

# Napatech

## Q3 2017 Presentation

November 7, 2017



# Highlights Q3 2017

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## Sales performance

- 7% decrease in USD sales compared to Q3'16
- 11% decrease in DKK Revenue compared to Q3'16

## Progress in Pandion business

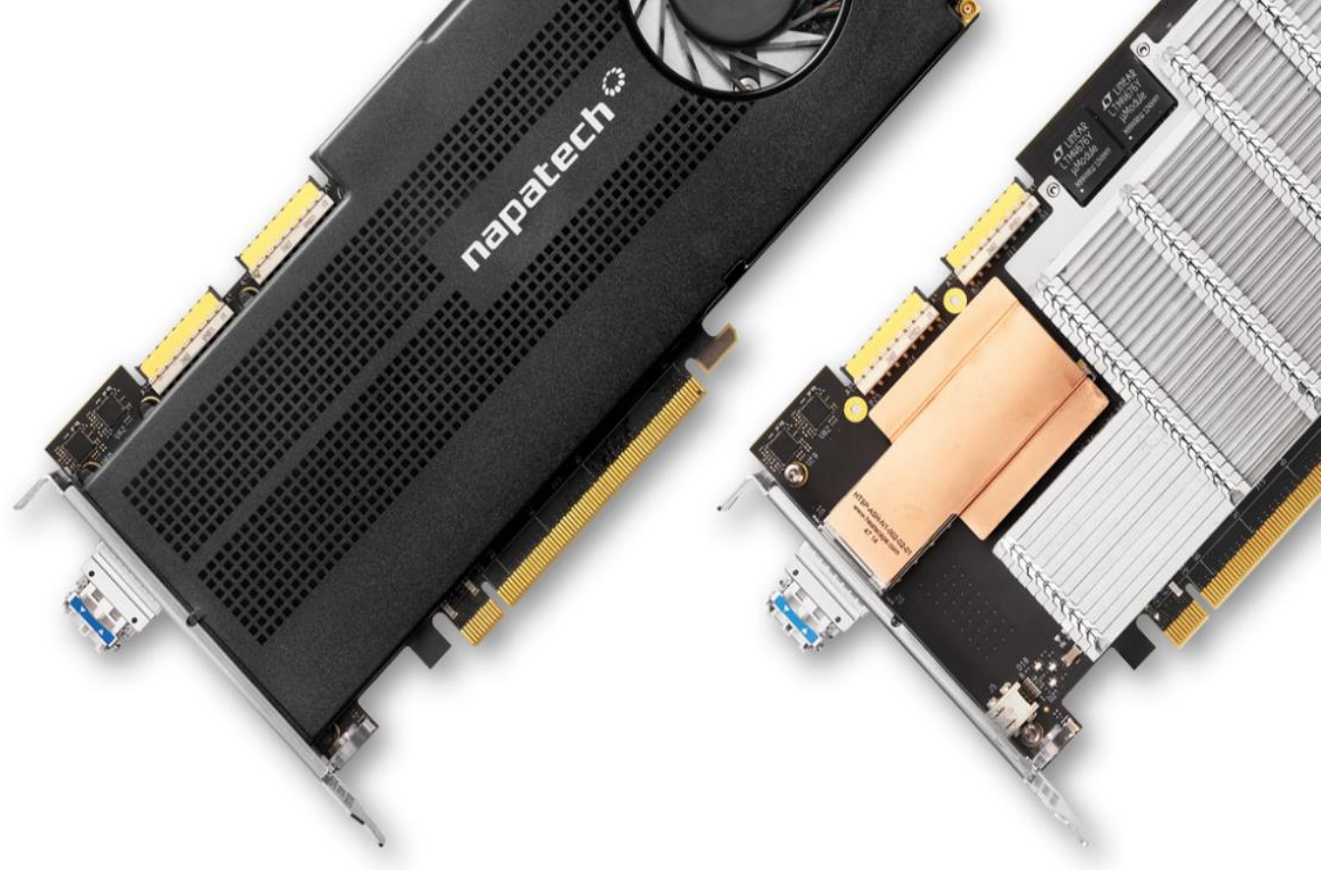
- 8% of our sales in Q3 coming from Pandion products

## Pandion integration with Palo Alto Networks Firewall

- Value Added Reseller has integrated Pandion and Palo Alto Firewall

## Board and Management strengthened

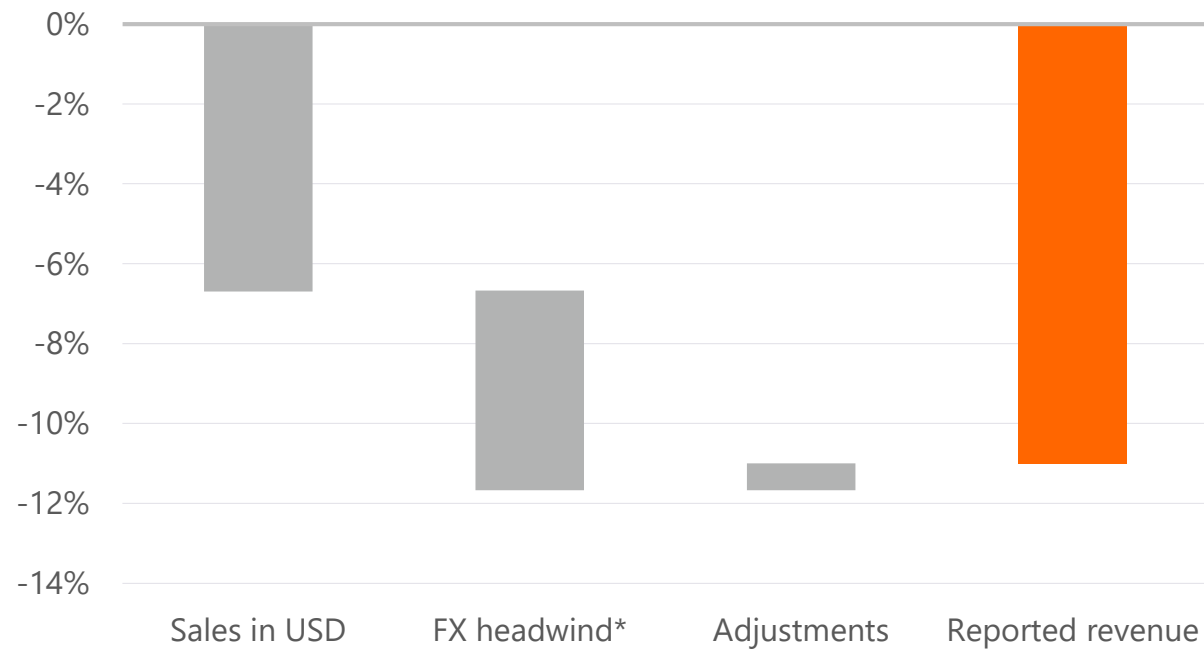
- Lars Boilesen, New Chairman of the Board
- Ken Way, New CSO



## Napatech Q3 2017 Financials

# Q3 2017 Revenue

Sales and Revenue Growth (YoY)



\* Based on average rates

## Comments:

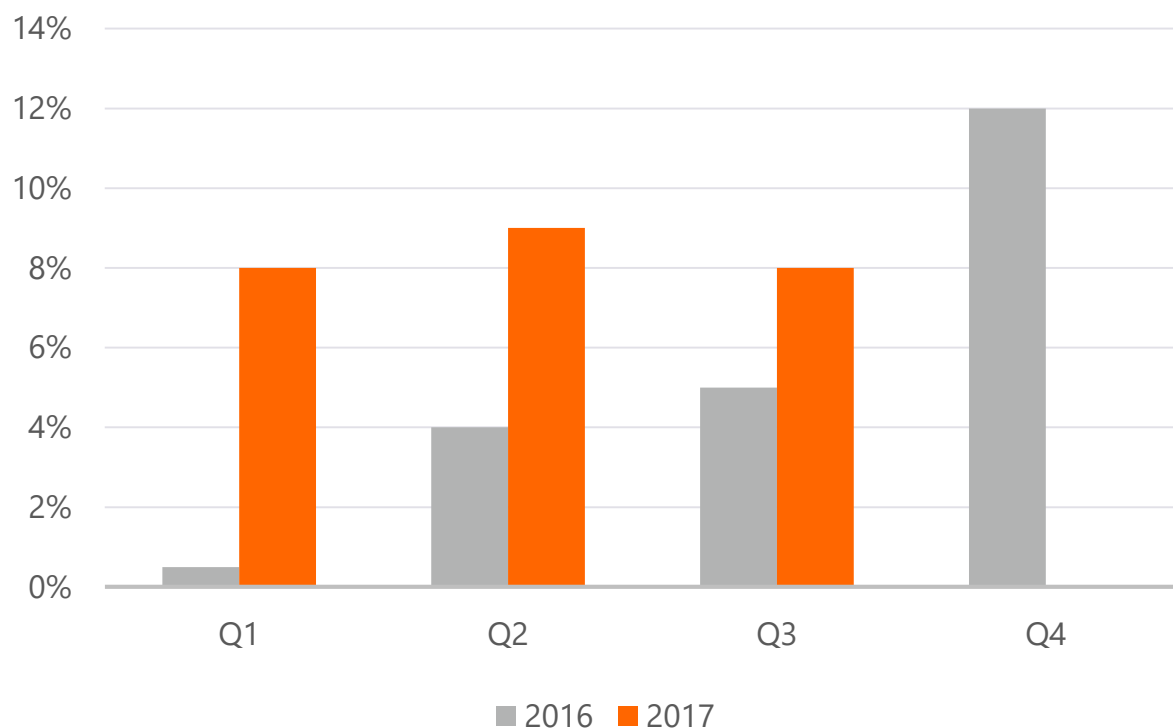
- Revenue declined in Q3 is 11%
- Revenue growth YTD is 11% (FY 2017 guidance 10-20%)
- The decline is due to the quarterly fluctuations as well as a loss of a Pandion project
- Currency has had a large effect as the USD exchange rate decreased compared to the previous year

Note: The US Dollar to Danish Kroner exchange rate is calculated as a daily average rate through the quarter and compared YoY



# Pandion Progression

Pandion share of sales



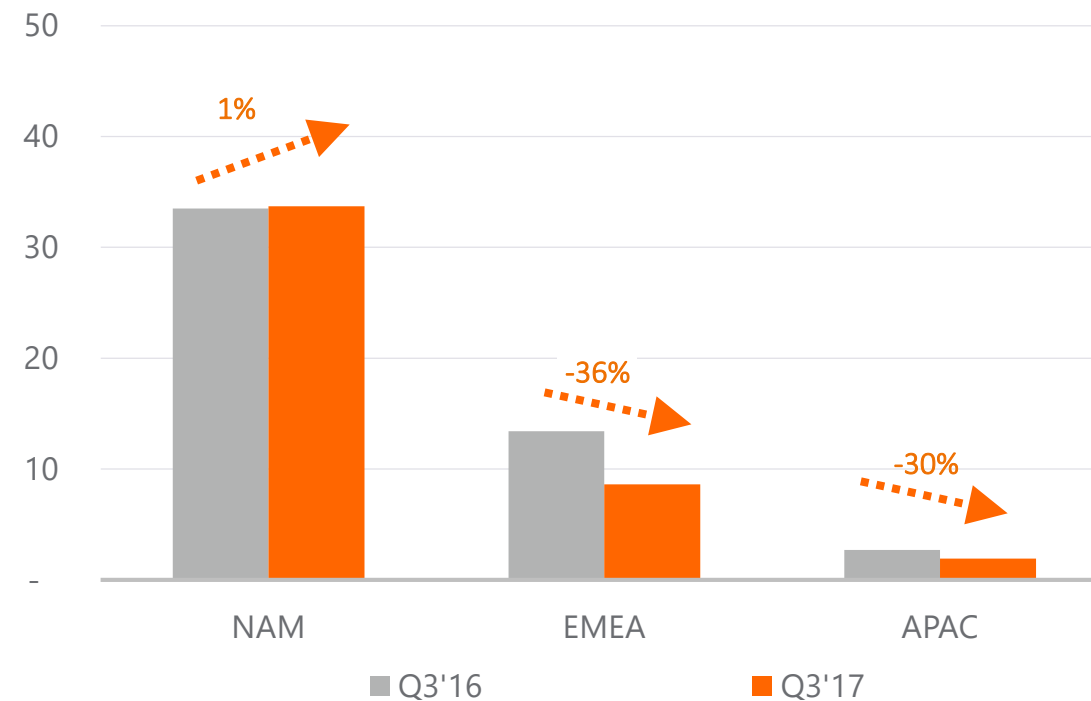
## Comments:

- Q3 below our expectations
- Pandion is expected to be a significant growth driver for the coming periods
- Pandion product mix sold:
  - As a recorder solution for system integrators
  - As recorder software and accelerators to OEM customers
  - As a DELL-branded recorder through DELL

Note: Pandion share of sales are measured in USD

# Regional Revenue Distribution

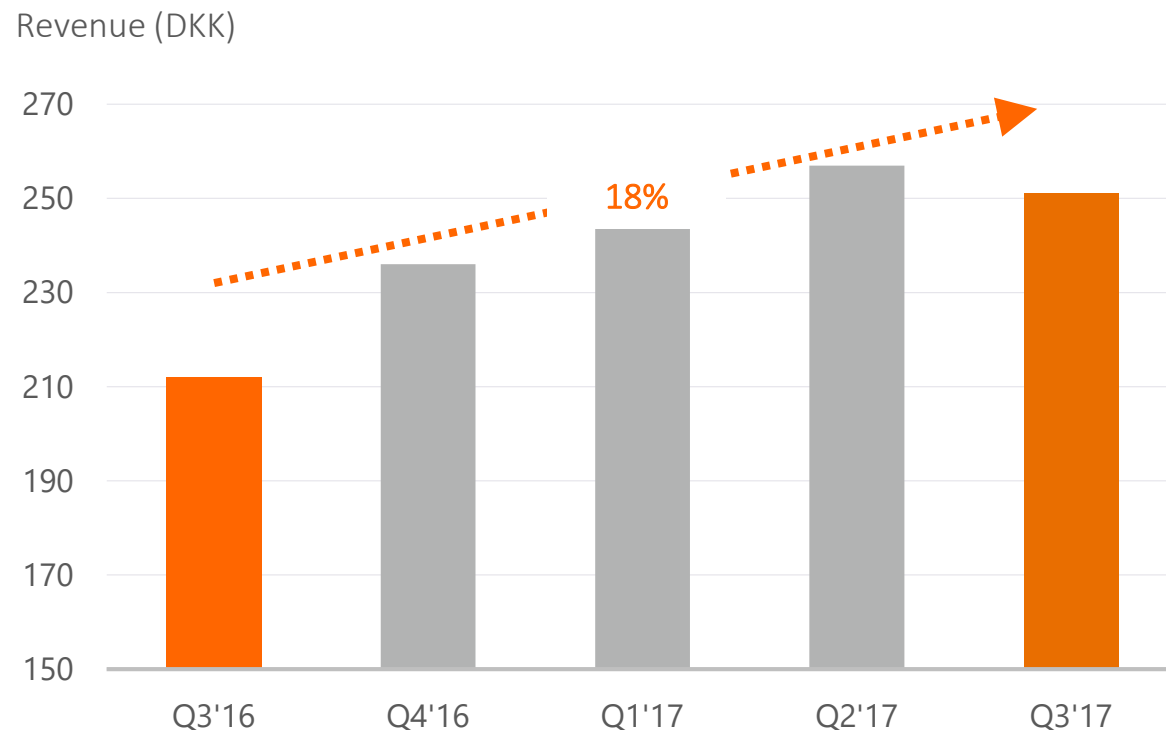
Quarterly revenue in MDKK



## Comments:

- Small growth in North America
- North America growth effected by fluctuations in order pattern
- EMEA decline due to timing of projects in the region
- APAC decline due to timing of projects in the region

# Last Twelve Months Rolling Revenue

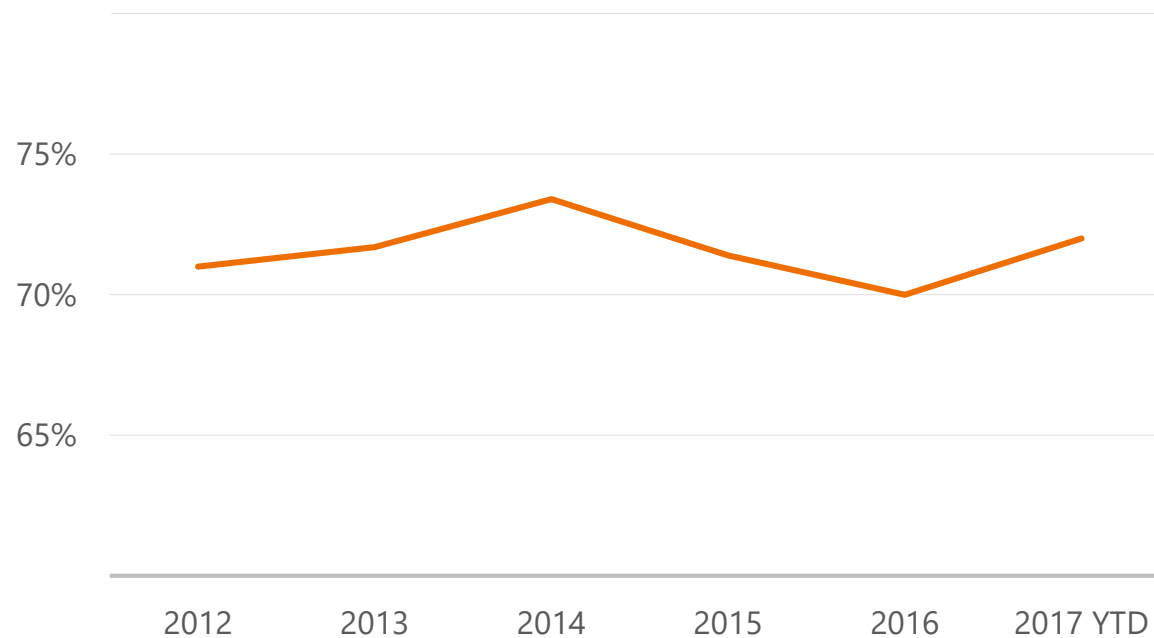


## Comments:

- Last twelve months (LTM) rolling revenue is 18% (FY 2017 guidance 10-20%)
- By comparison, EBITDA (LTM) for same period has shown an increase of 54%
- Fluctuations in quarters offset by longer-term trend

# Gross Margin Development

Gross Margin



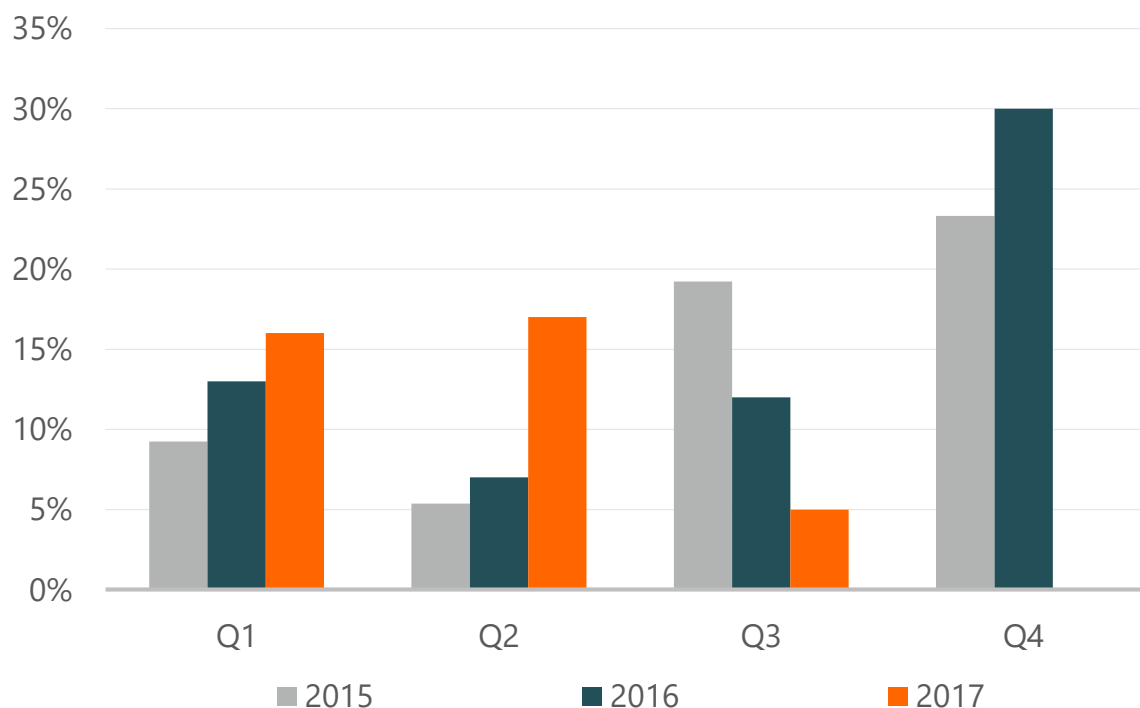
## Comments:

- Gross margin YTD is 72% (FY 2017 guidance around 68%)
- The gross margin in Q3'17 is at 72%, increase of 1 point compared to Q3 2016
- Larger volumes to strategic accounts and changes in product mix are expected to drive the gross margin down



# EBITDA Margin

EBITDA Margin



## Comments:

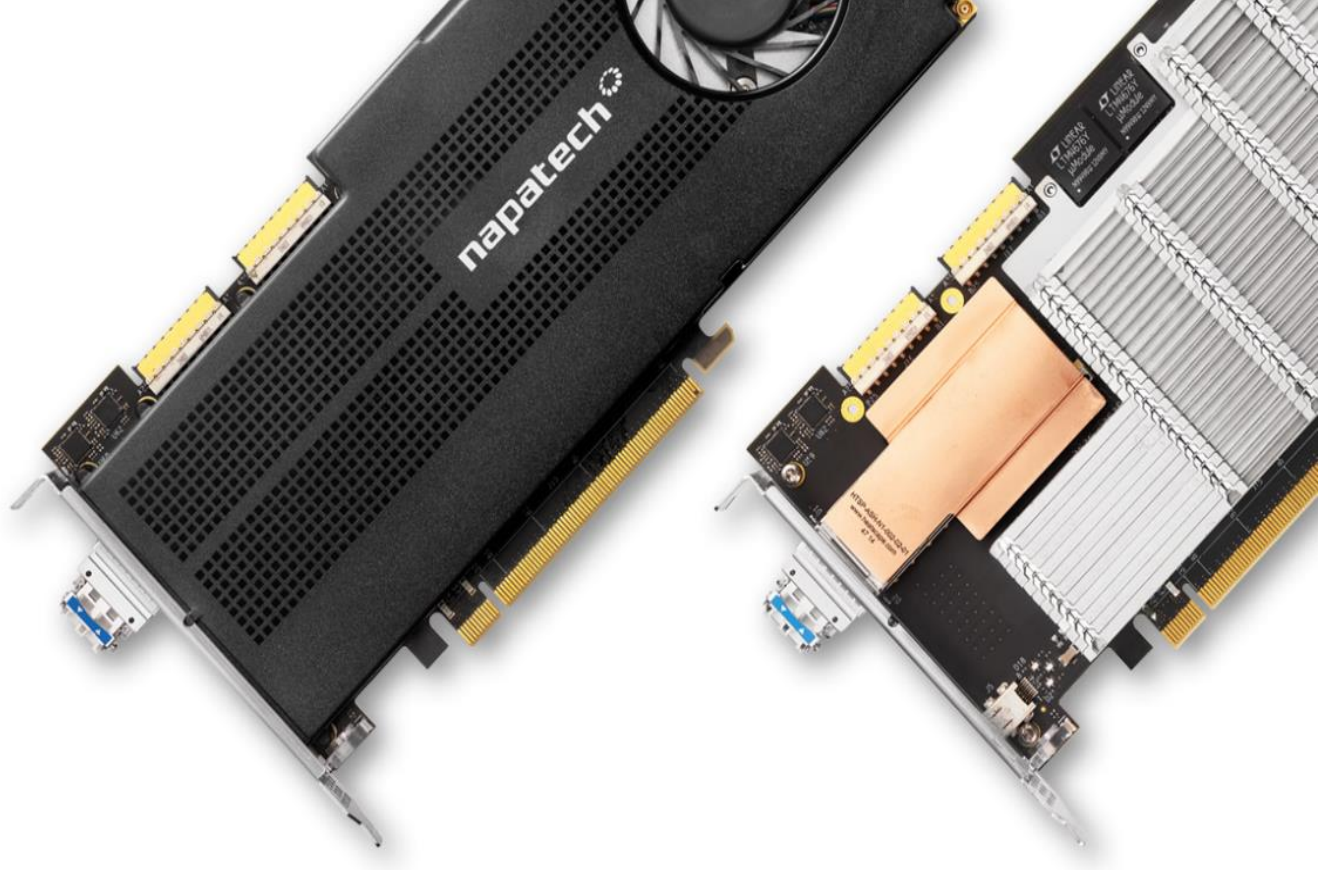
- EBITDA margin YTD is 13% (FY 2017 guidance around 20%)
- EBITDA margin is lower in Q3 compared to last year. This is due to the lower revenue, as our cost are very stable, the EBITDA margin is heavily dependent on the revenue level

# Financial Results Q3 2017

(Figures in MDKK)	Q3 2017	Q3 2016	YTD 2017	YTD* 2016
Revenue	44.1	49.6	158.1	142.4
Growth YoY**	(11%)	(18%)	11%	(3%)
Gross Margin	72%	71%	72%	72%
EBITDA	2.1	6.1	21.0	15.4
EBIT	(7.3)	(3.6)	(7.4)	(11.2)
Cash flow from operating activities	4.8	10.0	14.8	7.3
Cash and cash equivalents, end of quarter	20.6	48.0	20.6	48.0

\* YTD September 2016

\*\* YoY is the growth of current quarter compared with the same quarter one year earlier



This is Napatech

# Napatech in Short

- Napatech provides reconfigurable SmartNIC solutions based on hardware and software that help IT organizations reimagine their business by harnessing the cost, performance and innovation benefits enjoyed by hyper-scale cloud service providers
- Napatech pioneered the use of reconfigurable FPGA-based acceleration hardware and software for networking and security applications. The use of FPGA technology is now broadening with the industry adoption of reconfigurable computing solutions and FPGA-based SmartNICs
- The shift towards cloud computing, 5G mobile and IOT has created a pervasive need for reconfigurable computing solutions across a wide range of new users, in high-growth applications and services; serving as the catalyst for the next phase of Napatech growth

## What is a SmartNIC?

- A SmartNIC is a product built around a very-flexible, high-speed, computing chip like a Field-Programmable Gate Array (FPGA)
- Unlike conventional technology, a SmartNIC is software reconfigurable – delivering hardware performance at the speed of software innovation



Cyber@adAPT

DELL EMC



# Market Trends In Networking and Communications



Cloud  
Computing



5G  
Mobile



Internet of  
things

By 2020

4

BILLION  
Connected People

25

MILLION  
Applications

25

BILLION  
Embedded Systems

50

BILLION  
Devices and Sensors

50

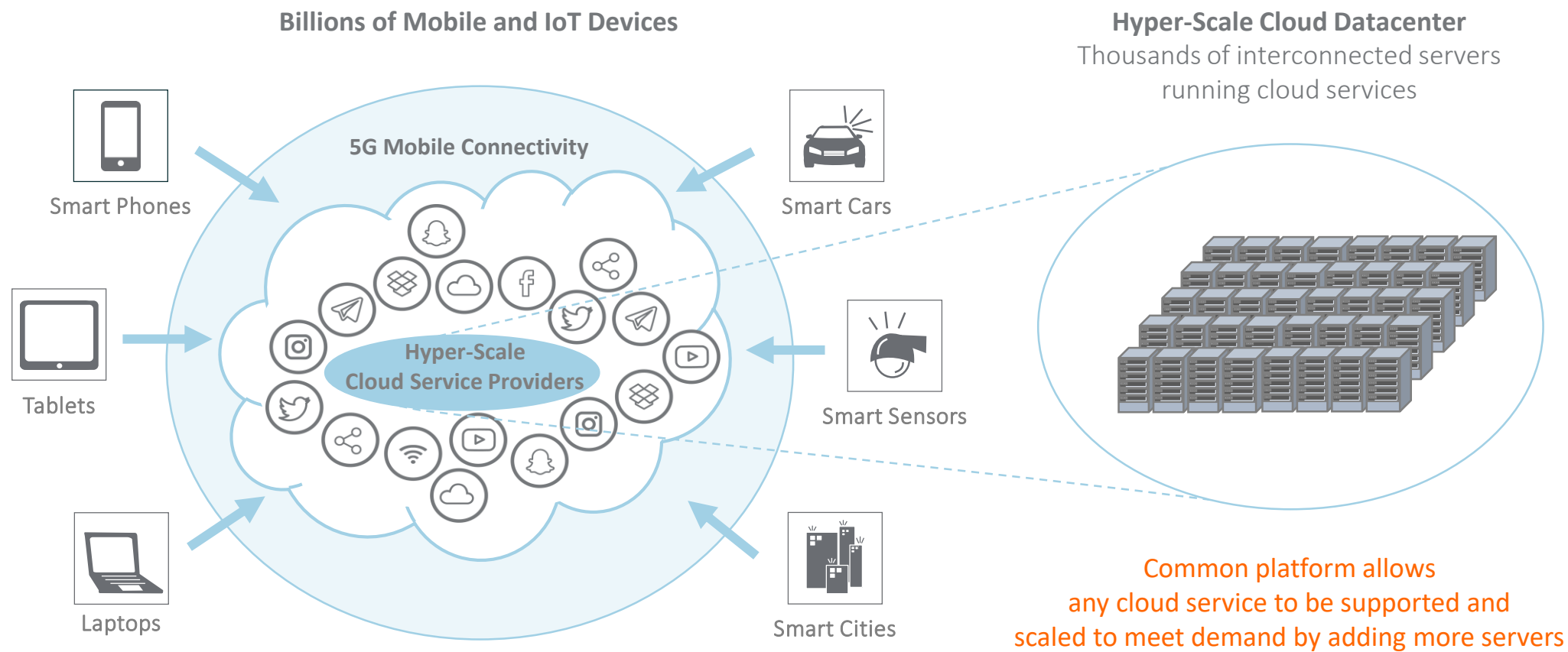
TRILLION  
Gbps of Data

Source: IDC



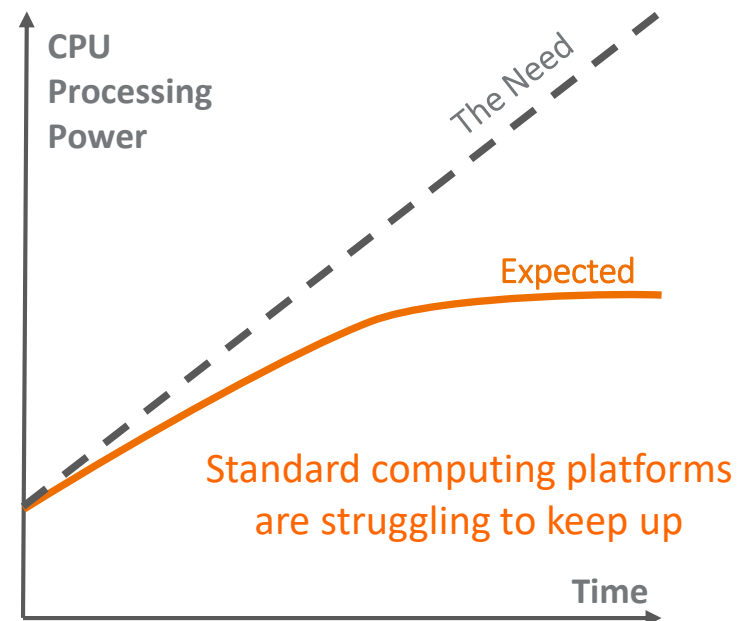
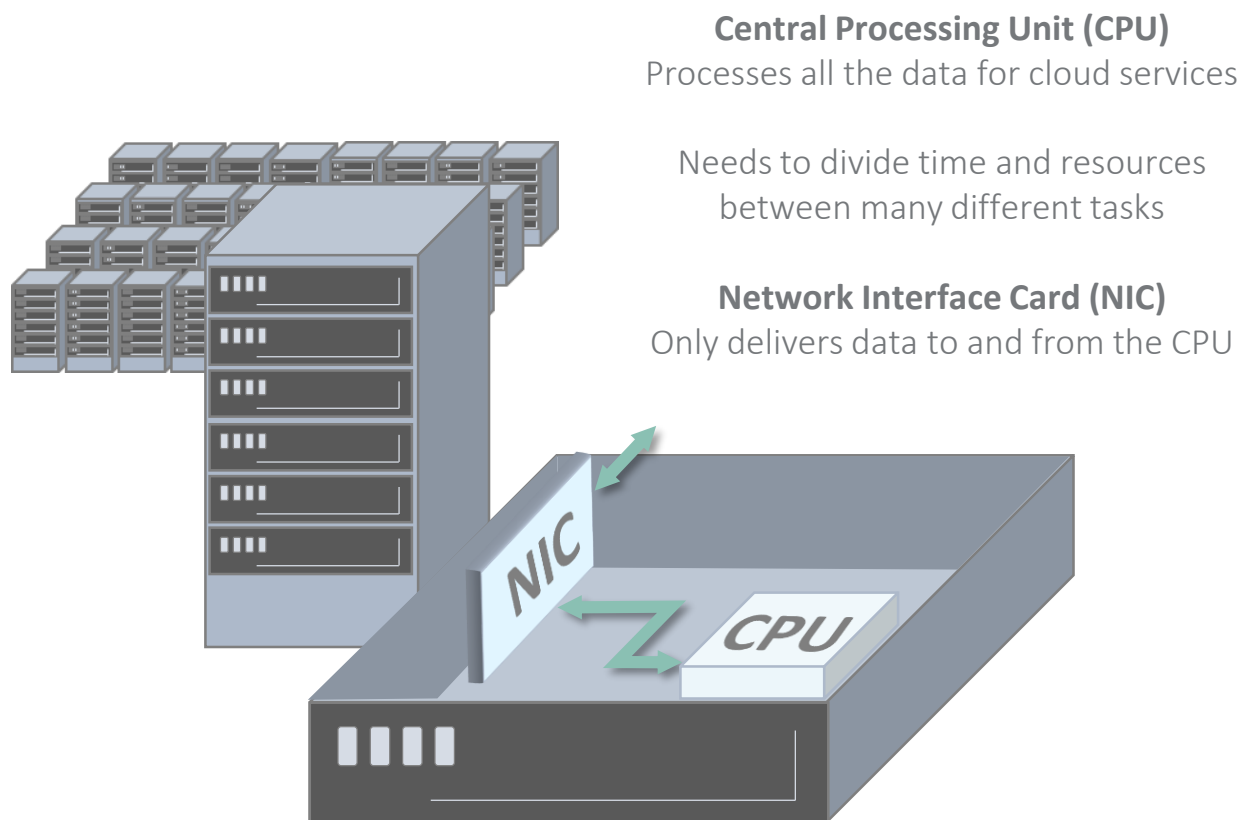
# Hyper-Scale Cloud Data Centers

## Common Platform Ensures Scalability to Meet Demand



# Standard Computing Platform

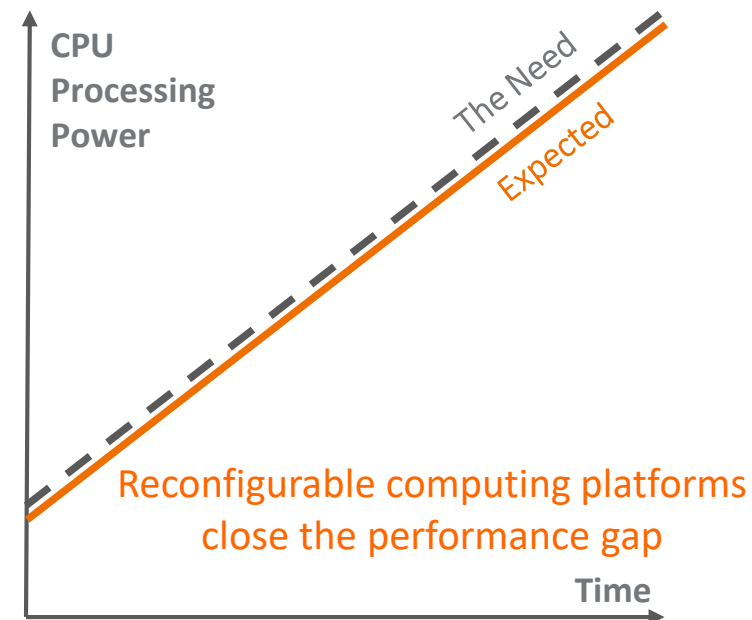
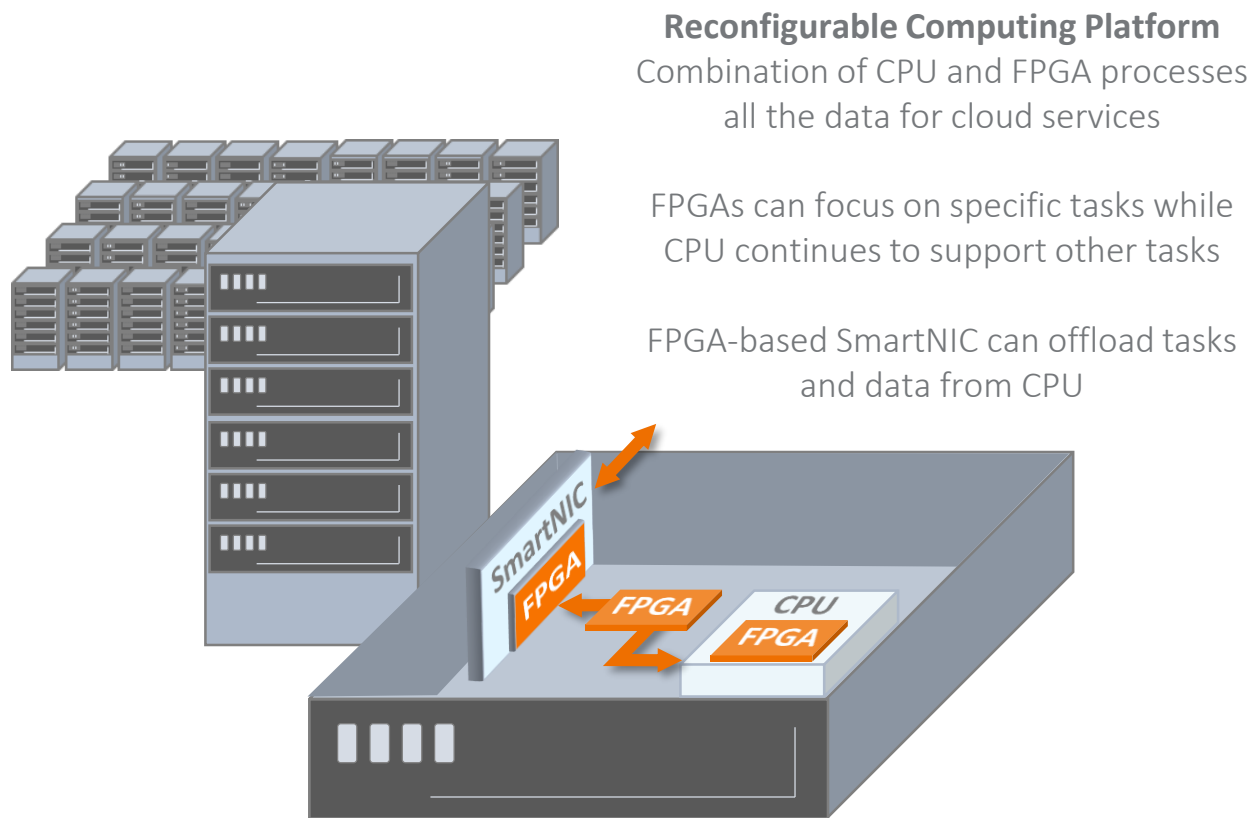
## Basis for Hyper-Scale Today But Struggling To Keep Up





# Reconfigurable Computing Platform

## FPGA's Provide The Additional Processing Power



# Reconfigurable Computing Solutions by FPGA Driven by Largest Cloud Service and Solution Providers

## Microsoft improves Azure latency by deploying custom NICs



WRITTEN BY  
Clare Hopping

News

24 Aug, 2015



### The hardware will help offload SDN demand for extra flexibility

Microsoft has started deploying custom network interface controller (NIC) hardware in its Azure datacentres to help offload the burden of software-defined networking (SDN).

The tech giant's SmartNIC hardware uses the same Field Programmable Gate Array (FPGA) technology developed for Bing, which it claims allows for extra flexibility, reprogramming it to offload the server CPU's virtual switch, used to route traffic between virtual machines.

This offers up better latency and frees up processing power for other operations where it's needed more urgently, according to Redmond.

Microsoft networking development engineer Albert Greenberg explained that a key part of the SmartNIC's inner workings are that it's adaptable to changes that may happen in the future, making it an even more attractive option for things like SDN, where the future is unpredictable.

"No one knows what SDN capabilities will be needed a year from now. Our FPGA-based SmartNIC allows us to reprogram the hardware to meet new needs, as they appear — reprogramming, not redeploying hardware," he said in a [blog post](#).

DEC 13, 2016 @ 01:30 PM 17,318

## Amazon's Xilinx FPGA Cloud: Why This May Be A Significant Milestone



### Intel Begins Shipping Xeon Chips With FPGA Accelerators

By: Jeff Burt | April 13, 2016

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POST WRITTEN BY

Karl Fre  
Karl Freunc

Combining the Intel server chips with Altera's FPGAs will improve the performance-per-watt of systems running the two by 70 percent, officials say.



Intel has begun shipping a development module that features the company's latest Xeon E5 server processors and programmable chips that will help customers drive performance while holding down power consumption.

The multichip platform is pairing the 14-nanometer Xeon E5-2600 v4 "Broadwell" processors—launched late in March—with the Arria10 field-programmable gate arrays

**HPC** Since 1987 - Covering the Fastest Computers in the World and the People Who Run Them

### Intel FPGAs Power Acceleration-as-a-Service for Alibaba Cloud

October 12, 2017

Oct. 12, 2017 — Intel today announced that Intel field programmable gate arrays (FPGAs) are now powering the Acceleration-as-a-Service of Alibaba Cloud, the cloud computing arm of Alibaba Group. The acceleration service, which can be launched from the Alibaba Cloud website, enables customers to develop and deploy accelerator solutions in the cloud for Artificial Intelligence inference, video streaming analytics, database acceleration and other fields where intense computing is required.

The Acceleration-as-a-Service with Intel FPGAs, also known as Alibaba Cloud's F1 Instance, provides users access to cloud acceleration in a pay-as-you-go model, with no need for upfront hardware investments.

- Home
- Technologies
- Sectors
- Exascale
- Specials
- Resource Library
- Events



Configurable cloud architecture  
based on FPGAs



Intel acquires Altera FPGA  
for record \$16.7B



Amazon introduces  
FPGA-as-a-Service

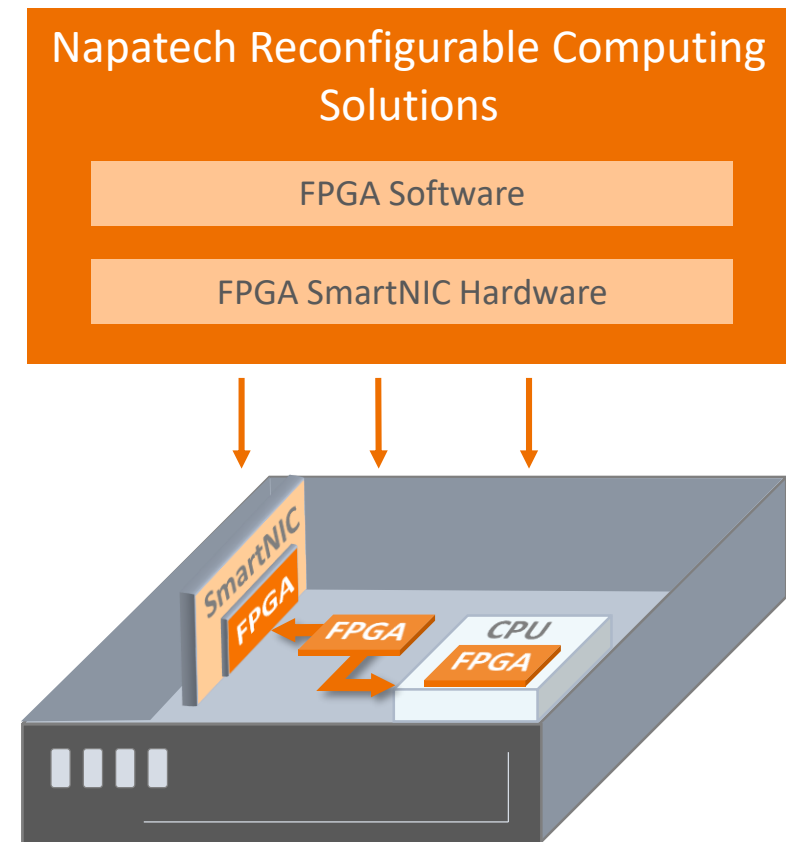


Alibaba introduces  
FPGA-as-a-Service

# Napatech Reconfigurable Computing Solution

## It's all about the software

- The power of FPGA technology is that it can be reconfigured by software on-the-fly to support a new task at any given point in time
- Reconfiguring the computing platform enables fast response in the hyper-scale datacenter to unexpected demands and performance challenges
- Napatech FPGA-based SmartNIC today enable standard servers to become reconfigurable computing platforms
- Napatech FPGA software forms the core of our solution and defines how the FPGA on the SmartNIC is configured to perform a specific task
- Our strategy is to ensure that Napatech FPGA software can be applied to FPGAs in any future reconfigurable computing platform design delivered by the server industry



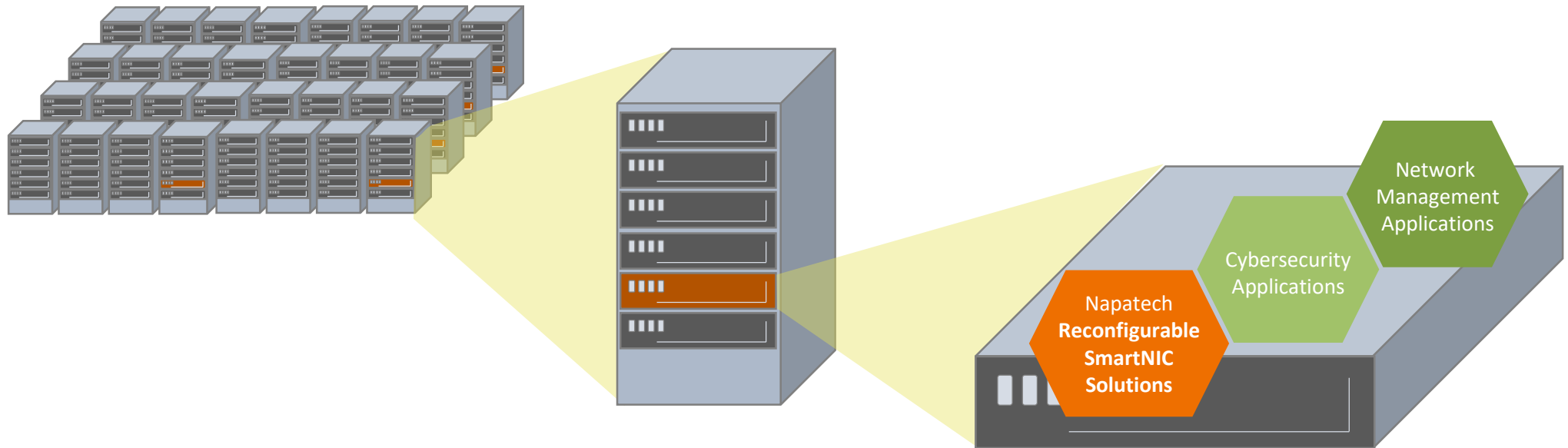
# Napatech Reconfigurable SmartNIC Solutions

## Today Focused on Cybersecurity and Network Management

Typical datacenter  
with thousands of servers  
supporting user services

Only some servers dedicated to  
network management and  
cybersecurity applications

Napatech Reconfigurable SmartNICs  
ensure reliable delivery of all the data  
all the time to network management  
and cybersecurity applications



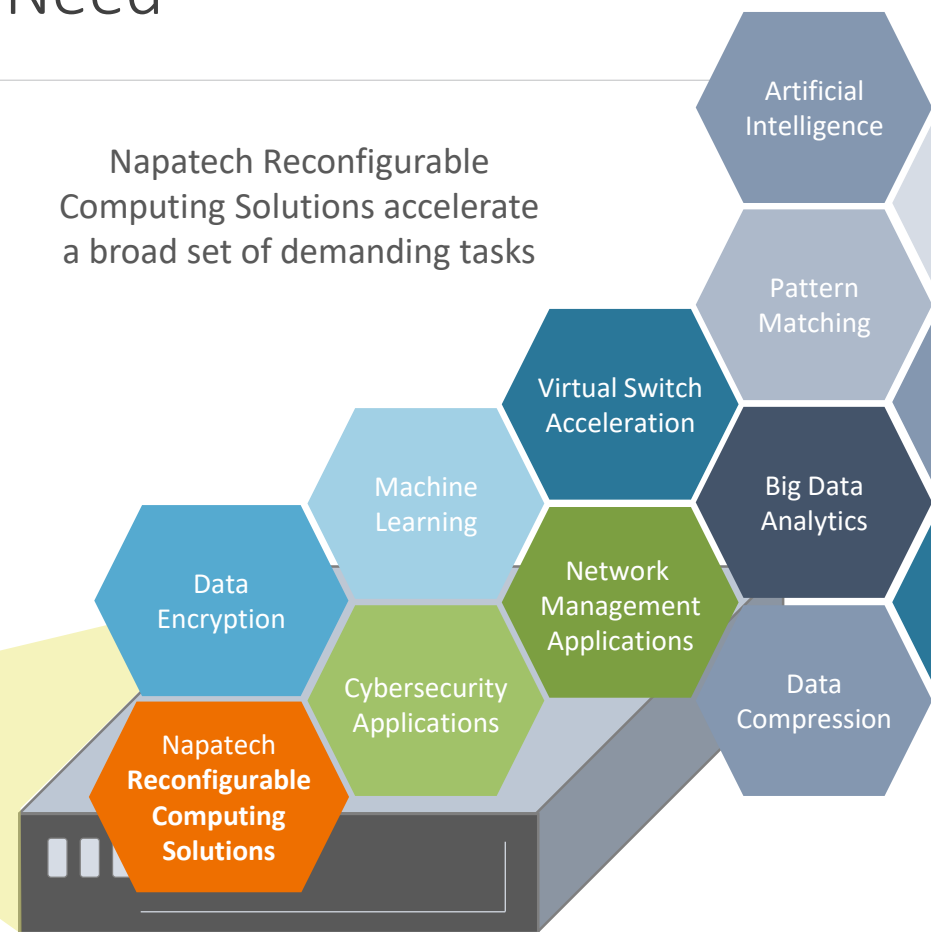
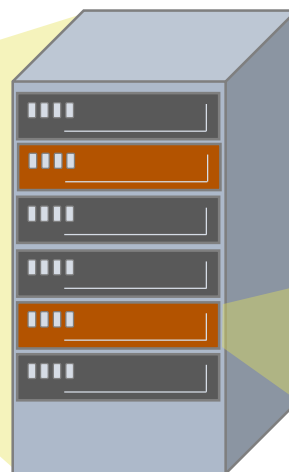
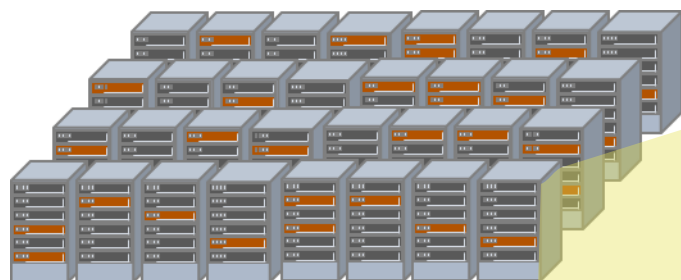
# Napatech Growth Strategy

## Powering Any Reconfigurable Computing Need

Reconfigurable computing platforms deployed to keep up with growth in cloud services, mobile and IoT devices

Reconfigurable Computing Solutions are required for each Reconfigurable Computing Platform

Napatech Reconfigurable Computing Solutions accelerate a broad set of demanding tasks



# Key Take-Away

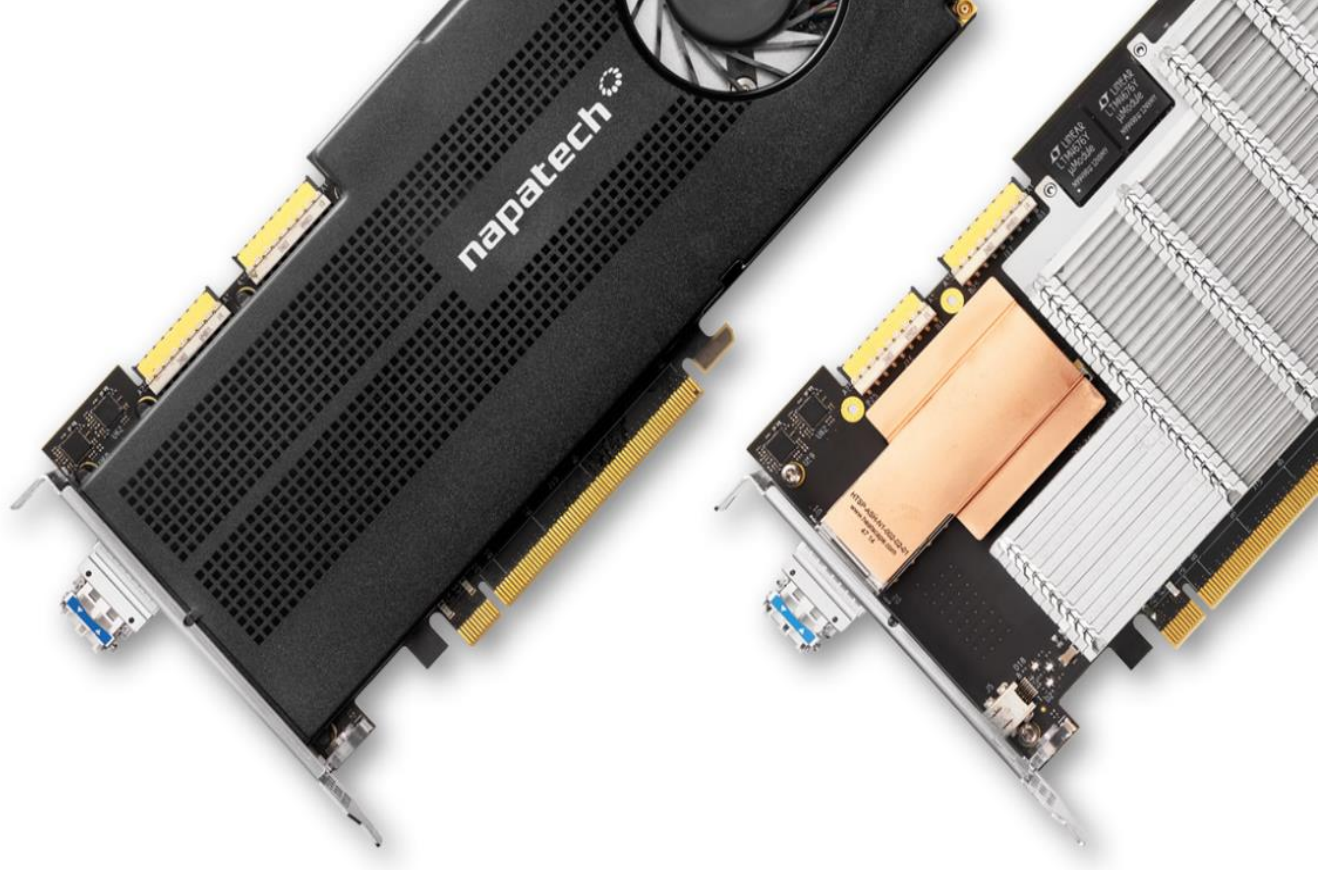
## FPGA's are the Foundation for Tomorrows Computing

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- The shift towards cloud networking, 5G mobile and IOT has created a pervasive need for reconfigurable computing solutions across a wide range of new users, in high-growth applications and services; serving as the catalyst for the next phase of Napatech growth
- The reconfigurable computing platform has been pioneered by cloud service providers, like Microsoft Azure, Amazon and Alibaba. The rest of the industry have been inspired by this development and are now converging on the reconfigurable computing platform as the new standard server for the future
- Major server and FPGA chip vendors will drive design of reconfigurable computing platforms and it is our strategy to ensure that Napatech FPGA software can be applied to FPGAs in any future reconfigurable computing platform delivered by the server industry
- The role of Napatech is to provide the FPGA software solution that will enable IT organizations of all sizes to reap the hyper-scale benefits of reconfigurable computing platforms

### Growth path towards 2020

- Robust portfolio of current customers and SmartNIC Solutions provide strong business foundation and further growth opportunities
- Catalogue of new and ongoing design win deployments with market leading customers.
- Strategic relationships with Tier 1 customers driving expansion into new use cases
- New emerging reconfigurable computing use cases provide large new growth opportunities



## Business Highlights



# Progress in our SmartNIC Strategy

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- Engagement with major telecom operators and equipment vendors discussing use cases related to our SmartNIC offerings for Network Function Virtualization
- On-going dialog about usage of Napatech technology for compute offload with the two largest FPGA technology vendors in the world, Intel and Xilinx
- On-track to add software only version of Pandion offering to existing Pandion portfolio by early 2018 – ensuring unbundling of hardware and software

**NOKIA**

 **XILINX®**



**napatech** 

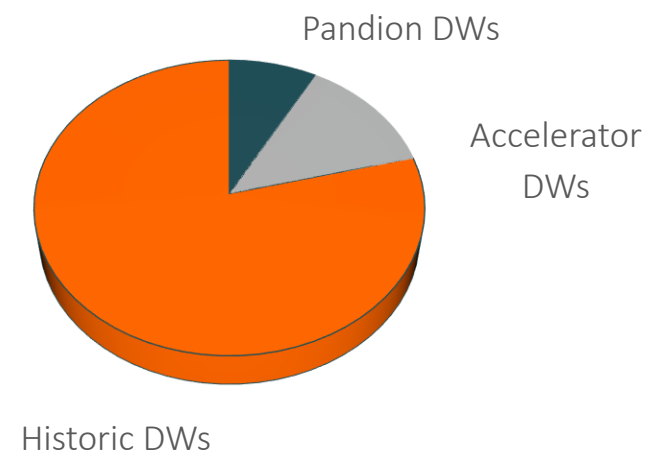
# Recent Design Wins to Drive Future Business

- 100 Gigabit Accelerator solution design win for a North American Tier-1 customer delivering a Network Monitoring solution
- 10 Gigabit Accelerator solution design win for an APAC customer focused on delivering product to the Telecom industry
- 10 Gigabit Accelerator solution design win for a European Government customer for a cyber security solution



# Design-win Effect on Q3 Revenue

- Design wins during the last 7 quarters delivered 21% of the overall Q3 2017 revenue
- The Pandion business delivered:
  - 8% of the overall revenue in Q3 is based on design-wins secured in 2016 and 2017
- The Accelerator business delivered:
  - 13% of the overall revenue in Q3 is based on design-wins secured in 2016 and 2017
- Recent design wins and new customers are the basis for our growth momentum, why even more resources are focused on new business



# Case study: IBM QRadar® Boosts Network Forensics

- As announced in Q3 2016, IBM partnered with Napatech to ensure that their QRadar® Security Intelligence Platform would provide complete network visibility
- As cybersecurity is the number one priority for IT organizations of all sizes, Napatech expects a multi-million dollar revenue stream associated with this opportunity
- The strategic relationship with IBM provides Napatech with valuable insight into cybersecurity pain-points of major IT organizations that can drive new innovative solution ideas

## Challenge

- Ensure that the IBM QRadar® SIEM platform would seize and retrieve 100% of network data

## Solution

- Napatech was selected as a strategic partner ensuring that absolutely all data was captured in real time and that selected data could be quickly retrieved for incident forensics

## Benefits

- Guaranteed availability of all evidence
- Ultra-fast data extraction
- Exceptional retention time
- Holistic and intelligent traffic insights

# Case study: Pandion Plug-in for Palo Alto Networks Firewalls

## From Circumstantial Evidence to Hard Facts

- Joint industry solution with the Danish company Credocom, combining the capture to disk capabilities of the Napatech Pandion with the unique security performance of a Palo Alto Networks Firewall allowing IT organizations greater insight into cyber security challenges
- Napatech expects this solution to generate a new revenue stream for Pandion as security solution integrators can enhance existing Palo-Alto installations
- The emerging relationships with security solution integrators provides greater insight into the cyber security challenges faced by IT organizations of all sizes that Napatech can address

### Challenge

- Palo Alto firewalls provide efficient logs for various security incidents, but cannot extract information on a detailed packet level

### Solution

- Credocom, has created a Palo Alto plug-in solution using the Napatech Pandion Network Recorder. Customers can now drill down into the details of each security incident

### Benefits

- Time and resource savings
- Better context for more accurate forensic analysis
- Much faster detection and containment of breaches

# Organization Enhancement to Match Our Strategic Ambitions

In the North American Market (NAM), in particular, we see a pervasive need for SmartNIC solutions across a wide range of new users, in high-growth applications and services

We therefore continue to strengthen the organization to match our ambitions in the North American market – and have initiated this journey by:

Additions to the Management Team:

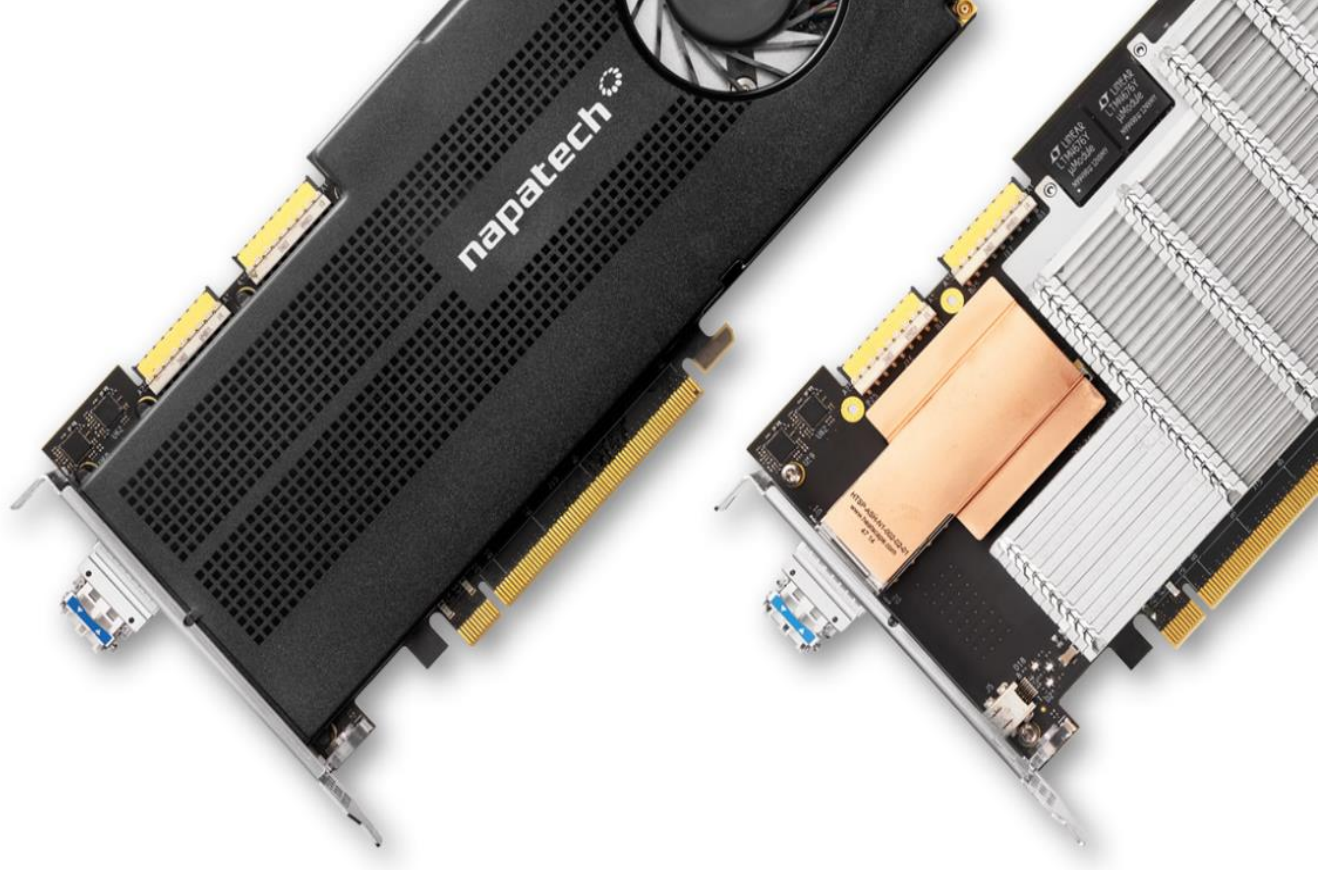
- Jarrod Siket, Chief Marketing Officer, Pittsburgh, PA
- Ken Way, Chief Sales Officer, Bay Area, CA

Additions to the Board of Directors:

- Howard Bubb, OEM customer and market expertise in NAM
- Henry Wasik, Software transformation and NAM data center expertise
- Lars Boilesen, Business development within NAM and other key markets

## Increased North America Market focus as:

- NAM is >75% of current sales
- 9 out of 10 top customers are all based in NAM
- Growth expectations towards 2020 include further progress with existing and new NAM customers

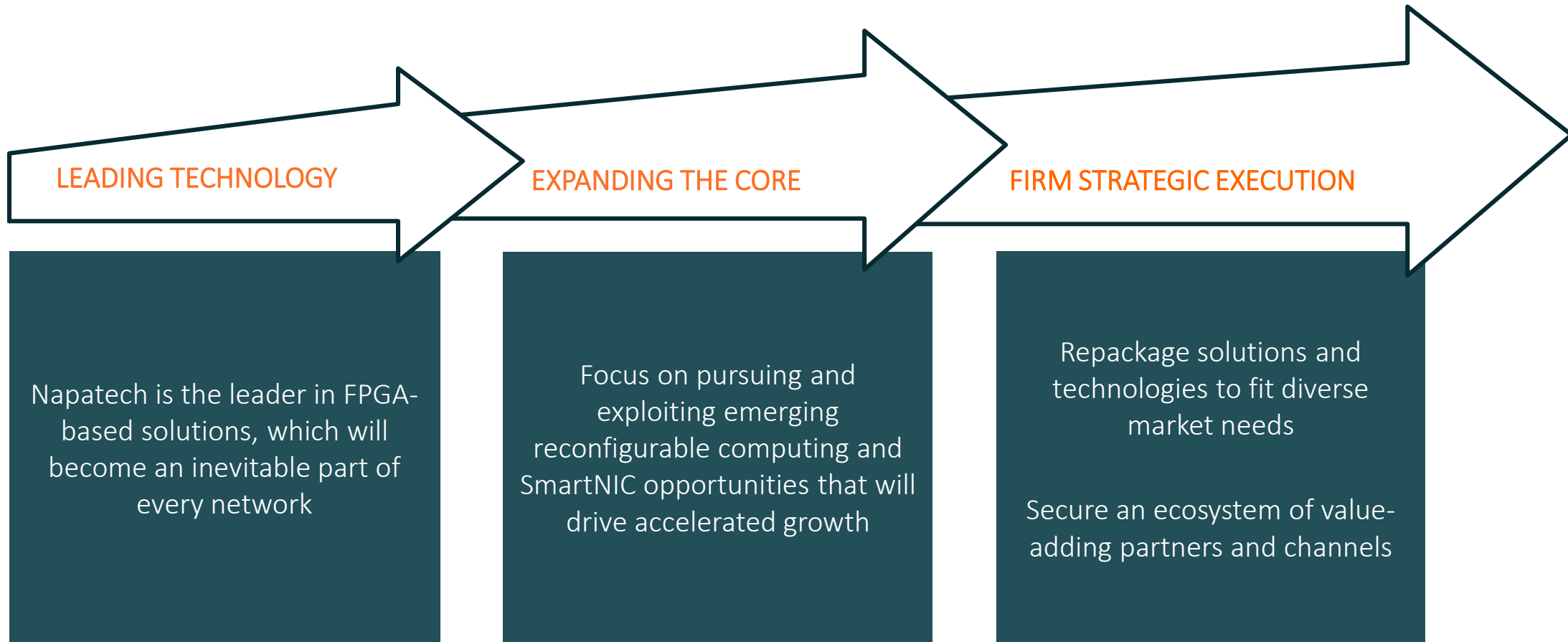


## Outlook

*The Roadmap to 100 MUSD by 2020*



# 2020 Strategy Secured by Strong Technology, Portfolio and Organization



# Management's Outlook

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- The Cloud Computing, 5G and IoT combined form a significant growth driver, leading to exploding volumes of users, devices and data. Clear industry consensus around that providing the needed processing power to support the hyper-scale data center in an efficient and cost effective manner will be done by introducing FPGA technology and software
- While this trend is exciting as it provides the catalyst for Napatech's next phase of growth, is also important to recognize that we already have a significant portfolio of solutions powering network management and cyber security applications ensuring our on-going business and holds further growth opportunities

## Comments:

Guidance for 2017 as stated in the report of 2017.02.14:

- Revenue growth 10% - 20%
- Gross margin around 68%
- EBITDA margin around 20%
- 2018 guidance to be provided in the Q4 2017 report

# Q&A Session

napatech

OSLO  
OSLO BERG



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