

The logo for Napa:tech is positioned vertically on the left side of the slide. It consists of the word "Napa:" in a large, bold, orange font, followed by "tech:" in a large, bold, teal font. The background of the entire slide features a dark blue, swirling, liquid-like pattern with numerous small, white, out-of-focus dots scattered throughout, resembling a starry night sky or a microscopic view of a fluid.

napa:tech;
RECONFIGURABLE COMPUTING

Capital Markets Day

5 November 2019

Safe Harbor Statement

- This presentation has been prepared by Napatech A/S (the “**Company**”) solely for information purposes. The presentation does not constitute an invitation or offer to acquire, purchase or subscribe for securities.

Certain statements included in this presentation contain various forward-looking statements that reflect management’s current views with respect to future events and financial and operational performance. The words “believe,” “expect,” “anticipate,” “intend,” “may,” “plan,” “estimate,” “should,” “could,” “aim,” “target,” “might,” or, in each case, their negative, or similar expressions identify certain of these forward-looking statements. Others can be identified from the context in which the statements are made. Although we believe that the expectations reflected in such forward-looking statements are reasonable, these forward-looking statements are based on a number of assumptions and forecasts that, by their nature, involve risk and uncertainty. Various factors could cause our actual results to differ materially from those projected in a forward-looking statement or affect the extent to which a particular projection is realized. Factors that could cause these differences include but are not limited to the Company’s ability to operate profitably, maintain its competitive position, to promote and improve its reputation, to successfully operate its strategy and the impact of changes in pricing policies, political and regulatory developments in the markets in which the Company operates, and other risks. The information and opinions contained in this document are provided as at the date of this presentation and are subject to change without notice. No representation or warranty (expressed or implied) is made as to, and no reliance should be placed on, the fairness, accuracy or completeness of the information contained herein. Accordingly, neither the Company nor its subsidiary undertakings or any of such person’s officers or employees accepts any liability whatsoever arising directly or indirectly from the use of this document.

Napatech Capital Markets Day Agenda

- Introduction – Lars Boilesen, Chairman
- Business Update – Ray Smets, CEO
- Data Center Compute Industry Overview – Vlad Galabov, Principal Analyst, Data Center Compute, IHS Markit Technology
- Market & Product Overview – Jarrod Siket, CMO
- Napatech Aspirations – Ray Smets, CEO
- Q&A

Business Update

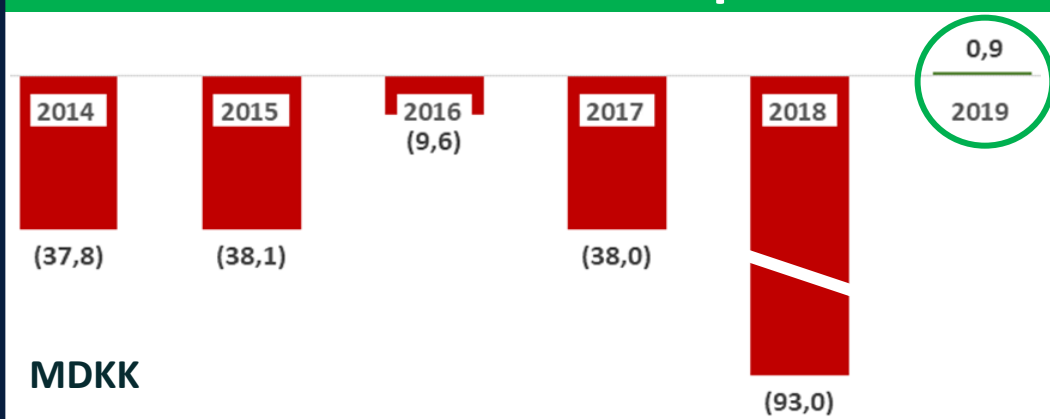
Corporate Overview

- +16 year history delivering **FPGA-based technology** to customers globally
- Unparalleled expertise accelerating compute-intensive applications on standard open servers
- High-tech solution with 22 patents & patents-pending provides high barrier-to-entry for competitors
- Solid gross margins and highly leverageable business model
- Targeting rapidly expanding \$1.6B SmartNIC market by 2023, with an addressable market of \$250M-\$350M
- Public company NAPA.OL

Top Tier Global Customers



Napatech In Review – 2019 Turnaround in Progress

2019 YTD Revenue	YTD Gross Margins														
<p>Reported: +124% Adjusted: +63%</p> <p><i>116.6 MDKK (\$17.6M) vs 52.2 MDKK (\$7.7M) in '18.</i></p>	<p>Reported: +23%-points Adjusted: +5%-points</p> <p><i>YTD GM of 74.6% due to improvement of hardware costs and price stability.</i></p>														
YTD Operating Costs	Q1-Q3 Free Cash Flow Improvements														
<p>-19%</p> <p><i>Cost structure reduced from 119.8 MDKK in '18 to 91.4 MDKK in '19.</i></p>	 <p>MDKK</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Free Cash Flow (MDKK)</th> </tr> </thead> <tbody> <tr> <td>2014</td> <td>(37,8)</td> </tr> <tr> <td>2015</td> <td>(38,1)</td> </tr> <tr> <td>2016</td> <td>(9,6)</td> </tr> <tr> <td>2017</td> <td>(38,0)</td> </tr> <tr> <td>2018</td> <td>(93,0)</td> </tr> <tr> <td>2019</td> <td>0,9</td> </tr> </tbody> </table>	Year	Free Cash Flow (MDKK)	2014	(37,8)	2015	(38,1)	2016	(9,6)	2017	(38,0)	2018	(93,0)	2019	0,9
Year	Free Cash Flow (MDKK)														
2014	(37,8)														
2015	(38,1)														
2016	(9,6)														
2017	(38,0)														
2018	(93,0)														
2019	0,9														

Data Center Compute Industry Update & Trends

Data Center Computing: Where, How Much and Why?

Demand for data center compute will accelerate and the CPU needs help.

Vlad Galabov

Principal Analyst, DC Compute, Cloud & DC Research Practice

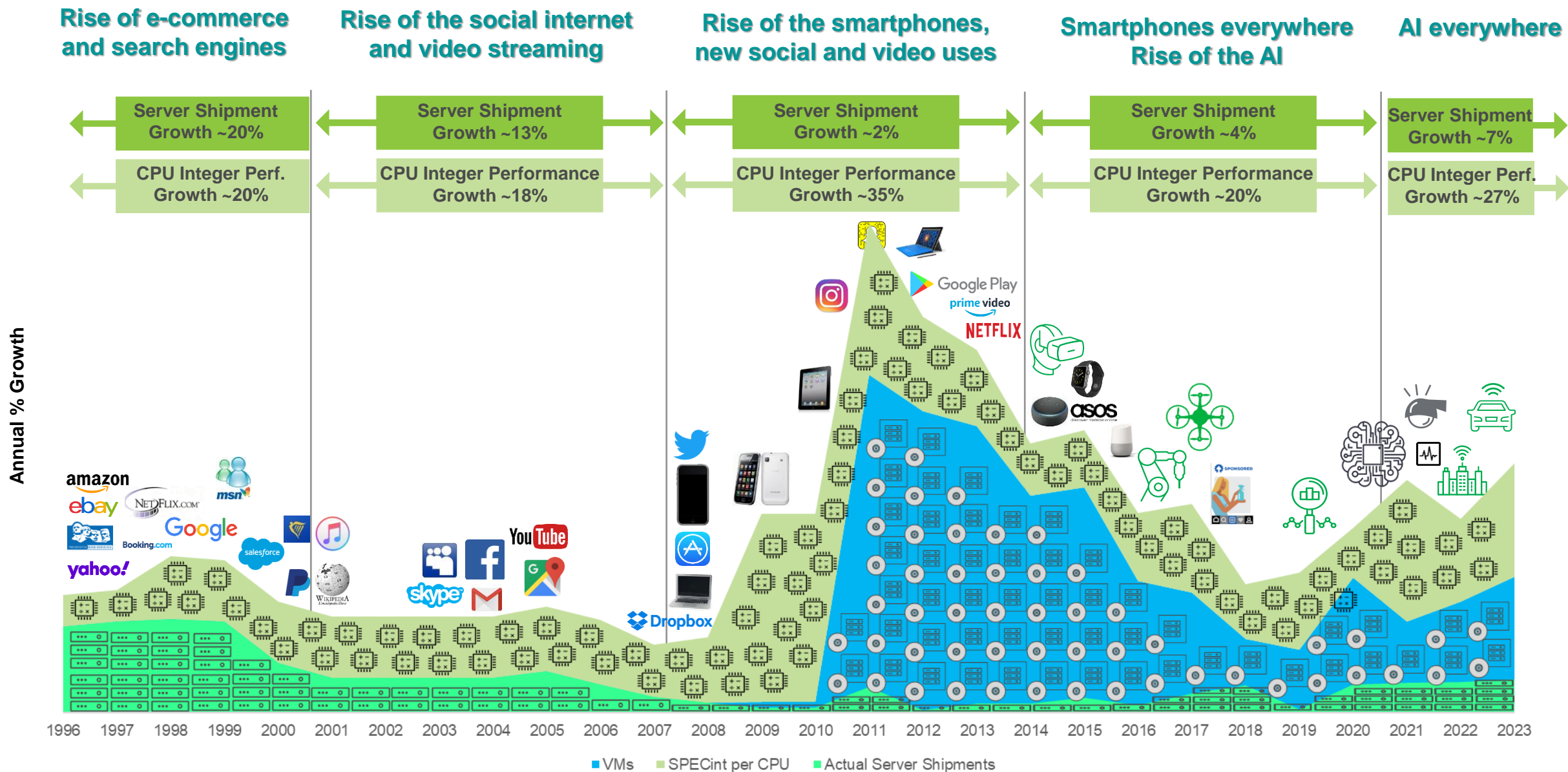
+44 2031593596

vladamir.galabov@ihsmarkit.com

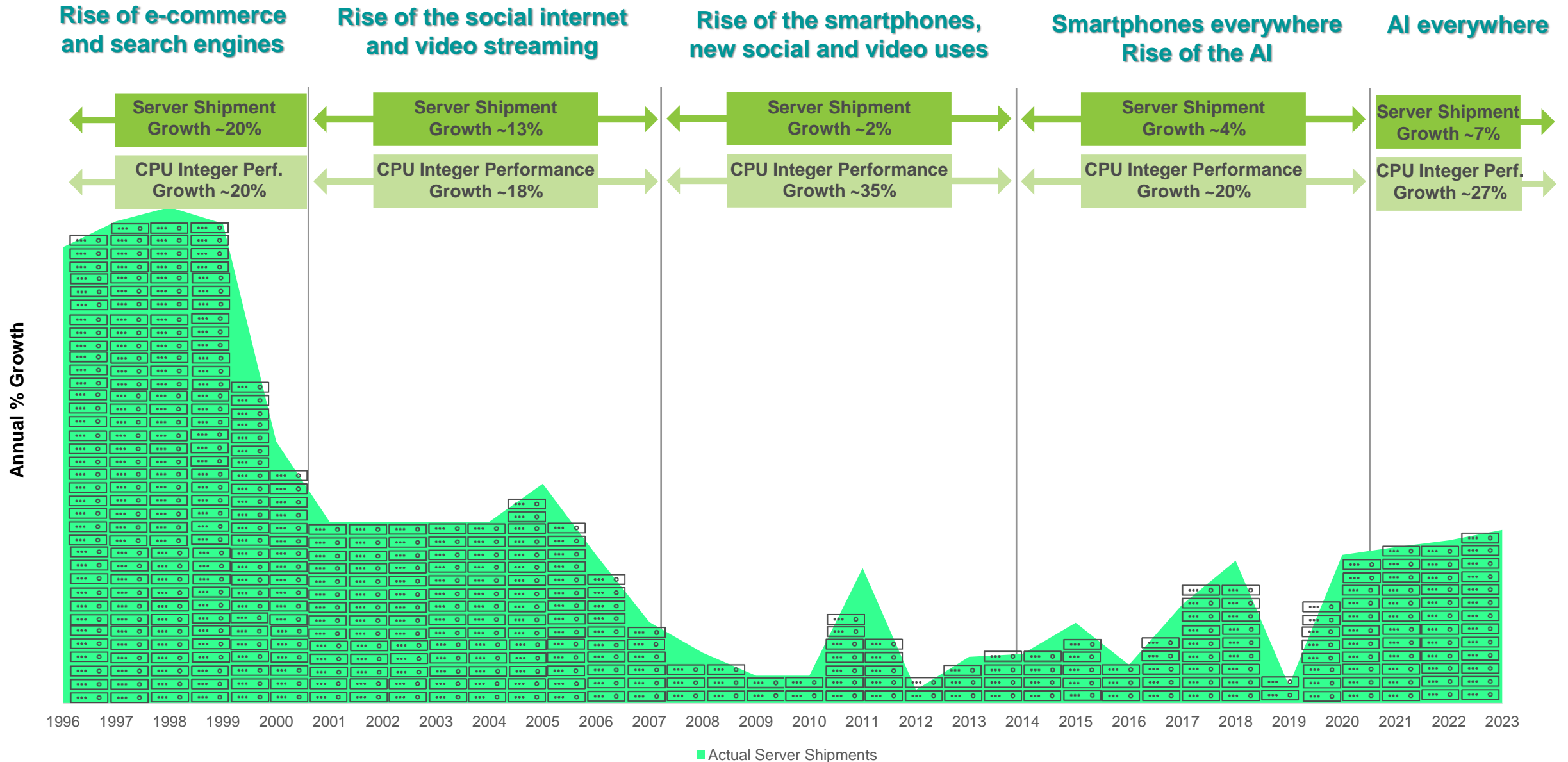
Agenda

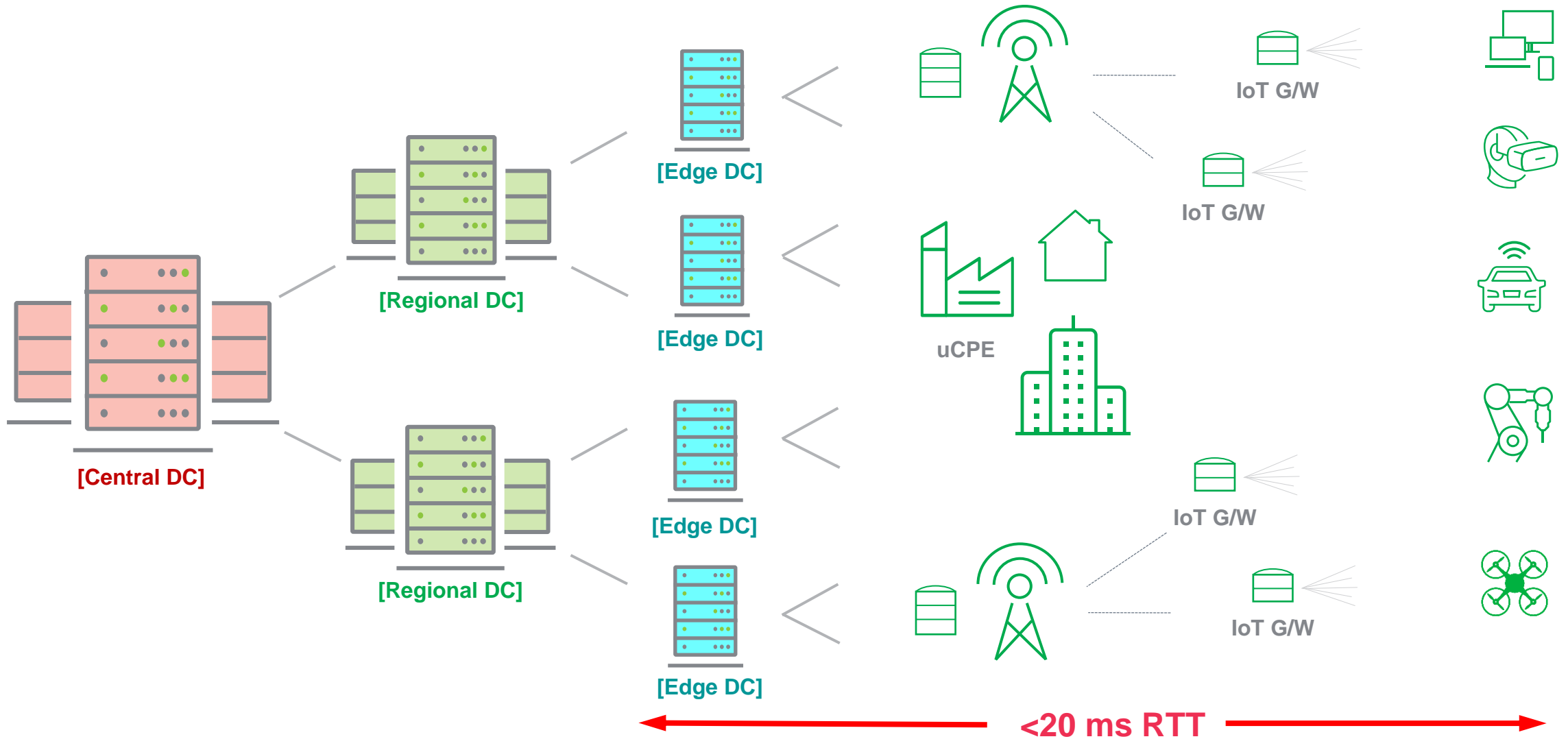
1. Global demand drivers for data center compute
2. New server use cases and edge computing
3. Ethernet adapter ports and revenue growth
4. Enterprise demand signals

Data center compute demand will accelerate again



Data center compute demand will accelerate again



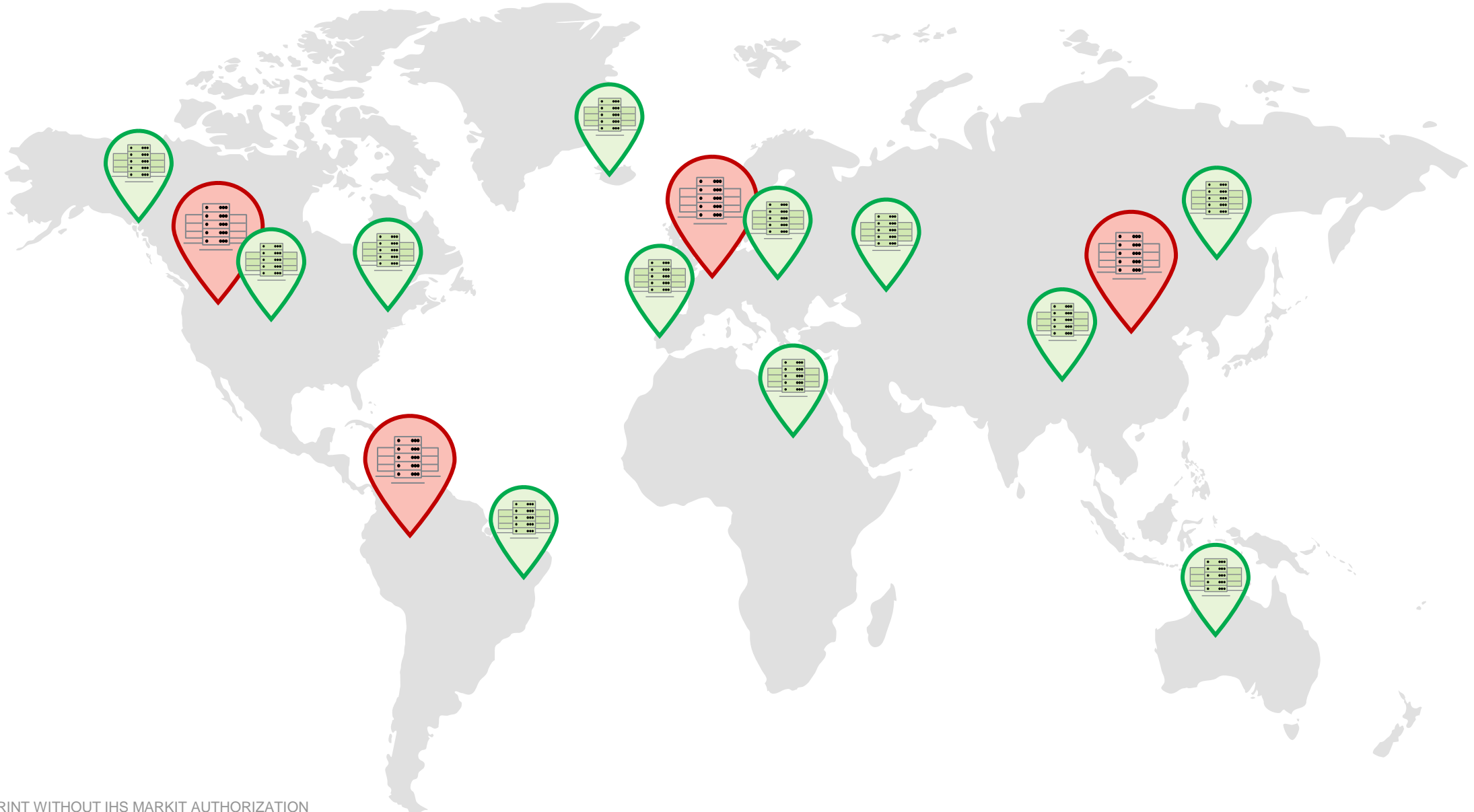


Source: IHS Markit Telco Edge Survey, October 2018

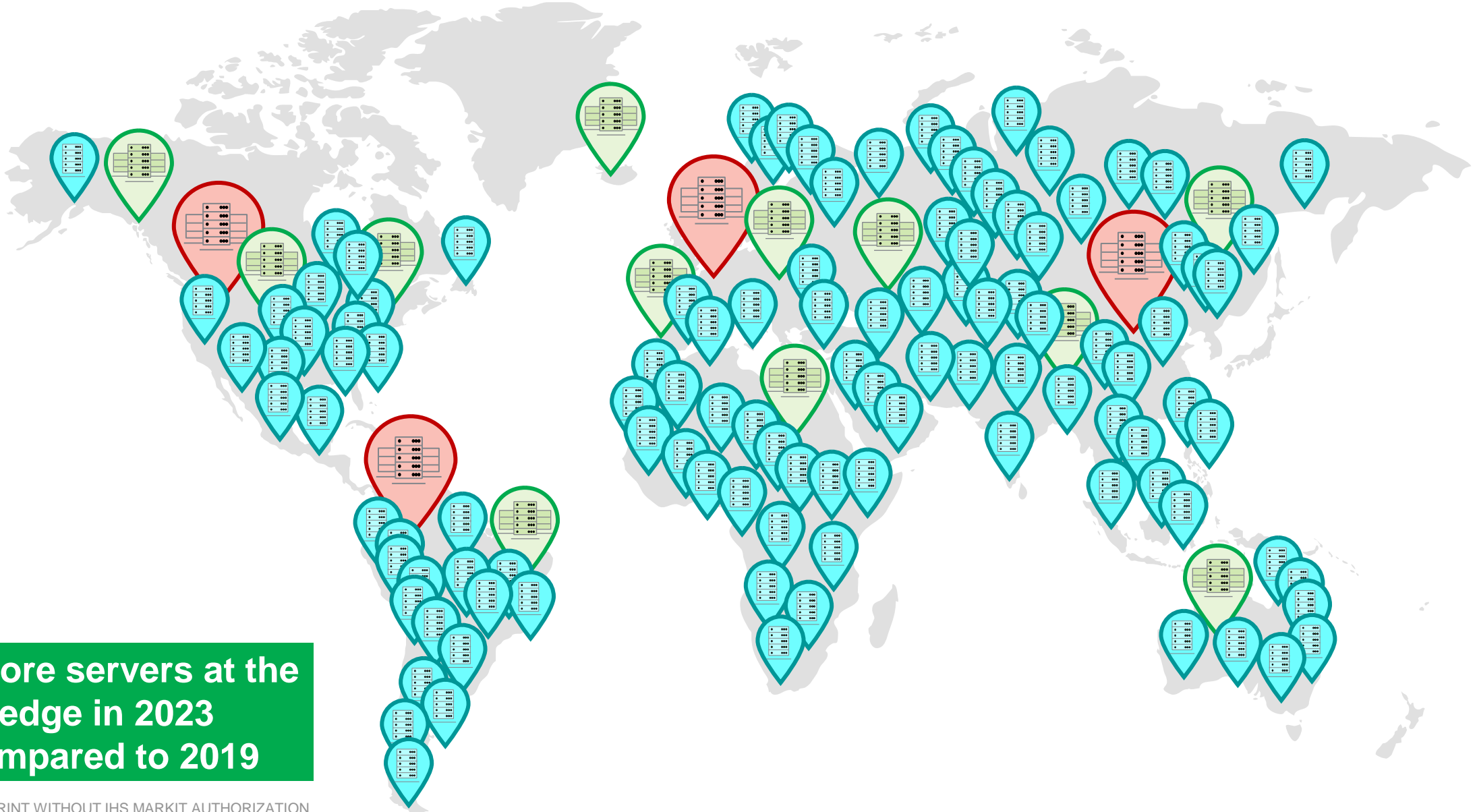
Server Distribution Scenario



Server Distribution Scenario

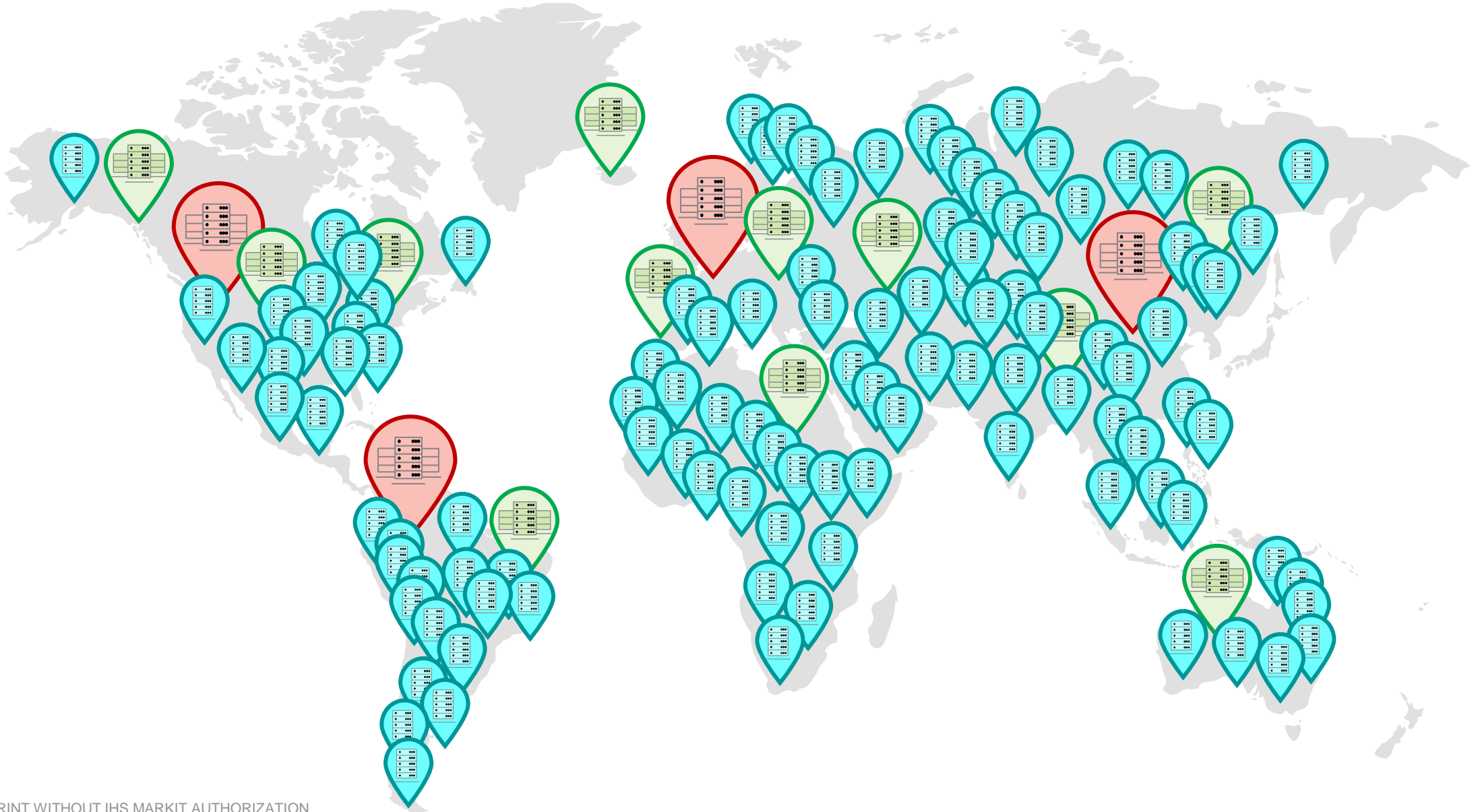


Server Distribution Scenario



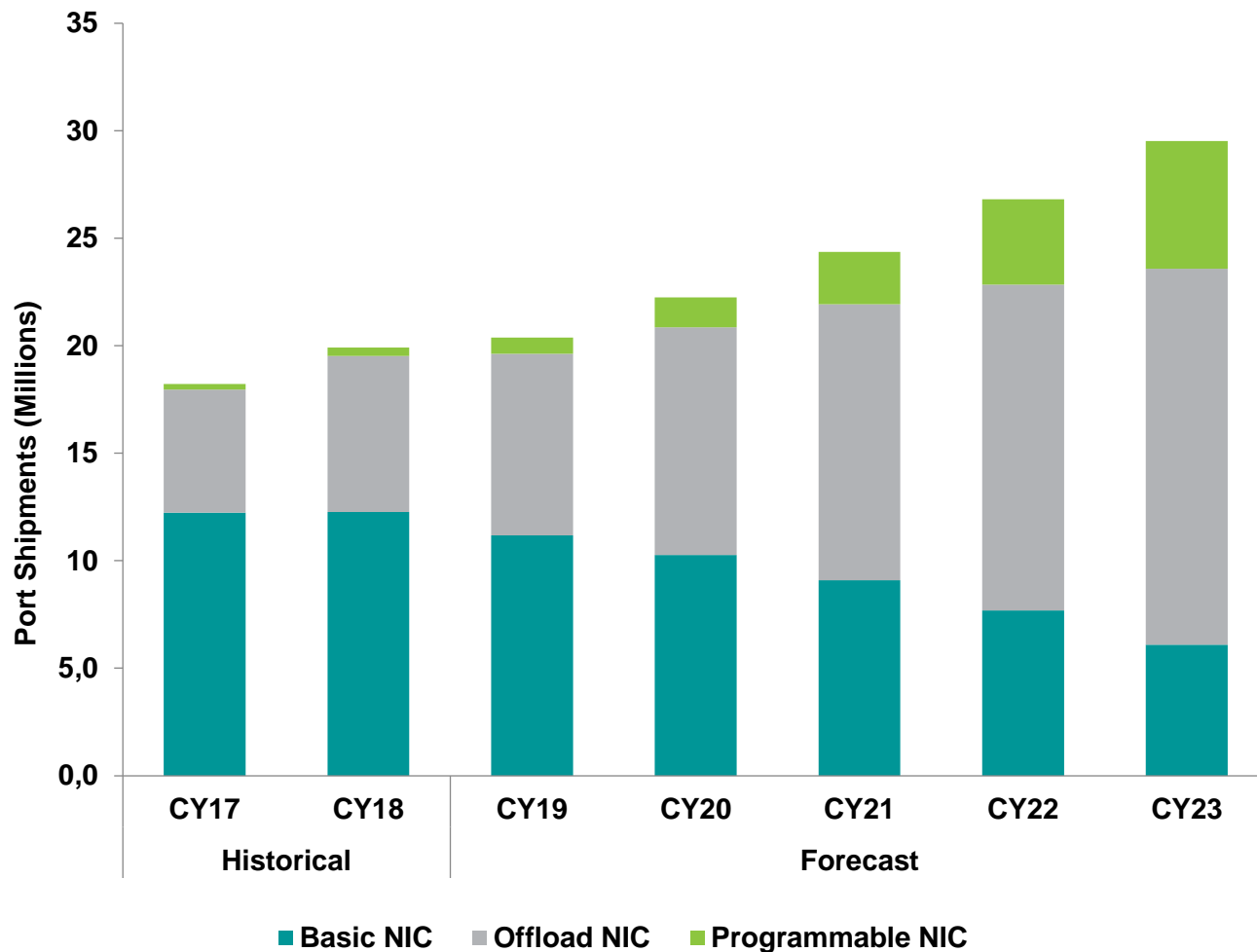
2X more servers at the edge in 2023 compared to 2019

Server Distribution Scenario



High-speed adapters offload the CPU, drive \$3.7B in CY23

DC Ethernet Adapter Ports Forecast by CPU Offload

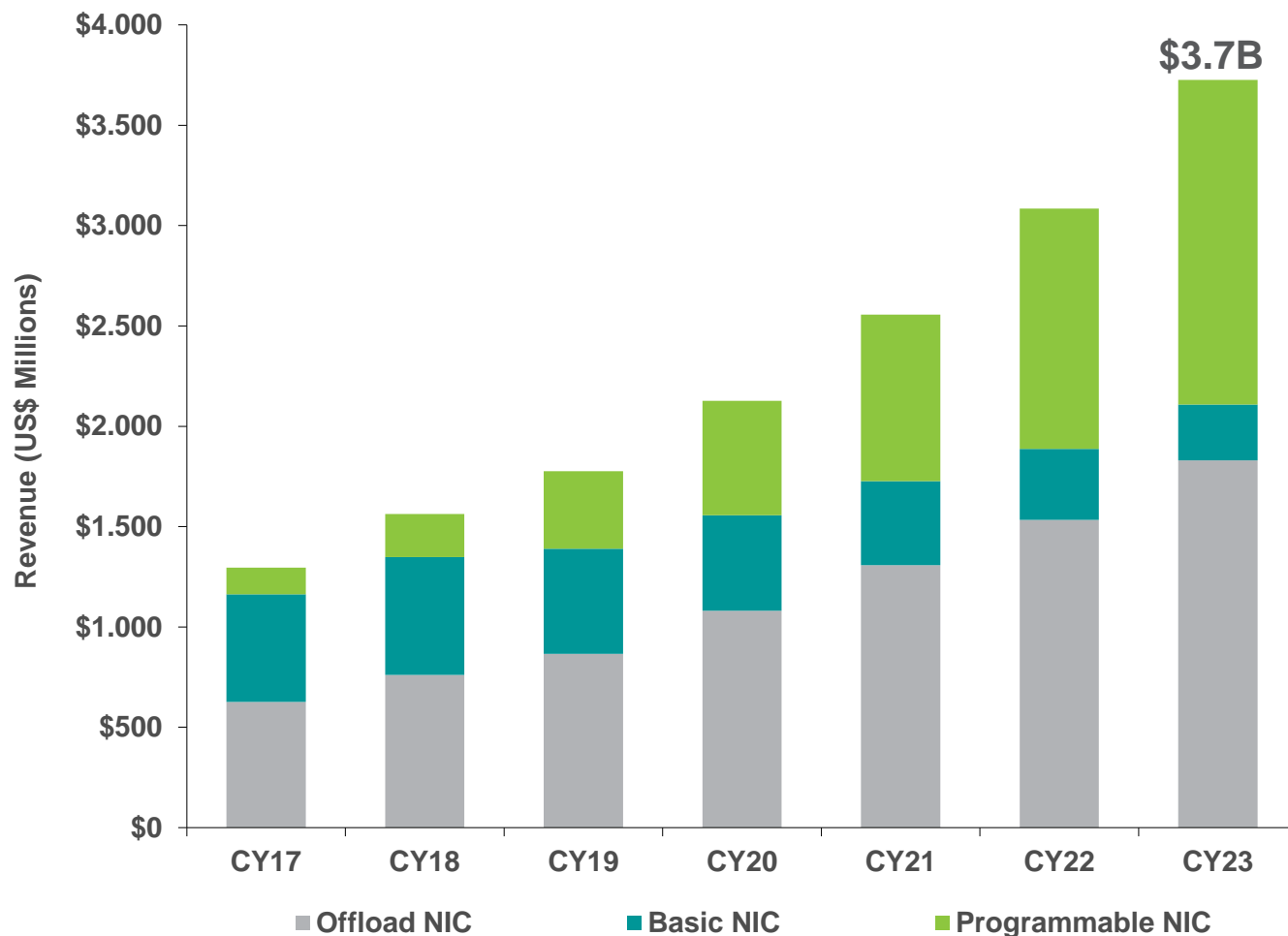


CY18–CY23 CAGR	
Basic NIC	-13%
Offload NIC	19%
Programmable NIC	72%
Grand Total	8%

Key takeaways

- Ethernet adapter port shipments parallel server shipments; 1% higher due to:
 - > Replacement in existing equipment
 - > Growth in the # of adapters per server
- The need to offload CPU processing is changing the mix of what types of adapters we use

DC Ethernet Adapter Revenue Forecast by CPU Offload



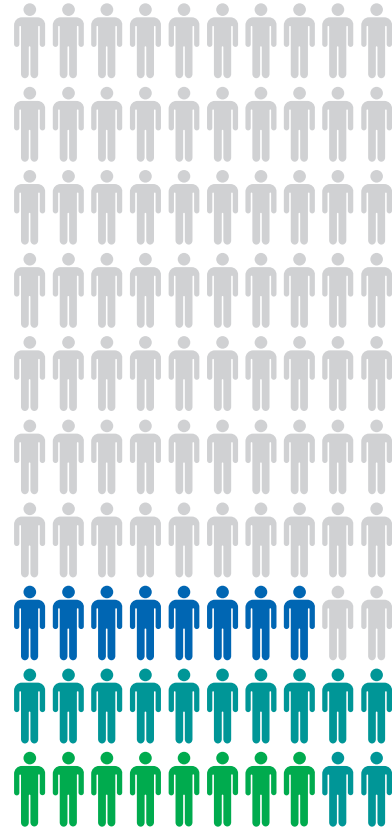
CY18–CY23 CAGR	
Basic NIC	-14%
Offload NIC	19%
Programmable NIC	50%
Grand Total	19%

Key takeaways

- Transition to higher speeds and CPU offloads drives revenue growth
- Offload adapters already deployed for AI & ML workloads, trend will continue
- Programmable revenue driven by:
 - > Hyperscale CSPs for SDN policies & real-time AI
 - > Telco for NFV
 - > Financials for network visibility
 - > Security workloads

Enterprises increasingly opt for programmable adapters

We asked 153 enterprises what type of network connectivity their servers use and what they expect by May 2021?



28%

Use Programmable NIC
in 2019



33%

Use Programmable NIC
in 2021

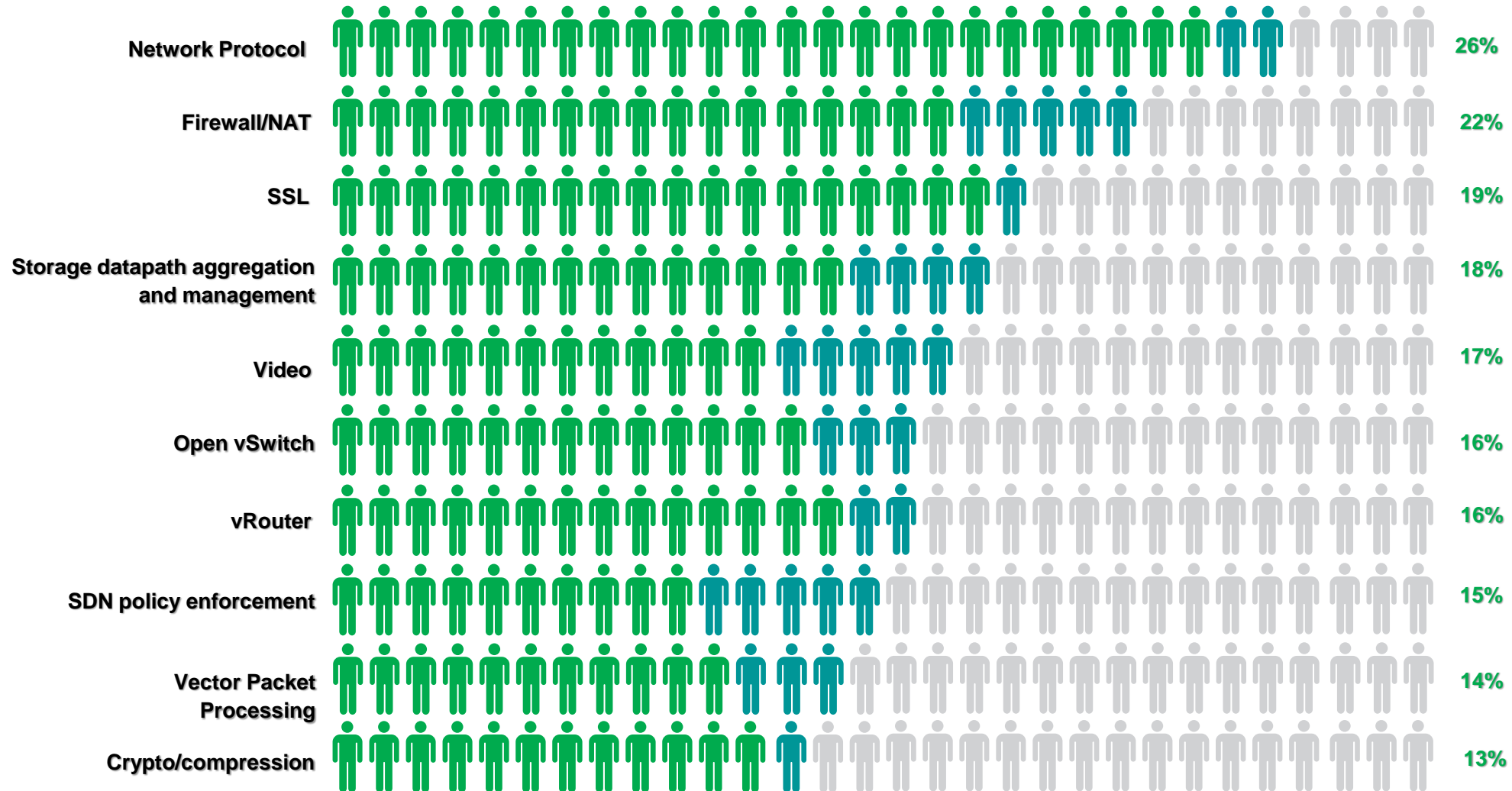
 using programmable NPU

 using programmable Arm-based SoC

 using an FPGA

Network policies and security workloads main driver

We asked the 76 enterprises who use a programmable NIC what workloads run on them and what they expect by May 2021?

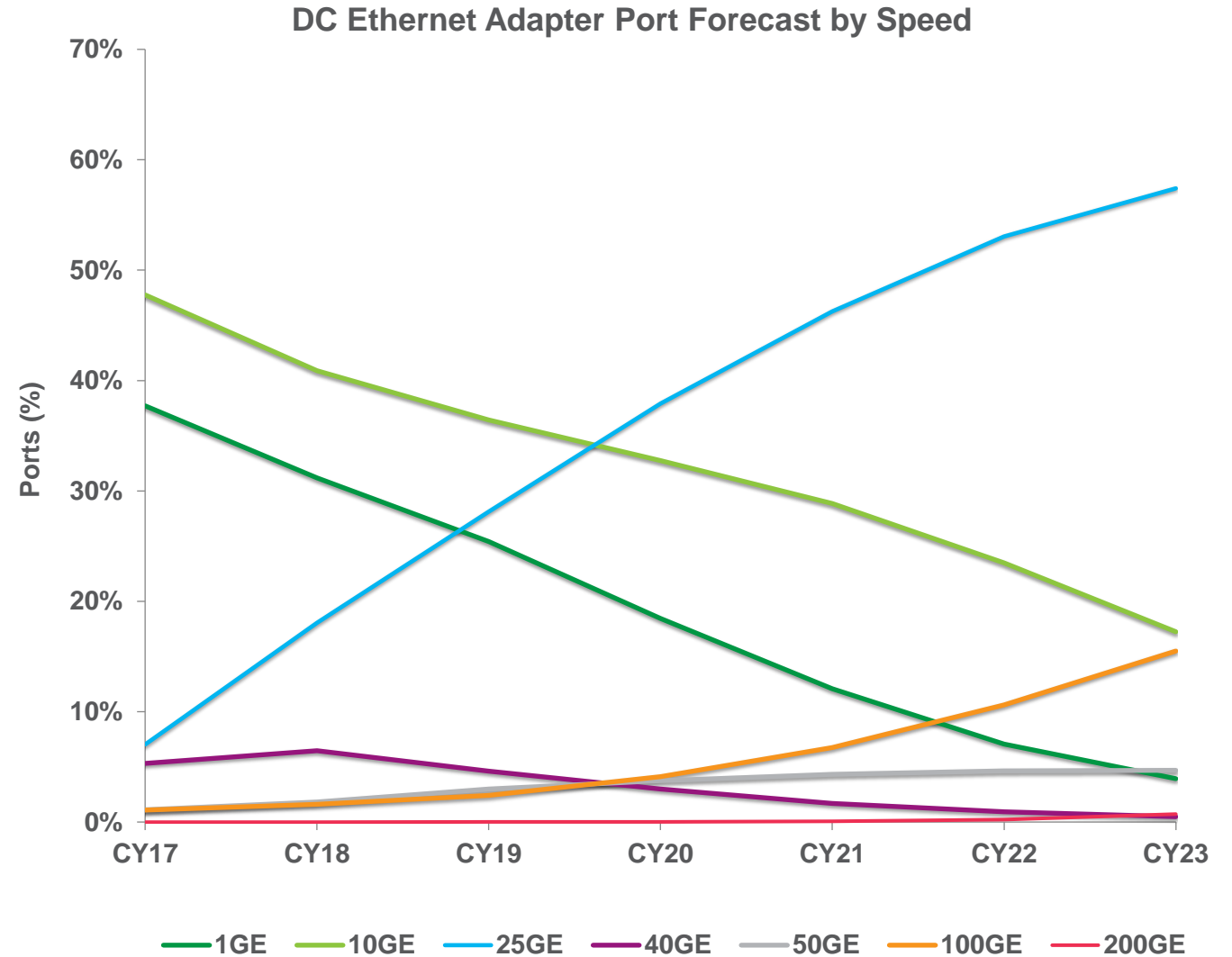


Over two-thirds of CY23 ports will be 25GE and 100GE

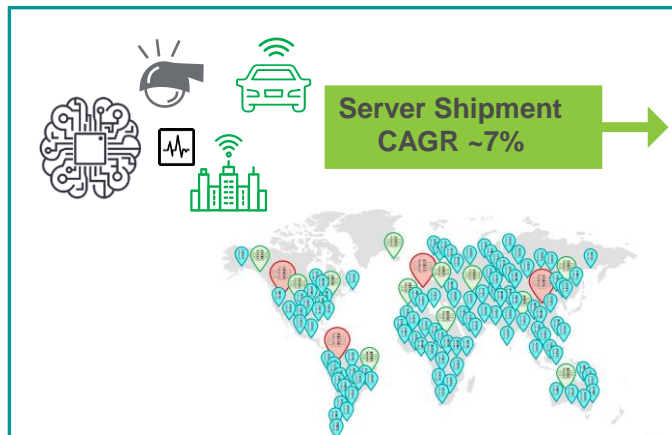
- By CY23, over 70% of switch ports shipped will be 25GE and 100GE
- 25GE and 100GE will represent 73% of adapter ports by CY23

Key takeaways

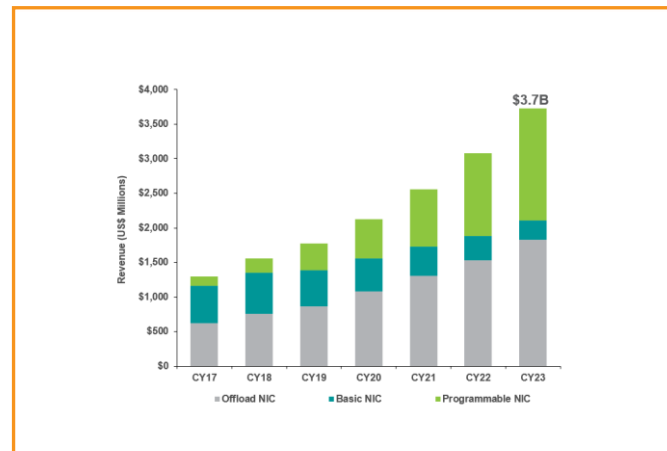
- Increased compute densities due to server hardware performance improvements drive need for additional server to ToR bandwidth
- Adoption of data intensive workloads
- 25/100GE provide increased density + improved economics
- Shift to cloud, ↑ enterprise to CSP DC connectivity



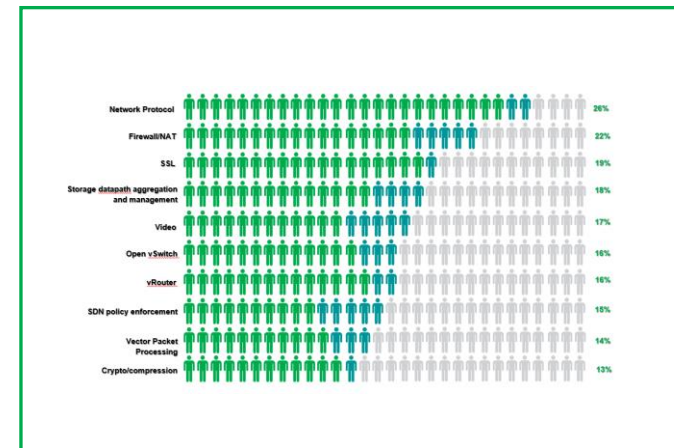
Takeaways



Demand for data center compute will accelerate driven by AI, data analytics & connected devices



Ethernet adapters will offload more CPU tasks while also moving to higher speeds



Expect new/more use cases for programmable NICs

Thank you. Questions?



Vlad Galabov

Principal Analyst, Data Center Compute

Cloud and DC Research Practice

Desk: +44 203 1593596

Mobile: +44 7970 969289

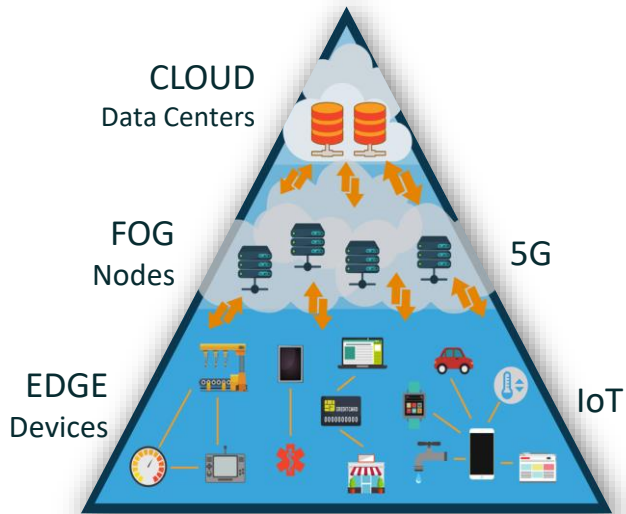
Vladimir.Galabov@ihsmarkit.com

 @VladGalabov

How Napatech Products Are Positioned in the Market

NIC Market is Driven By Server Expansion

Megatrends Impact All Networks



Megatrends Change the Way Networks are Built

Server Market Expansion Continues



Networks Built at Massive Scale
Hardware: Low-Cost Servers & Appliances
Software: Applications & Services

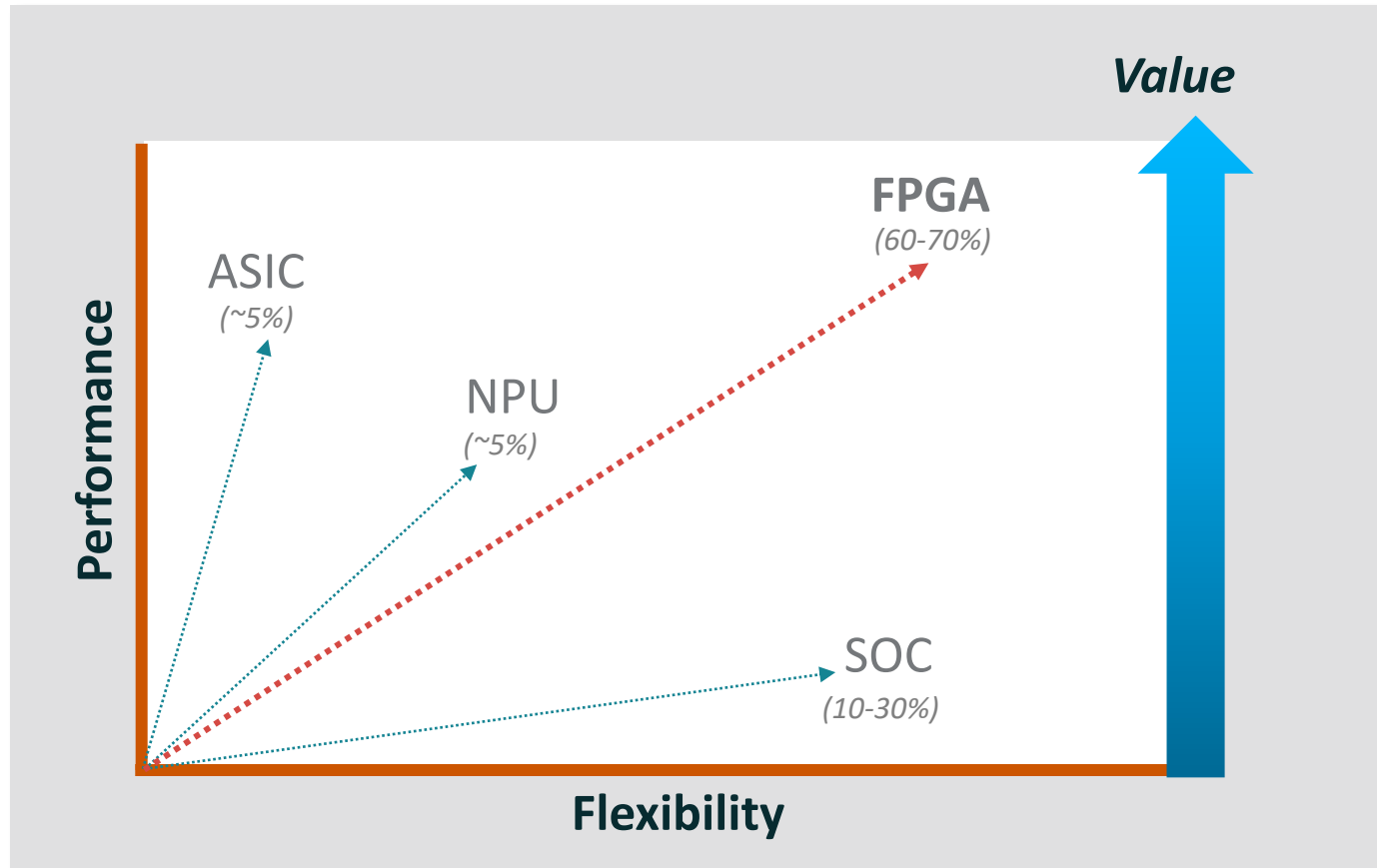
NIC Market Grows to Solve Server Connectivity



NICs: 2019 1.7B, 19% CAGR thru 2023
SmartNICs: 2023 \$1.6B of \$3.7B, growing at 50%









Napatech's Achieves a Key Position in the Emerging SmartNIC Market

SmartNIC Competitive Landscape (% technology deployed 2023)



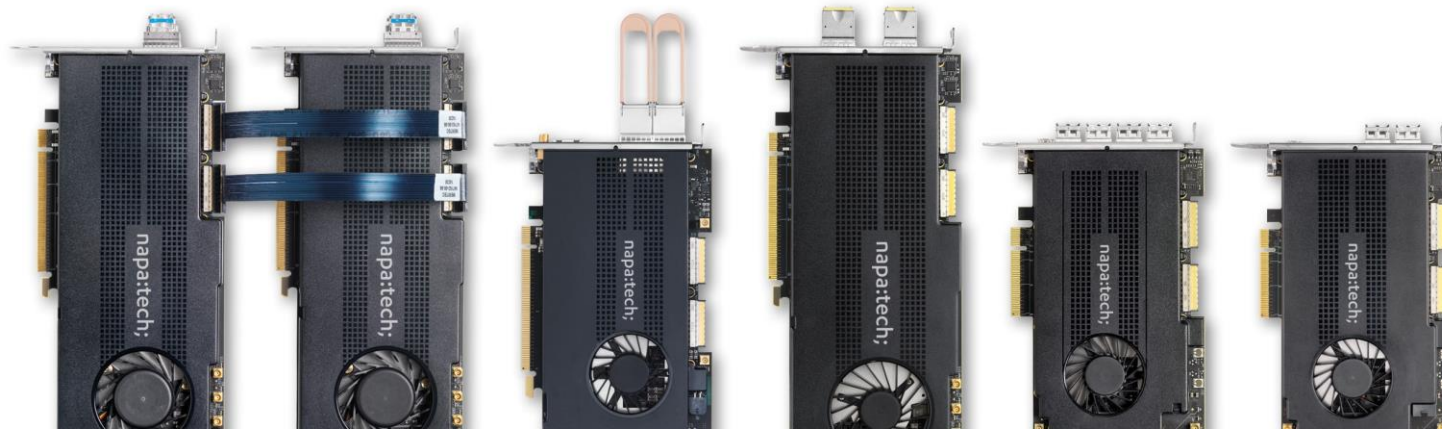
- Competition chases opportunity
 - >20 companies have entered the market
- Technology options increase competitive dynamics
- It is expected that FPGAs will lead amongst the technical options
- *Napatech is the largest FPGA-based SmartNIC provider*

Napatech Brings A Unique Combination Of Value and Benefits

-  **Expertise:** Pioneered the use of FPGA technology for SmartNICs
-  **Agility:** Programmable hardware performance at the speed of software innovation
-  **Software:** FPGA solutions optimized for leading applications & services
-  **Price:** Economies of scale in FPGA volumes from leading manufacturers Intel and Xilinx
-  **Performance:** Line-rate, low-latency networking from 1 to 100 Gbps and beyond
-  **Openness:** Standard, multi-vendor hardware, processing, tools and software
-  **Flexibility:** SmartNICs spanning price, performance, interface types and densities
-  **Sustainability:** ESG-friendly, up to 3X energy-efficient and 2X cost-efficient solutions



Napatech LINK™ Software and
Napatech LINK™ Hardware are
Used to Improve the Performance
Of Leading Applications Up to 40X



Growth Aspirations

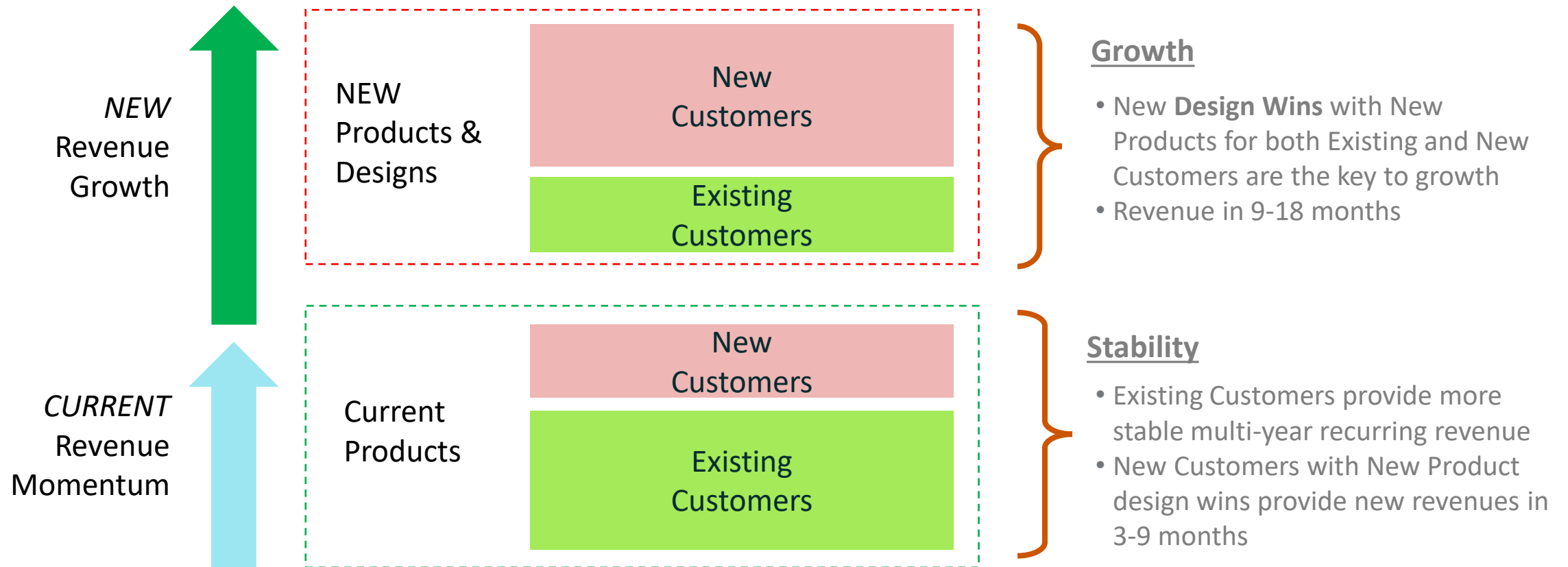
Our Plan Of Attack

Leverage our expertise in **FPGA software** to out-innovate the competition and build new higher growth product lines in Application Acceleration for Virtualization and Cybersecurity solutions

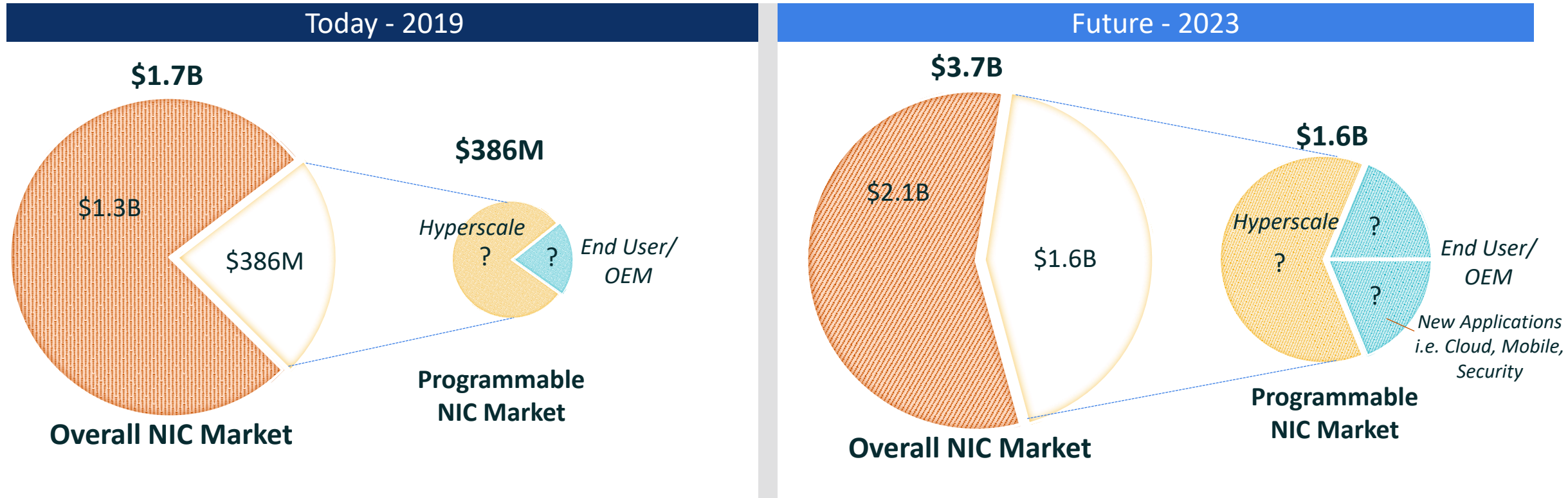
1. Continue to drive FPGA-based SmartNIC leadership in current Packet Capture solutions
2. Expand our SmartNIC leadership *beyond Packet Capture* to address new high-growth markets to accelerate applications and services in Cybersecurity and 5G Mobile
3. Drive innovative developments in Virtual Switching Acceleration solutions to emerge into new market areas and create new revenues in 2020 and beyond.

Goal: New product revenue growth by leveraging our unique expertise in FGPA software

Customer and Revenue Growth



The SmartNIC Market Evolves in Napatech's Favor



- Overall NIC market: \$1.7B today growing to \$3.7B by 2023; Programmable NIC market: \$386M today growing to \$1.6B by 2023
 - Large hyperscale operators account for larger part of Programmable NIC market spend today
 - Napatech today targets End Users and OEM customers in the remaining part of the Programmable NIC market
 - Napatech's SmartNIC addressable market will expand as new applications become reality

Napatech Future Growth Aspirations

3 year aspiration		
Revenue	CAGR 20%-30%	
Margins	around 70%	
Operating Costs	CAGR around 7%-10%	
S/W-Only Revenue	Growing from <1% to 10%-15% of revenue	
Network Management	Growth comes from Packet Capture as our Core Competency Network Management historically about 70% of Revenue	CAGR around 10%
Cybersecurity	Growth comes from our expansion to new addressable cybersecurity, mobile and network infrastructure markets	CAGR 30%+
Virtual Switching	Growth comes from on ability to capture new NFV market growth in virtual switching	CAGR 80%+

Why Invest in Napatech?

Large Market Opportunity

- FPGA SmartNIC market is growing rapidly
- Napatech is investing for growth in important emerging parts of the market

Positioned for Success

- Proven expertise in FPGA software
- Protected position in high-barrier-to-entry FPGA technology market

Leverageable Business Model

- Access to growing markets and revenues allows us to deliver more profit

Q&A

napa:tech;
RECONFIGURABLE COMPUTING

Thank You!

WANT TO LEARN MORE?

Sign up for the Napatech News
Sign up for OSE news
Follow us on social media



OSLO BØRS

