



# Nordic at a glance

Investor Relations  
October 2024



**NORDIC**<sup>®</sup>  
SEMICONDUCTOR

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This presentation was prepared in connection with the Q3 results released on October 24, 2024. Information contained herein will not be updated. The following slides should also be read and considered in connection with the information given orally during the presentation.

# A globally leading IoT enabler

## Simplifying lives through all things connected



Founded 1983	Employees 1,383 (~75% R&D)	Oslo listing OSEBX:NOD	Market Cap ~\$1.9bn
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- Fabless semiconductor company specialized in low power wireless connectivity and embedded processing for IoT
- Market leader in Bluetooth Low Energy
- Early adopter of Thread (802.15.4) and support for Zigbee. Active contribution to Matter development
- Launched Wi-Fi 6 connectivity (dual band)
- Complementing ultra low power solutions with innovative PMIC's
- Early mover in cellular IoT & 5G with LTE-M, NB-IoT and DECT NR+
- Value added device control and management through nRF Cloud

# Dedicated to wireless connectivity

Broad portfolio - scalable solutions - common software platform

Strong product and solutions portfolio...

...for short-, medium- and long-range connectivity technologies



Low-power integrated circuits (ICs)

+



Embedded software

+

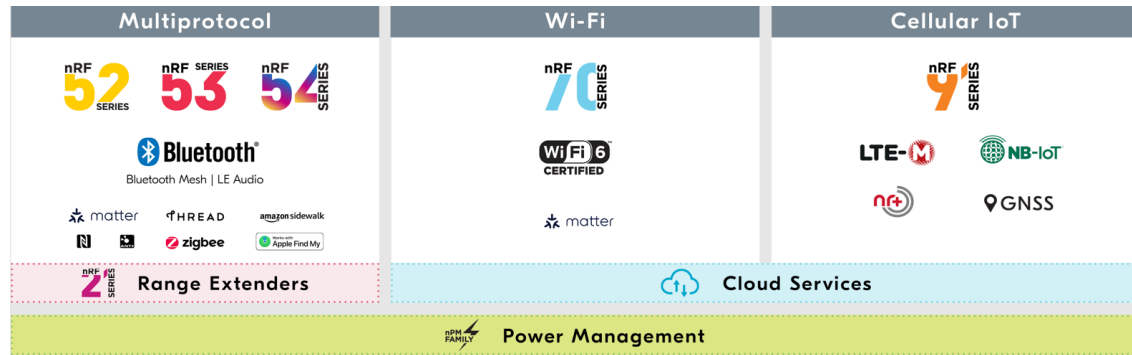


Advanced development tools

## Short-range IoT

## Medium-range IoT

## Long-range IoT



# Our tech solutions are recognized globally



2023 U.K. Elektra Awards

'Internet of Things  
Product of the Year' category  
Nordic's low power Wi-Fi 6  
companion IC



2024 Time magazine and  
Statista

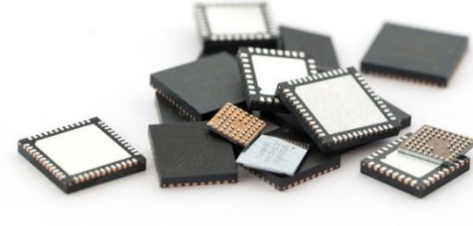
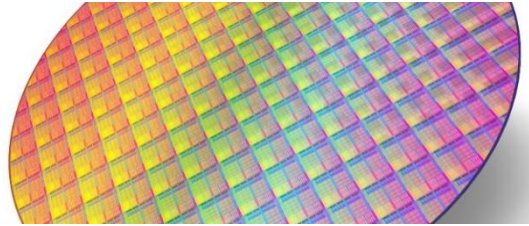
Named one of the  
"Worlds Most Sustainable  
Companies"



2023 EM Best Awards

IoT Semiconductor  
Company of the Year  
For product innovation,  
excellence, and sustainability

# Resilient supply chain



- Norwegian company
- R&D in Norway, Finland, Sweden, UK, Poland, India and USA
- All development in-house

- Wafer production outsourced to TSMC and Global Foundries
- Facilities in Taiwan and Germany

- Test and packaging outsourced to ASE, Amkor, Nepes and Qorvo
- Facilities in Taiwan, Philippines and China

# 2024: Reorganizing with 4 new business units

## Short-range, Long-range, Wi-Fi & Power Management (PMIC)



**Short-range**  
Øyvind Strøm  
*EVP Short-range*



**Long-range**  
Øyvind Birkenes  
*EVP Long-range*



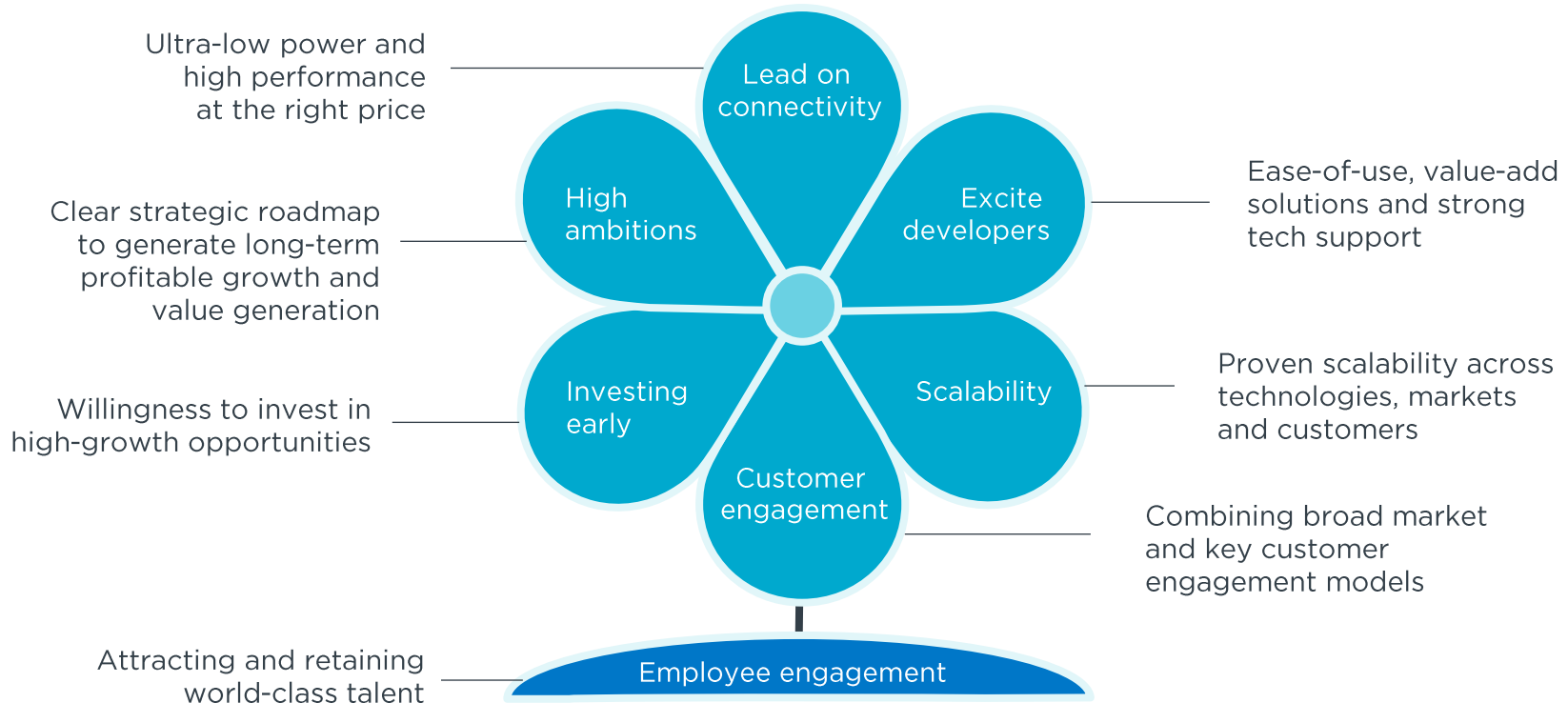
**Wi-Fi**  
Joakim Ferm  
*SVP Wi-Fi*



**PMIC**  
Kjetil Holstad  
*EVP Strategy and Product Management*

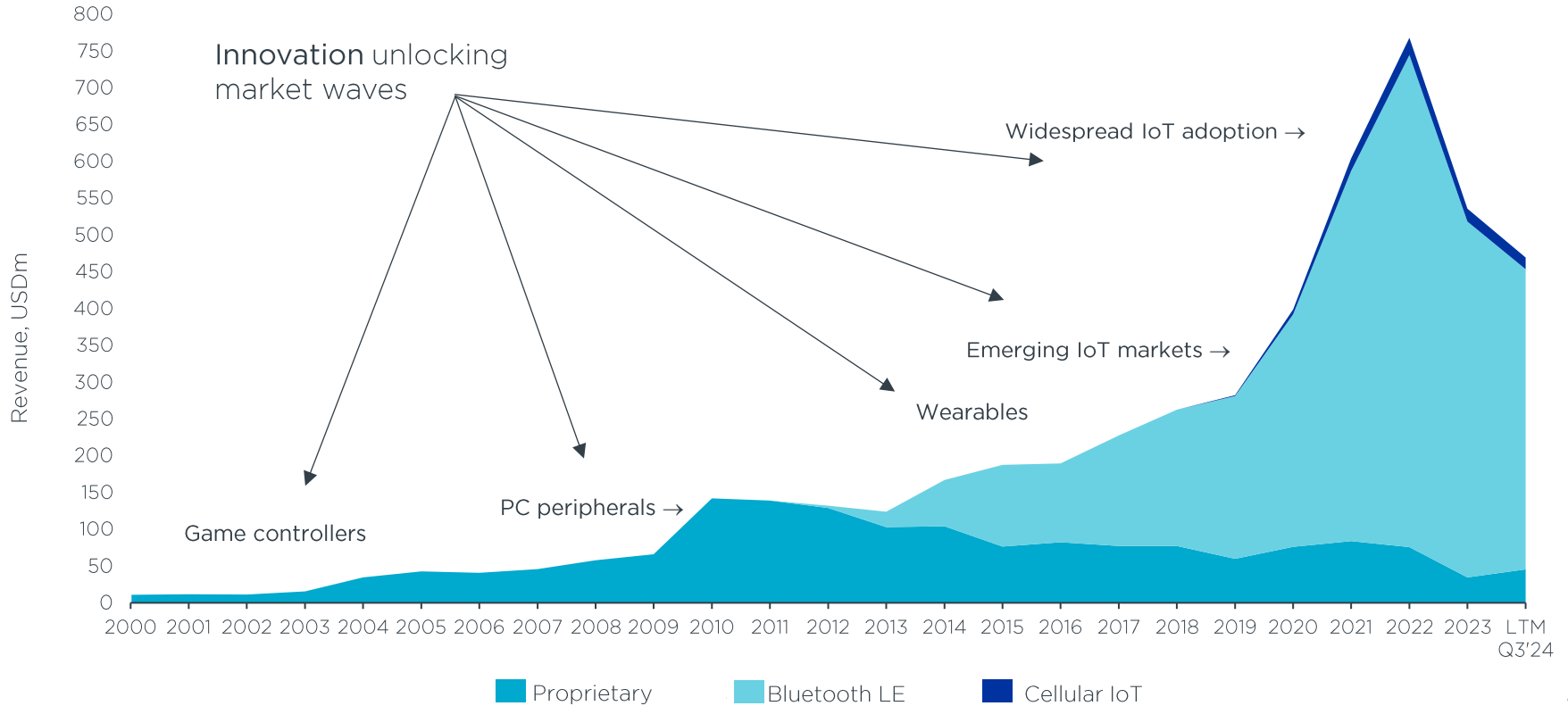
- Strengthening executive management team and improving accountability and autonomy
- Sharpening the focus on products and development roadmaps
- Customer centric and agile approach to improve market responsiveness and shorten time-to-market
- Seeking to improve return on our R&D investments and our world-class engineering teams

# Strategy based on distinctive advantages





# Nordic is on a long-lasting growth journey

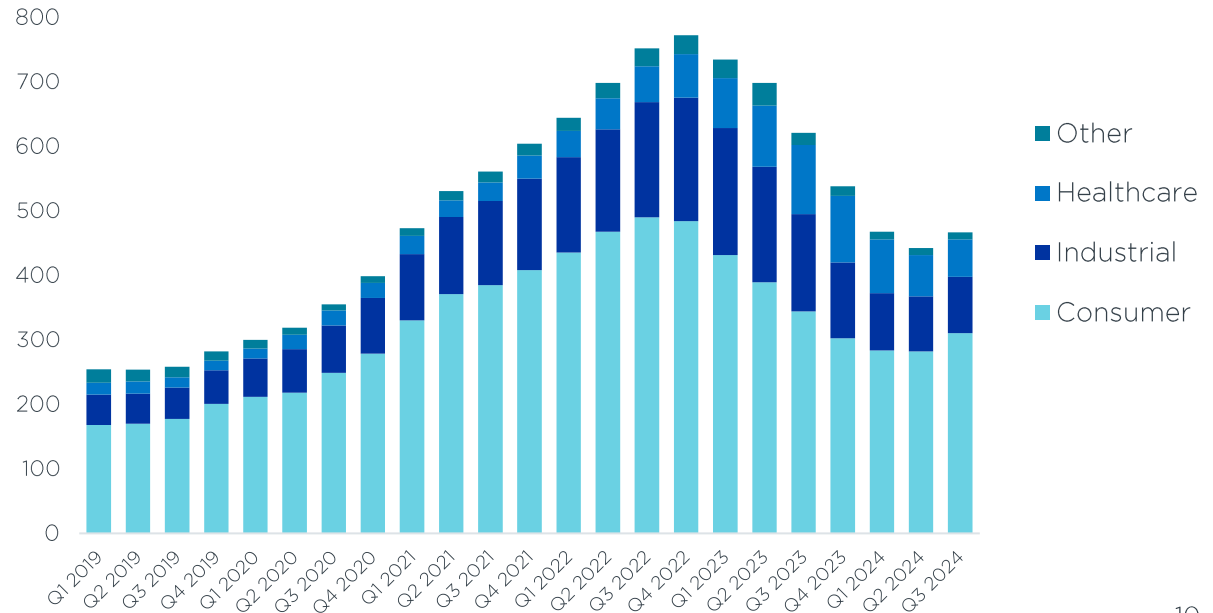


# Revenue by end-user market

## Markets beginning to stabilize

- Weak demand in all markets through 2023
- Markets beginning to stabilize, with sequential revenue improving in Q2 and Q3 2024, reflecting higher demand from both key customers and the broad market

Short-range revenue by end-user markets, last 12 months (USDm)



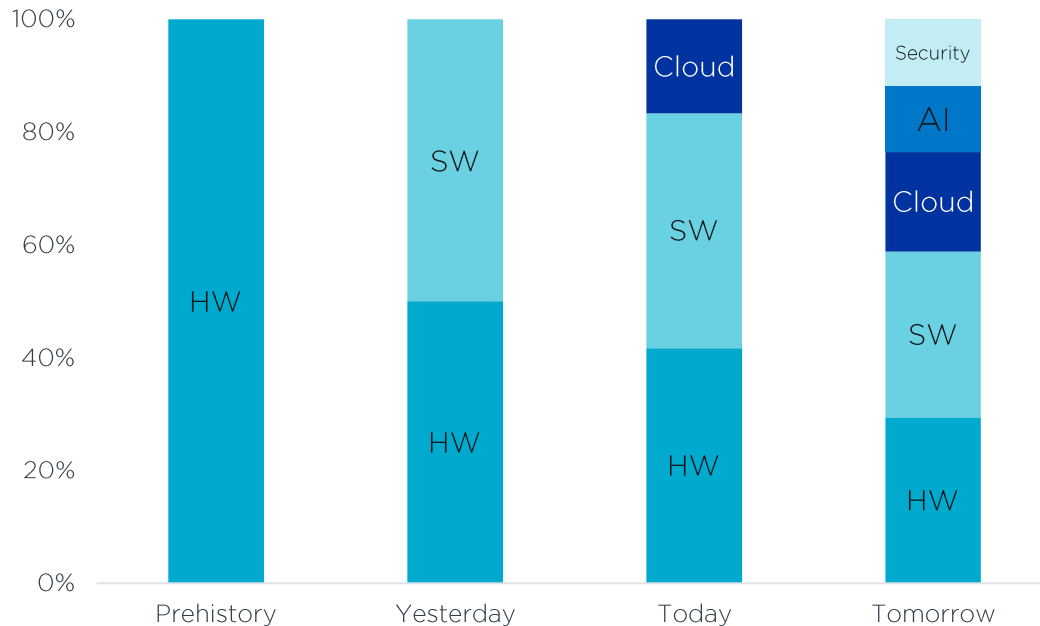
# Breakdown by end-user markets

Aligned with customers end-products and our sales structure

Markets	Verticals
Consumer	<ul style="list-style-type: none"> <li>Mobile/PC HID</li> <li>Wearables</li> <li>Smart Home</li> <li>Gaming</li> <li>VR/AR</li> <li>Consumer Asset Tracking</li> <li>Consumer Health</li> <li>Audio</li> <li>Toys</li> <li>CE Remotes</li> <li>Wireless Charging</li> <li>Other</li> </ul>
Healthcare	<ul style="list-style-type: none"> <li>Drug Delivery</li> <li>Disease Monitoring</li> <li>Hearing Aids</li> <li>Other</li> </ul>
Industrial	<ul style="list-style-type: none"> <li>Asset Tracking</li> <li>Professional Lighting</li> <li>Metering</li> <li>Building Automation</li> <li>Modules</li> <li>Retail</li> <li>Transportation</li> <li>Payment / ID</li> <li>Tools and Machinery</li> <li>Agriculture</li> <li>Beacons</li> <li>Maker and Education</li> <li>Automotive</li> <li>Other</li> </ul>
Other	<ul style="list-style-type: none"> <li>Catalog sales</li> <li>Undefined</li> </ul>





# Delivering on our customers' needs

Customer investment in product development



- Nordic is providing solutions to our customers reaching beyond ICs
- Investments in Software, Cloud, AI and Security is essential for the next growth wave

# Broadening our technology space

	Cellular IoT
	Wi-Fi
	Power management
	Cloud Services

Sound **investment criteria** across technologies, products, services and verticals

- Sizeable markets
- Growth above industry average
- Opportunity for healthy gross-margins
- Opportunity to grow market share
- Feasibility from technical and financial viewpoint and time to market

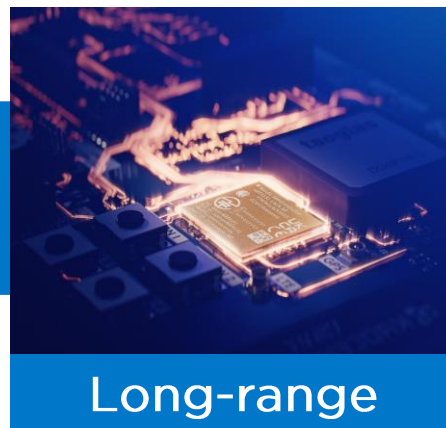
# Innovating for growth across our portfolio

Executing on existing roadmaps and exploring new opportunities

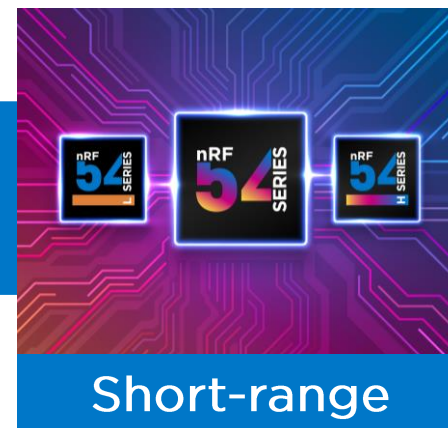
Early-stage



Scale-up



Established



Evaluating both organic and inorganic growth opportunities

# Four major trends defining our opportunity

## Consumer Work, Play, Live



Staying connected, at work, at home, and on the go ++

## Connected health disruption



Medical monitoring, drug delivery, health trackers ++

## Industrial IoT disruption



Automation, asset tracking, infrastructure, agriculture ++

## Machine learning at the edge



Secure real-time data delivery demands smart edge devices

# Revenue ambitions

## **Established: Short-range**

- Ambition to grow faster than our market over time, driven by new product launches
- Expect modest growth with only limited effect of nRF54 in 2025
- Growth set to accelerate from 2026 onwards

## **Scale-up: Long-range**

- Establish revenue base of >USD 100 million by 2028

## **Early-stage: Wi-Fi, PMIC**

- Establish revenue bases of >USD 50 million in each of the business areas

## **Group level ambition**

Deliver average annual revenue growth above 20% throughout the decade



# Short-range IoT (Established)

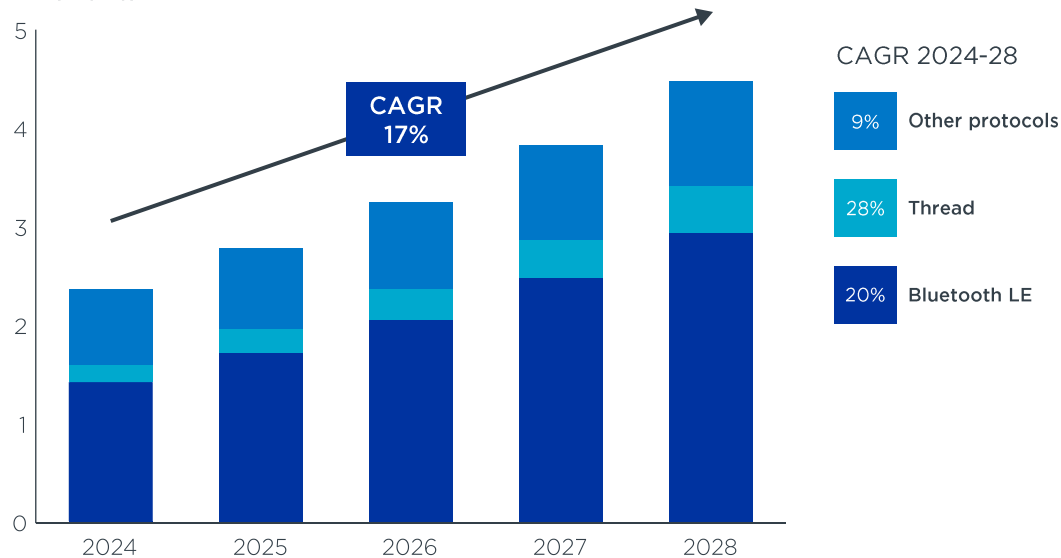
**Market leader with strong growth**

# Ambition for Short-range

## Healthy market outlook for our main engine

### Serviceable markets across technologies\*

Billion units



- Ambition to grow faster than our market over time, driven by new product launches
- Allow for cyclicity and non-linear growth, depending on economic developments

Source: Based on data from ABI, Bluetooth SIG, Omdia, TSR.

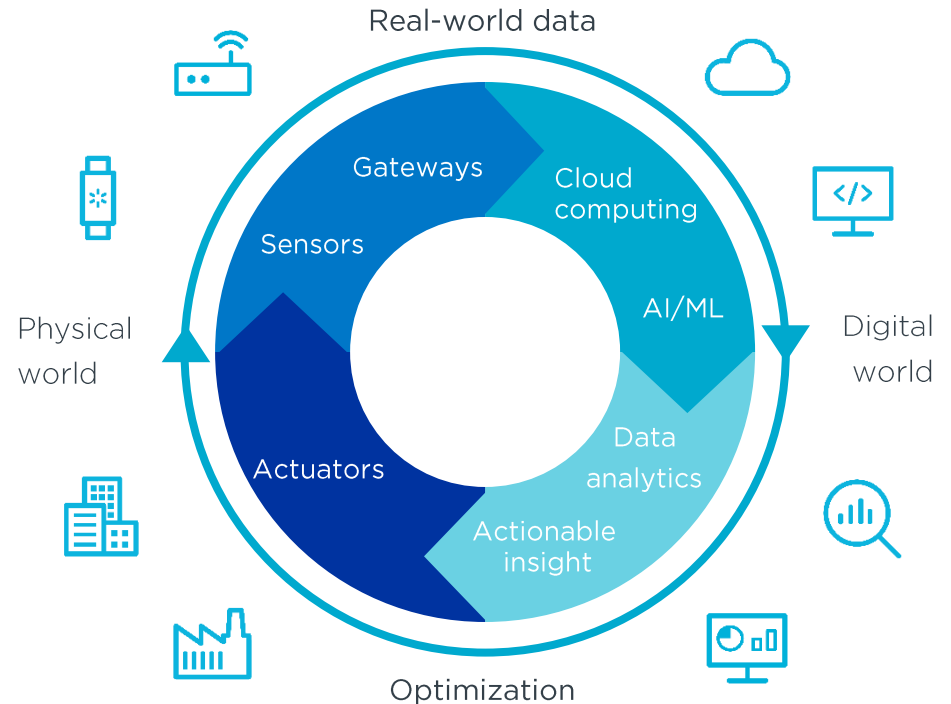
\*Serviceable market (SAM) excludes all Bluetooth classic/dual mode devices, RF4CE and automotive.

# IoT - Connect, Compute, Analyze and Act

## IoT starts with connecting things

Bridging the physical and digital worlds requires:

- **Advanced** connectivity solutions
- **Powerful** low power compute
- **Accurate** sensing capability



# Key connectivity for platform ecosystems

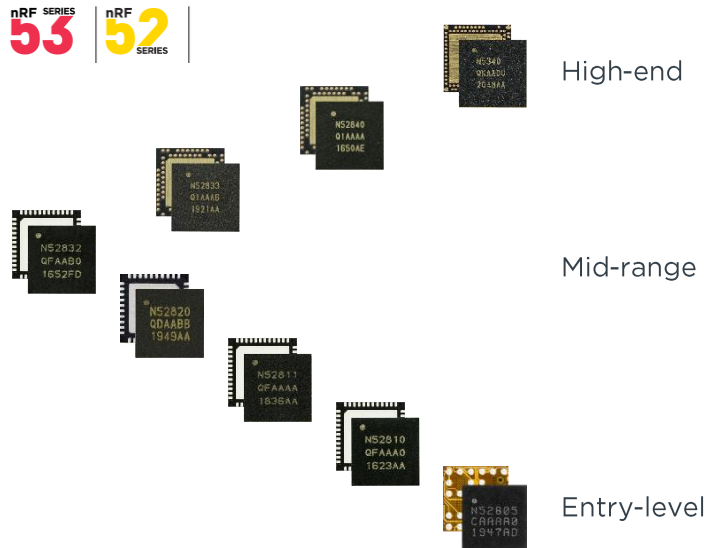
- Nordic leverages on leading broad market position and strong key customer relations built over many years
- Recently added support for Google's 'Find My Device', adding to already established support for 'Apple Find My'





# Successful short-range product strategy

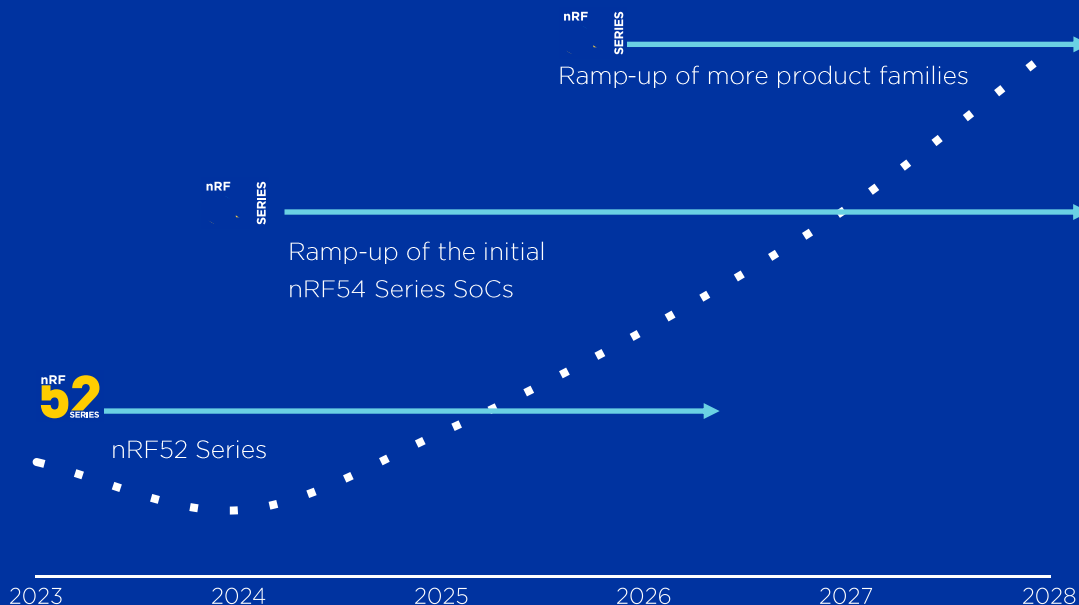
## Customer centric broadening of the portfolio



- Broad portfolio of ultra-low power SoCs
  - Multiprotocol products combining Bluetooth LE, Bluetooth mesh, ANT, NFC, Matter, Thread and Zigbee
- Leading the market on power consumption, performance and features
- Catering to all types of applications
  - From entry-level SoCs for cost constrained applications to high-end SoCs for complex IoT
- Major R&D efforts ongoing for development of next generation SoCs

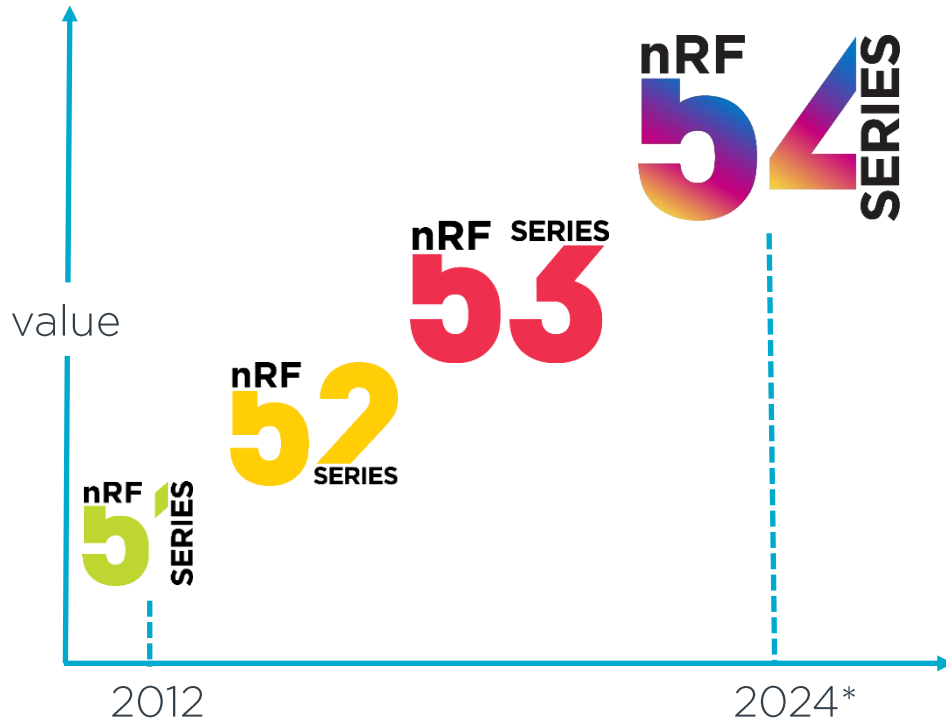
# Unique growth opportunity with the launch of nRF54

Product launches supporting growth through the decade



- Ramp-up of the nRF54 Series set to drive growth through the decade
- Gradual transition from current nRF52 Series
- Rolling out a competitive portfolio covering our full SAM

# Driving value through continuous innovation



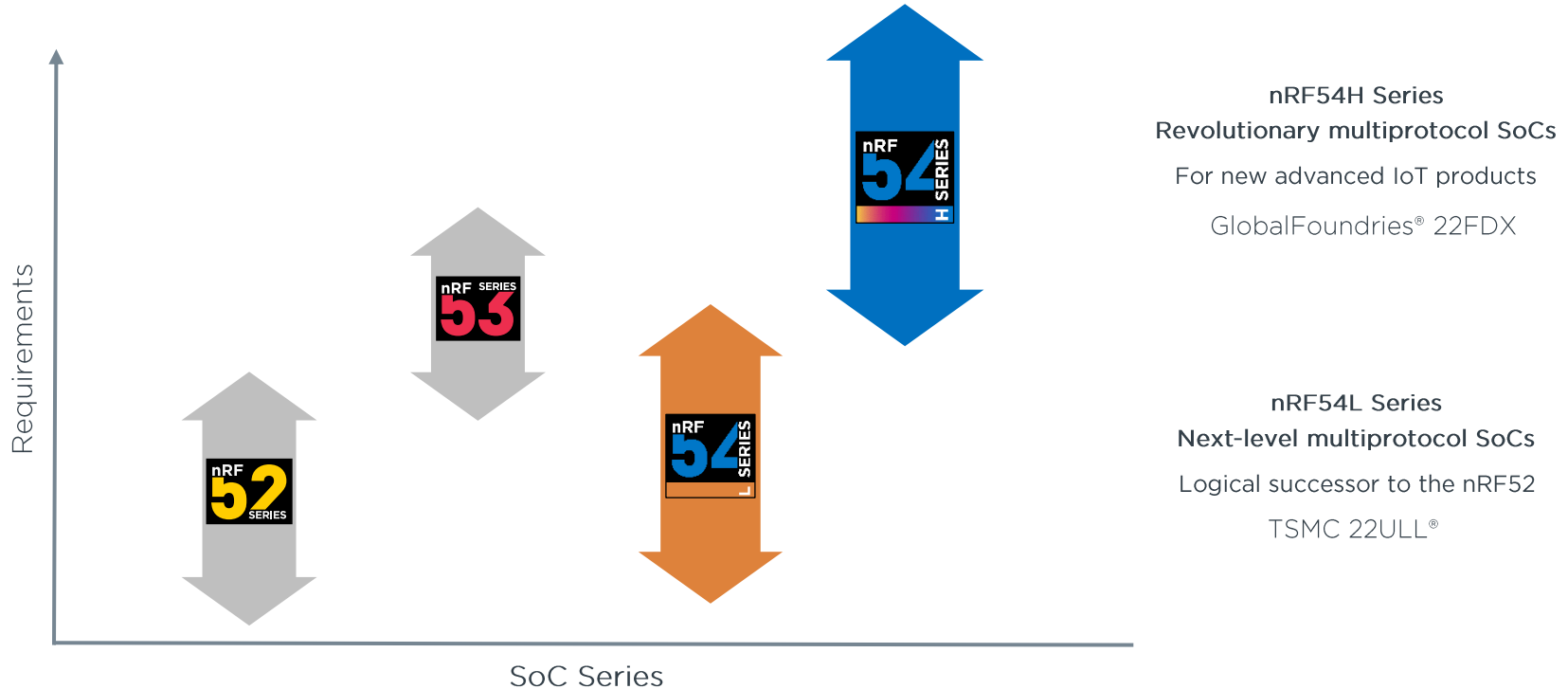
- New product families increases overall value for customers
- More features enables faster time to market and better end-products from our customers

\*Initial revenue by year end 2024

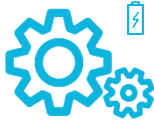


# Nordic raising the bar once again

nRF54 - sampled both L and H to >200 customers by mid 2024



# Cornerstones of the nRF54 Series



Higher processing power  
lower power consumption

## 22nm

Smallest and most modern  
process node for connectivity in IoT

# nRF54 SERIES



More security integrated  
ensuring its readiness for the next  
generation of IoT



4<sup>th</sup> generation Nordic radio  
equipped to support future Bluetooth  
specification updates



5.4 LE Audio Mesh

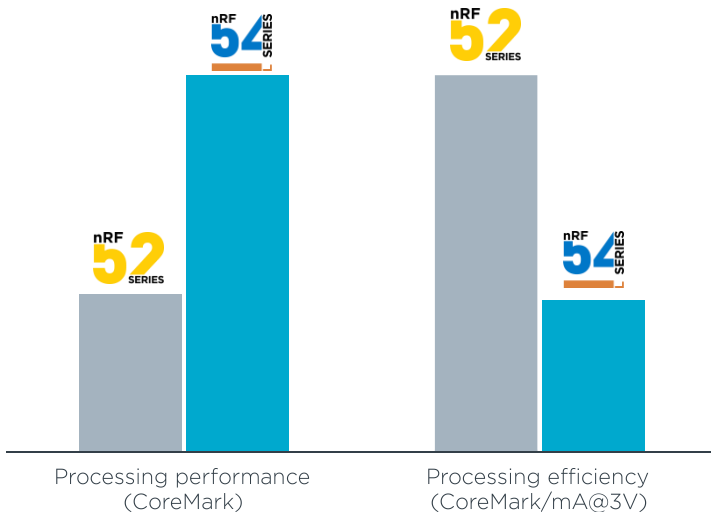


2.4 GHz  
4 Mbps throughput

## nRF52 Series vs nRF54L Series

Greater performance

Lower power consumption



# A step change in performance

>2x

processing power than nRF52 Series

>2x

energy efficiency than nRF52 Series

~30%

reduced radio power consumption

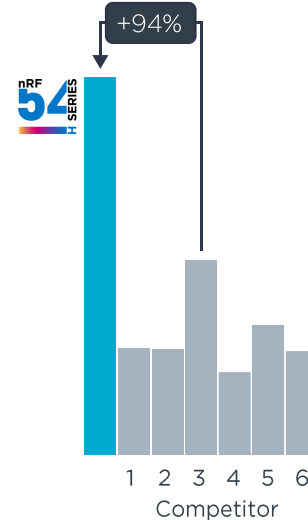
# Max performance at highest efficiency

~2x performance compared to the highest performing low-power MCUs or SoCs on the market

>30% more efficient compared to the most energy efficient MCUs or SoCs

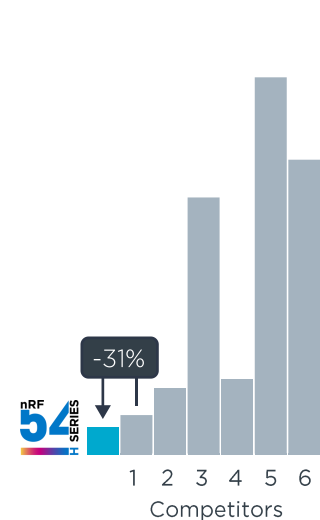
Nordic proprietary ultra-low power technology and IP in 22nm

Greater performance



Processing performance (CoreMark)

Lower power consumption



Processing efficiency (CoreMark/mA@3V)

# nRF54 Series launching in Q4

## Qualification and preparing for volume production

- Launching the first products in our nRF54 Series at Electronica in Germany in mid-November
- All key customers and many broad market customers evaluating the nRF54 Series
- Beginning to ship both nRF54L and nRF54H in volumes in Q4



Bringing the market leading nRF52 Series to the next level



Revolutionary multiprotocol System-on-Chip (SoC)

# Targeted applications



PC accessories

Gaming, VR, AR, and media controllers

Smart home and Matter

Medical devices

Industrial IoT



Advanced wearables

VR, AR, and advanced gaming controllers

Smart home and Matter

Medical and healthcare

LE Audio

Industrial

E-mobility

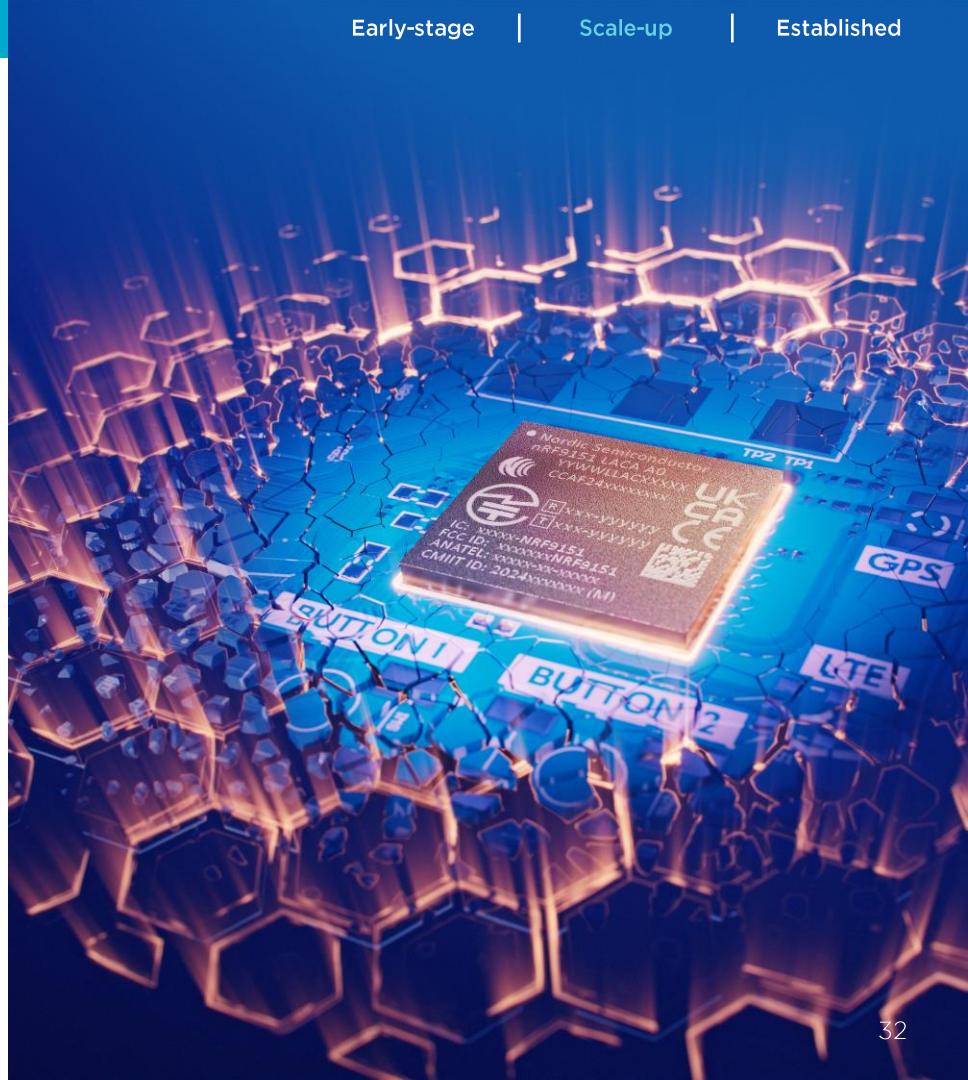
# Long-range IoT (Scale-Up)

Early mover in next growth waves

# Ambition Long-range

## What will it require?

- Target profitability in 2028.  
Establishing a revenue base >USD 100 million, through market penetration of asset tracking, metering and industrial IoT
- Successful roadmap execution and product introductions, to access larger parts of market, drive growth and strengthen gross margins
- Cost containment





# Nordic delivers a Long-Range complete solution Hardware, software, support and services

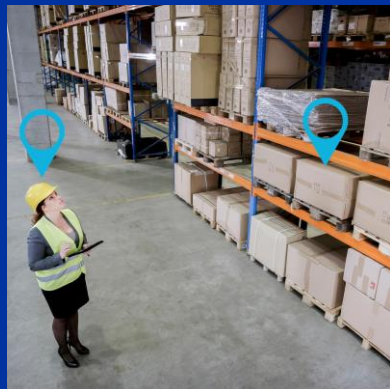


Making it easy for customers to use complex cellular technology

# Positioned to win and scale

## With IoT megatrends in commercial and industrial markets

### Asset tracking



- Lowest Power
- Integrated locationing
- Smallest size
- Synergies with Bluetooth/Wi-Fi

### Metering



- Lowest power
- Country of origin
- Performance and security
- One-stop shop from Nordic

### Industrial IoT

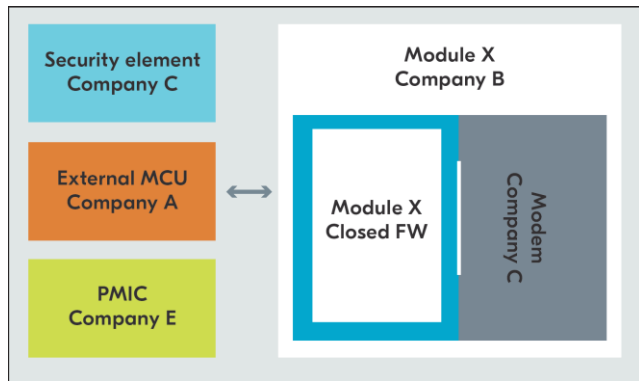


- Ease of use
- Lowest power
- Performance and security
- Synergies with Bluetooth/Wi-Fi

# Lowers total cost and simplifies supply chain

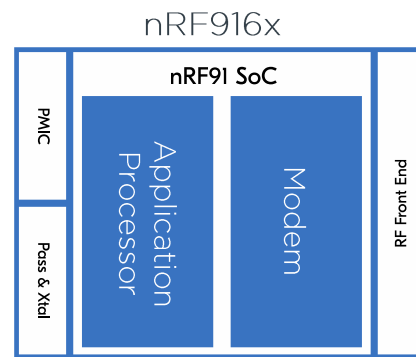
Others

Fragmented ownership



Nordic

Full solution ownership



Completely integrated

- Lower complexity
- Lower power
- Smaller size
- Total lower cost
- Simpler supply chain
- Support and maintained
- Globally Certified

# nRF9151 sets new standards

## Smallest and lowest power in the market

### Lowest power cellular IoT solution

Lowest power and smallest size Cellular-IoT solution on the market, supports both Power Class 3 (23dBm) and Power Class 5 (20dBm) operation

### Global connectivity and power efficiency

Global connectivity without regional limitations, including new unique modem features for power saving and ease of use

### Unleashing the power of Non-Terrestrial Networks

Ensuring all-terrain connectivity for critical applications and ubiquitous service

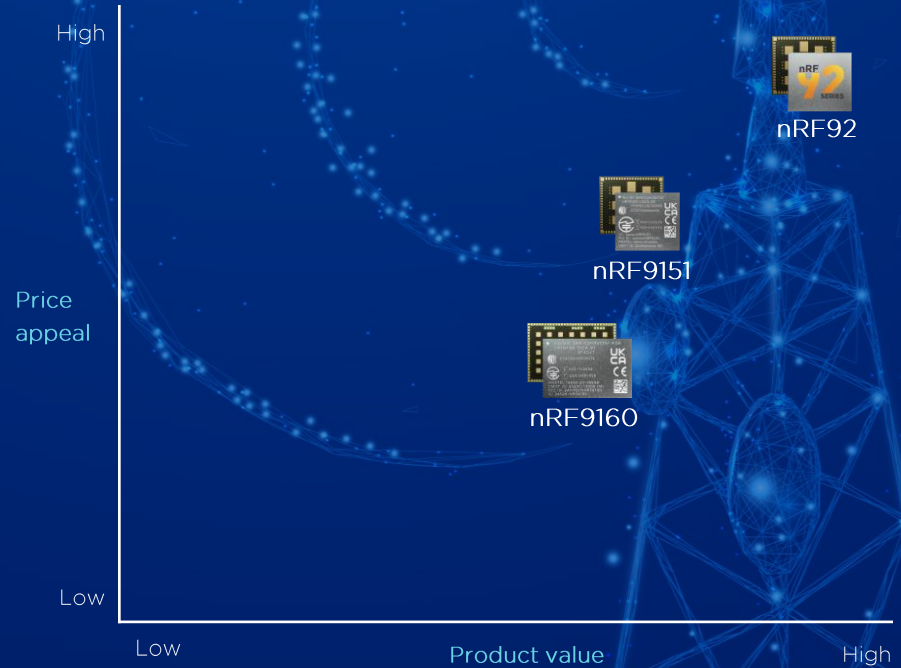
### US tariff-free country of origin

20% smaller than  
nRF9160  
Up to 70% smaller than  
competition



# Highly competitive product roadmap

- Transitioning towards 22nm
- Lower power and lower cost
- More integration
- Higher performance
- Robust and proven software

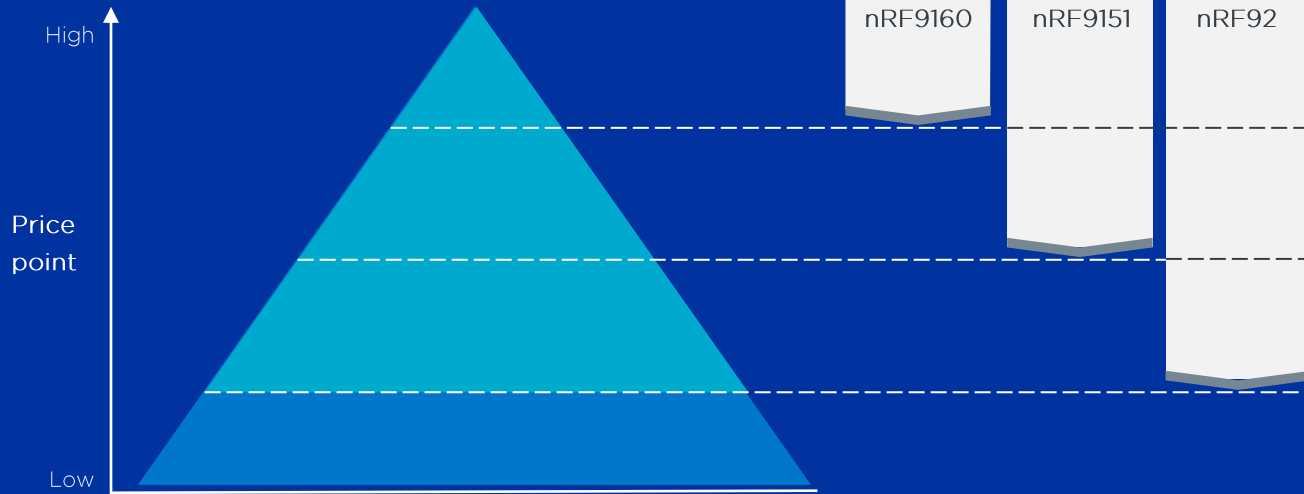


# Opening a larger part of the market

Driving down costs enables more adaptive pricing strategies

## Product roadmap to address the full serviceable market

- Serviceable market (product value play)
- Non-serviceable low-end market



# Target Applications – Cellular IoT



## Asset tracking

People/pet/pallet tracking and health management  
Portable medical devices



## Smart City

Waste management  
Smart streetlights  
Environmental management  
Device maintenance  
Smart parking



## Smart metering

Water/electrical/gas metering  
Agriculture



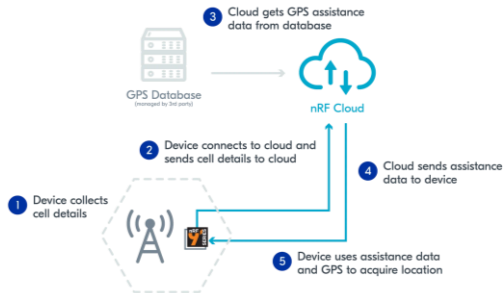
## Industry 4.0

Predictive maintenance  
Smart grid

# Expanding into cloud-based services

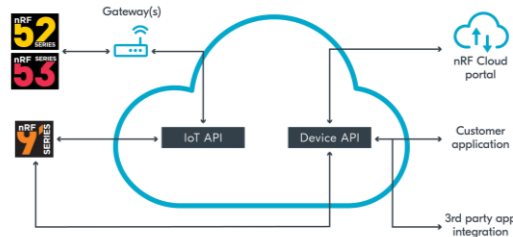
A new long term revenue stream for Nordic Semiconductor

## Location Services



Initial services for nRF91 Series  
 Assisted / Predictive GPS  
 Cell-tower based location  
 Significantly enhances battery life

## Future Services



Also for short-range devices  
 Firmware Over The Air updates  
 Device lifetime management  
 Other value added services

## One-stop-shop



Out-of-the-box support on Nordic kits  
 Tightly integrated, device to cloud  
 Single sales point for customer  
 «Ease of use»



# nRF Cloud emerging as a value driver

## nRF Cloud ARR beginning to gain traction

USDk



- High-value lifecycle services
- Fully standalone offering speeding up product development for our customers
- Ease-of-use key for market penetration
- Recurring high margin revenues with high stickiness over product lifetime

## Services offered today



Location services



Security services



Device management

# WiFi & PMIC (Early-stage)

Early mover in next growth waves

# Ambition for Wi-Fi

## Ability to differentiate will be key

### Financial targets

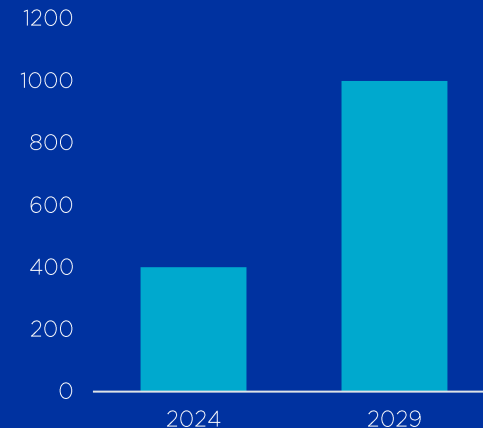
- Establish USD >50 million revenue base and reach profitability by 2028

### Key success factors going forward:

- Increase customer conversion to nRF7000
- Launch nRF71 Series to capture the Wi-Fi SoC market for IoT - leveraging 22nm, 'best-in-class' power and radio, ample memory, advanced security and peripherals, and AI/ML accelerator

### Select Wi-Fi target markets

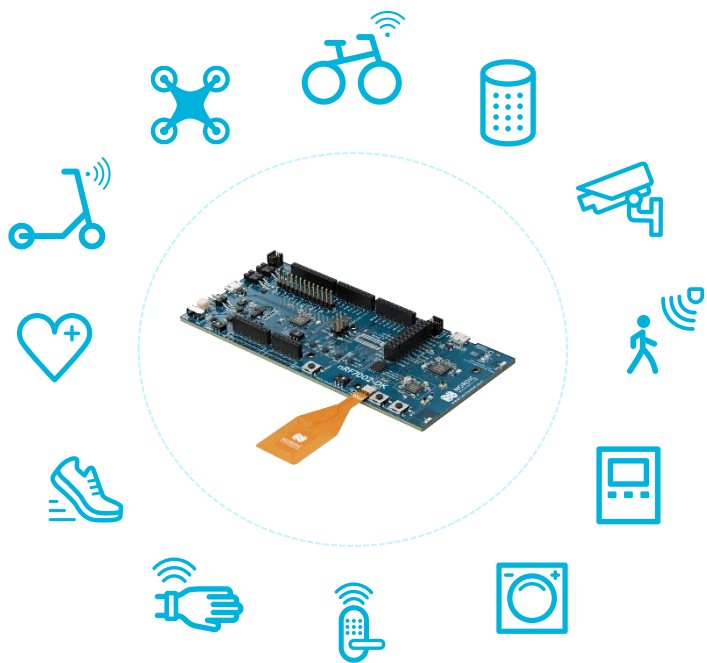
Units, million



*Target markets: Embedded Wi-Fi in Smart Home and Industrial IoT, Consumer/Wearables, Home Entertainment/Smart Cameras*

# Expanding into Wi-Fi

## nRF70 Series - enabling IoT



- Wi-Fi 6 companion IC - 40nm node
  - Dual band, 2.4 GHz and 5 GHz
  - QFN 6x6mm package
  - ~US\$ 2 in high volumes
  - Customer projects within Smart Home/Matter, Building Automation and Asset Tracking and other verticals
- 
-  Low Power - Efficient radio power saving schemes
  -  Robust performance - in dense congested environments
  -  Secure - Cutting-edge security protocols

# Accelerating Wi-Fi market adoption

- Full connectivity solutions increasingly required in the market
- nRF70 accelerated learning and market penetration through companion devices with Bluetooth/Cellular IoT
- Design-ins already seen with nRF52, nRF53, nRF91 and now also with nRF54
- Next generation nRF71 builds on nRF54 Series architecture and performance and include a cutting-edge Wi-Fi 6E radio for comprehensive connectivity offering

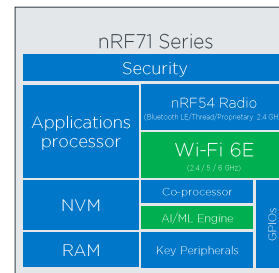
Initial combinations



New combination



Next generation



New generation will significantly expand the serviceable market

# Ambition for PMIC

## End-to-end low-power wireless IoT

### Financial targets

- Establish USD >50 million revenue base and reach profitability by 2028

### Key success factors going forward

- Expand addressable market with portfolio expansion
- Increase conversion rates with existing customers
- Win designs with key customers
- Establish PMIC product line enabling control of entire energy path from battery to antenna



# PMIC portfolio

## Multi-function PMIC with unique system management features

Launched '21  
nPM1100



Launched '22  
nPM6001



Launched '23  
nPM1300



Charging		No	
Power Rails (DCDC+Linear)	1	4+2	2+2
System Management Features			
Price			
Use Case	Bluetooth LE, cloT	Bluetooth LE, Wi-Fi, cloT	Bluetooth LE, cloT
Availability	In production	In production	In production

*"I have been an earlier adopter for many of your parts over the years and would really like to put this PMIC in a design where the customer reaction is simply WOW. Congratulation for you and your team, you are definitely going to shake up the industry."*

*Customer email when nPM1300 was launched*

# All IoT products require power management

## PMIC a key enabler of ultra low power solutions

- Maximizing battery life in applications is a key customer requirement
- PMICs optimized for Nordic ICs enhance power efficiency and system performance on customer circuit boards
- Innovating to broaden serviceable market
  - Initially focused on rechargeable batteries
  - Currently expanding to non-rechargeable, primary, batteries

### Planned 2-3 product launches per year

#### Rechargeable batteries

Current offering



Expanding portfolio to cover broad market requirements



2025



2026

#### Primary batteries



2025

Strong demand for power management systems for non-rechargeable primary batteries, significantly expanding the addressable market



# Acquired AI/ML tech IP and team

Harnessing the power of AI to transform our position in the IOT market

- Bolt-on acquisition of high strategic significance
- Buying the IP portfolio and employing small core team in San Diego
  - › Always-on AI/ML accelerator – a key differentiator in the future
  - › Smart Health analog front-ends
  - › Power Management IC (PMIC)
- The acquisition obtained U.S. regulatory approval December 1, 2023



*"This brings a new level of always-on AI/ML capabilities and technologies that will strengthen our core business"*

Kjetil Holstad,  
EVP Strategy and Product Management

# AI and ML on edge devices

## Why smarter edge devices are needed



### Latency

Edge computing with AI enables quicker decisions and real-time responsiveness for time sensitive applications



### Bandwidth

Reduces reliance on constant network connectivity and conserves bandwidth by processing data locally



### Privacy

Local processing and storage on edge devices minimizes risk of data breaches and mitigates privacy concerns from data in the cloud



### Cost

Cloud-based AI increases cost significantly, edge computing reduces the need for cloud infrastructure



### Energy efficiency

Smarter edge devices significantly reduces energy demand vs. cloud-based data processing and storage

# Importance of energy efficient compute

- Low-power is and will remain core differentiator for Nordic
- Advancements with TinyML has allowed machine learning inference models to run on modest MCU cores, including the Arm Cortex M
- Currently customers are deploying machine learning to enhance their products and make them smarter and more efficient



## **OPUM Technologies**

Digital rehabilitation platform for joint injuries  
nRF52840



## **Lilbit**

Pet tracker and health monitor  
nRF9160 + nRF52811



## **Metasphere**

Wastewater and sewerage spill monitoring  
nRF9160



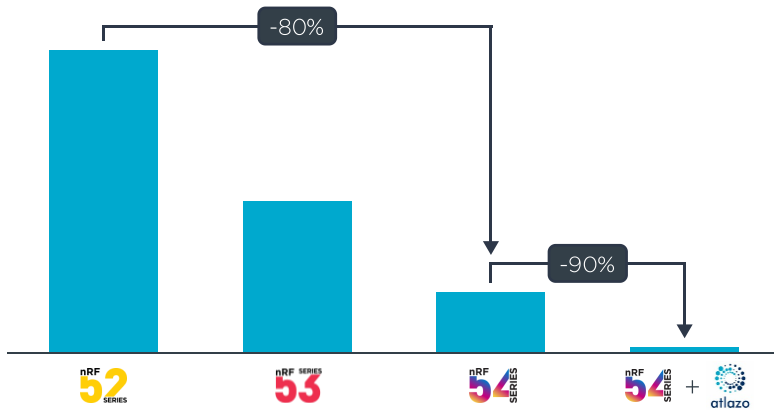
## **Artifeel**

Home security system  
nRF5340

# AI to drive more efficient edge compute

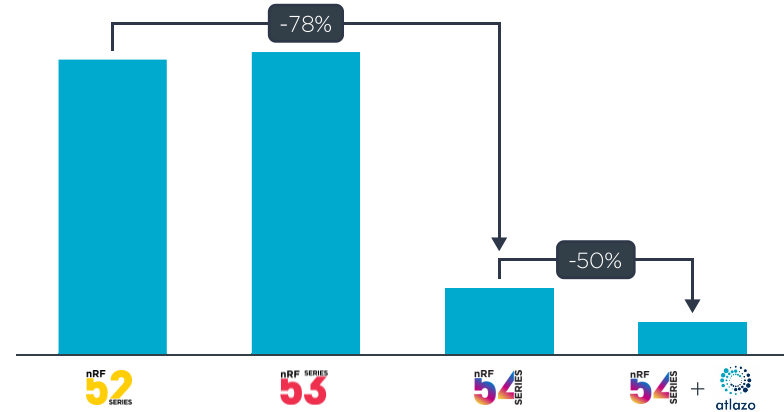
## Latency

Regular MCU cores are built for general purpose tasks - accelerators drive performance for specific ML operations



## Power consumption

Accelerators are designed for low power for specific tasks, giving superior performance versus regular MCU cores



Nordic's energy efficient compute and ultra low-power connectivity accelerated by AI and ML

IoT supporting sustainability

# Nordic recognized by Time magazine and Statista

## Named one of the "Worlds Most Sustainable Companies"

- TIME and Statista to recognize and reward companies that **prioritize sustainability** is designed to promote corporate responsibility and advance sustainable practices



# Now using recycled plastic component packaging

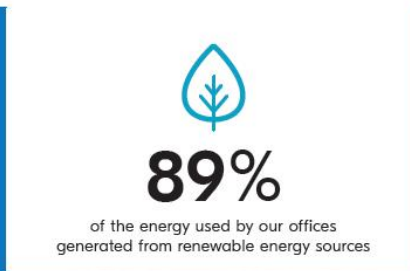
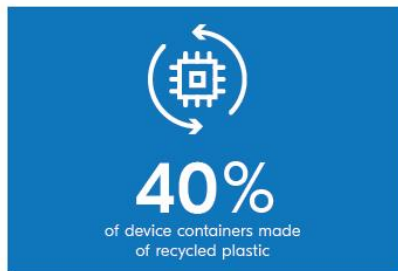
## An important step in our sustainability strategy

- Nordic one of the first semiconductor companies to use component reels made from recycled plastic
- The switch to recycled plastic will reduce plastic waste by almost 15,000 kilograms per year



*"Regarding ESG, we make an effort to walk our green talk"*  
Ole-Fredrik Morken, EVP of Supply Chain, Nordic Semiconductor

# 2023 ESG and people highlights



Awarded

**A-**



Awarded

**B+**



Received

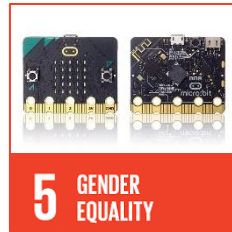
**ESG Top-Rated  
Companies list**





# Sustainability depends on technology

Disruptive IoT projects can contribute immensely to UN SDGs



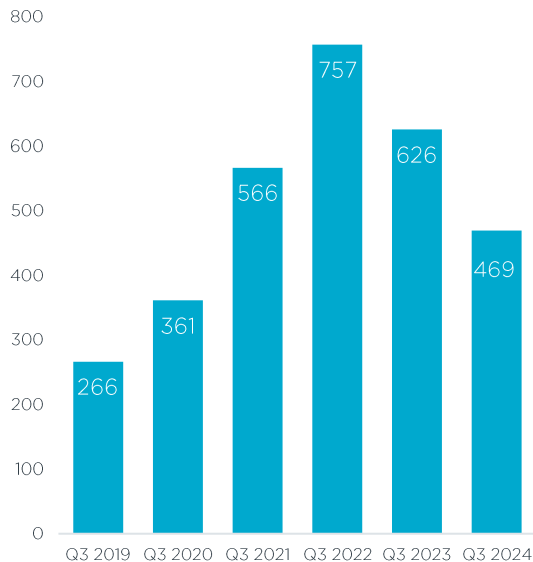
# Key financials & Summary

Continuing a profitable growth journey

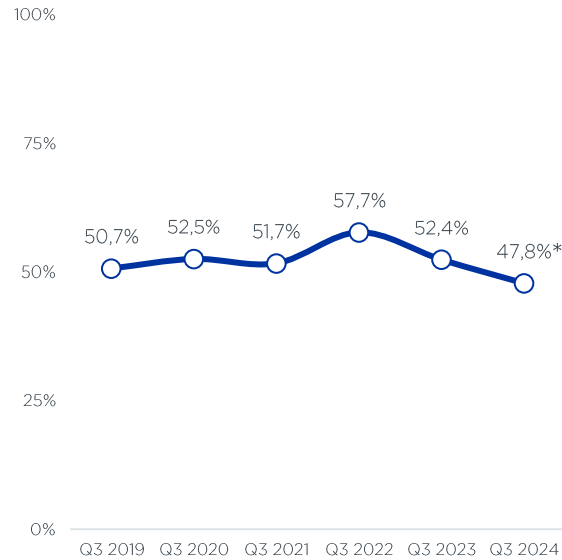
# Financial performance – rolling 12 months

## Earnings decline reflecting lower revenues and gross margin

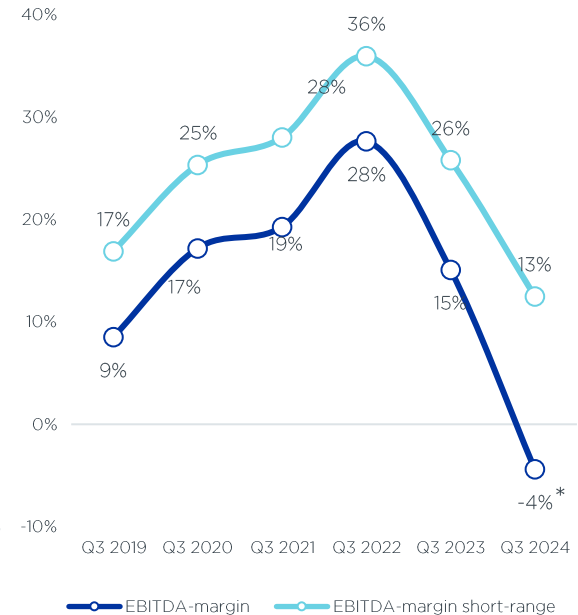
Revenue, last 12 months USDm



Gross margin, last 12 months, %



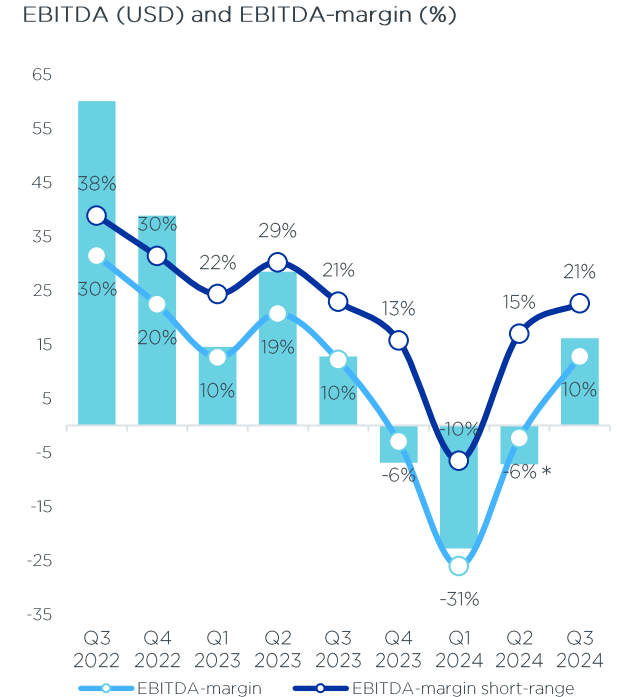
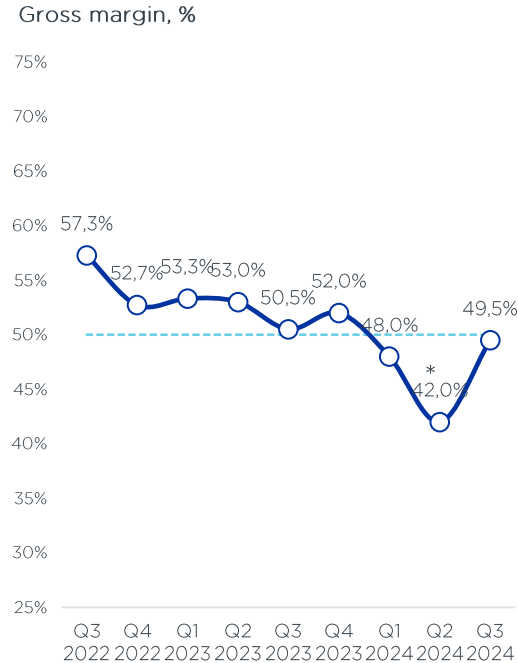
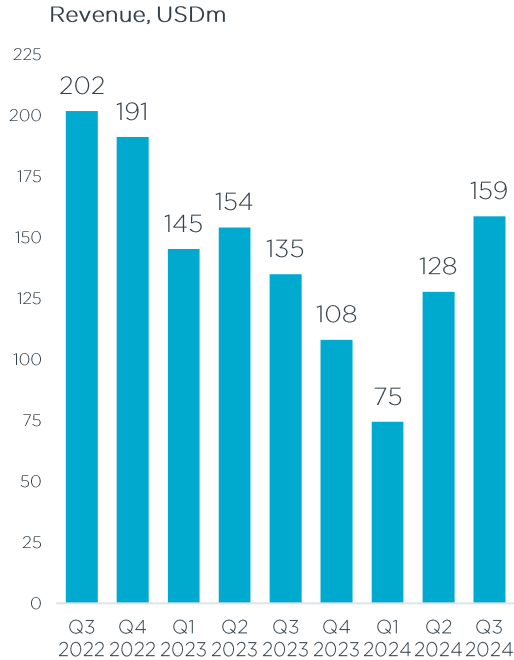
EBITDA-margin, last 12 months, %



\*Includes a USD 10m writedown of Long-range components in Q2 2024

# Financial performance – quarterly

## Sequential improvement reflects a demand recovery

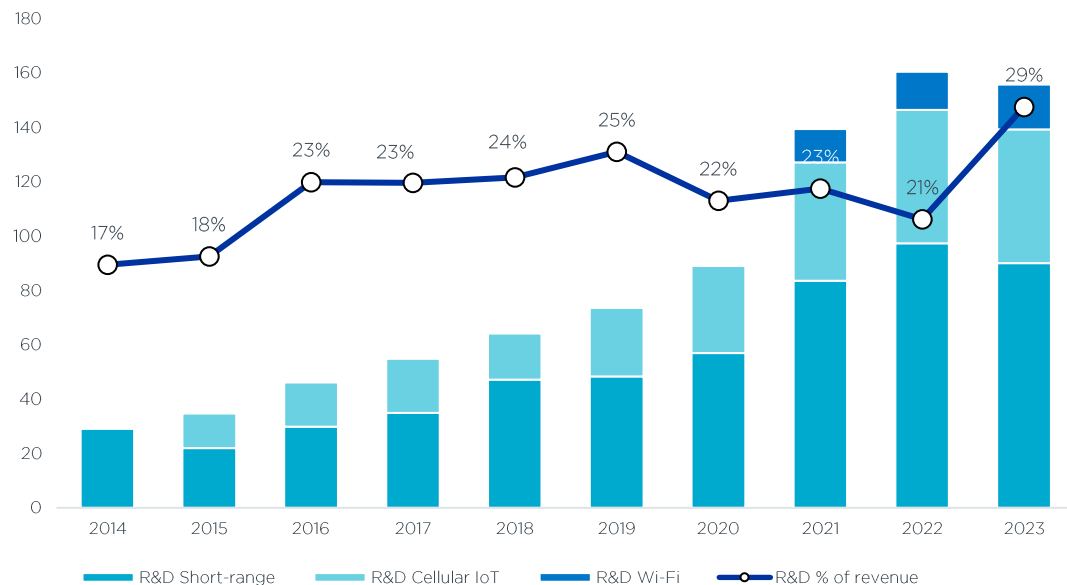


\*Includes a USD 10m write-down of Long-range components in Q2 2024 (adjusted Gross Margin 49.8%, adjusted EBITDA-margin +2%)

# Investing in innovation

Innovation is a core driver of long-term revenue and margins

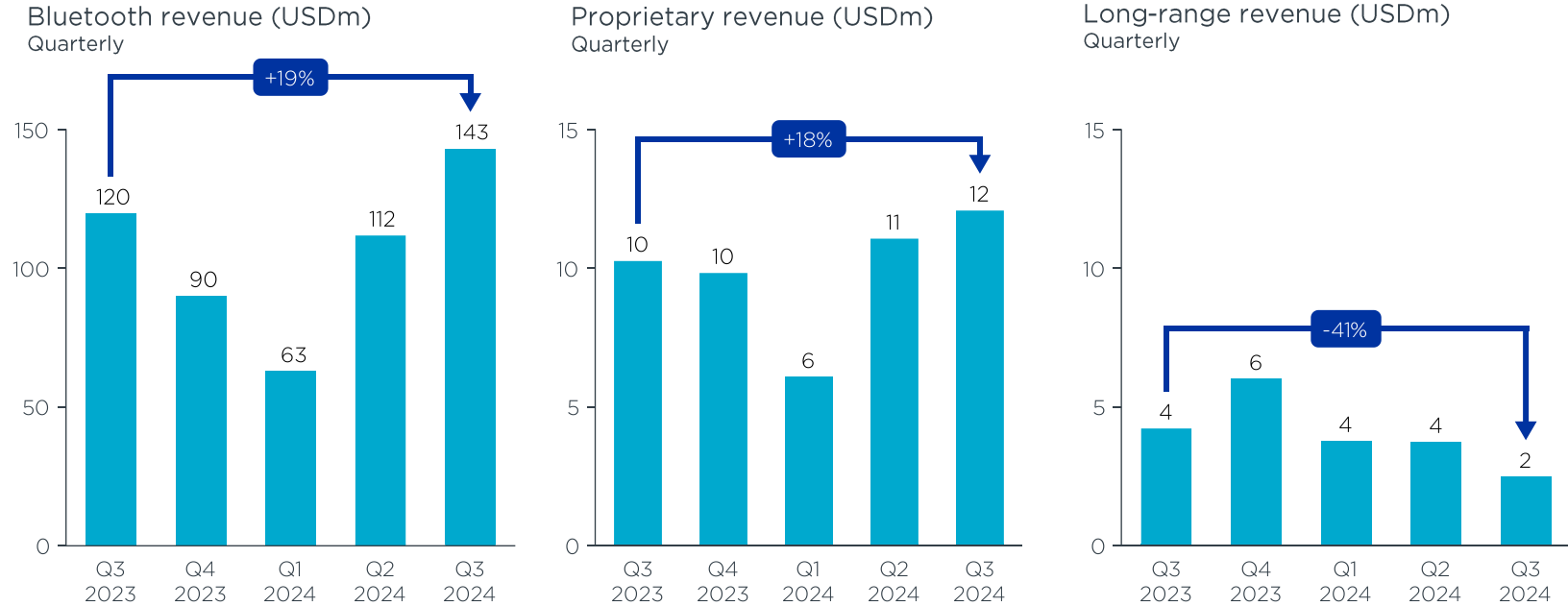
R&D expenses\* by technology, USDm



- R&D intensity increased sharply with declining revenue in 2023
- Implemented measures to reduce costs and reallocate R&D resources
- Focus on cost in 2024

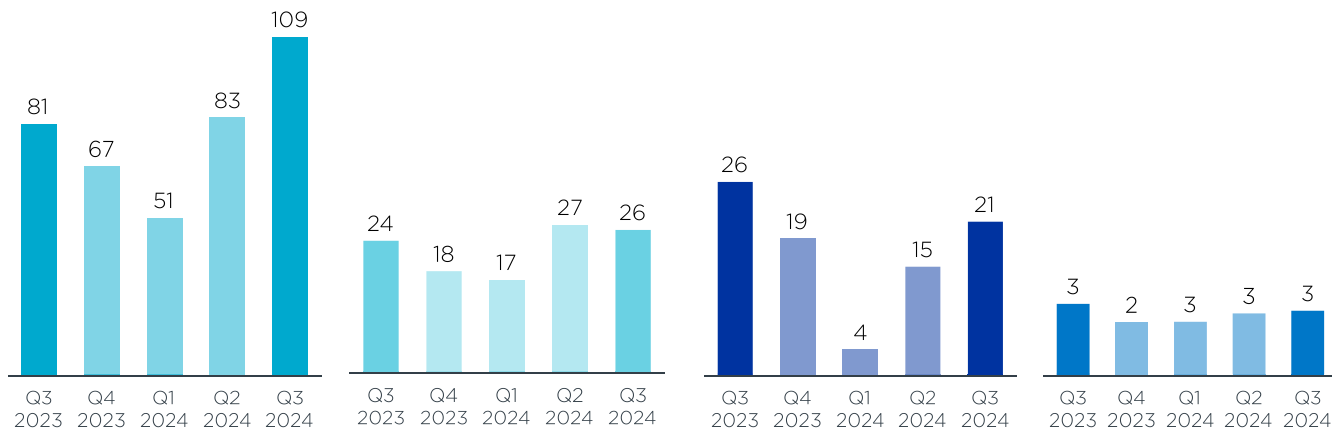
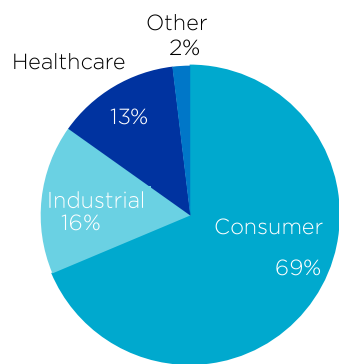
- Recognized in P&L
- 2023 numbers are excluding restructuring cost

# Revenue by technology



# Consumer leading the revenue recovery

Group	Consumer		Industrial		Healthcare		Other		
158.8 USDm	109.0 USDm		25.7 USDm		21.1 USDm		3.0 USDm		
18% y-o-y	25% q-o-q	35% y-o-y	31% q-o-q	8% y-o-y	-3% q-o-q	-21% y-o-y	41% q-o-q	-10% y-o-y	4% q-o-q



Revenue for the individual markets excludes ASICs and consulting revenue

# Q4 expected to show continued y/y growth

## Q4 2024 guidance

Revenue		Gross margin
USDm 130-150m		~50%
+20% to +39% y-o-y	-18% to -6% q-o-q	

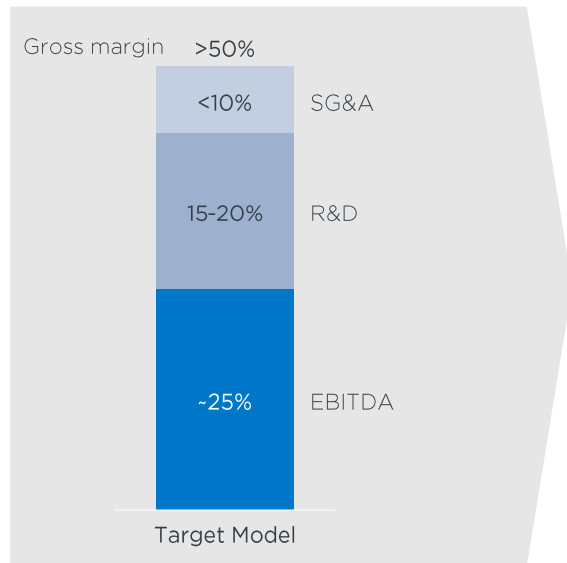
- Year-on-year revenue growth outlook reflecting higher underlying demand
- Sequential decline from Q3'24 reflecting seasonal effects
- Gross margin expected at ~50%, on par with the previous quarter



# Target operating model

Organization set up for significantly higher revenue levels

## Target operating model



Gross margin

- Gross margin depending on technology and customer mix
- Lower gross margin expected in cellular IoT Module business
- Higher gross margin opportunities in other new technologies and service offering
- Overall goal to maintain above 50%

SG&A

- Increasing operational leverage

R&D

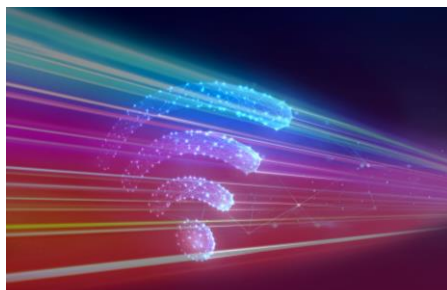
- Continued strong commitment to innovation

EBITDA

- High operational leverage - margin depending on volume growth

# Group level ambitions

Early-stage



Wi-Fi, PMIC

Scale-up



Long-range

Established



Short-range

Group  
level  
ambitions

Deliver average annual revenue growth above 20% through the decade

Moving towards operating model profitability of ~25% EBITDA within five years

# Our investment case

Improving returns - unlocking value creation opportunities

**Clarifying strategy**

Sharpened priorities and improved engineering execution

**Operational agility**

Market adaptive, customer-centric, roadmap-focussed

**Capitalizing on innovation**

New product launches supporting growth and margins

**Profitable growth outlook**

Clear market leader in a recovering market

# Contact details

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