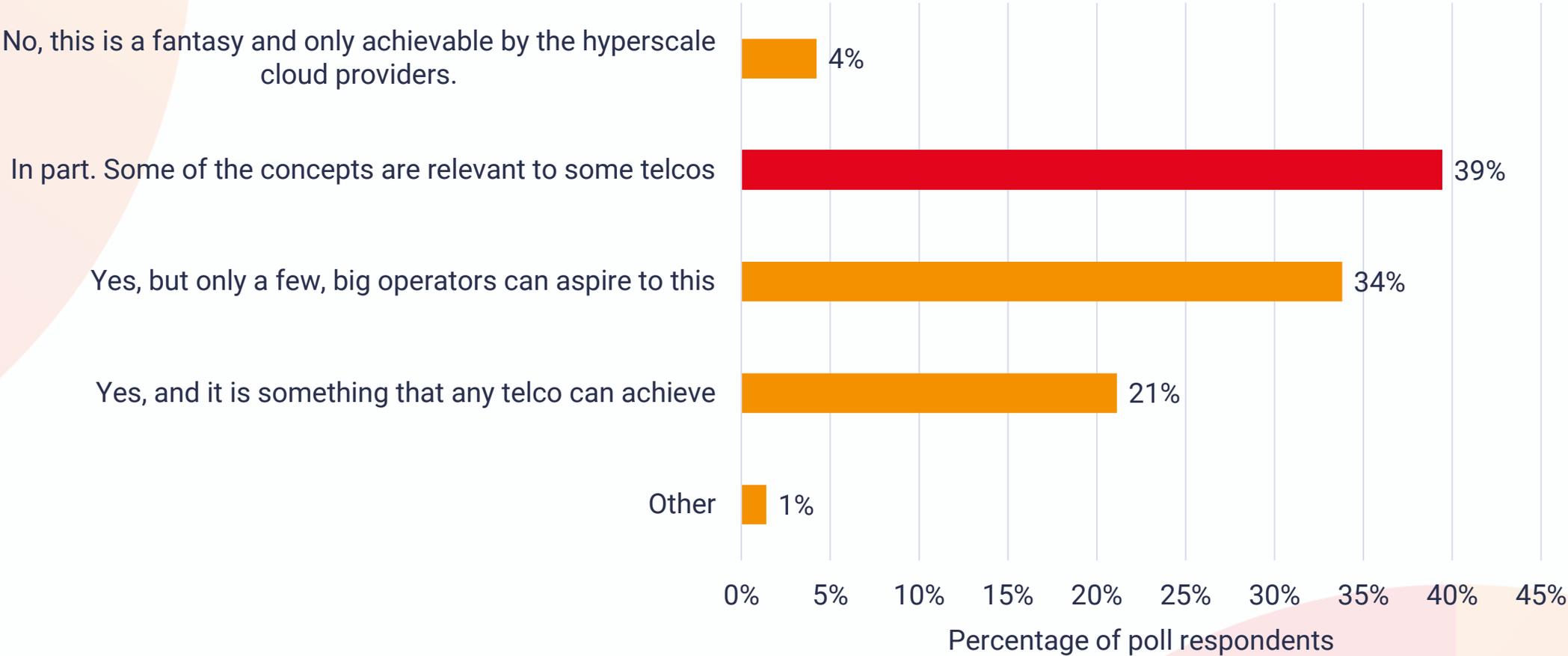
Minimising the potential blast points and associated impacts

“

It's not just about scale and agility, it's also about robustness, resilience, and the ability to sustain shocks better – that's what hyperscale is all about.

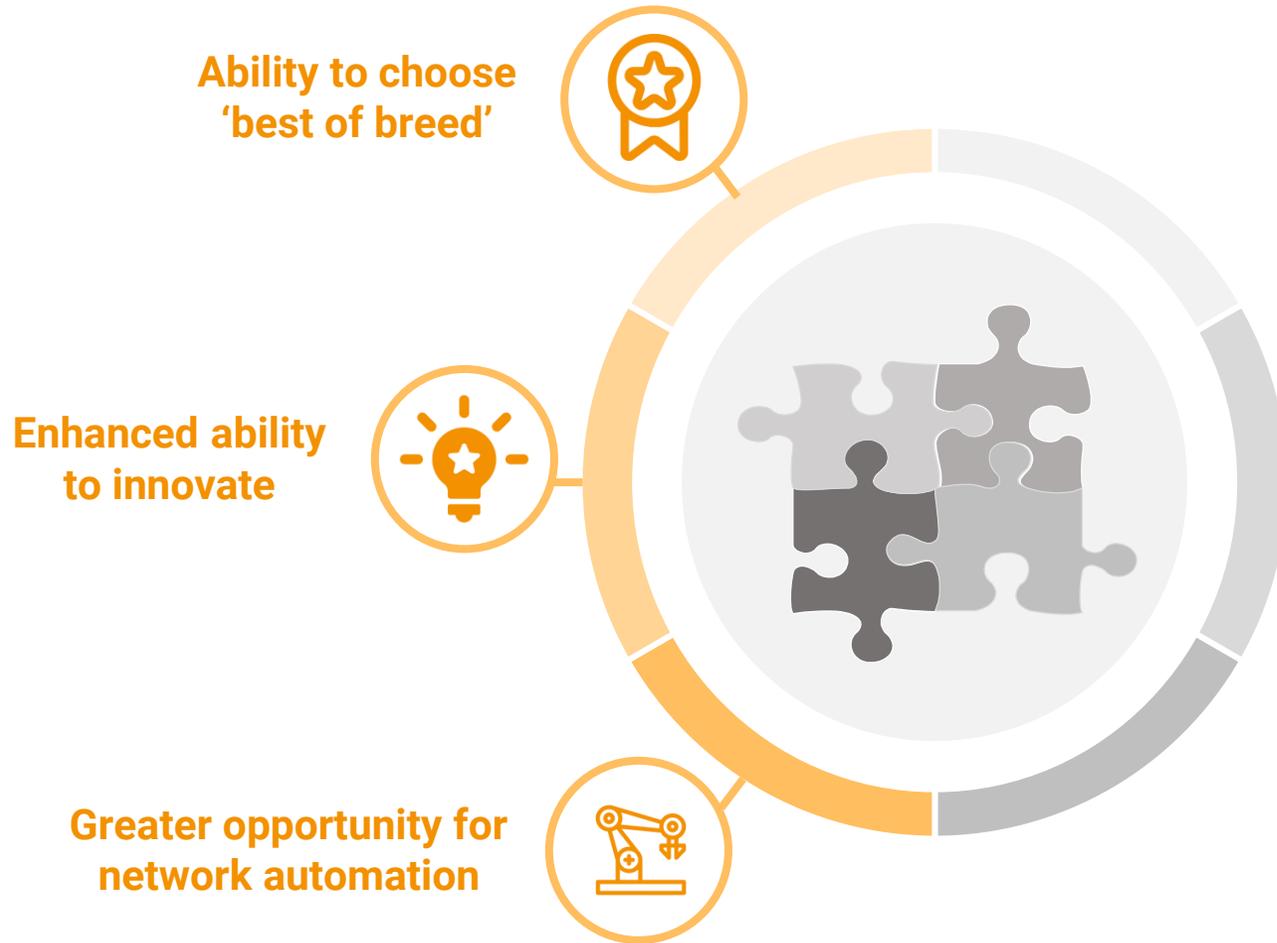
*Group executive, Product & Technology
Asia Pacific converged operator*

Audience poll: Do you think hyperscale economics is achievable by telecoms operators?



Source: STL Partners webinar, Sept 2021

Disaggregation and the move to cloud native play a key role in pursuing hyperscale economics...



“ Disaggregation takes away the power from the vendors and moves it back to the telcos.

*Cloud Technology Strategist
North American T1 operator*

“ You need to decouple each layer and be more vendor-agnostic, and it's that layered architecture that enables you to be cost effective, avoid lock-in, have that flexibility, scalability, and accelerate that beat rate of innovation.

*Group executive, Product & Technology
Asia Pacific converged operator*

“ It is also about giving operators choice of using the best in class automation tools and ability to automate the entire lifecycle. With the appliance-based approach, there was no agility or flexibility to move to a zero-touch... Disaggregation and cloud native allows you to automate much more.

*EVP, Network Strategy
Asia Pacific converged operator*

...but disaggregation can present operators with challenges

“ Culture and ways of working absolutely have to change to attain hyperscale economics.

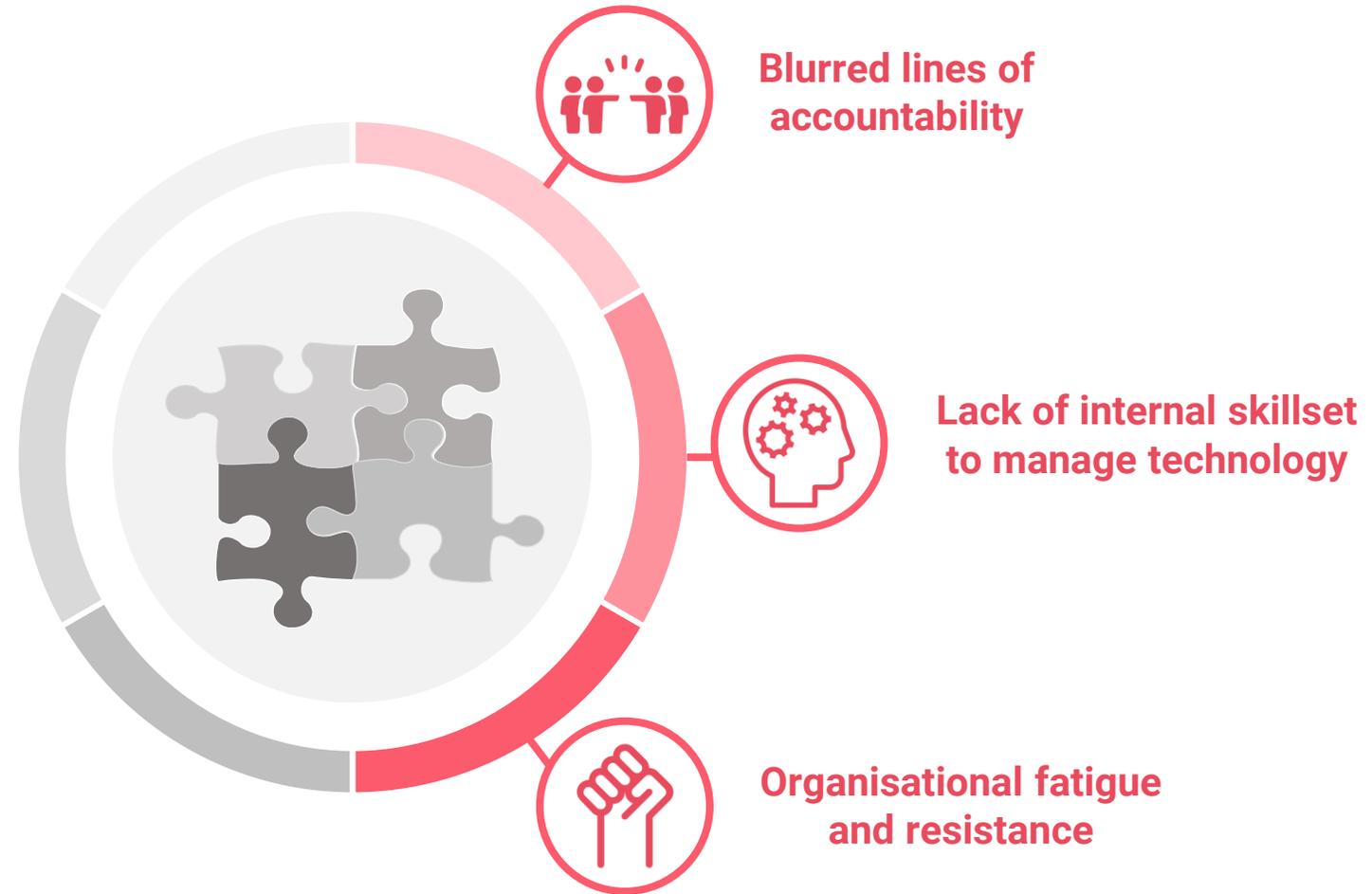
*VP Cloudified Production
European T1 operator*

“ The challenge of doing a microservices-based vendor selection is that both the SW and HW are getting split, have to integrate everything together and it's not clear who is accountable – the telco has to try identify which vendor isn't performing.

*EVP, Network Strategy
Asia Pacific converged operator*

“ The barriers for us are mainly skills, for example with CI/CD pipelines and the move to more frequent software updates. We've hit a few speed bumps on the way in moving to this new model, and need to be on our toes operationally but it's all new to us, so we don't know what we don't know.

*CTO
Asia Pacific converged operator*



Not all telcos think that hyperscale economics is applicable or realistically achievable for them



LEADING PIONEERS



AVID BELIEVERS



CAUTIOUS PRAGMATISTS



CONSTRAINED FOLLOWERS

ATTITUDE TOWARDS THE NEED FOR CONTINUOUS CHANGE

Change is the goal



“Continuous change is the goal and we embrace this as the new normal, including CI/CD pipelines, DevOps and agile practices. This should be part of what we want to move to in terms of the way we work”

Change is the challenge



“Continuous change is a challenge that we have to deal with, particularly from an operational perspective but we have to do it and will do it.”

“Change is a challenge given our lack of skills and culture/mindset so we have to rely on our partners to innovate”

THOUGHTS ON APPLICABILITY OF HYPERSCALE ECONOMICS

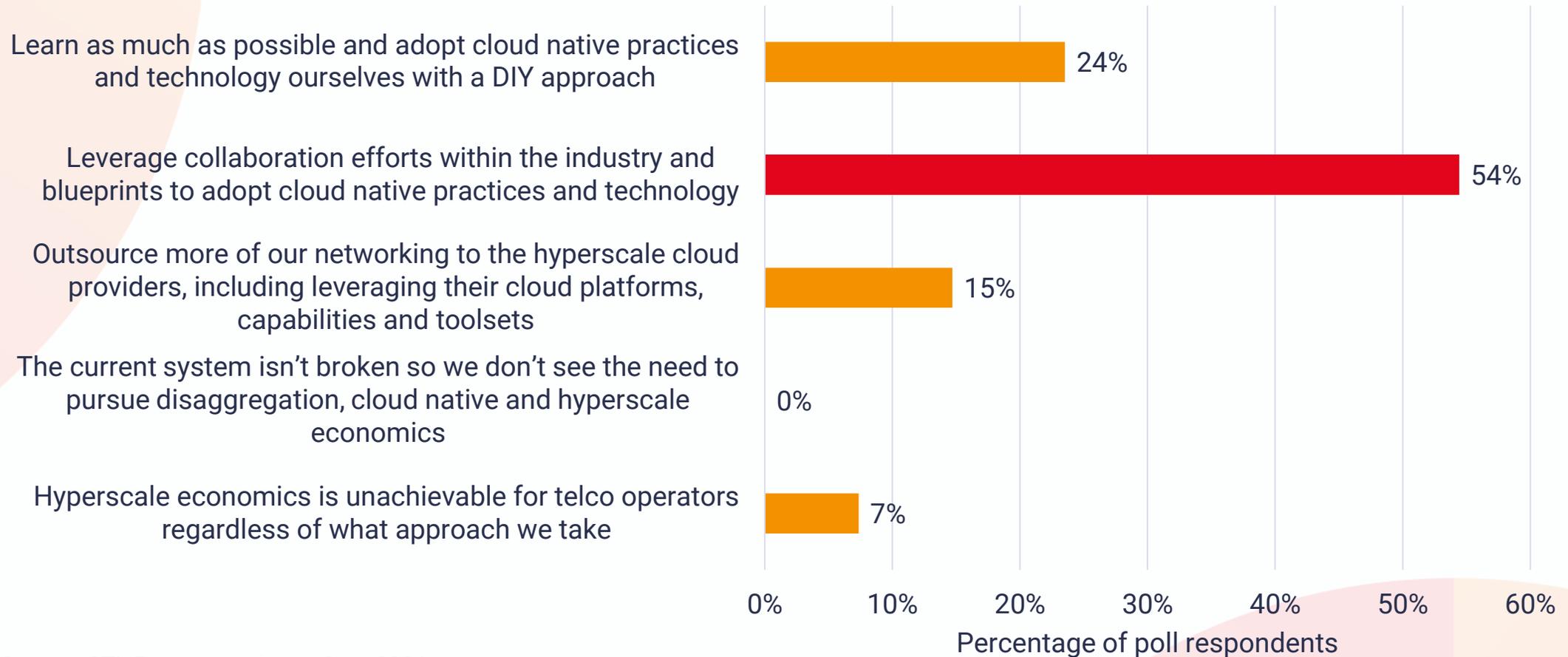
Believes that hyperscale, disaggregation and cloud native are the goals and **will lead the efforts to achieve this, including taking a DIY approach**

Believes that hyperscale is the goal through disaggregation and cloud native but **relies on collaboration efforts and blueprints to get there**

Sees the value of hyperscale economics but **sceptical on the applicability to them**. Some still see the value in working with incumbent vendor partners

Don't see the pursuit of hyperscale economics as applicable or achievable for them given constraints, lack of skills, capabilities and resources

Audience poll: How should operators pursue hyperscale economics and move to a disaggregated, cloud native model in networks?

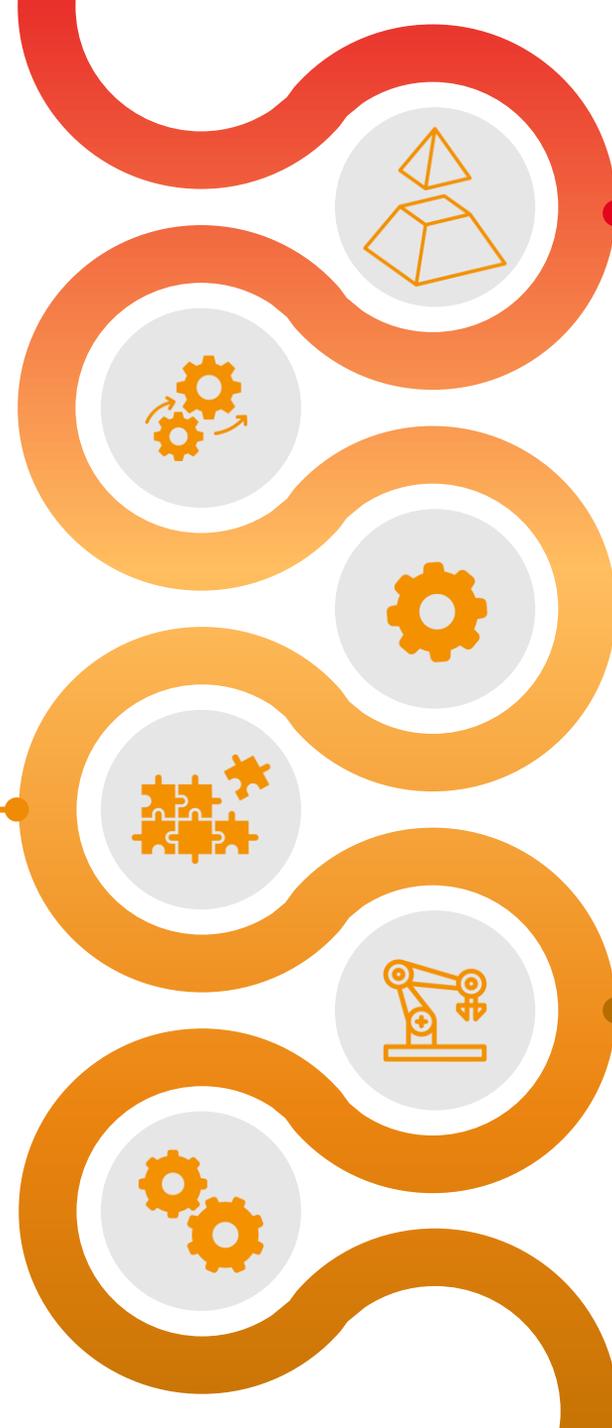


Source: STL Partners webinar, Sept 2021

Operators must find key breakthrough opportunities as part of the ongoing pursuit

Abstraction and disaggregation of software

Enables software-based innovation and unlocks different types of operating models and more open interfaces between components, resulting in more agile innovation



Decoupling of hardware and software

Enables greater flexibility and optionality while avoiding vendor lock-in

Expansion of automation to manage the end-to-end lifecycle

Provides better network visibility, more efficient operations and therefore time to market, and ultimately greater value for customers

To recap, we have summarised our four key findings

Summary of our key findings



The concept of hyperscale economics resonates with telcos, but in slightly different ways



- Many telcos see hyperscale economics as an important goal given the pressures they face from both a capability standpoint and also the way you operate
- ...but some see this as a result of the hyperscalers as a source of competition and a model to follow



Disaggregation and cloud native change what's possible with hyperscale from a cost, capability and revenue perspective



- The first wave of NFV failed to deliver on the promises of telco cloud but cloud native and disaggregation is a fundamental shift in how telcos run their network
- This is around optimal scalability and flexibility, as well as building infrastructure-agnostic applications that evolve independently and more programmability to expose network elements safely to customers and partners in a B2B2BX model



...but not all telcos think that hyperscale economics is applicable or achievable for them



- Many want to move to a disaggregated cloud native model with more agile practices but feel they cannot take the approach of a leading T1 operator
- Some operators see the lack of skills as the reason to accelerate, others see it as a barrier. Some operators embrace change as the new normal, others see it as a barrier.



Hyperscale economics should be seen as an ongoing pursuit and a means of realigning key stakeholders



- Hyperscale economics should be seen as the North Star but operators should focus on the "economics" rather than the hyperscale and think about hyperscale economics as the goal, not the outcome.
- Telcos should focus on identifying key breakthroughs and aim for the stages in sight that enable them to disentangle their costs and capabilities

We set out three key recommendations for operators



Focus on hyperscale economics as the goal

- Think of the concept as the goal, with disaggregation and cloud native as the means of getting there
- Use this as the basis by which strategic decisions are made and the measure by which they are assessed



Use the concept as a means of informing strategy and challenge teams to deliver

- Ask the most experienced practitioners to challenge what they know
- Identify and aim for stages or breakthroughs in sight to build momentum and credibility



Be your own catalyst to drive significant belief and change within your organisation

- Build your own conviction as a leader that your organisation is facing an existential crisis
- Clearly communicate your own beliefs and vision to drive others to share this view and behave accordingly

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THE RIGHT WAY TO PURSUE HYPERSCALE ECONOMICS

(It's the data-plane, stupid)



Dudy Cohen

Senior Director, Product
Marketing
DriveNets

Network Functions Are Moving to The Cloud as Part of The Pursue of Hyperscale Economics

AT&T to run its mobility network on Microsoft's Azure for Operators cloud, delivering cost-efficient 5G services at scale

June 30, 2021 | Microsoft News Center



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Press release

DISH and AWS Form Strategic Collaboration to Reinvent 5G Connectivity and Innovation

April 21, 2021 at 9:00 AM EDT

In a telecom industry first, DISH will leverage AWS infrastructure and services to build a cloud-based, 5G Open Radio Access Network (O-RAN) that delivers consistent, cost-effective performance from core to the edge



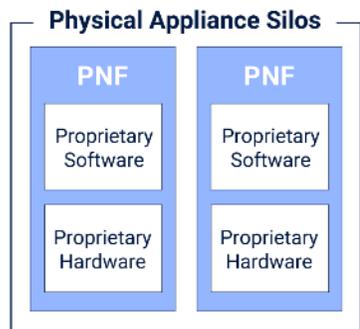
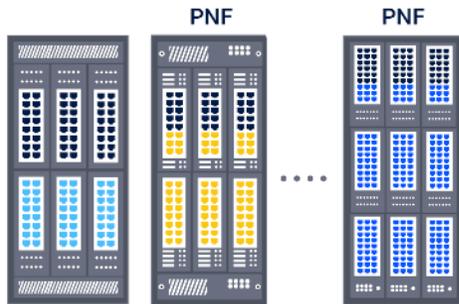
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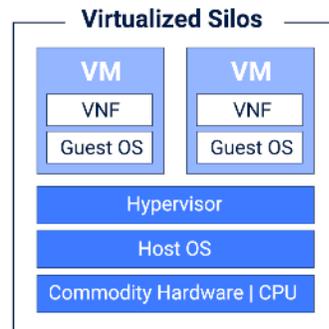
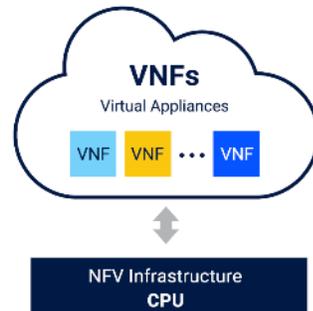
But When it Comes to the Data Plane...



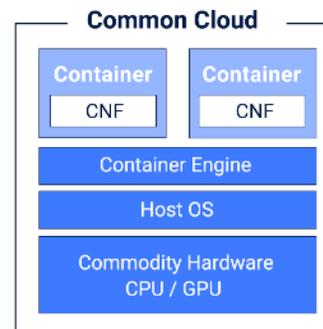
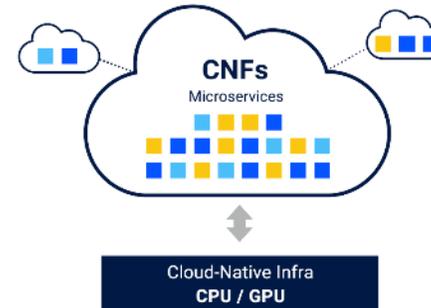
Legacy Appliance



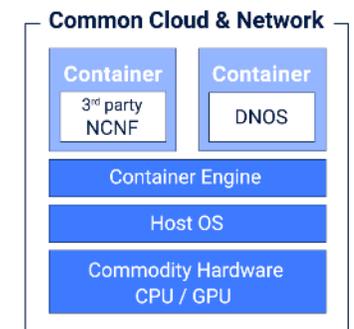
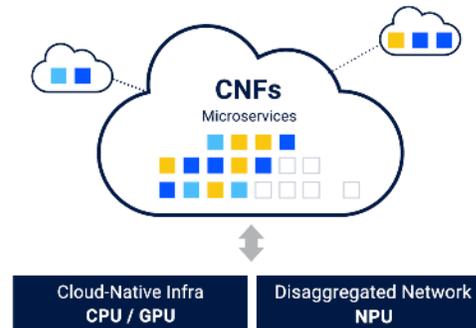
NFV (Server-Based)



Containers over Standard Cloud

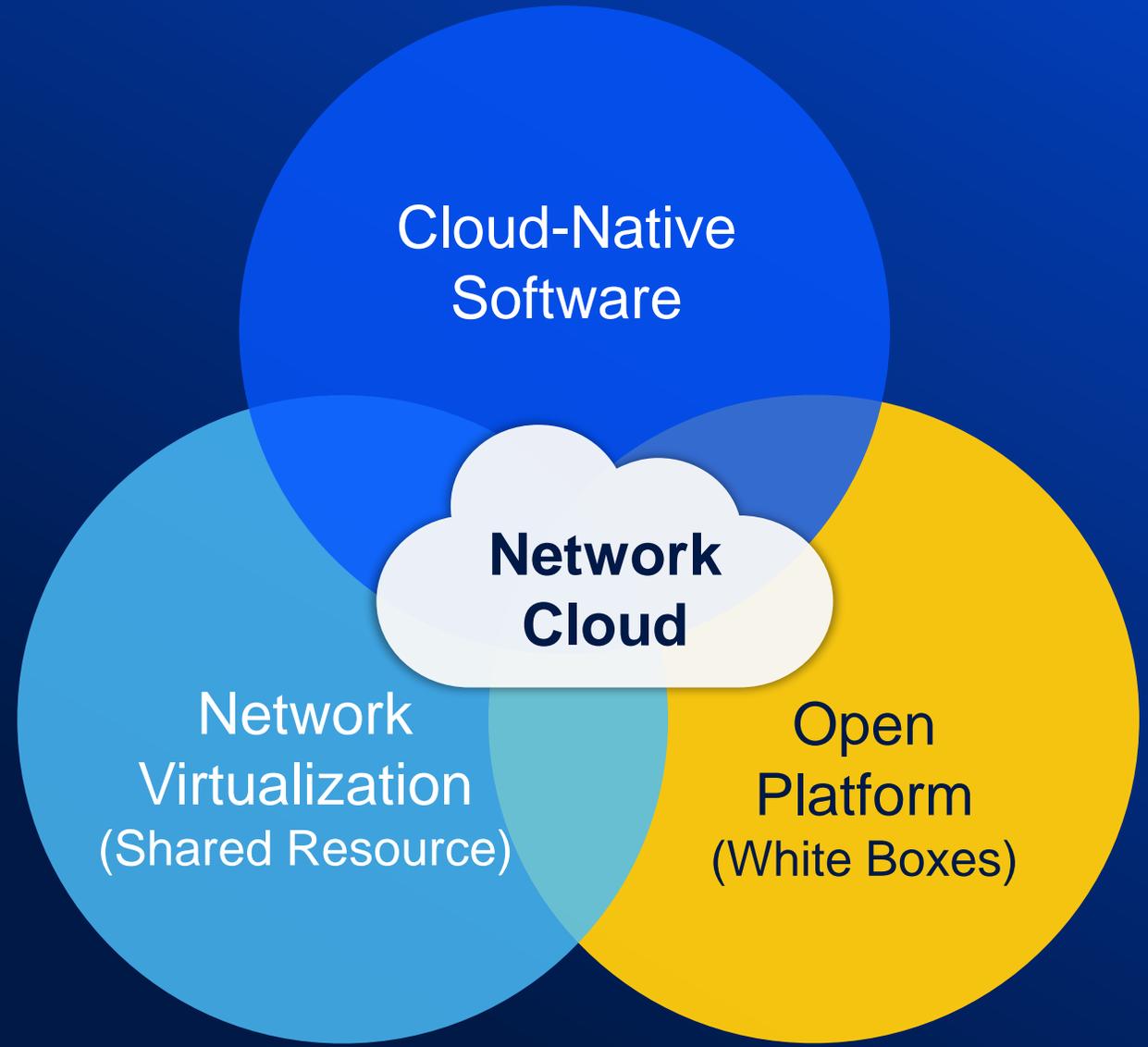


Containers Over Network-Optimized Infrastructure



Networking-Optimized White Box Cluster

DriveNets Builds Networks Like Clouds



DriveNets Network Cloud

1

Lower Cost

- Lower-cost hardware
- Same building blocks, any use case
- Optimal use of resources
- Multiservice over shared infra
- Fewer # ports
- Simplified operations – automation

2

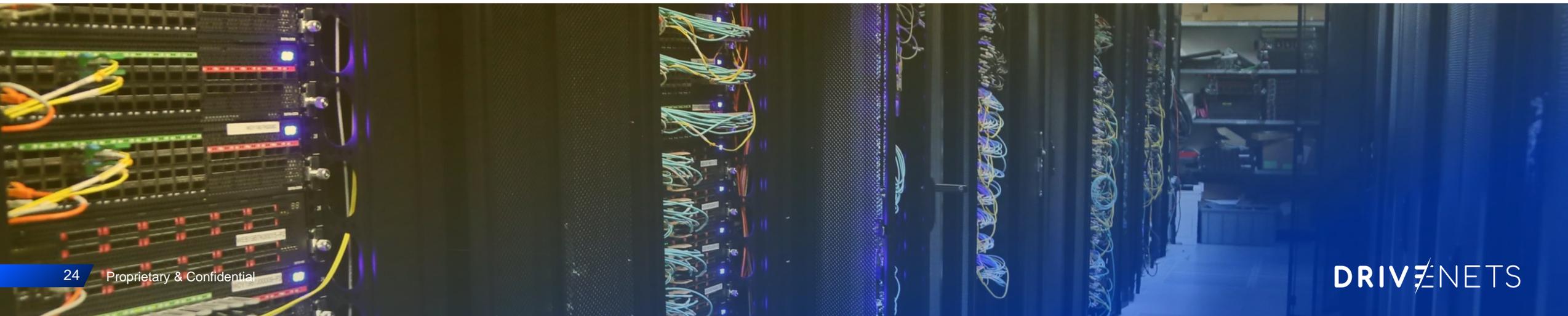
Optimal Scaling

- Any size distributed router (DDC)
- Scale capacity – grow the cluster
- Scale services - any service, any port

3

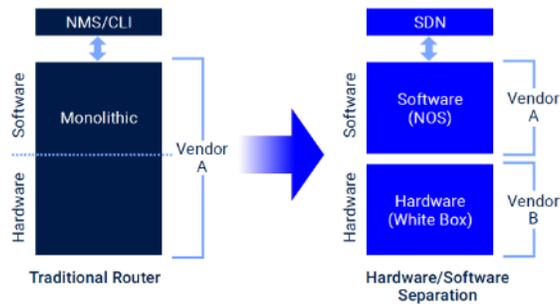
Ease of Innovation

- Software-based innovation
- Faster TTM of new services (DNOR marketplace)
- Minimize footprint at the edge
- Efficient infrastructure for network-aware services



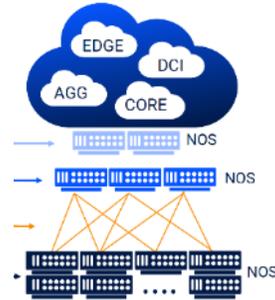
How We Do It

Disaggregation



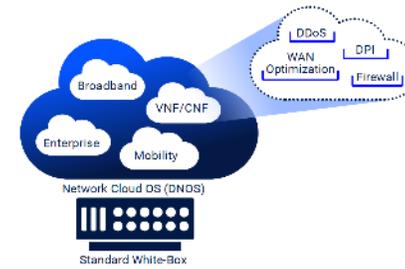
Hardware/Software
Disaggregation

Distribution



White box cluster
abstraction into a
shared pool of resources

Containerization



Multiple service instance
containers over one
infrastructure

Orchestration



Orchestration of
infrastructure and
service instances

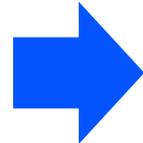
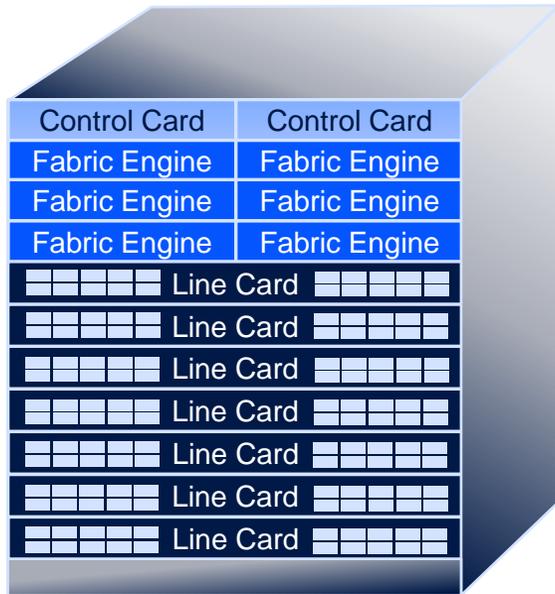
Lowest Cost

Optimal Scaling

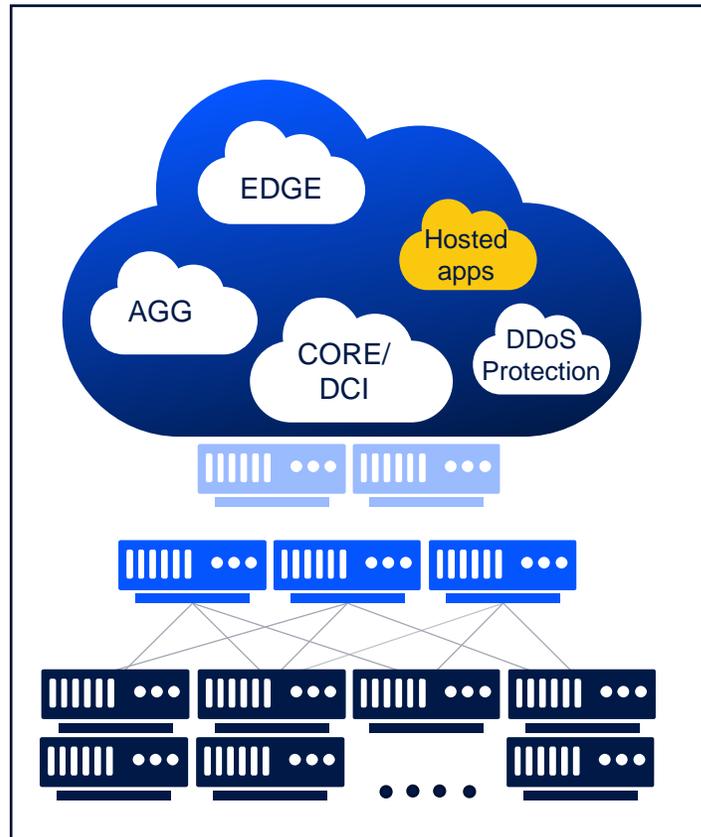
Ease of Innovation

DriveNets Network Cloud – Distributed Disaggregated Chassis

Monolithic Chassis



Network Cloud



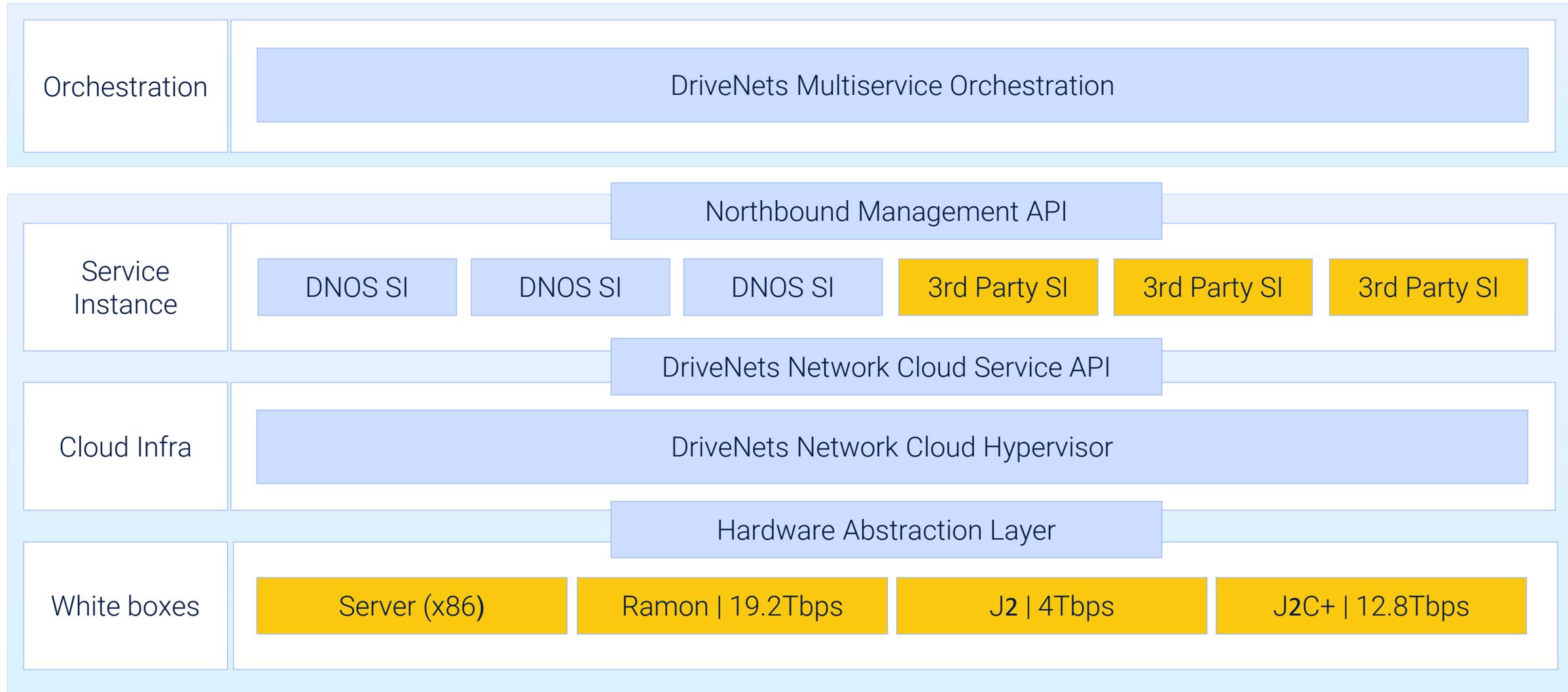
DNOR



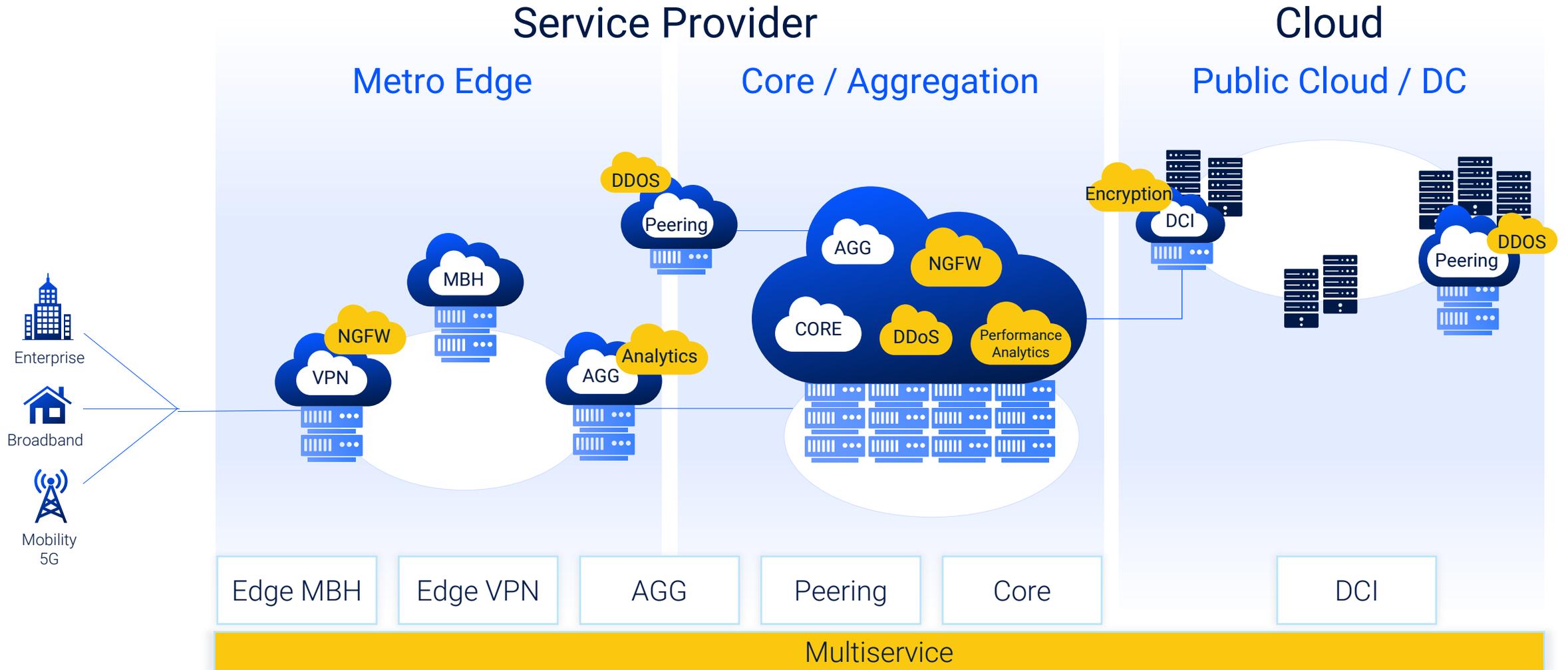
Two hardware building blocks



Network Cloud Architecture



Network Cloud Portfolio





Thank You!



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Live panel session

Moderator



Phil Laidler
Managing Director,
Consulting
STL Partners

Our guest panellists



Bryce Mitchell
VP, Core Network
Engineering
Rogers Communications



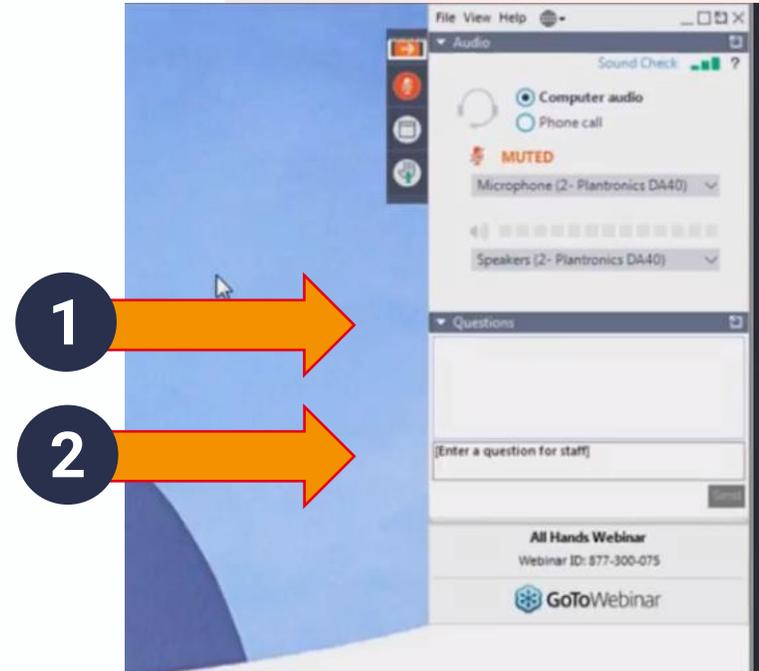
Joe Baeumel
VP, Business Development
& Partner Strategy
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Inbar Lasser-Raab
Chief Marketing Officer
DriveNets

Q&A session

Please submit any questions using the GoToWebinar control panel



Thank you for joining!

All registrants will be receiving the link to the research report, recording and slides shortly to watch back or to share with colleagues, plus a Q&A write-up in due course.

For any other questions, please contact:

- Yesmean Luk, yesmean.luk@stlpartners.com
- Dudy Cohen, dcohen@drivenets.com

