

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 smaller, 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

# ABGSC INVESTOR DAYS 2019

CFO Heine Thorsgaard  
December 5, 2019

# Danish based technology company listed on OSE since 2013

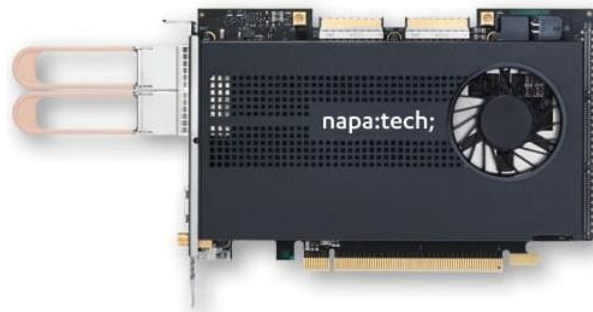
Napatech was founded in 2003, opened its first office in California in 2004, and was listed on OSE in 2013.

Napatech develops and sells Network Interface Cards with 85 employees and offices in Denmark and the US.

R&D located in Denmark and Sales organization located in USA, DK and Asia.

Production handled by a US based contract manufacturer specialized in building complex products in small series meeting extremely high reliability requirements.

Napatech customers are primarily large IT companies and large corporations.





# Napatech produces high-performance Network Interface Cards

Network Interface Cards are hardware components connecting servers to a computer network.

SmartNICs are reprogrammable network interface cards capable of performing advanced network processing tasks that would otherwise be handled by the processors (CPUs).

Being reprogrammable SmartNICs enable the networks to accommodate the changing needs on the application level.

Napatech produces high-end SmartNIC's for

- **Original Equipment Manufacturers (OEMs)** like IBM, Cisco & Polystar, and
- **End User Customers** like Facebook, Walmart & Bank of America

Unit prices ranges from \$1,500 to \$11,000+

Product margins >70%

**Napatech Brings A Unique Combination Of Value and Benefits**

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- 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**

NAPATECH A/S © COPYRIGHT 2019

5 November 2019 6



**Napatech Software Suite**

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Napatech Software Suite provides a well-defined application programming interface as well as support for the well-known, open-source interface libpcap and the Windows variant called WinPcap. This allows programmers to quickly integrate Napatech FPGA SmartNICs for network monitoring and security applications into their system.

Software development tools  
Napatech provides a complete set of tools for developers to create and test applications. These tools are designed to be used by developers to create and test applications. These tools are designed to be used by developers to create and test applications.

Customer Applications  
Our customers can use our products to create and test applications. These applications are designed to be used by customers to create and test applications. These applications are designed to be used by customers to create and test applications.

One-stop application programming interface for all our products  
We provide one application programming interface for all our products. This interface is designed to be used by customers to create and test applications. This interface is designed to be used by customers to create and test applications.

Highly scalable and efficient  
Our products are designed to be highly scalable and efficient. This allows customers to create and test applications. This allows customers to create and test applications.

Highly secure and reliable  
Our products are designed to be highly secure and reliable. This allows customers to create and test applications. This allows customers to create and test applications.

Highly flexible and adaptable  
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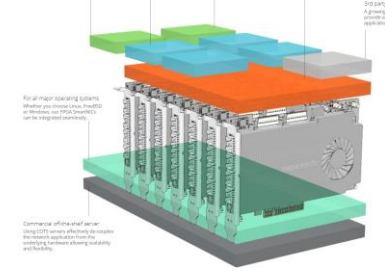
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# Selling to Top Tier Global Customers

Napatech customers are primarily global top tier customers.

Majority of sales is to global OEMs with long term strategic relationships and sales committed through year-long design win cycles.

Direct end-user sales to large corporations with own data centers has emerged over the last couple of years.

## Top Tier Global Customers



# Napatech's SmartNICs are used to accelerate applications

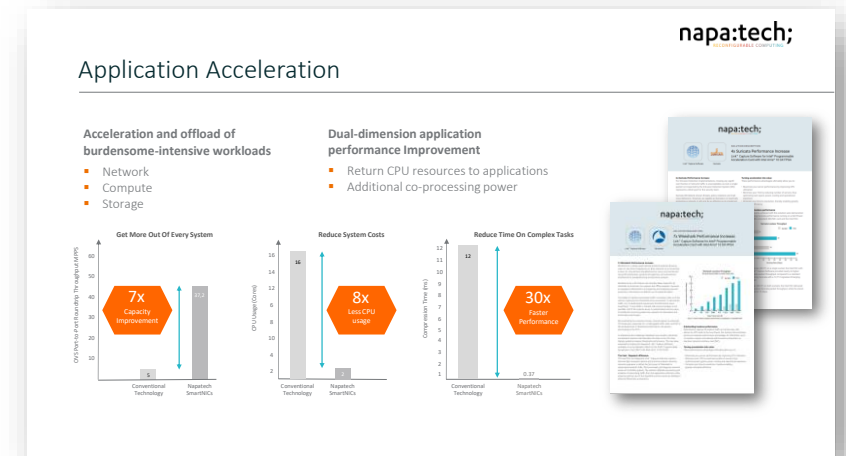
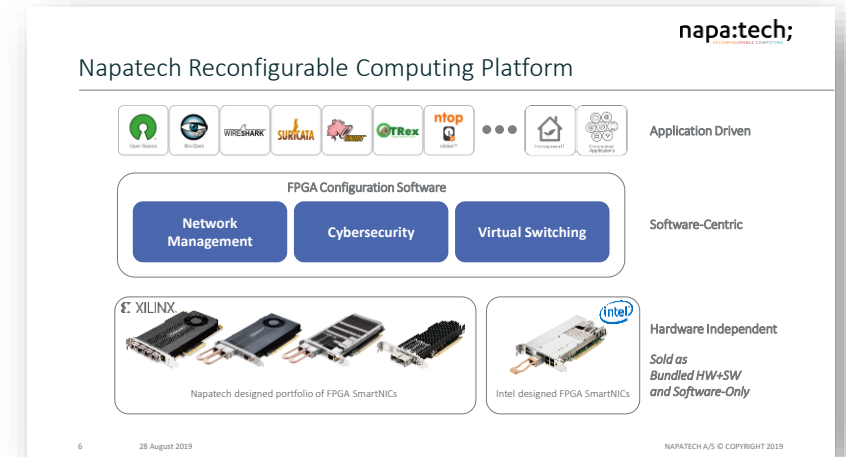
Napatech SmartNICs are used to accelerate applications within:

- Network Monitoring & Network Management
- Cybersecurity, and
- Financial Trading

Running their applications on our SmartNICs our customers secure better performance of their applications and they offload burdensome and intensive workloads from their CPUs.

Using Napatech's SmartNICs customers can:

- achieve significantly faster application performance on business-critical applications,
- obtain significant capacity improvements from increased data throughput
- free up expensive CPU time

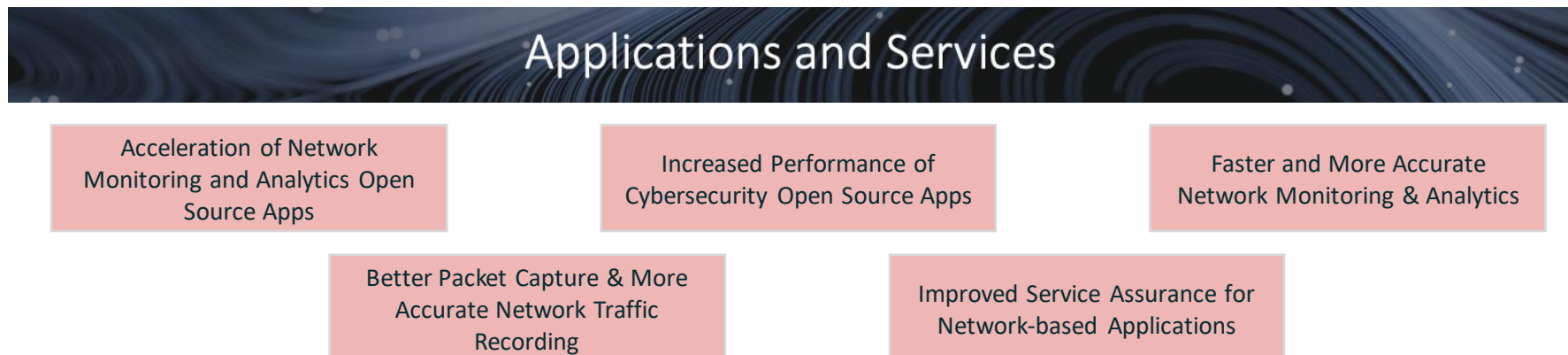


# Napatech's Value to Customers is high performance and flexibility

Napatech competes against other technological solutions than SmartNICs and against SmartNICs based on different chipsets.

Customers choose Napatech for a number of key reasons

- Higher performance and lower latency of applications at high speed in the data center or cloud
- Better cost performance of their server deployments
- Better customer experience with compute-intensive applications that perform better and more securely
- Overall improvements in TCO and space utilization

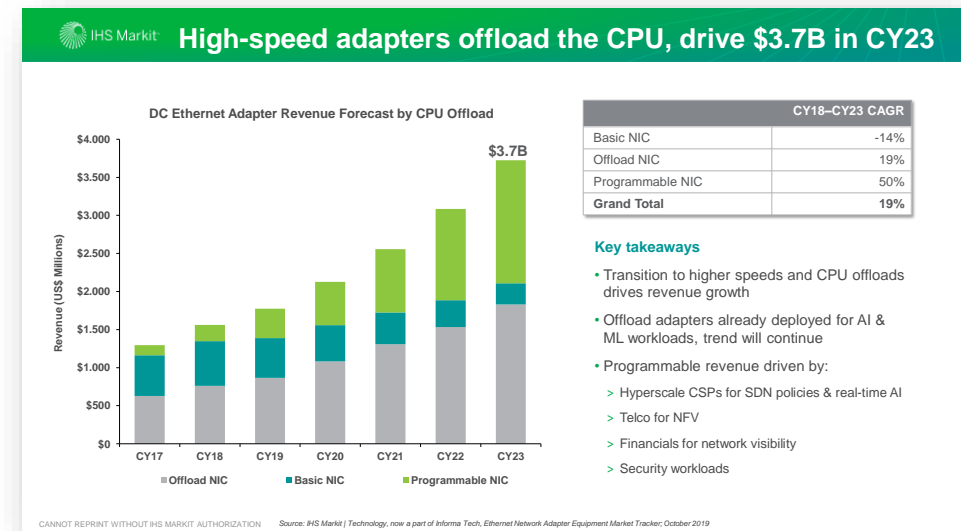
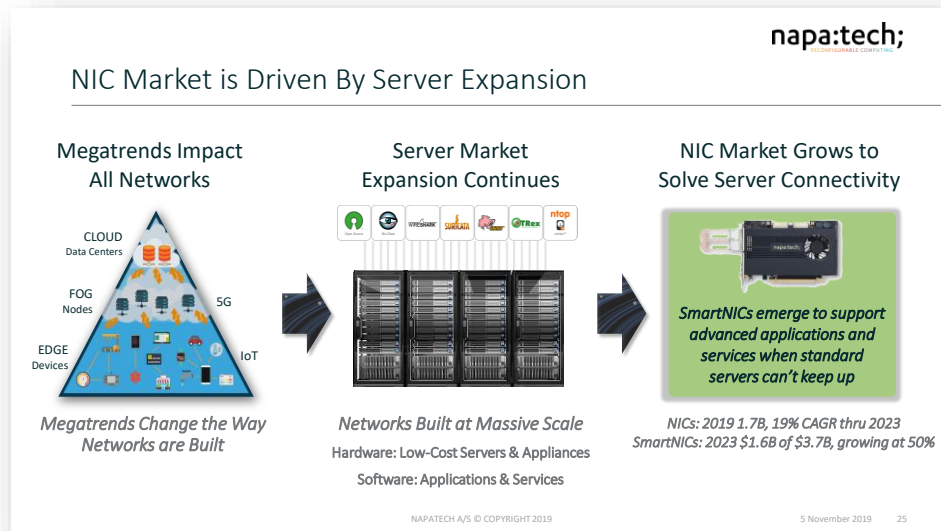


# Napatech is addressing a rapidly growing market

Napatech is addressing a global SmartNIC market estimated to grow at a 50% CAGR to \$1.6B in 2023.

Growth in SmartNIC market is fueled by

- growth in servers for data centers, corporate networks and 5G infrastructure
- accelerating network speeds, and
- increased security workloads



# A positive turnaround after a transitional year

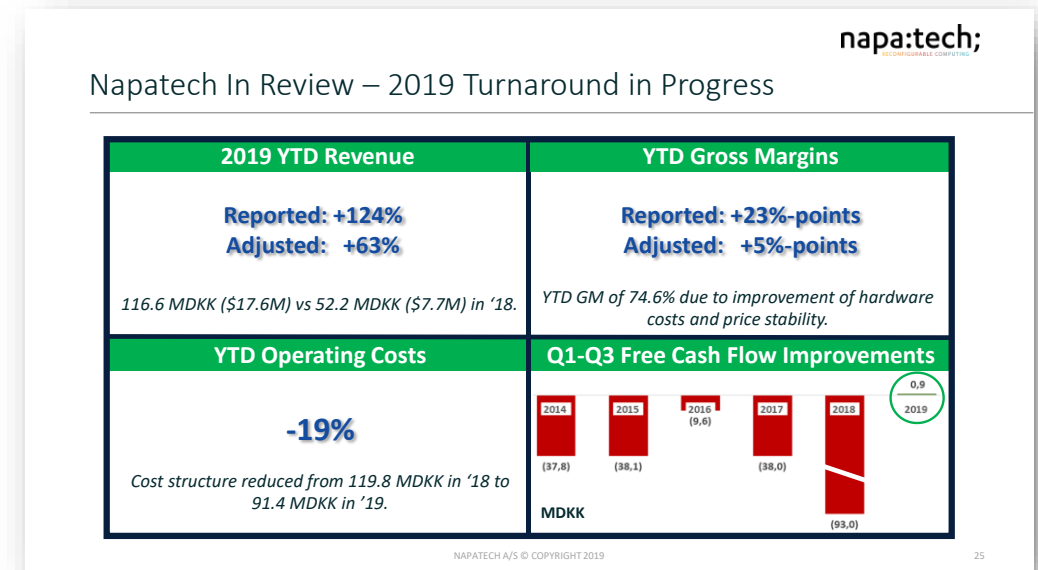
Technological uncertainty in the industry caused significant drop in sales in 2018.

2019 has been a turnaround year with significant improvements in sales, cost savings and cash flow.

Napatech has emerged with a renewed direction:

- New management in H2 2018
- Restructuring of the business
- Divestment of business line
- Raise of capital in Summer 2018 and Spring 2019

Napatech is investing in its area of core competency in network management and cybersecurity and is driving new business development to focus on emerging growth markets.





# Why Invest in Napatech?

## Large Market Opportunity

- SmartNIC market is growing rapidly: \$1.6B in 2023
- Napatech is investing for growth in emerging market segments

## Positioned for Success

- Proven technology
- Market leading competencies
- Protected position in high-barrier-to-entry technology market

## Leverageable Business Model

- Highly leverageable business model
- Grow aspirations: CAGR of 20-30%; costs growing at 7-10% a year
- Margins above 70%



## For More Information

[Q3'19 IMS Presentation from 5 Nov 19](#)

[Capital Markets Day from 5 Nov 19](#)

<http://www.napatech.com/investor-relations/>









<https://www.napatech.com/napatechworld/>





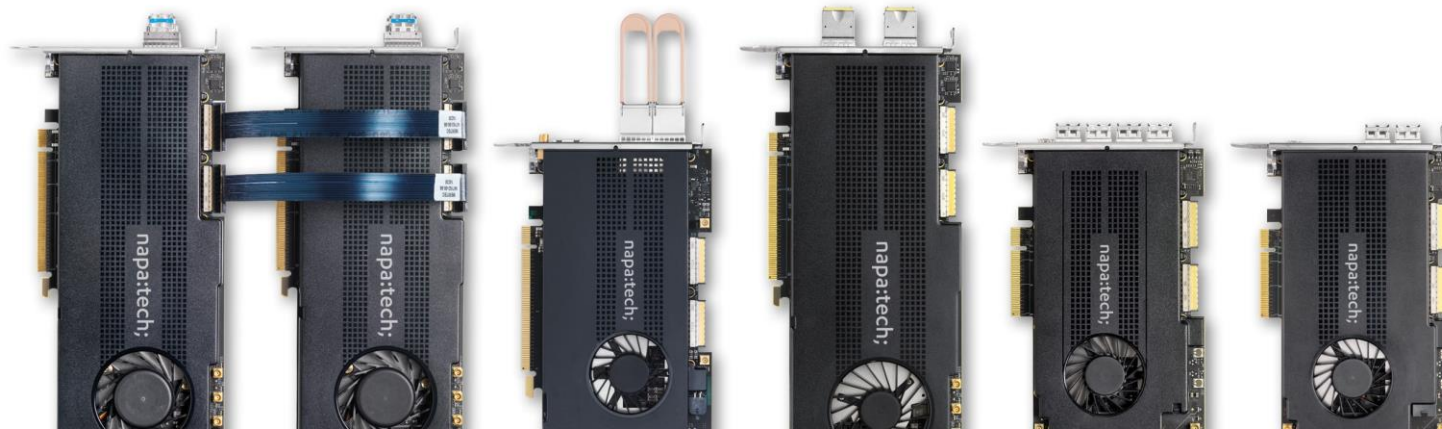
# Additional Slides

# 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
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Used to Improve the Performance  
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# Napatech Software Suite

Napatech Software Suite provides a well-defined application programming interface as well as support for the well-known, open-source interface libpcap and the Windows variant called WinPcap.

This allows programmers to quickly integrate Napatech FPGA SmartNICs for network monitoring and security applications into their system.

**Software development tools**  
Napatech provides a number of command line tools and application example source code to be used by customers for evaluation, prototyping, diagnostics or getting a head start in application software development.

**Customer Applications**  
Our customers can stay ahead of the data growth curve by creating high performance network management and security applications, based on Napatech FPGA SmartNICs.

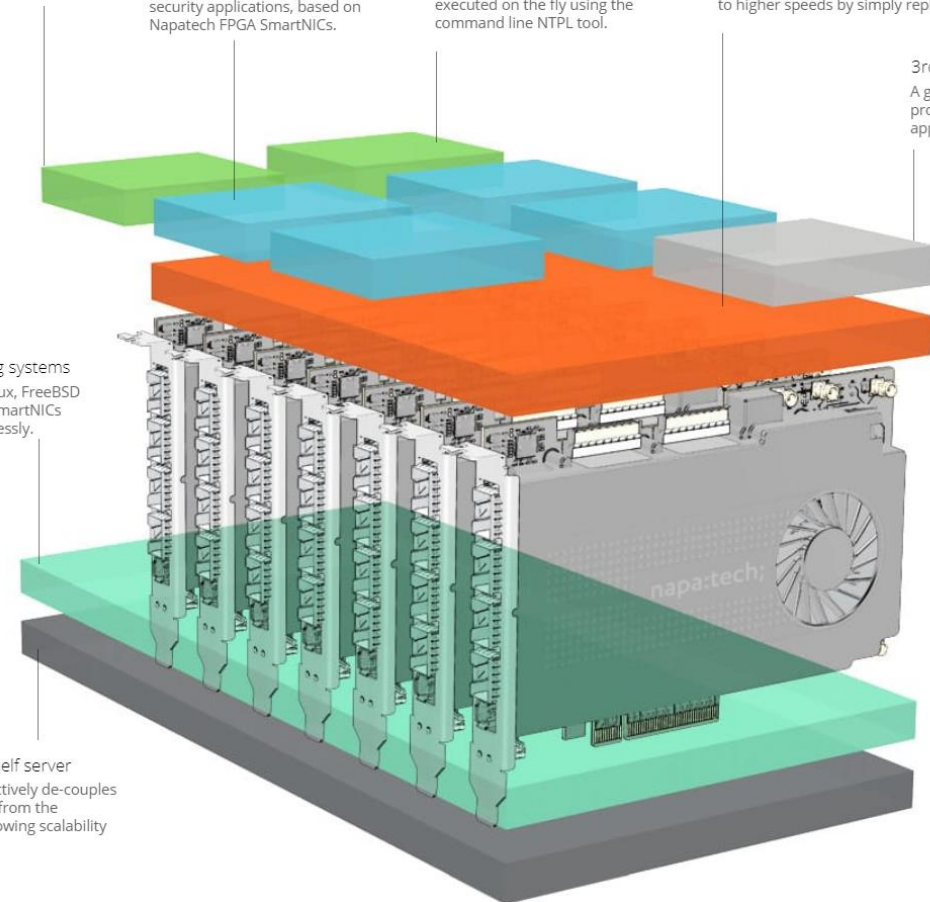
**On the fly reconfiguration of features and capabilities**  
Designed for ease-of-use, the Napatech programming language (NTPL) can be used within application software, in configuration scripts (for hash values and filters) or it can be executed on the fly using the command line NTPL tool.

**One interface for quick and easy integration**  
We provide one application programming interface for all our FPGA SmartNICs to reduce integration time for new products. The hardware abstraction it provides also allows for migration to higher speeds by simply replacing the hardware.

**3rd party software**  
A growing range of partners provide value adding applications.

**For all major operating systems**  
Whether you choose Linux, FreeBSD or Windows, our FPGA SmartNICs can be integrated seamlessly.

**Commercial off-the-shelf server**  
Using COTS servers effectively de-couples the network application from the underlying hardware allowing scalability and flexibility.



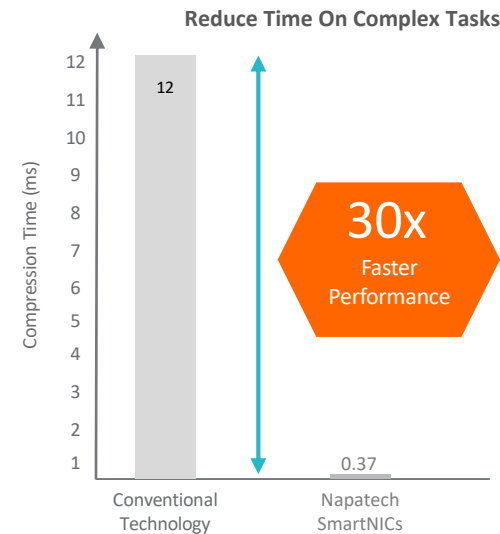
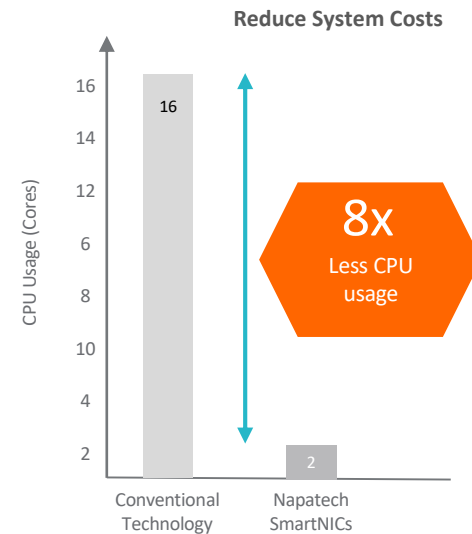
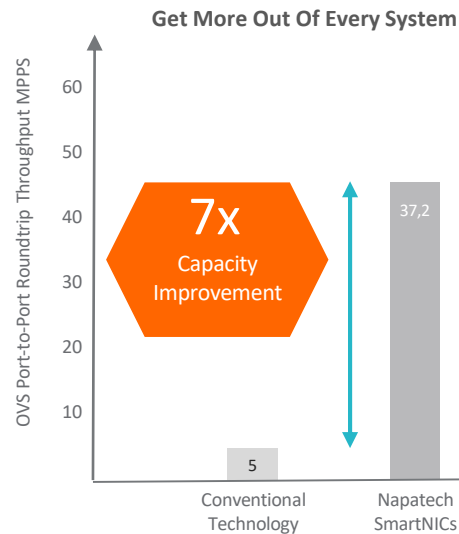
# Application Acceleration

## Acceleration and offload of burdensome-intensive workloads

- Network
- Compute
- Storage

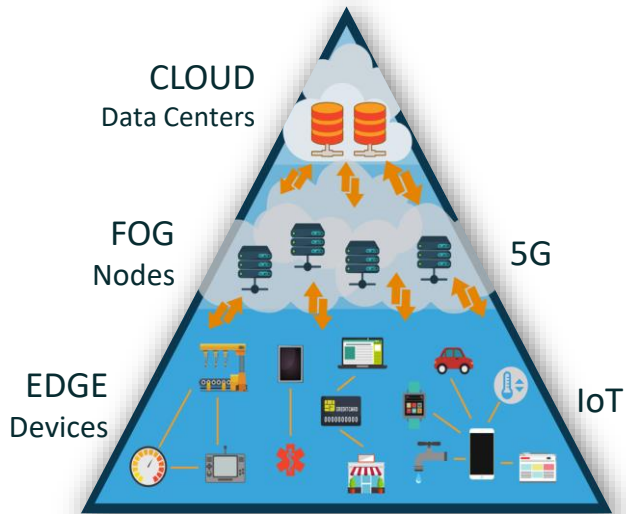
## Dual-dimension application performance Improvement

- Return CPU resources to applications
- Additional co-processing power



# NIC Market is Driven By Server Expansion

## Megatrends Impact All Networks



*Megatrends Change the Way Networks are Built*

## Server Market Expansion Continues



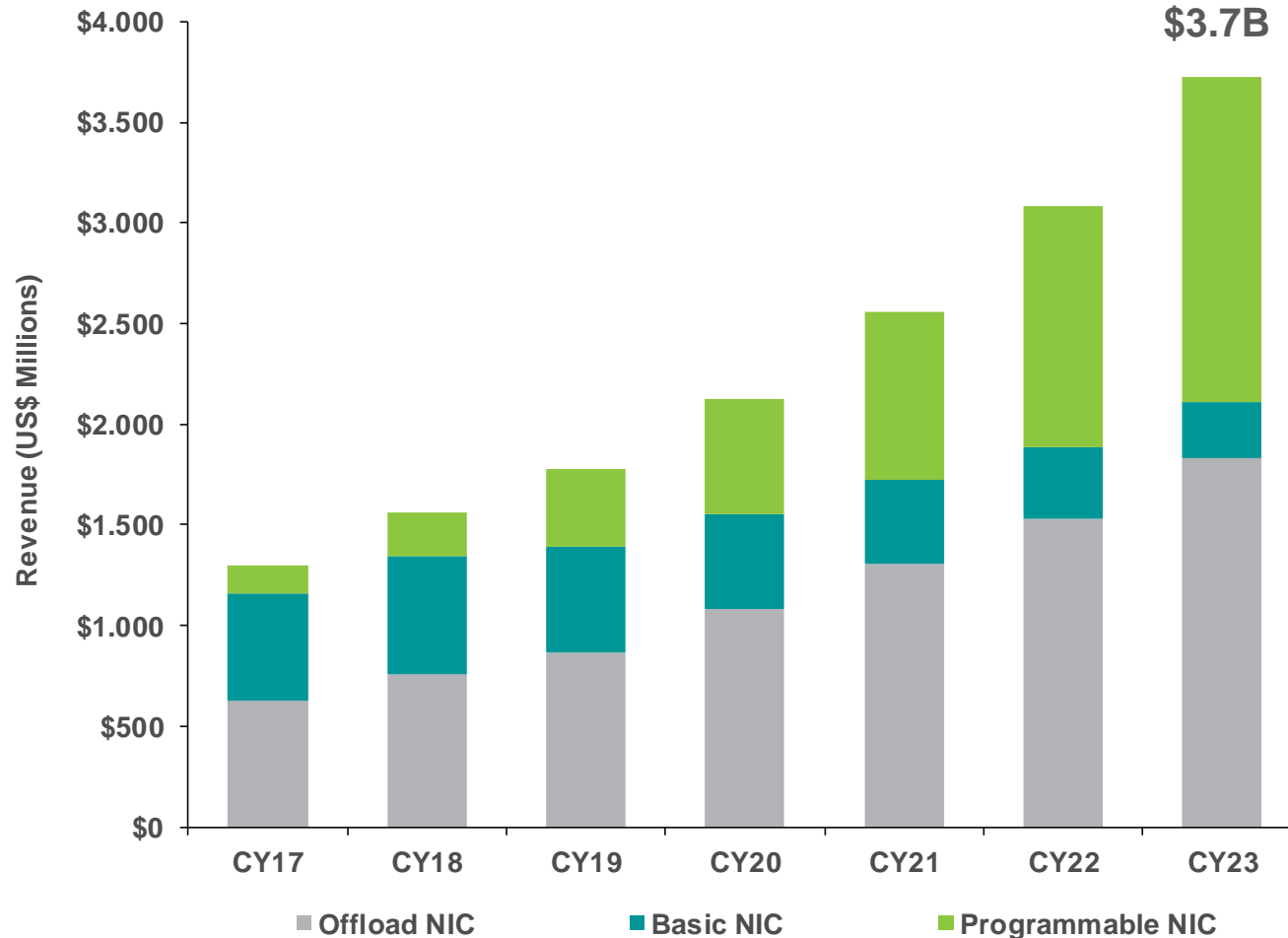
*Networks Built at Massive Scale*  
Hardware: Low-Cost Servers & Appliances  
Software: Applications & Services

## 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%*

DC Ethernet Adapter Revenue Forecast by CPU Offload



CY18–CY23 CAGR

Basic NIC	-14%
Offload NIC	19%
Programmable NIC	50%
<b>Grand Total</b>	<b>19%</b>

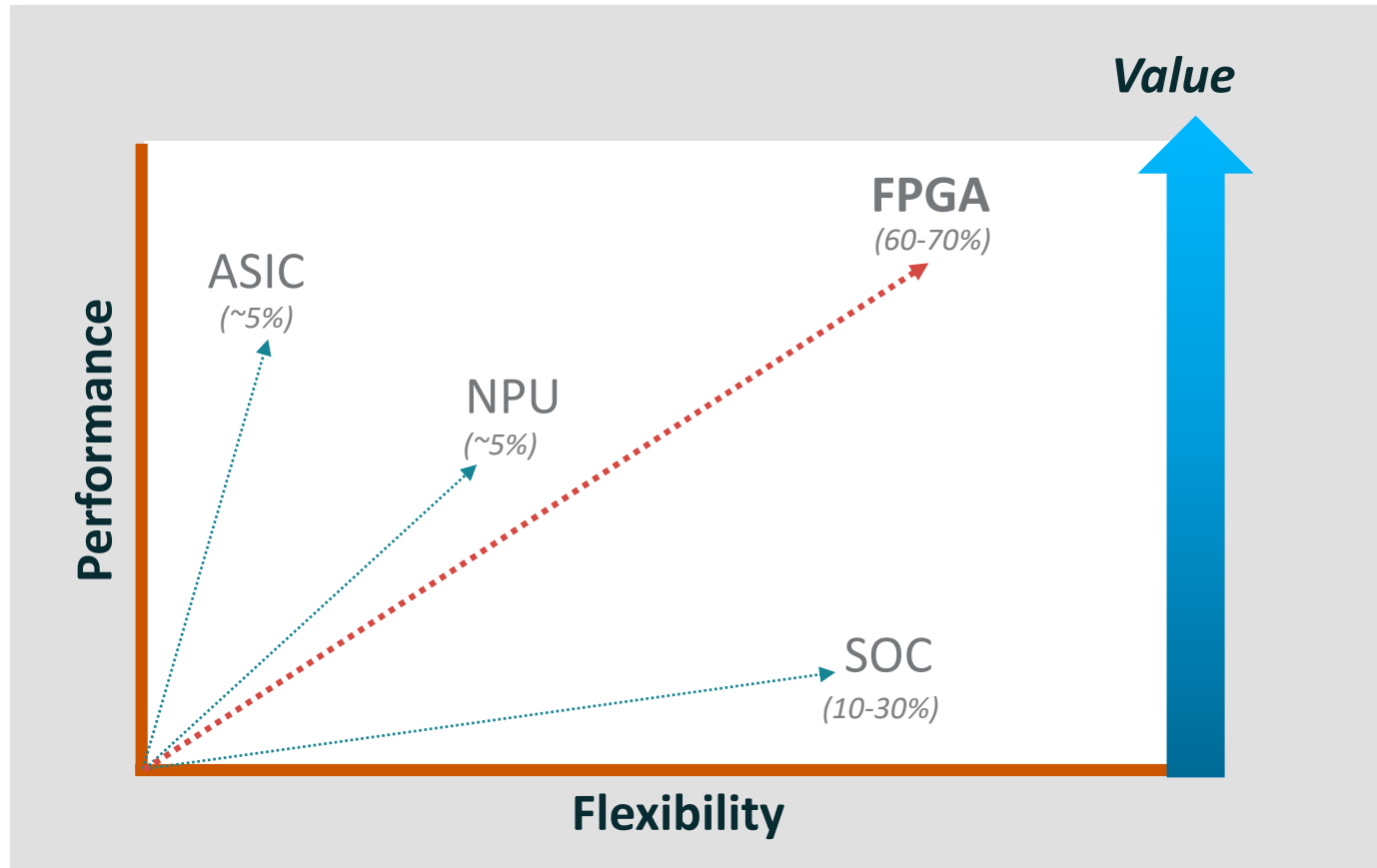
## Key takeaways

- 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



# 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*