William Demant

Capital Market Days 2016
Opening remarks

Niels Jacobsen

President & CEO, William Demant

Niels Jacobsen

President & CEO, William Demant

Curriculum

- Born in 1957
- M.Sc. in Economics from Aarhus University
- Part of the executive management in William Demant since 1992
- President & CEO of William Demant since 1998

Board positions

- LEGO (Chairman)
- KIRKBI (Deputy Chairman)
- Maersk Group (Deputy Chairman)
- Össur (Chairman)
- Directorships in a number of Group-owned subsidiaries

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Our Capital Market Days

What to expect

- A thorough insight into
  - The hearing healthcare market
  - Our hearing healthcare ambition and strategy
  - Each of our key business areas presented by the responsible business owner
  - Selected technologies and products
- An active and constructive Q&A dialogue between participants and William Demant
- A continuation of our IR communication including
  - Unchanged outlook for 2016
  - We do not provide long-term financial targets

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Agenda

10:30	Opening remarks • *Niels Jacobsen*
11:00	Hearing healthcare • *Søren Nielsen*
12:00	Lunch
13:00	Hearing Devices (wholesale and retail) • *Søren Nielsen and Niels Wagner*
14:30	Coffee break
15:00	Diagnostic Instruments • *Arne Boye Nielsen*
15:45	Sennheiser Communications • *Jeppe Dalberg-Larsen*
16:30	Q&A
19:00	Drinks and dinner, restaurant Orangeriet

Q1 2016 key messages

Revenue growth in all business activities

- Strong unit growth and lower ASPs in the wholesale business
- Strong growth in the retail business
- Diagnostic Instruments and Hearing Implants impacted by oil-dependent countries

2016 EBIT skewed further than normal towards H2

- Timing of Oticon Opn™ launch
- Loss on forward exchange contracts in H1
- Seasonality in Hearing Implants

Q1 2016 key messages

2016 outlook maintained

- We expect to see a unit growth rate of 4-5% in the global hearing aid market, which will however be partly offset by a decline in the market's average selling price due to continued mix shifts and fierce competition. In terms of value, we expect to see a slightly positive market trend in 2016.
- We expect to generate growth in sales in all the Group's three business activities: Hearing Devices, Hearing Implants and Diagnostic Instruments.
- Based on exchange rates in early 2016 and including the impact of exchange rate hedging, we expect the exchange rate impact on revenue to be neutral in 2016. Acquisitions made in 2015 will impact consolidated revenue by approximately 6% in 2016.
- In 2016, EBIT is expected to be skewed further than normal towards the second half of the year due to, among other things, the timing of the Oticon Opn™ launch, losses on forward exchange contracts affecting H1 and seasonality in Hearing Implants.
- **We are guiding for an operating profit (EBIT) of DKK 2.0-2.3 billion**


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Thank you

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Leading in hearing healthcare

Søren Nielsen

COO, William Demant

William Demant

Søren Nielsen

COO (Deputy CEO) of William Demant and President of Oticon

Curriculum

- Born in 1970
- M.Sc. in Industrial Management and Product Development from the Technical University of Denmark
- COO and Deputy CEO since 2015
  - Overall responsible for hearing aid wholesale
- President of Oticon since 2008
- Employed with William Demant since 1995

Board positions

- Sennheiser Communication

Agenda

- The hearing healthcare market
- William Demant's strategy
- Position and competition

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Introducing the hearing healthcare market

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The hearing healthcare market

Hearing Devices

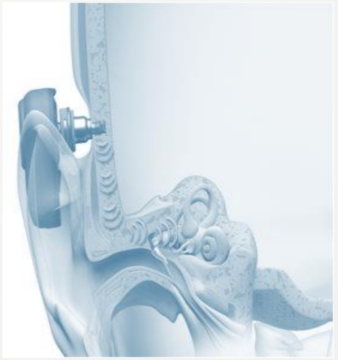
Hearing instruments and accessories

Hearing Implants

Bone-anchored hearing systems and cochlear implants

Diagnostic Instruments

Wide range of hearing-related equipment



Hearing devices value chain in commercial market

Suppliers	Manu-facturers	Retailers	End-users/ payers
~5%	~25%	~70%	100%

Percentage of value chain

Suppliers
- Components
- Consolidated market

Manufacturers
- Six main players
- Tough competition
- Fight for market access

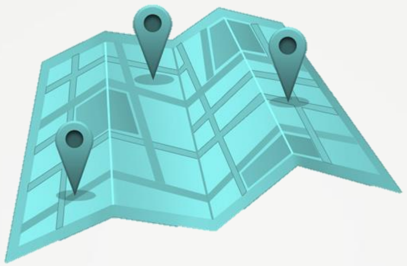
Retailers
- Fragmented market
- Consolidation
- Expanding through existing and new distribution models

End-users/payers
- Private market
- Public market

Solid structural growth drivers in hearing devices

Demography

- Growing ageing population
- Increasing life expectancy



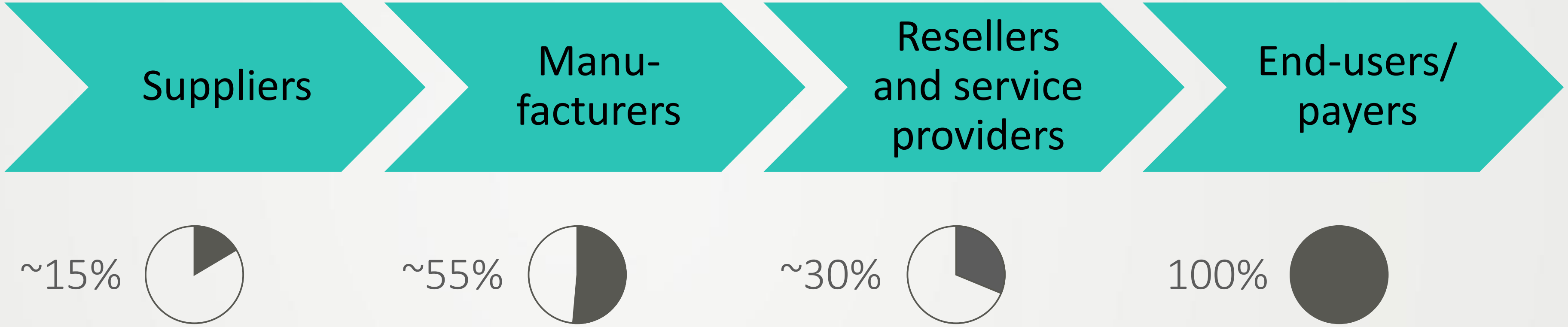
Increasing points of sales

- Greenfield store openings
- New channels being tested with a few showing sustainability
- Increased marketing
- Increased access to reimbursed hearing aids

Emerging markets

- Demography
- Growing penetration rates
- Improved healthcare systems
- Higher average income
- Improving access to hearing aids

Diagnostic instruments value chain



Percentage of value chain

Suppliers
- Components

Manufacturers
- Three large players
- Critical mass is crucial
- Wide range of product segments to address

Resellers and service providers
- BtB
- SIDs
- Consolidation in main market

End-users/payers
- Hearing aid dispensers
- Hearing clinics etc.
- Government services
- ENTs and general practitioners

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Positive growth outlook for diagnostic instruments

New business areas

- Balance measurements/diagnostics
- New-born screening
- eHealth

Emerging markets

- Building infrastructure
- Improved healthcare systems
- Higher average income
- Increasing life expectancy

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Hearing implants value chain

Suppliers	Manu-facturers	Distri-butors	Clinics / Hospitals	End-users/ payers
~10%	~55%	~35%	100%	
• Components	• Four competitive players	• Manufacturers in most cases	• Hospitals • Private clinics	• Reimbursement • Insurance

Percentage of value chain

Note: Surgeon fees, follow-up costs etc. are not included in the value chain, and the value chain in general differs from country to country

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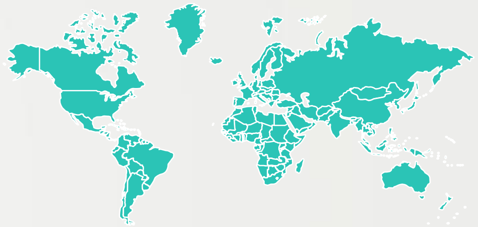
Long-term attractive growth potential in hearing implants

Increasing reimbursement

- Reimbursement schemes are key to growing penetration

Continuous market expansion

- Significant number of new-born who qualify for a hearing implant
- Increased life expectancy
- Converting Super Power users
- Cosmetic benefits could make hearing implant solution more attractive for end-users



New markets

- New indications
- Emerging markets

Attractive value and growth in hearing healthcare

	Market size (value)	Market growth (value)
Hearing Devices	USD 4bn	1-3%
Cochlear Implants	USD 1.4bn	10-12%
Bone Conduction Systems	USD 170m	10-15%
Diagnostic Instruments	USD 500m	3-5%
Hearing Healthcare		~5%*

Above number estimates represent wholesale value

*2015 to 2020 CAGR - growth rates increasing as hearing implants become bigger part of total market

Attractive value and growth in hearing healthcare

- Modest growth in Hearing Devices
- Modest growth in Diagnostic Instruments
- Strong growth in Hearing Implants

Note: Above numbers represent wholesale value

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William Demant’s strategy

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William Demant's overall vision

To make a life-changing difference to people living with hearing loss

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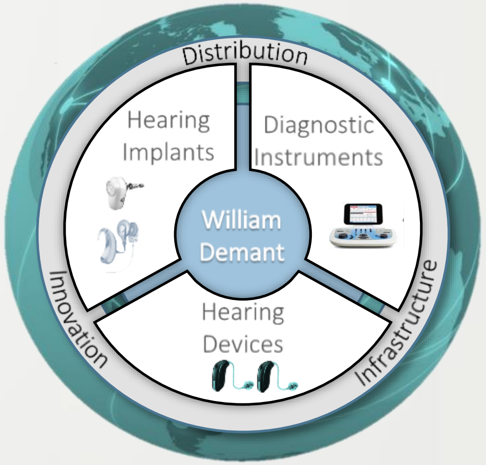
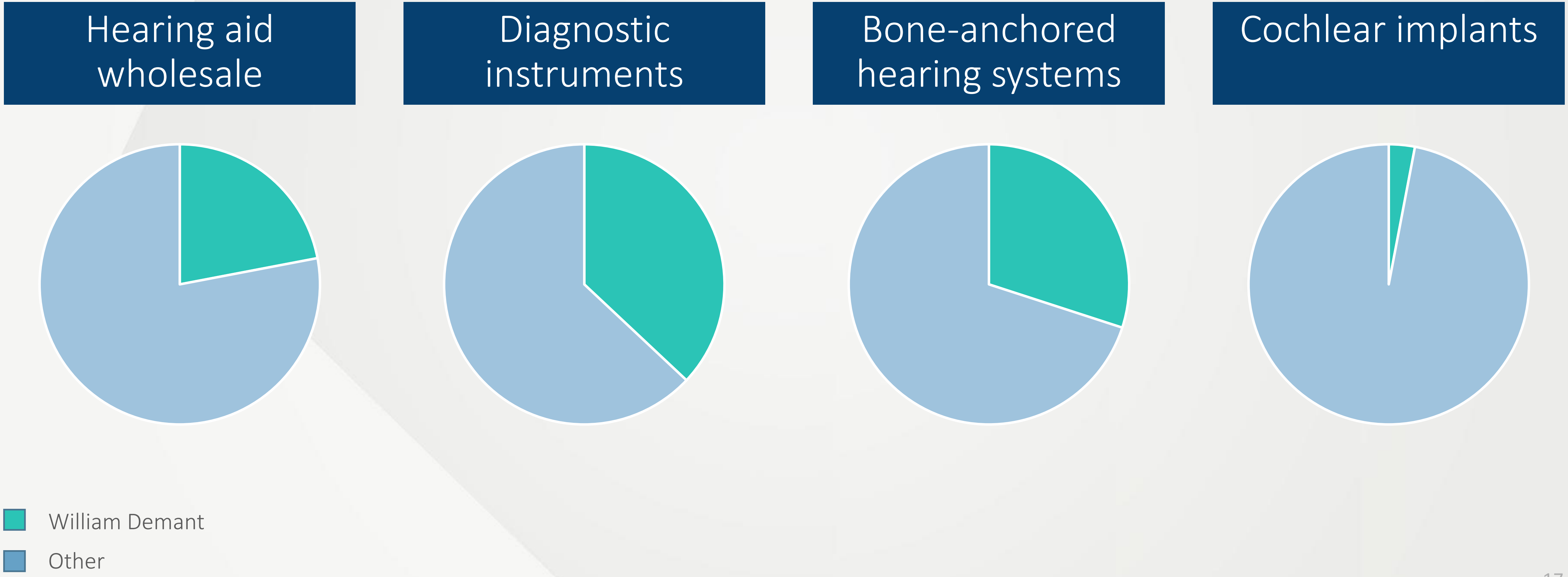
William Demant's overall strategy

We want to further develop our position as a leading hearing healthcare company with the broadest and deepest product offering based on **true innovation** – delivered to customers and end-users through a **multi-brand** approach backed by a comprehensive **global distribution** set-up and efficient **shared services**



William Demant's value market share



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Strategy of delivering profitable long-term growth

Hearing Devices
- Maintain technology leadership
- Multi-brand strategy
- Be present in all channels and segments
- Take measures to expand and develop retail where needed
- Get closer to end-users

Diagnostic Instruments
- Strengthen distribution model
- Pursue new market opportunities
- Generate organic and acquisitive growth
- Push for synergies with related businesses

Hearing Implants
- Maintain insight into and knowledge from acquired companies
- Develop and grow the business by benefitting from William Demant technology and distribution platform

DGS
- New global ERP backbone
- Global approach to operation and supply chain
- Shared services approach across IT, HR and Finance
- Large scale and cost effective operation to ensure competitive unit cost

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Positioned to grow in all business activities in an efficient way

- Profitable organic growth
- Strategic acquisitions
- Multi-brand approach

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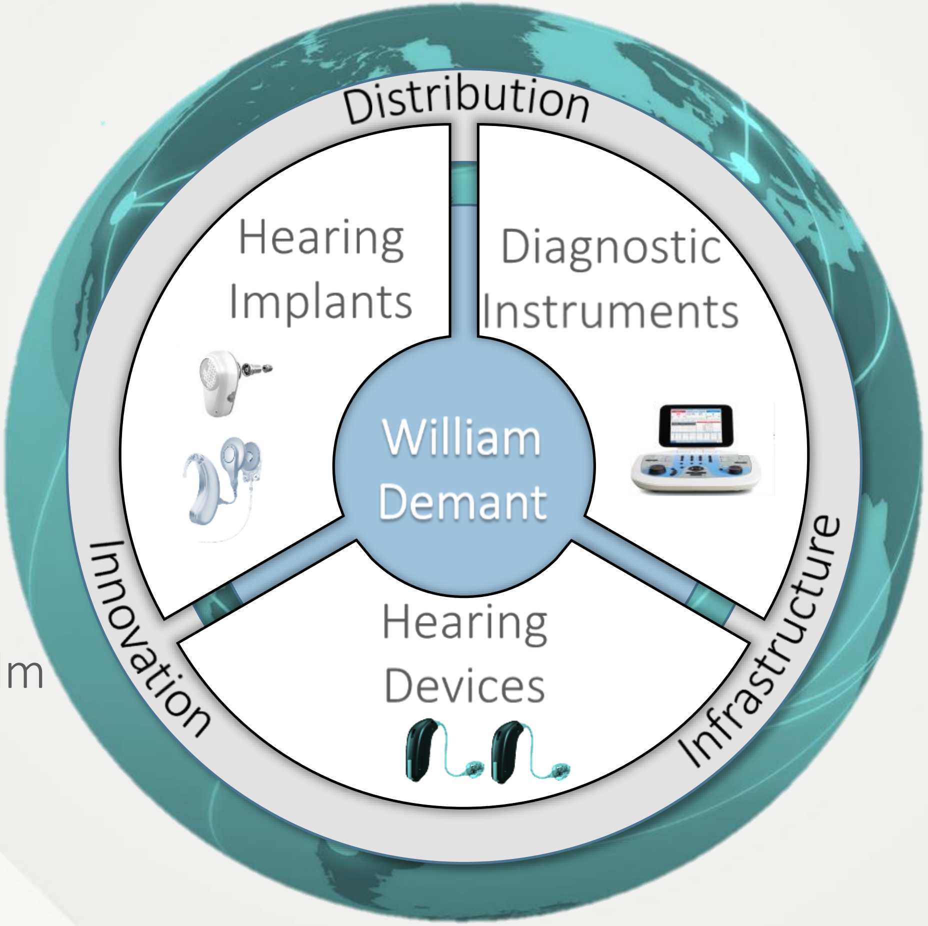
Synergies from our hearing healthcare approach

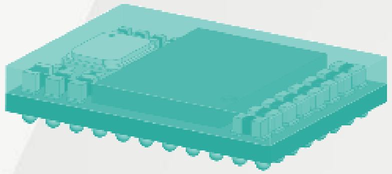
Innovation
- Sharing core platform (DSP, wireless)
- Advanced digital signal processing
- Total fitting flow
- Cross-product integration
- Quality assurance
- Long-term research at Eriksholm
- eHealth



Distribution
- Commercial cross-business synergies
- Lead generation across businesses
- Global distribution platform
- Market insight
- Critical mass in local markets

Infrastructure
- Shared sales companies in more than 30 countries
- Global IT platform serving all business units
- Strong global supply chain
- Strong operational footprint in Poland and Mexico

Real-life synergies

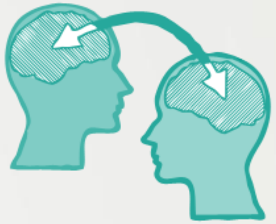


Hearing aid technology in hearing implants

- Leveraging sound processing from hearing aids
  - DSP chip and signal processing in Oticon Medical (CI and BAHS)
  - Ponto fitting system built on back of hearing aid fitting system
- Sharing audiological know-how
- Exploiting purchasing power and in-house development capacity from hearing aids
- Strong synergies in mechanical tool development

Market access for Oticon Medical through existing customer relations

- Existing relationships to ENT doctors through Diagnostic Instruments improve Oticon Medical's position
- Oticon Medical builds on strong Oticon brand legacy

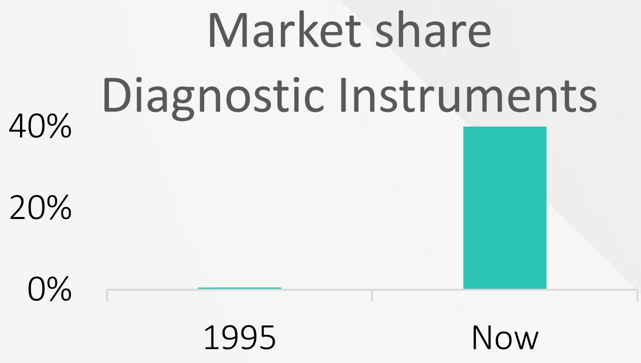


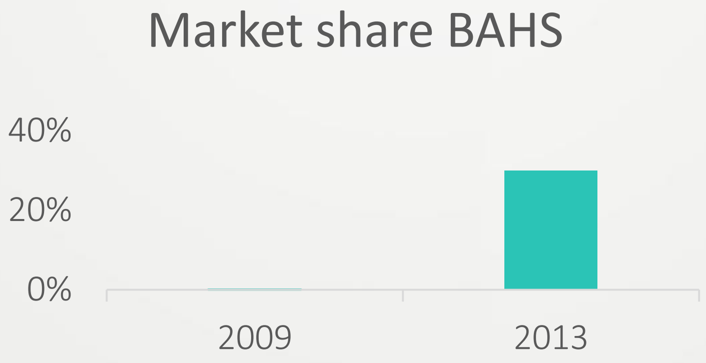
Developing state-of-the-art fitting process

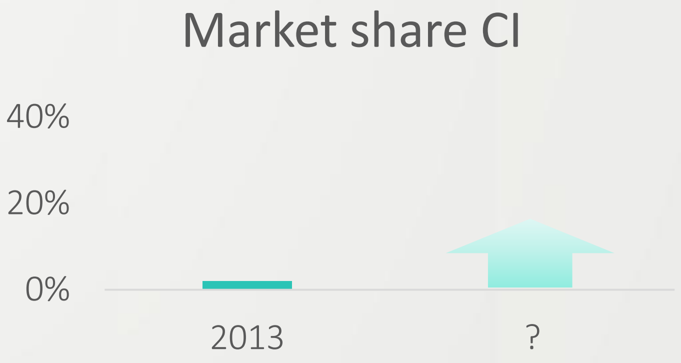
- End-user knowledge from retail
- Product knowledge from wholesale
- Technology knowledge from Diagnostic Instruments
- First live, end-to-end eHealth solution

Strong platform for new growth opportunities

- Through the strategic focus on innovation, distribution and infrastructure, William Demant has built a strong platform on which to execute on additional future growth opportunities
- Diagnostic Instruments and BAHS are both successful additions to William Demant's Hearing Devices business activity
- Cochlear implants hold great commercial potential





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Position and competitive landscape

We have a strong foundation for growth

Offerings	William Demant	Sonova	Sivantos	ReSound	Starkey	Widex	Cochlear	MED-EL	Amplifon
Hearing aid wholesale	◕	◕	◕	◑	◑	◔			
Cochlear implants	◔	◑					●	◕	
Bone-conducting systems	◑						●	◔	
Diagnostic instruments	◕			◑					
Controling distribution	◑	◕	◔	◑	◔	◔			◕

◕ = Relative strength in business segment

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Hearing healthcare trends and strategies

Current trends likely to evolve

1. Product complexity continues to rise
2. Modest value growth due to consolidation in retail and increasing competition among manufacturers in zero-sum markets
3. Further expansion of distribution channels and increased complexity
4. Strong growth expected to continue in Hearing Implants
5. Growing direct end-user engagement at wholesale level

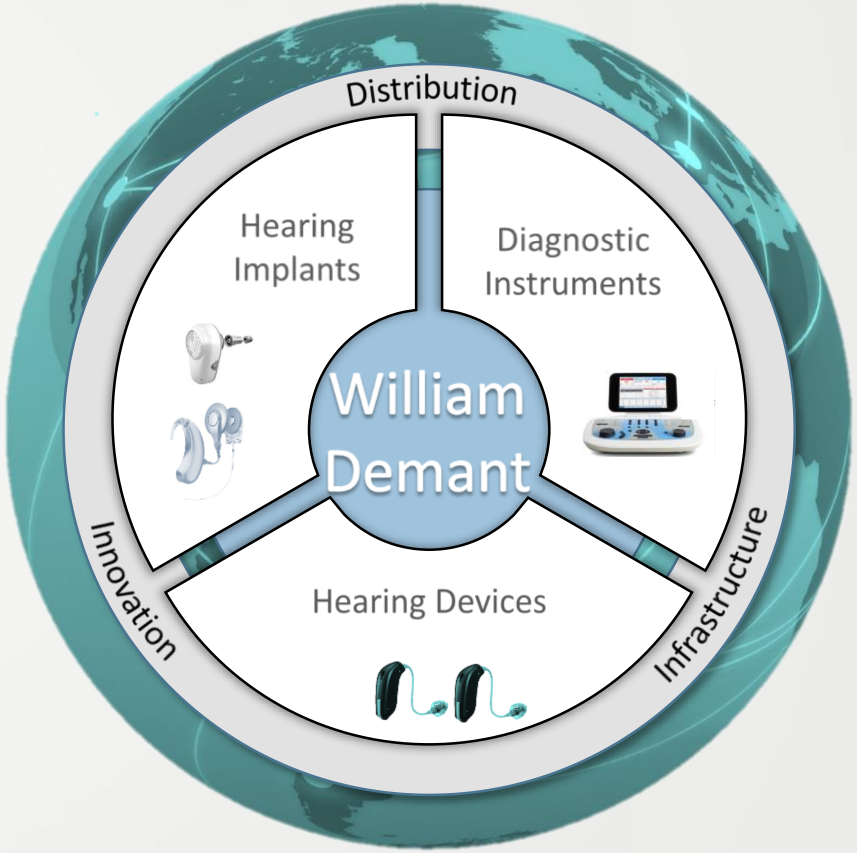
Strategies supporting long-term profit

1. Ever growing and innovative R&D organisation remains king – manufacturers need leverage on R&D spending and size matters
2. Manufacturers experience pressure to lower unit costs, while seeking diversification to obtain synergies and growth – size matters
3. Manufacturers need to be present in all markets and all channels
4. Hearing Implants’ attractive growth opportunities hold significant synergies to core hearing aid wholesale cost base
5. Increased focus on effective channels for end-user communication – especially web

William Demant well positioned to win

Diversification is key to success

- William Demant is able to meet high investment requirements and R&D spend
- William Demant is well positioned to benefit from growth in all parts of the hearing healthcare value chain from a broadly based presence
- William Demant has a strong track record when it comes to building new profitable businesses
- William Demant has sufficient size and a strong platform for obtaining internal synergies

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Thank you

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Hearing Devices

Søren Nielsen

COO, William Demant

Niels Wagner

President of Retail, William Demant

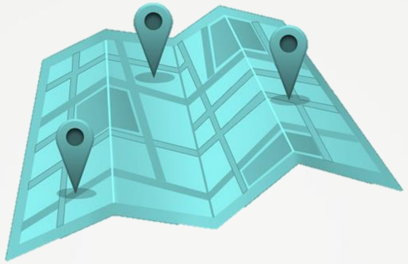
Agenda

- Hearing aid market
- Hearing aid wholesale
- Hearing aid retail

Solid structural growth drivers in hearing devices

Demography

- Growing ageing population
- Increasing life expectancy



Increasing points of sales

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Emerging markets

- Demography
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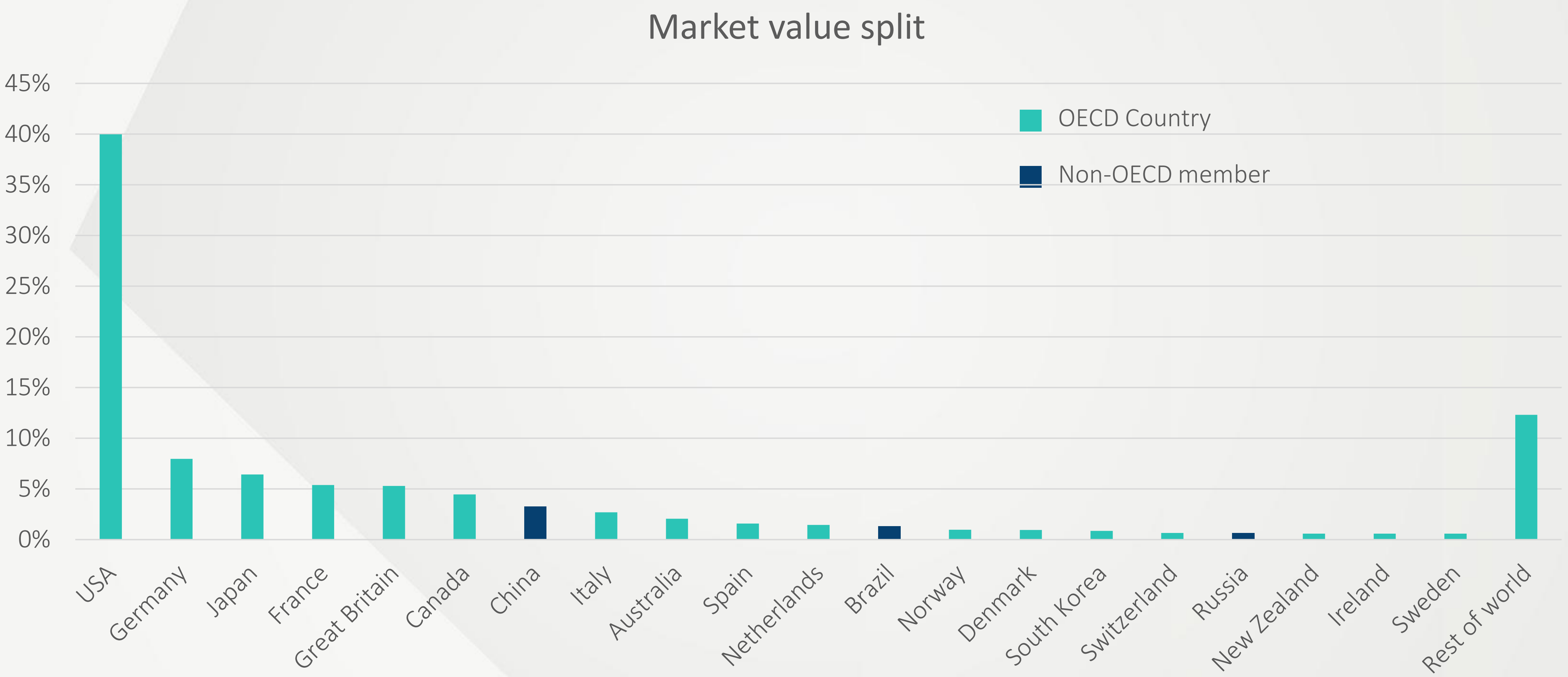
OECD countries continue to dominate

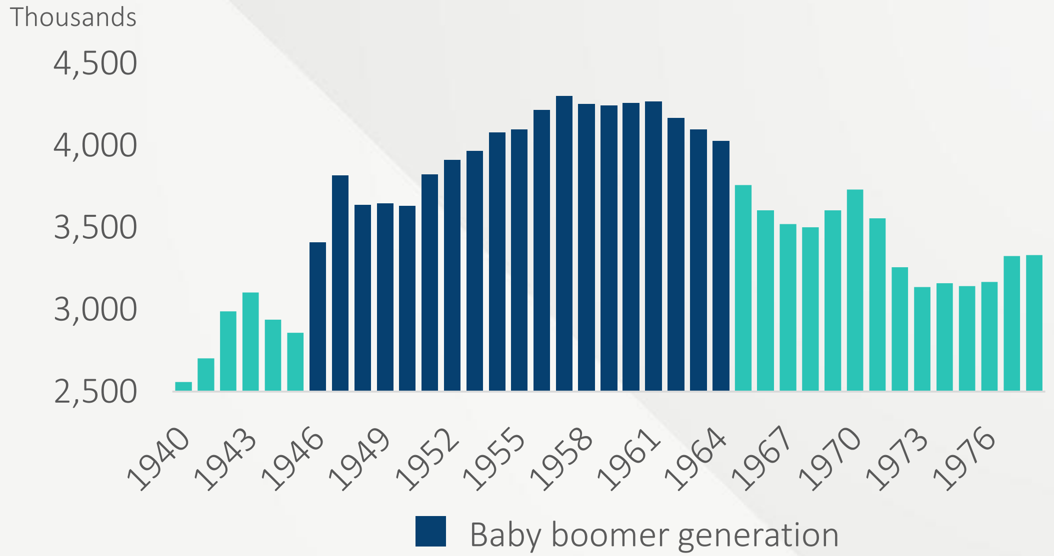


Underlying growth driven by baby boomers

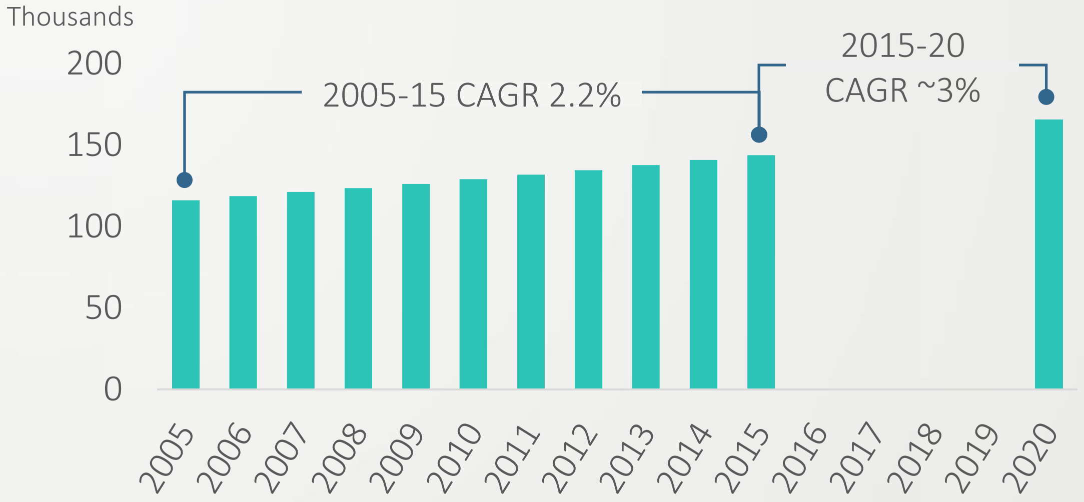
Baby boomers will drive growth for the next 10-15 years

70 years old	~69 years old	Increasing longevity	Active and tech-savvy
Age of the first baby boomers	Average age of first-time user	We live longer and longer	Characteristics of the baby boomers

US birth rates (1940-1978)



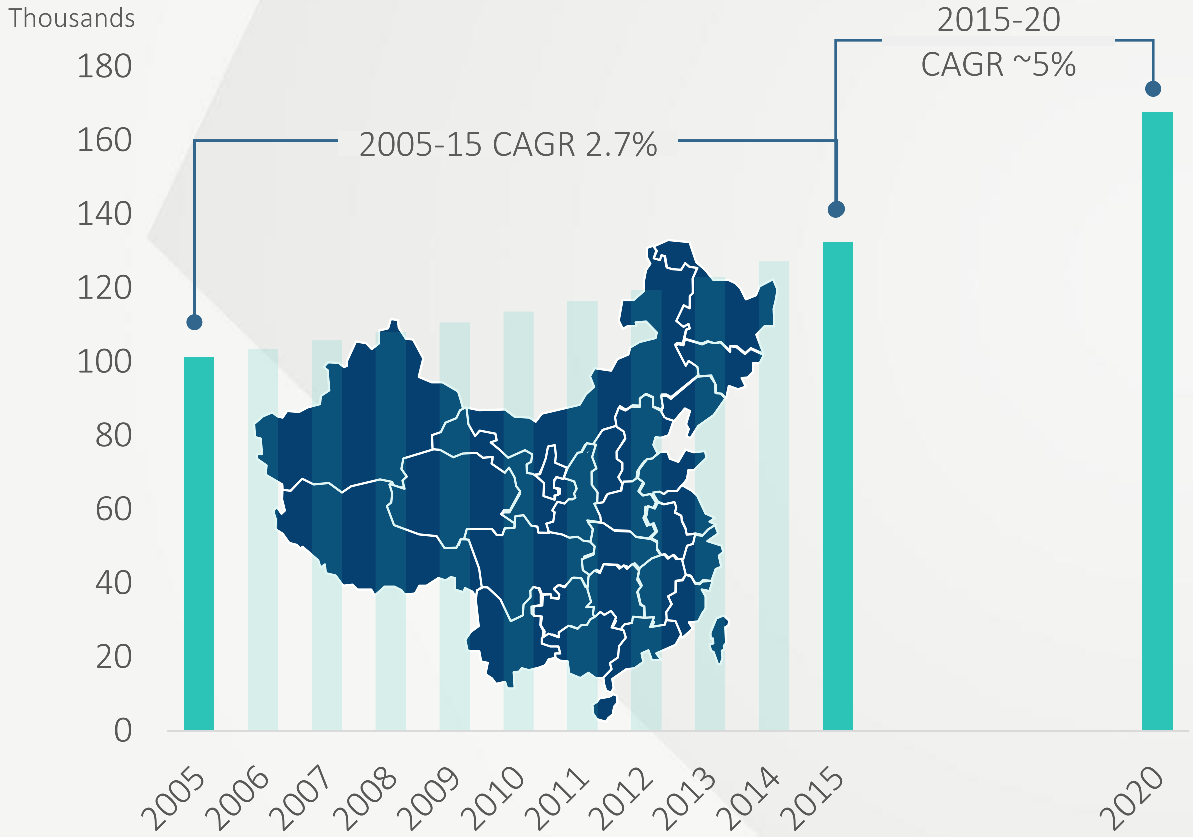
70+ population (OECD countries)



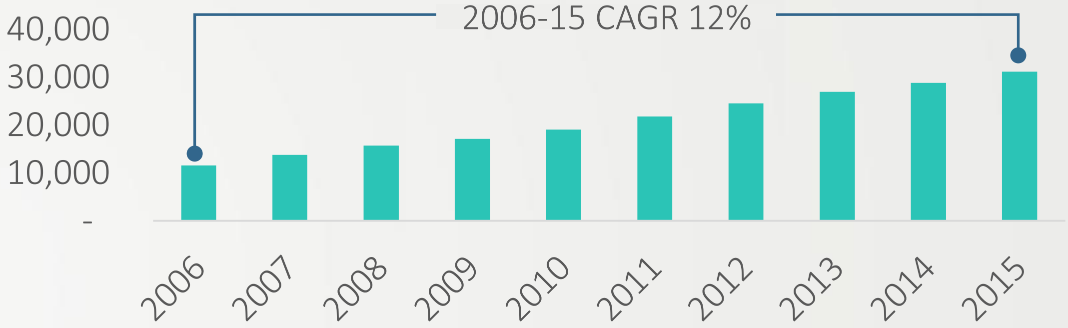
Source: William Demant estimates and data from OECD.stat and US Census

China’s emerging senior market

65+ population (China)

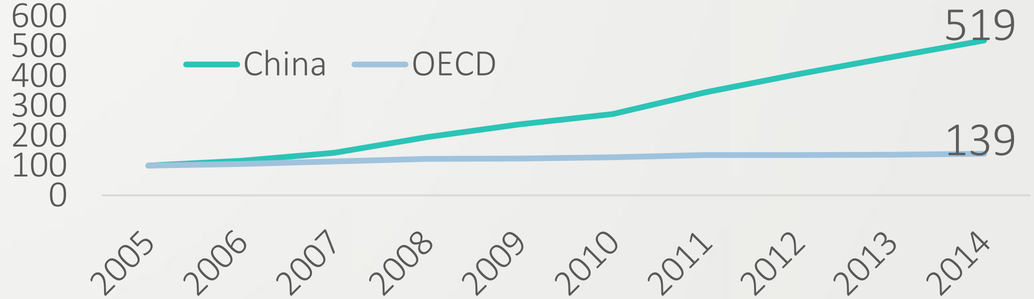


Disposable income per capita (CNY)



Large regional differences (rural vs. urban)

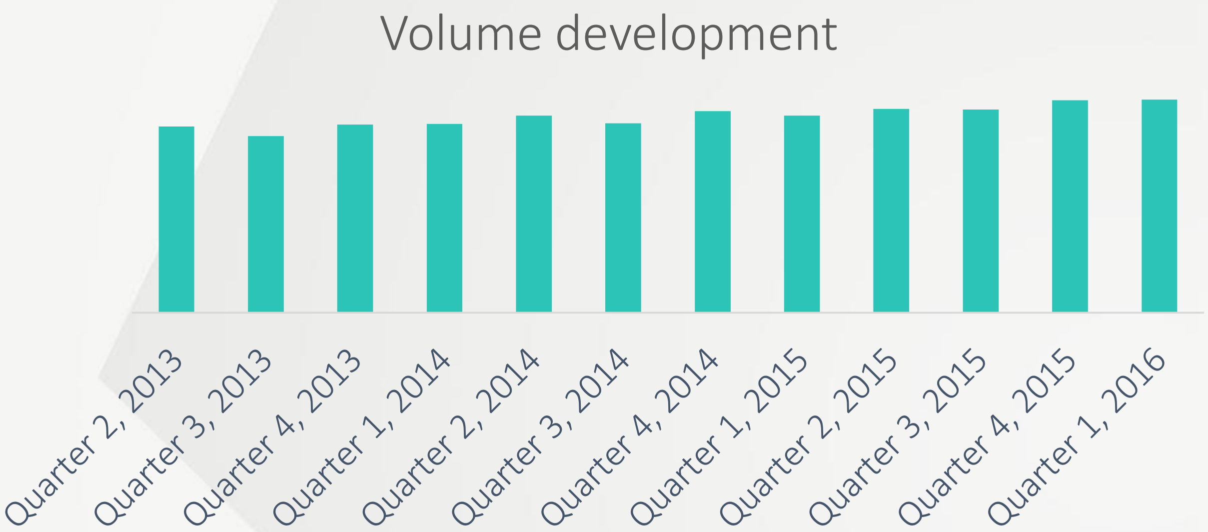
Health expenditure per capita (**Index 2005**)

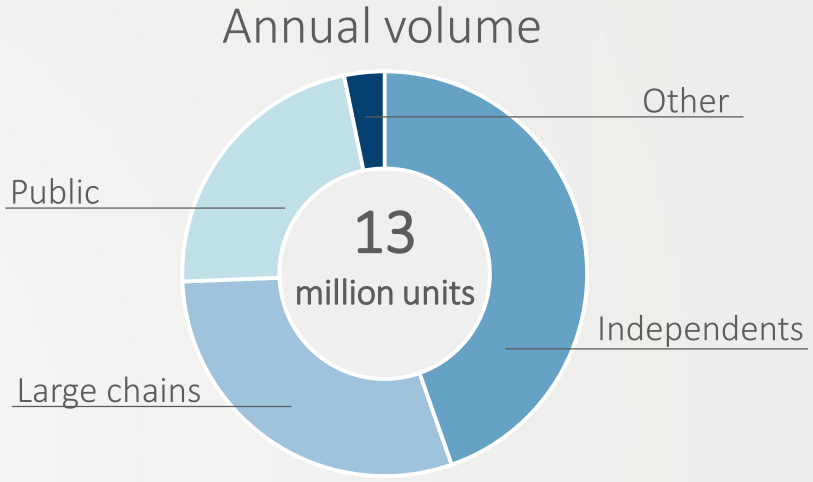


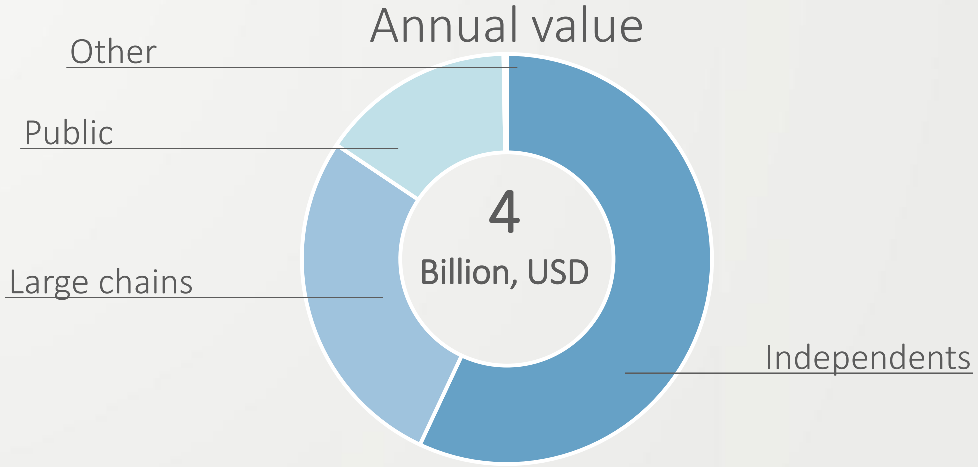
OECD still factor >10x (4,746$ vs 419$)

Source: OECD stat and National Bureau of Statistics of China

Global market development







- Stabile volume growth with small volatilities
- Slow change in country and channel mix
- Independents continue to grow
  - However stronger and stronger tie-ins

Source: William Demant estimates and official market statistics

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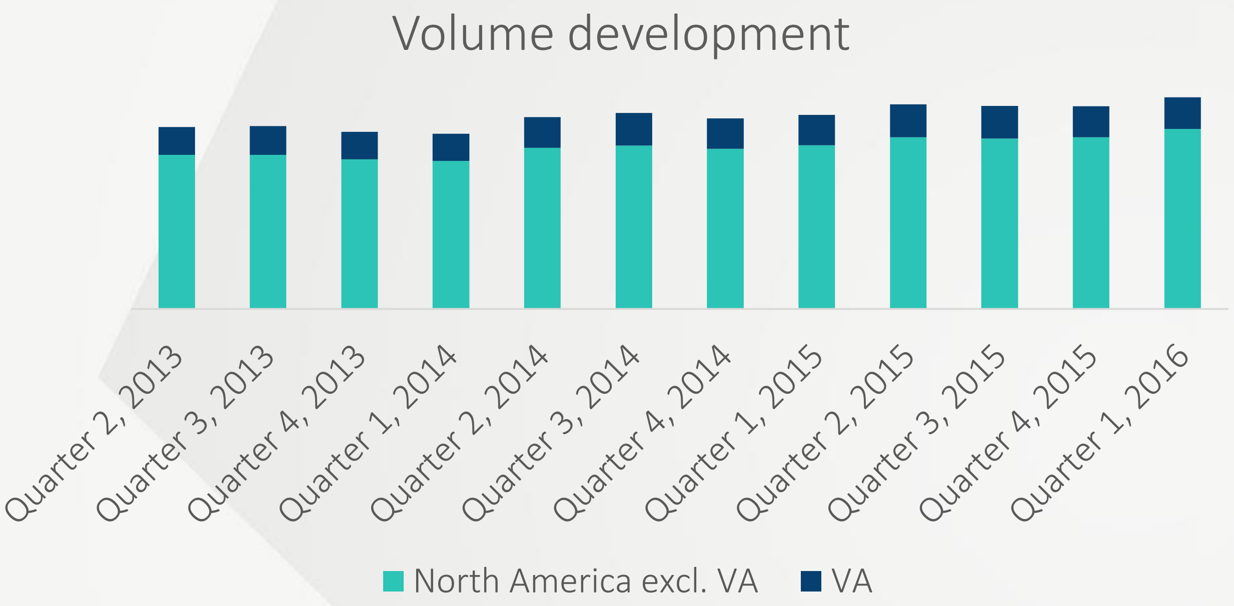
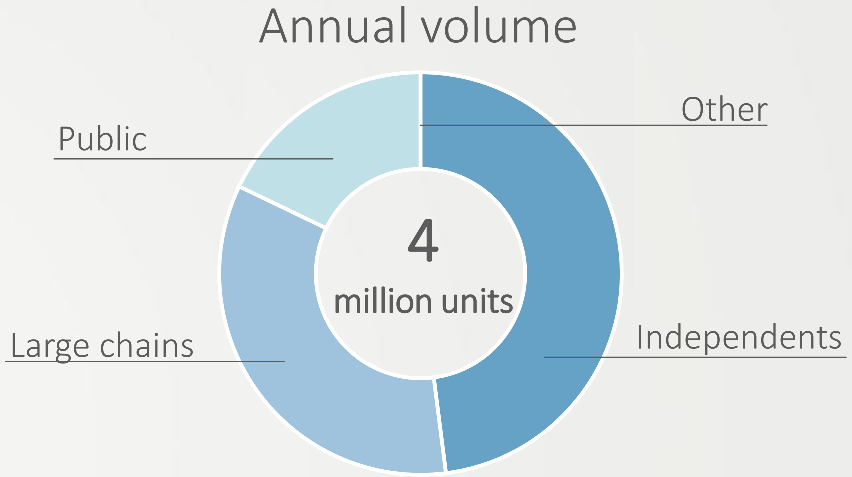
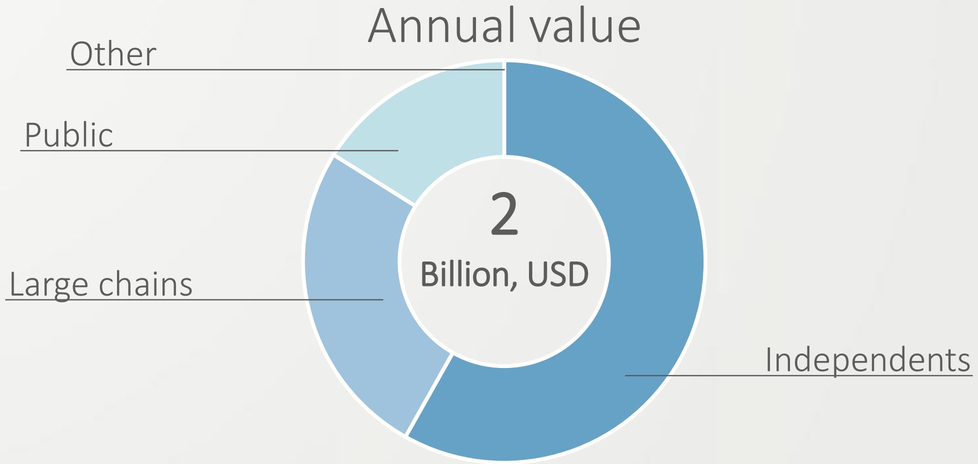
North America market development



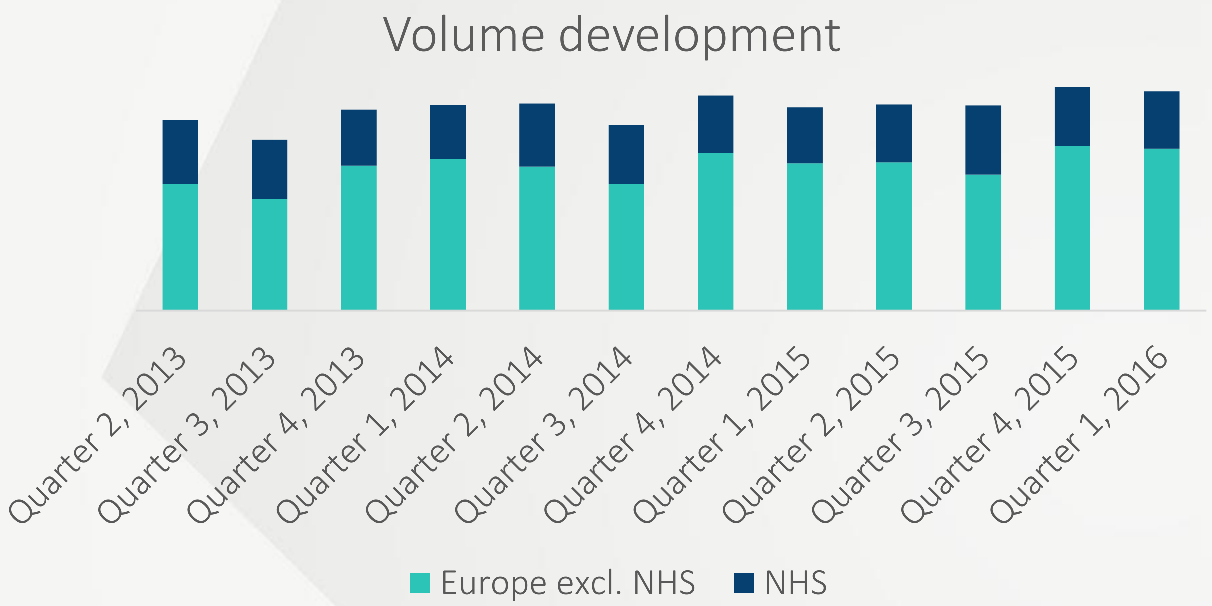


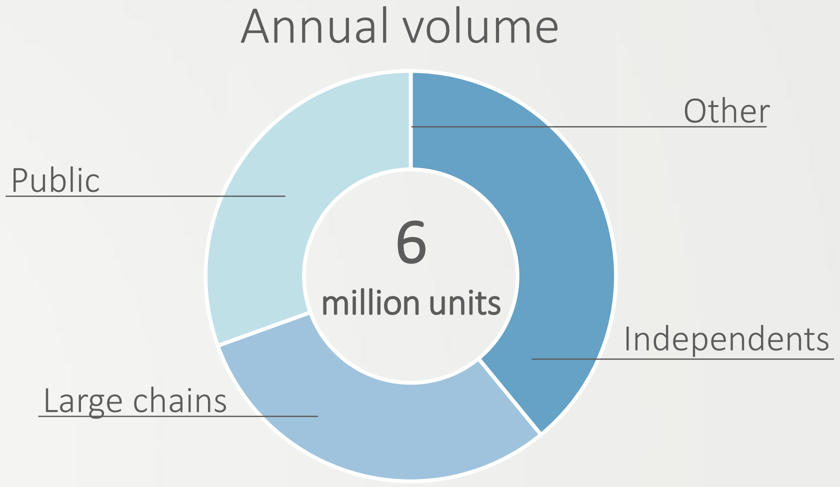


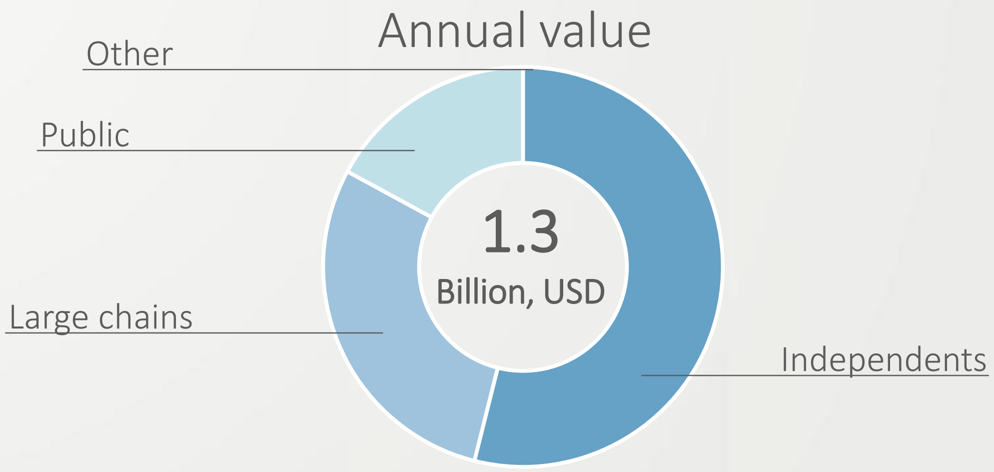
- Major players growing
- Growing number of independents seek support from networks and buying groups
- Average selling prices in wholesale continue to decline due to growth of major players as well as fierce competition

Source: William Demant estimates and official market statistics

European market development







- Germany returning to normal growth rates
- France, Italy and UK maintaining encouraging growth rates
- Scandinavia still developing at a slow pace

Source: William Demant estimates and official market statistics

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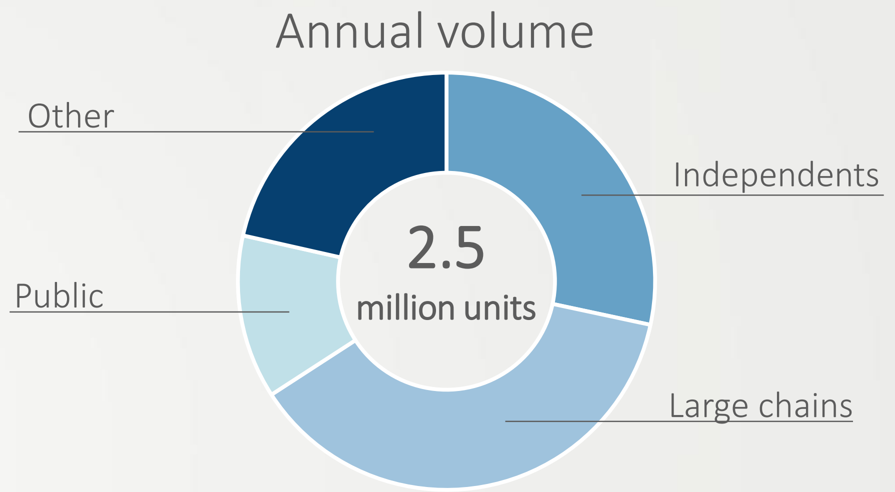
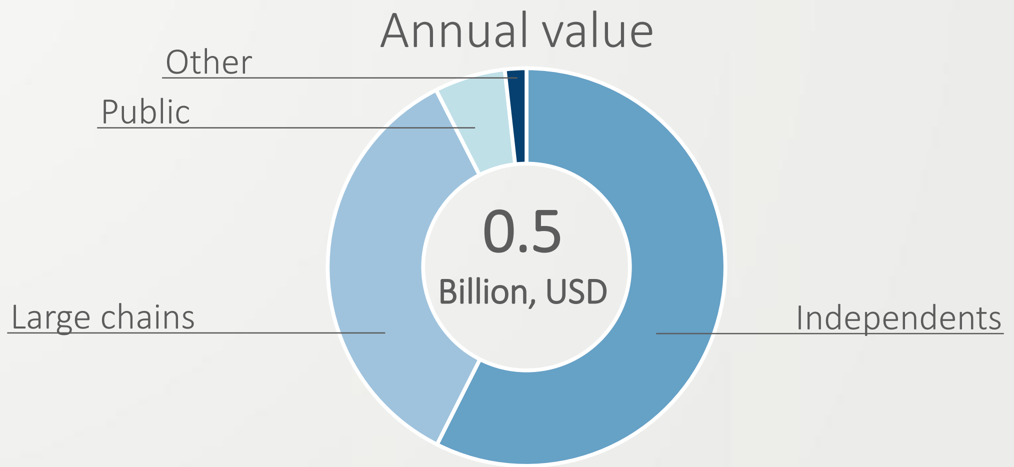
Asia Pacific

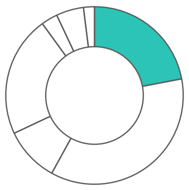
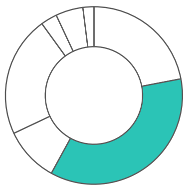
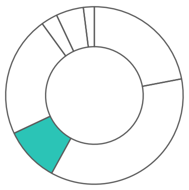
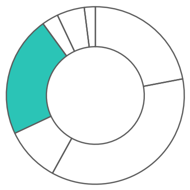
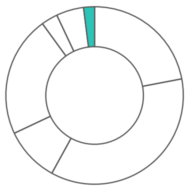
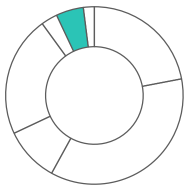
- Low penetration in Asia
- Highly unregulated in many markets





Source: William Demant estimates and official market statistics

Hearing aid distribution channels

	Public/ hospital settings	Conventional independents	Value-added wholesalers	Conventional retail chains	Direct online sales	Specialty retailers	Multi-line retailers
Description	• **Professional procurement** • Work with manufacturers with high audiological content and the ability to demonstrate user benefits via clinical studies etc. • Capacity is often the main challenge, and **efficient fitting processes** and highly reliable products are the main drivers	• Owners are an integral part of the operation and typically have a background in hearing instruments and are **dedicated and specialised** • Often **loyal to their main suppliers** based on long term relationship and maybe also financial tie-ins to their suppliers	• More and more Independent businesses seek help with value-added resellers compete in commercial markets • This service is normally financed through negotiation of **discounts with suppliers** • Typically require a high-priced market with margins to finance these services	• Typically have strong marketing and process control as well as strong, central, corporate functions • Strong focus on low purchase price • **High marketing spend** • They expect leading suppliers and always up-to-date technology	• Model currently tested in many shapes and forms in a number of markets • Challenge is to combine the internet with the need for personal counselling and fitting of the hearing instruments • Still very difficult to run a stand alone business	• Pharmacies, opticians etc. • In some markets, attractive alternative source of revenue for opticians • Leveraging on existing traffic • Professional and commercial retailers who expect products that are easy to sell	• Big-box retailers • Professional – but not specialised • They work with high traffic and low margins • They look for partners who can generate the best retail value • They want top-tier brands • **Low marketing spend**
Level of specialisation	Specialised professional						Complementary business
Players	NHS		elite HEARING NETWORK, AHAA, AUDIGY GROUP	amplifon, KIND HEARING	audibene einfach gut hören, embrace hearing	Fielmann, Boots, Specsavers	COSTCO WHOLESALE, Sam's CLUB
Market split (volume 2015)							

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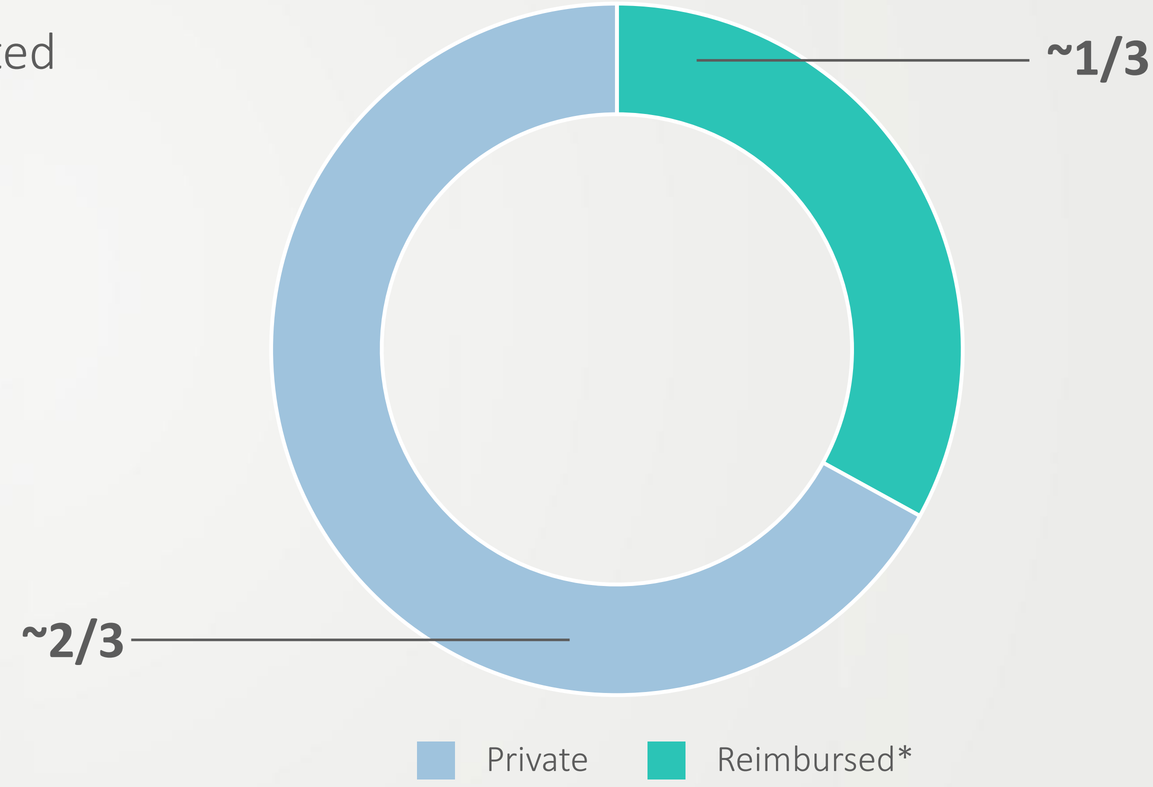
Regulation and reimbursement

Changes to reimbursements and regulation are made from time-to-time (examples):

- Germany: Increase in reimbursement, but only limited co-payment
- Netherlands: Lowering of reimbursement
- Denmark: Lowering of reimbursement
- Switzerland: Lowering of reimbursement

No major changes to regulation and reimbursements are expected in the foreseeable future



Note: Reimbursed*: Markets where a public subsidy system is in place.

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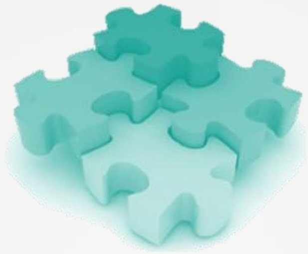
Status of the current hearing aid market

Centralised market

- Top 5 markets continue to hold >70% of the global market value
- Stable markets
- Top 5 – all baby boomer countries



Retail consolidation

- Dispensers consolidating in different forms and sizes
  - Networks and buying groups
  - Retail chains
  - Manufacturers

Wholesale value shrinking proportionally

- Average selling prices continue to decline
- High competition for market shares among manufacturers

William Demant Wholesale business

Our strategy

- Grow market share through strong and innovative R&D effort combined with global multi-brand strategy
- Effective infrastructure to ensure competitive cost base

William Demant

oticon PEOPLE FIRST

bernafon Your hearing · Our passion

SONIC Everyday Sounds Better

Multi-brand strategy

Gain market share in a diverse distribution system

Truly global reach

Through our hearing healthcare platform, expand our global market reach

Technology innovation

Deliver a commercially attractive, innovative product range based on proprietary technology

Attractive partner

Strong and attractive service and support package for customers and channels with specific needs

Successful multi-brand strategy

- Differentiated brand strategy, positioning and customer targeting
- To be different where it matters, e.g. products/features, people (customer interface), communication and services
- To share where possible, e.g. back office, production/logistics and technology/platform development
- Internal governance

oticon PEOPLE FIRST

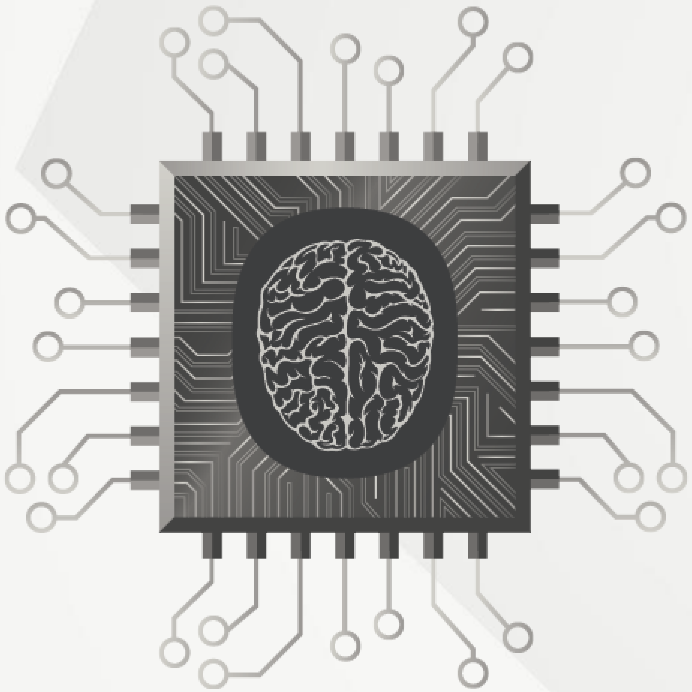
bernafon Your hearing · Our passion

SONIC innovations

Utilise synergies across brands without jeopardising the individual brand value and brand recognition

Platform elements	**Integrated circuits**	**Algorithms/ features**	**Design**
Platform sharing	Maximum		Minimum

Leading hearing aid technology innovation

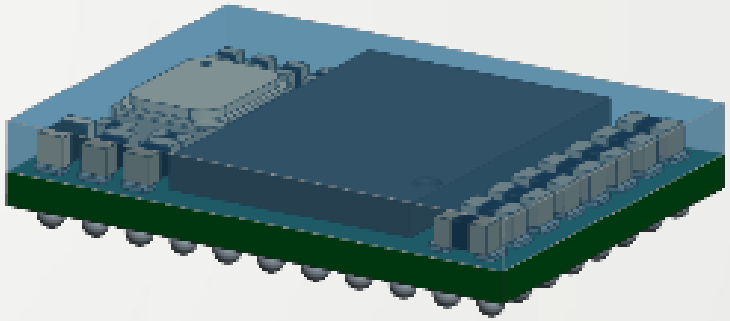


Powered by Velox™

Giant leap in innovation

Extreme processing power – without sacrificing power
Unique capability, enabling superior audiology

	Velox^{TM}	Inium Sense
Technology (nm)	65	130/180
Transistors (M)	64.5	8.7
Die size FE+DSP FE+DSP+RF (mm2)	15.8 23.5	23.7 -
DSPs	7+1	1
Channels	64	16
Max input dynamic (dB SPL)	113	93



Module: 5.8 x 4.2 x 1 mm3 = 24,4 mm3

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TwinLink® technology

Near Field Magnetic Induction

Near Field Magnetic Induction (NFMI) is used to interface binaurally between hearing instruments

- A short range (1-1.5 m) wireless system
- Operates at <15 MHz (Oticon 3.84 MHz) and only needs <10% of the transmission power of RF (e.g. 2.4 GHz) systems
- Is immune to radio frequency interference and is not degraded by the human body blocking the field

William Demant

TwinLink® technology

Radio frequency (2.4 GHz)

2.4 GHz Bluetooth Smart® RF is suited for interfacing with consumer devices

- Long-distance capability
- Acceptable power consumption for media consumption and phone calls
- Standardisation eliminating the need for intermediate devices
- Higher current consumption (>10x compared to NFMI)
- Complex hearing instrument antenna design

Market leading 2.4 GHz performance

Proprietary developed chip delivering superior performance

- Oticon's 2.4 GHz IC radio is among the best in class across all industries with respect to current consumption
- Receiver performance has significant advantage
- Opn™ uses 35% less power than the market benchmark when streaming from an iPhone
- Oticon Opn™ is prepared to meet future possible interference from expanding LTE traffic in neighbouring frequency bands (i.e. 2.3 GHz/2.5 GHz)

	Oticon	**Nordic (current)**	**Nordic (new)**
Chip size [mm2]	7.9	13.2	9.6
Supply voltage [V]	1.0 to 1.7	1.8 to 3.6	1.7 to 3.3
2.4 GHz 1Mbps sensitivity [dBm]	-96	-93	-96
Rx peak current [mA] (1 Mbps 2.4 GHz)	5.5 (1.2V)	13 (1.8V)	10.9 (1.7V)
Tx peak current [mA] (1 Mbps 2.4 GHz)	8.5 (1.2V)	10.5 (1.8V)	9.6 (1.7V)

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Benefits of in-house design

Electronics designed for running directly on 1V battery

- Optimised current consumption
- No efficiency loss from battery to integrated circuits (IC)

Size and integration advantages

- Smaller IC dies with aspect ratios optimised for the hearing instrument application
- Full access to all layers in the IC and SW enabling higher integration
- Optimised modularity for size and quality
- Reduced IC die cost including NRE
- Efficient and high-quality production through design for manufacturing

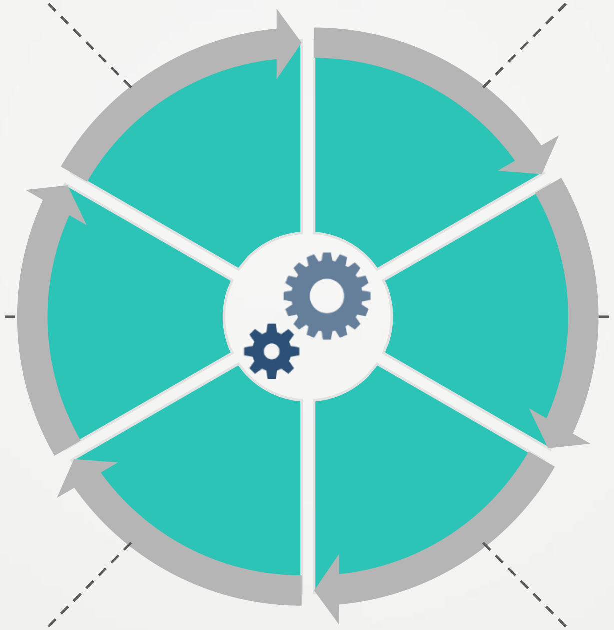
Driving technological leadership

Innovation and performance as key to market leadership

Custom interface (how to fit to people)

Ultra-low power chip design, incl. advanced wireless systems

Wireless system integration and connectivity



Advanced digital signal processing

Micromechanics and high performance electro-acoustics incl. antenna design

Strong audiological insight and fitting systems development

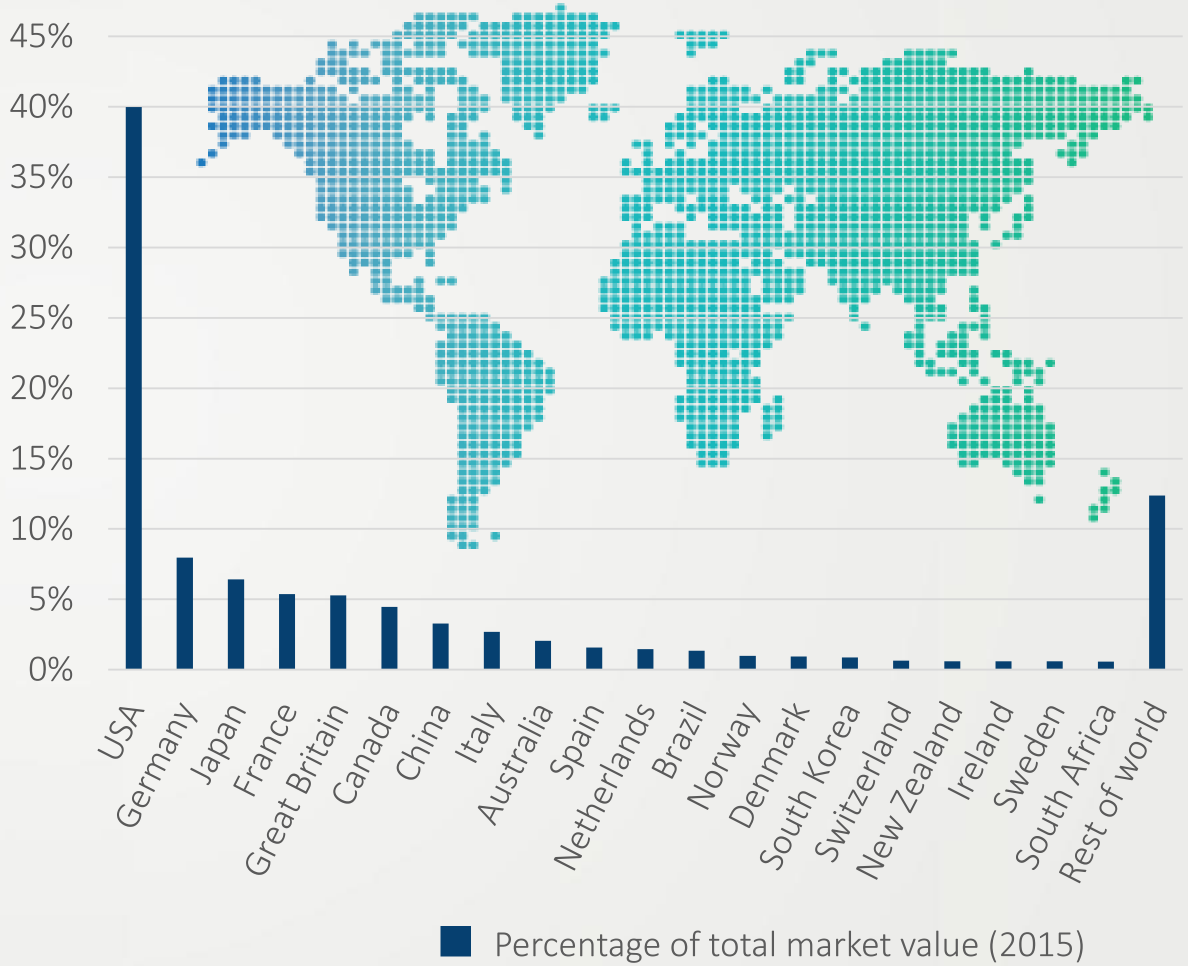
Keeping leadership to create motivation and engagement

William Demant

Expand our global reach into new markets

Building presence in new markets

- Build relationship with new distributors
- Open sales company where necessary, e.g.
  - Myanmar – 2015
  - Turkey – 2014
- Leverage on our other business activities
  - Diagnostic Instruments has access to many potential new customers
  - Hearing Implants has access to the medical channels



William Demant's global wholesale footprint

= Headquarters = Wholesale company = Production

Continue to be the desired partner for our customers

Well positioned to continue growth in hearing aids

Technology leadership

William Demant

oticon bernafon SONIC Interacoustics gsi MAICO amplivox MedRx Micromedical oticon MEDICAL Phonic Ear frontrow SENNHEISER

Multi-brand strategy

Global presence

DGS

Strong cost base

William Demant

William Demant Retail business

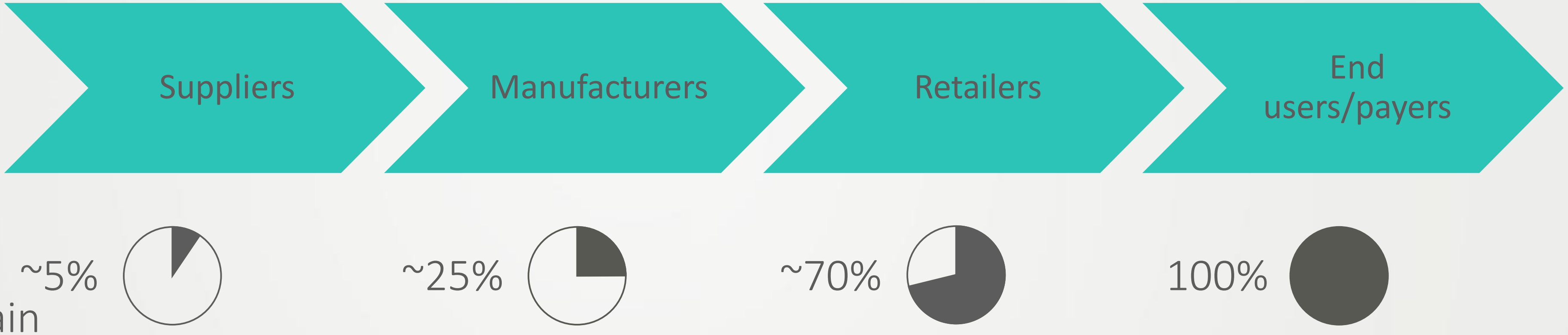
Niels Wagner

President of Retail in William Demant Holding A/S

- Born in 1971
- Cand. Oecon, Aarhus University
- President, Retail in William Demant since 2007
- Vice President, Retail, GN ReSound 2006-2007
- Sales Director, Synoptik, 2003-2006
- General Manager, Oticon Australia, 2000-2003

William Demant

Hearing aid market value chain

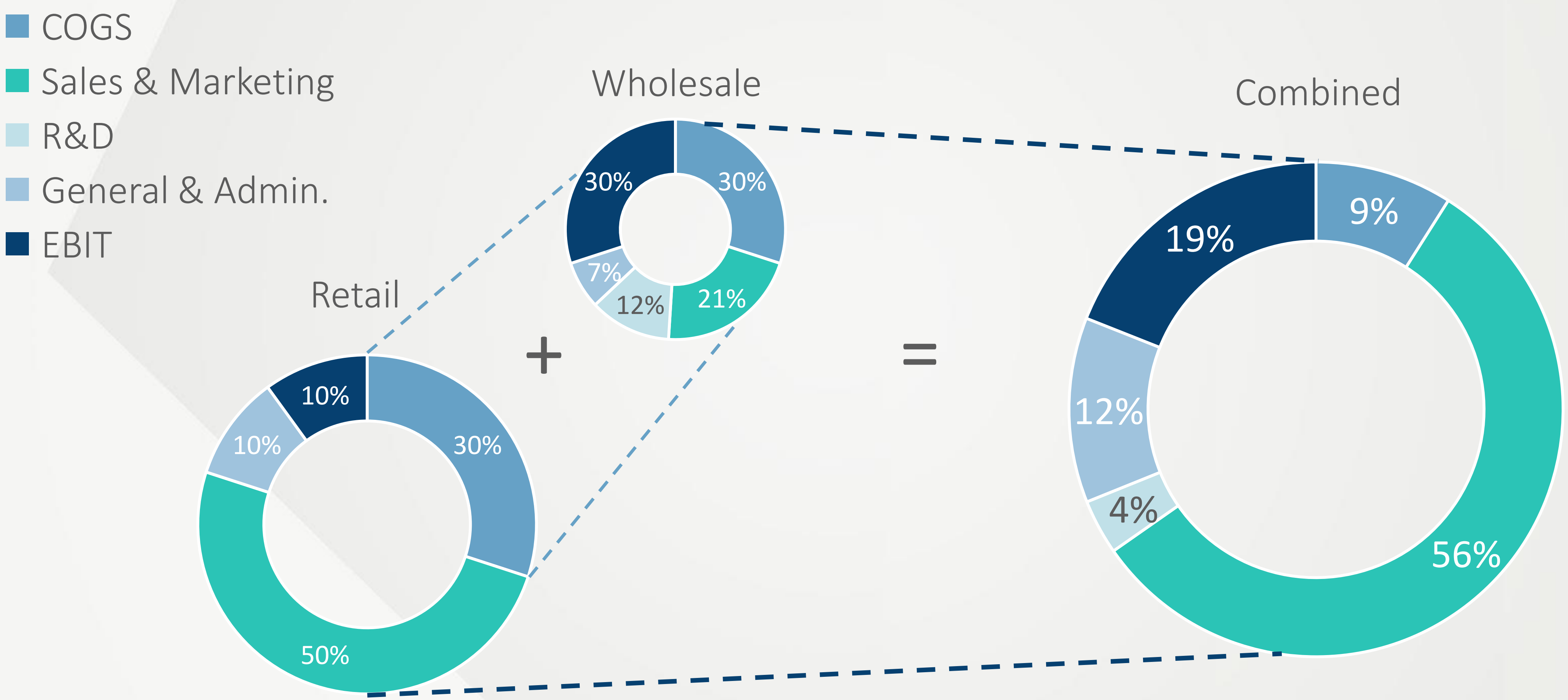


Percentage of value chain

~30% wholesale profit margin

~10% retail profit margin

Consolidating retail with wholesale accounts



Note: The illustration above is a mechanical example, showing percentage of revenue without possible synergies etc.

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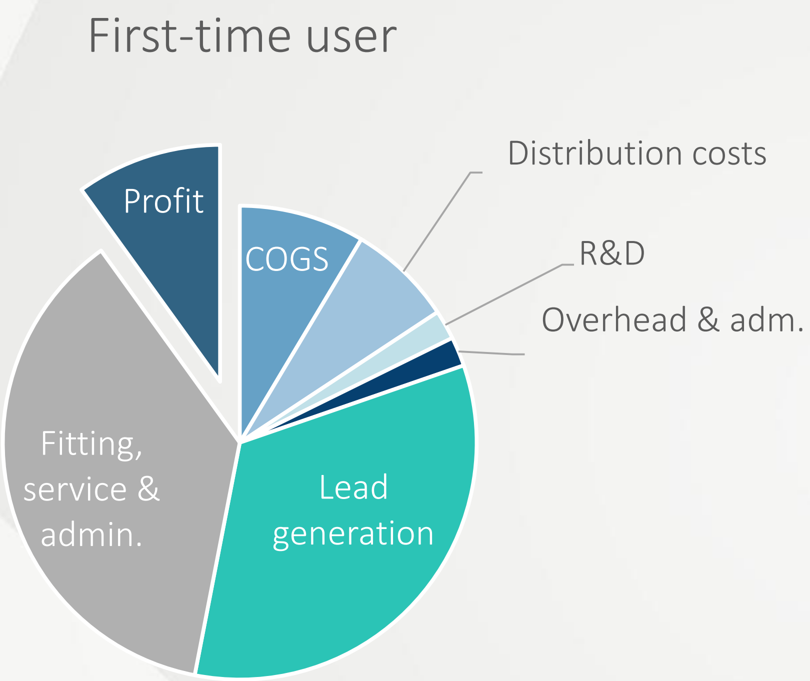
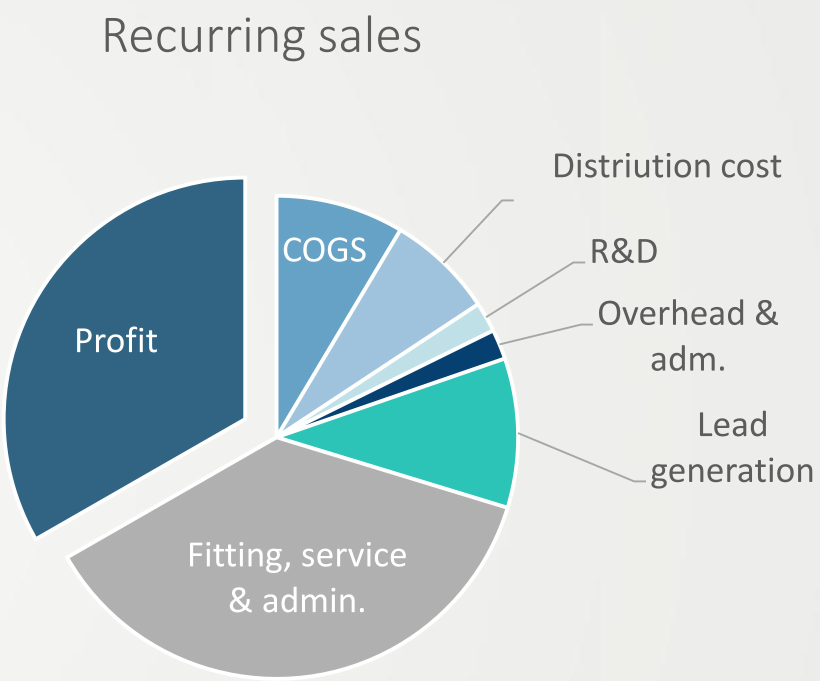
Recurring sales are key to profitability





- Material up-front investments in lead generation
  - Lead generation remains expensive
  - Relatively low conversion to sales

- Recurring sales offer attractive earnings
  - Lower lead generation cost
  - High earnings potential from users getting older

Note: Above illustration, is an example of manufacturer owned retail and does not include cost synergies

Retail is a defensive, but important, value driver

In addition to securing distribution – retail contributes by:

Getting closer to the end-user

- Closer end-user interaction, ensuring right product development and innovation as well as the ability to influence end-users

New technologies across retail and wholesale

- Technology for optimising fitting flow and efficiency developed between wholesale and retail

Developing consumer competences in retail

- Better understanding of the consumer journey and the dispensers' business challenges

William Demant

William Demant’s retail strategy

Defensive retail strategy

Deep market insight and access through the wholesale business

Country-by-country strategy

Shared back office across William Demant

Sales and marketing excellence

Organic and selective acquired growth

William Demant

Retail benefits our wholesale business

Insight into understanding our wholesale customers' business challenges

Building competences in lead generation	Carefully planned retail expansion
Lifetime support including exit	Extended transition from wholesale to retail

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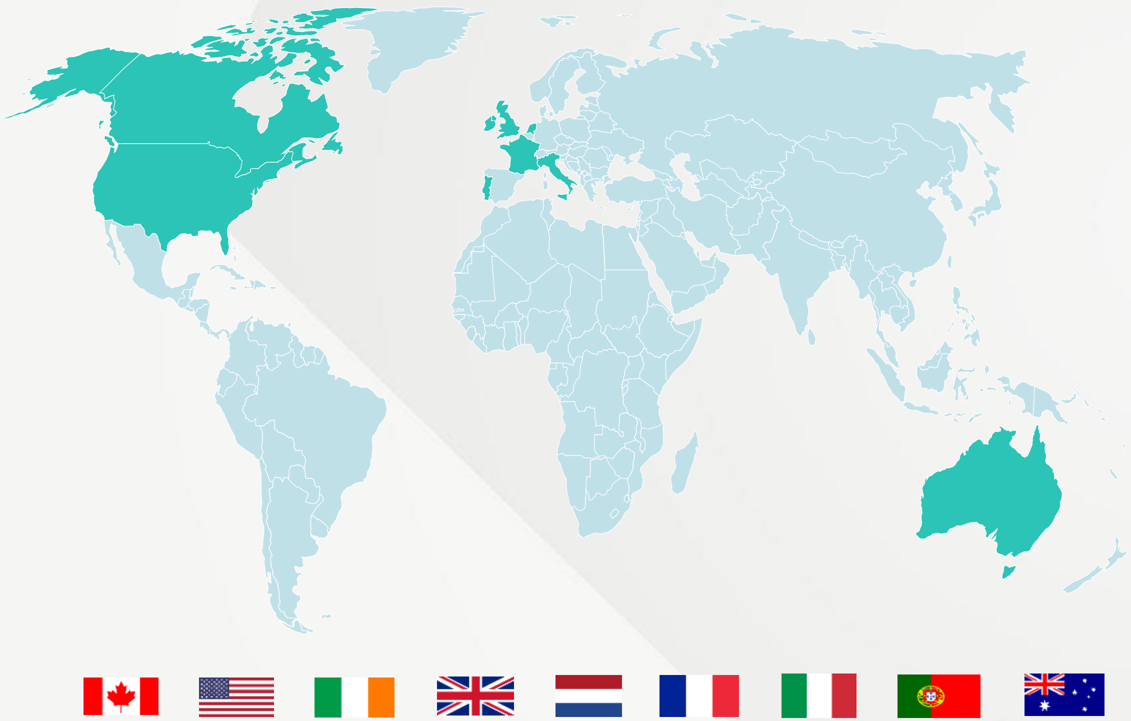
Survey: Choice of clinic and brand positioning

Consumer research with 2,452 respondents in 9 markets*



Top 5 drivers of choice for visiting a clinic

1. It was an easy clinic/place to get to (accessible)
2. It offered a free hearing test (tactical)
3. It had a good reputation in general (brand image)
4. It was easy to get an appointment (accessible)
5. It was known for expertise (brand image)

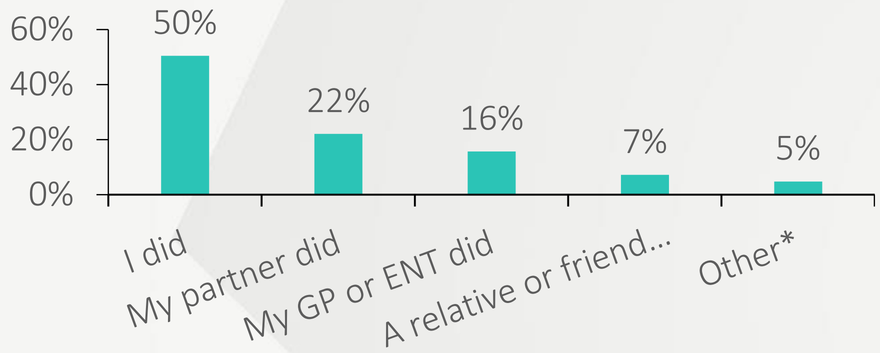
Brand position most likely to motivate customers to visit a clinic

1. Experts in audiology (23%)
2. Cutting-edge technology (19%)
3. Value for money (18%)
4. Best service (10%)
5. Customer centric (9%)

***Research description**
The focus of the survey was to identify drivers for choice of hearing care clinic and optimal brand positioning for a hearing care retailer. The consumer survey was a web-based survey with stimuli material. Respondents were recruited through local web panels. All respondents have at some point visited a hearing care retailer and are therefore able to relate to this situation. The survey cover both non-users and users of hearing aids and relatives.

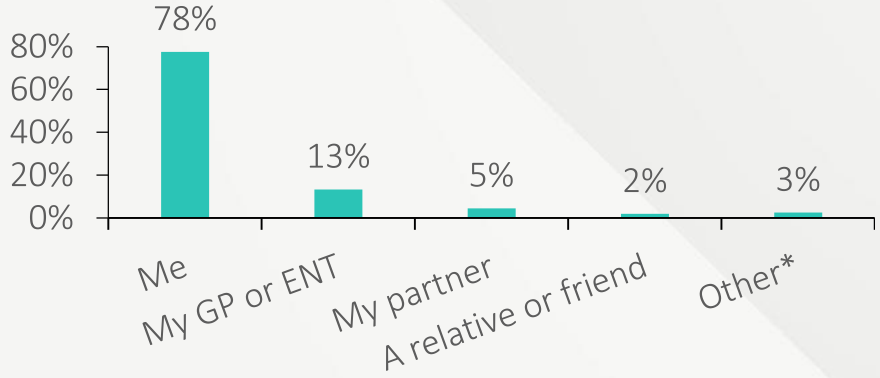
End-user insights

Who motivated you the most to visit a clinic?



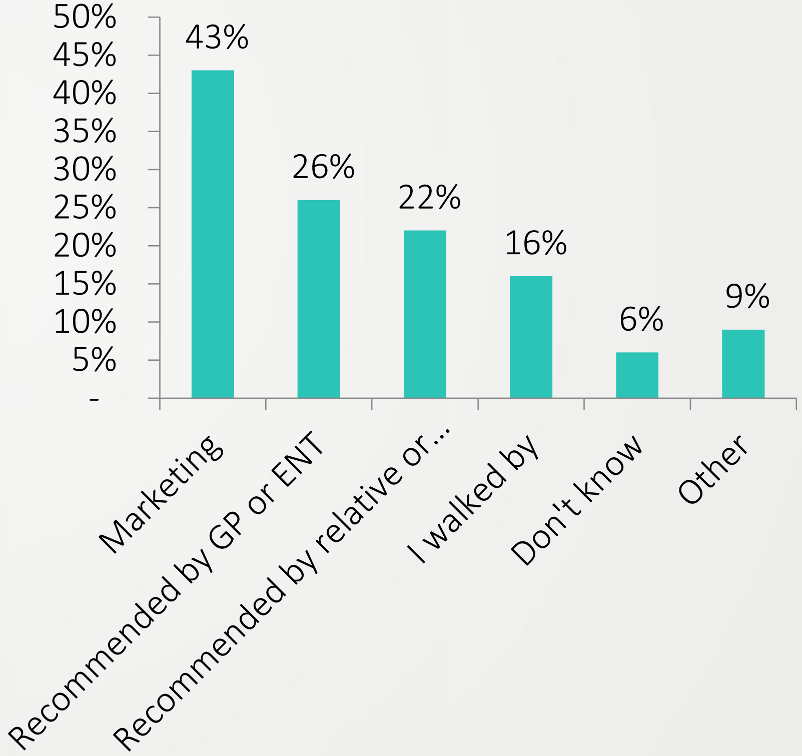
Users make their own choice

Who decided which specific clinic to visit?



Users decide which specific clinic to visit

What made you aware of the clinic?



Marketing is the key driver of awareness

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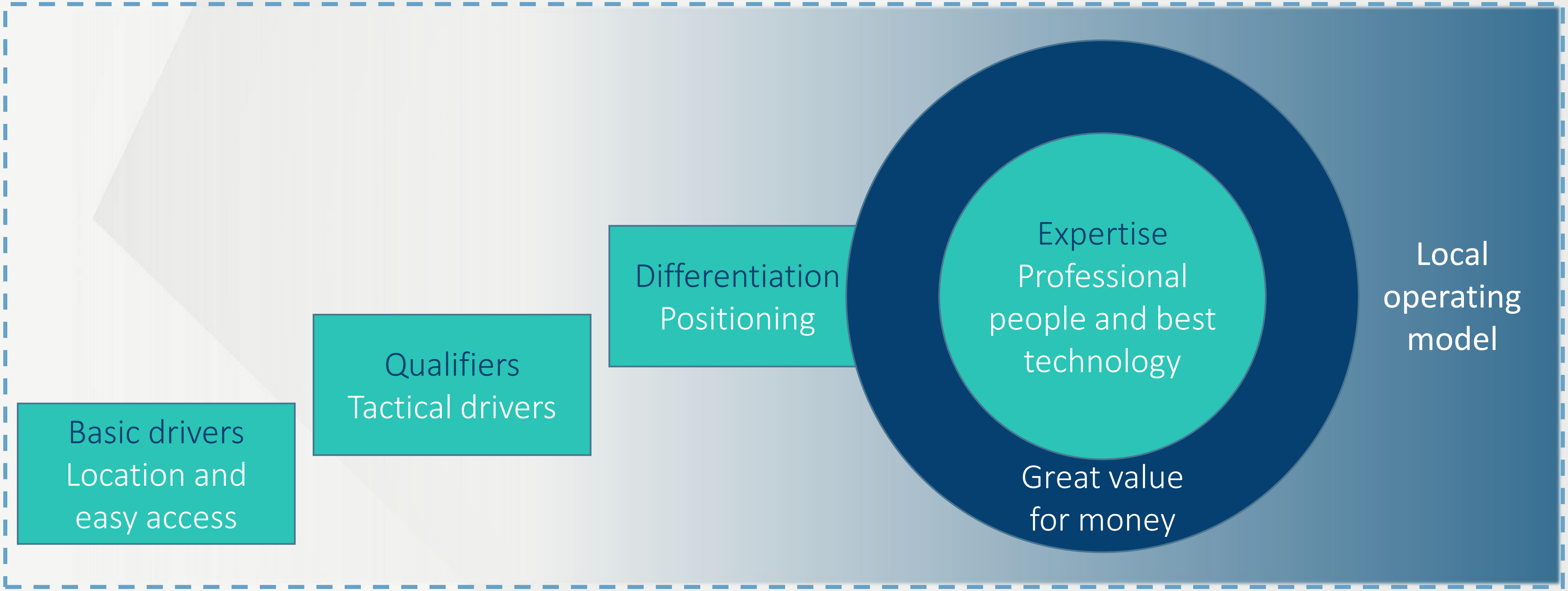
Shared vision and positioning, but local execution



Sales excellence

Recruit, retain and develop our people

Focus on creating opportunities

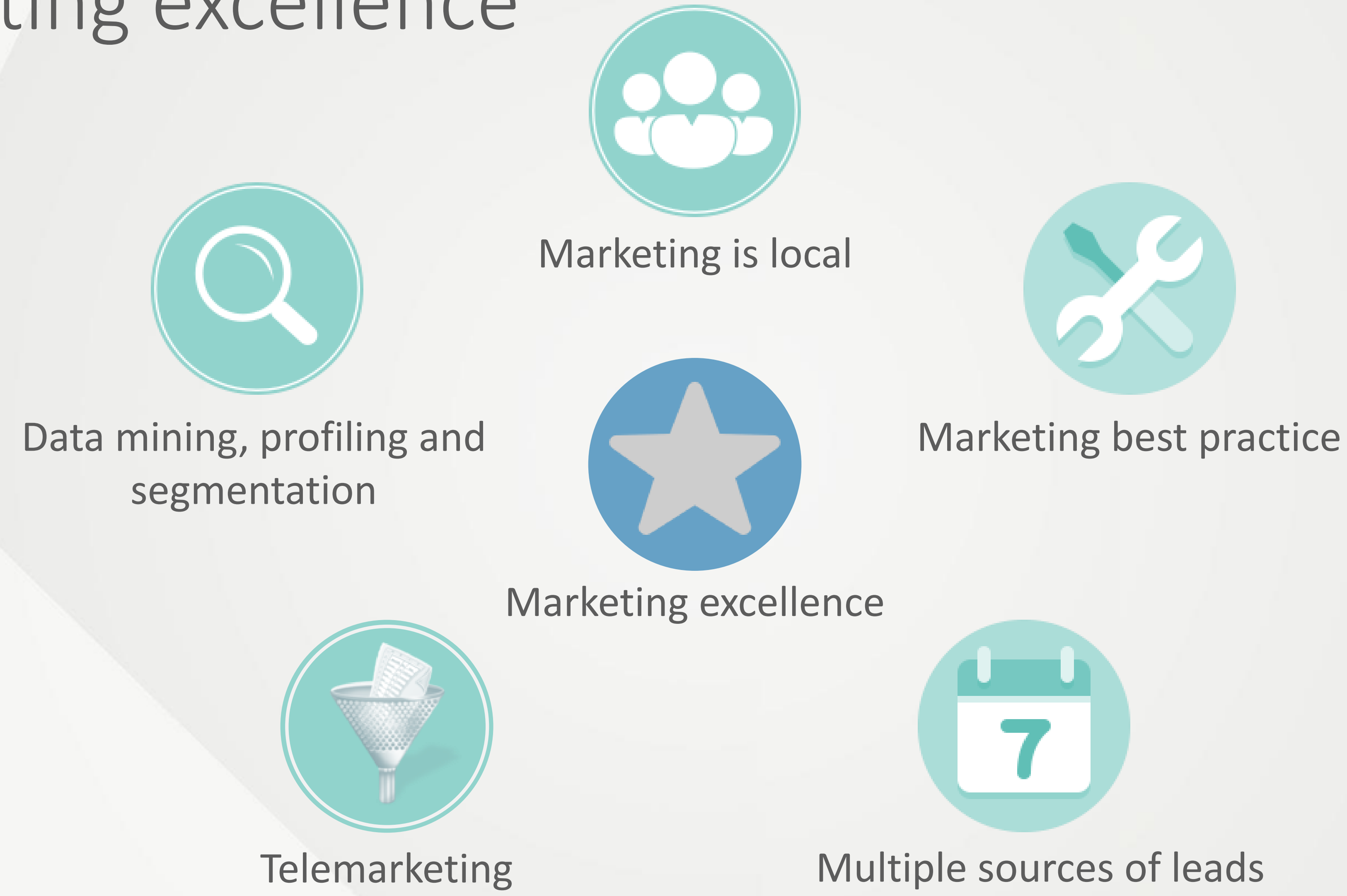
Living our brand position – operating model

Sales excellence

Optimising the sales funnel

Schedule management – retail is detail

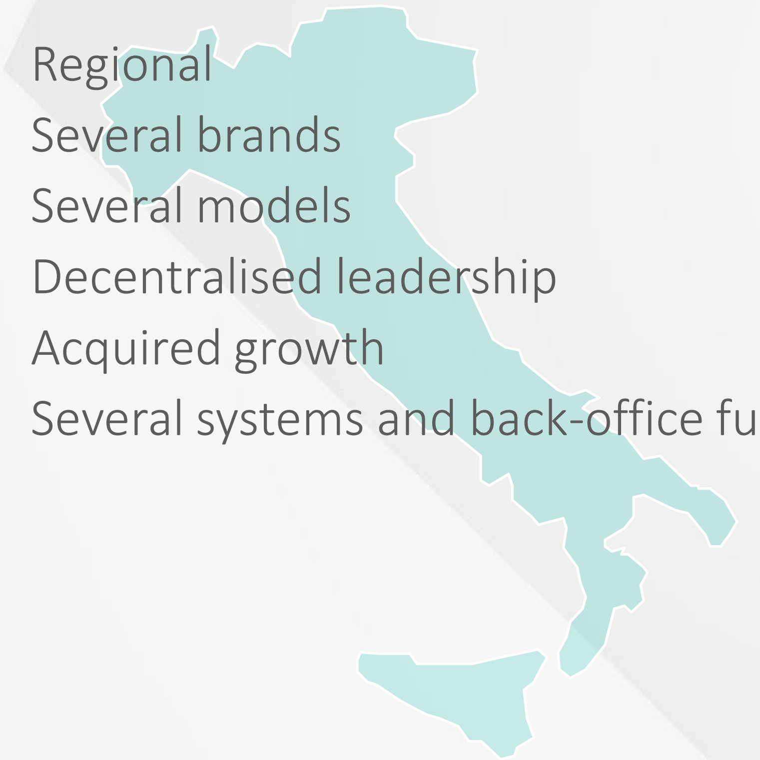
Marketing excellence



Mix of mature and new retail markets

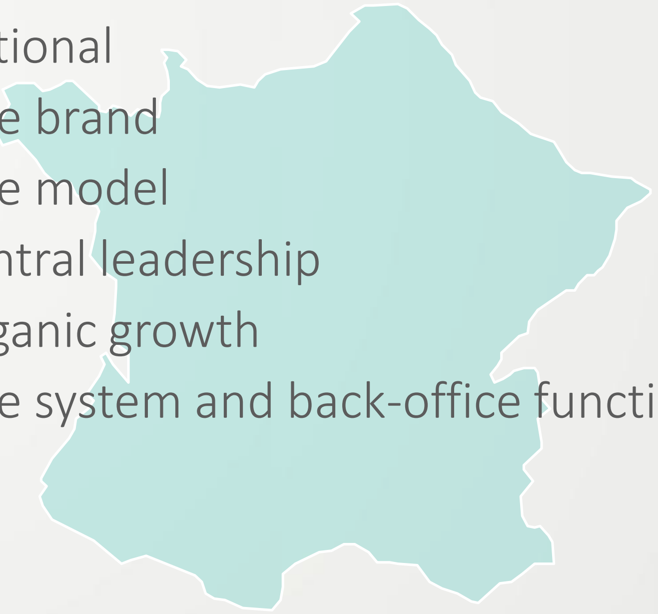
New development (Italy)

- Regional
- Several brands
- Several models
- Decentralised leadership
- Acquired growth
- Several systems and back-office functions



Mature (France)

- National
- One brand
- One model
- Central leadership
- Organic growth
- One system and back-office function



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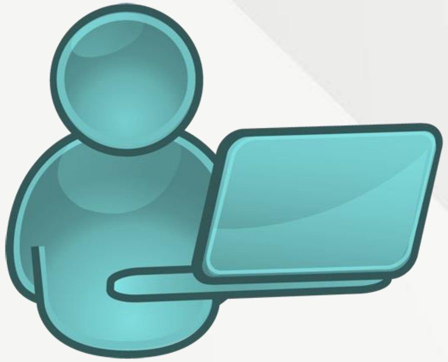
Digital marketing strategy

Develop innovative and effective models for lead generation

Lead generation

National coverage

End-user



Creating awareness
e.g. tripadvisor.com

Objective reseller
e.g. hotels.com

Brand website
e.g. “Hotel name”.com

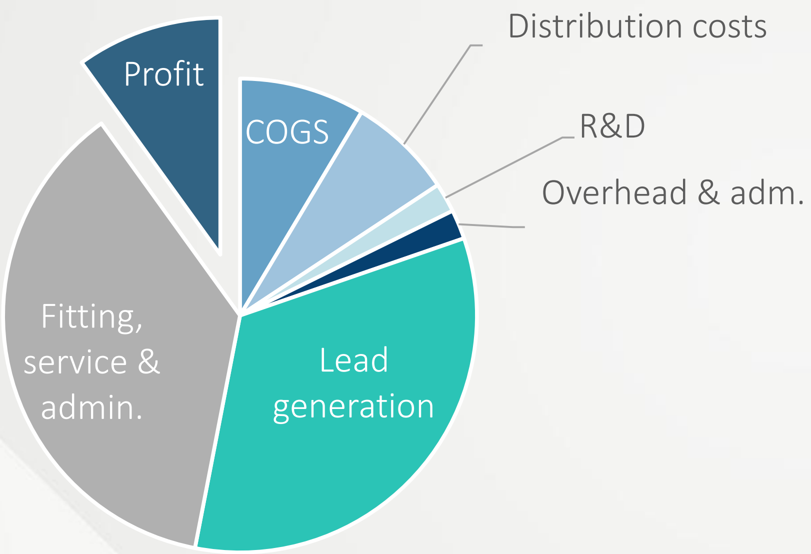
Call centre

Wholesale customers

Network members

Own retail

Lead generation requires integration with retailers



- Own retail
- Online revenue model
- Fee model

Multi-line retailers vs. specialty retailers

Overall aim for hearing retailer:

Advance consumer from denial to decision

Many different models, but two models are currently getting a lot of attention

Multi-line retailers

Specialty retailers

- Service and support business can be challenging
- Lead generation model or location leverage


William Demant
Thank you

William Demant

Diagnostic Instruments

Arne Boye Nielsen

President, Diagnostic Instruments

William Demant

Arne Boye Nielsen

President, Diagnostic Instruments and Personal Communication, William Demant Holding A/S

- Born in 1968
- M.Sc. in Business Administration, Copenhagen Business School
- President, Diagnostic Instruments and Personal Communication in William Demant since 1996
- Employed with the William Demant since 1990

Board positions:

- Össur
- Directorships in a number of Group-owned subsidiaries

William Demant

Agenda

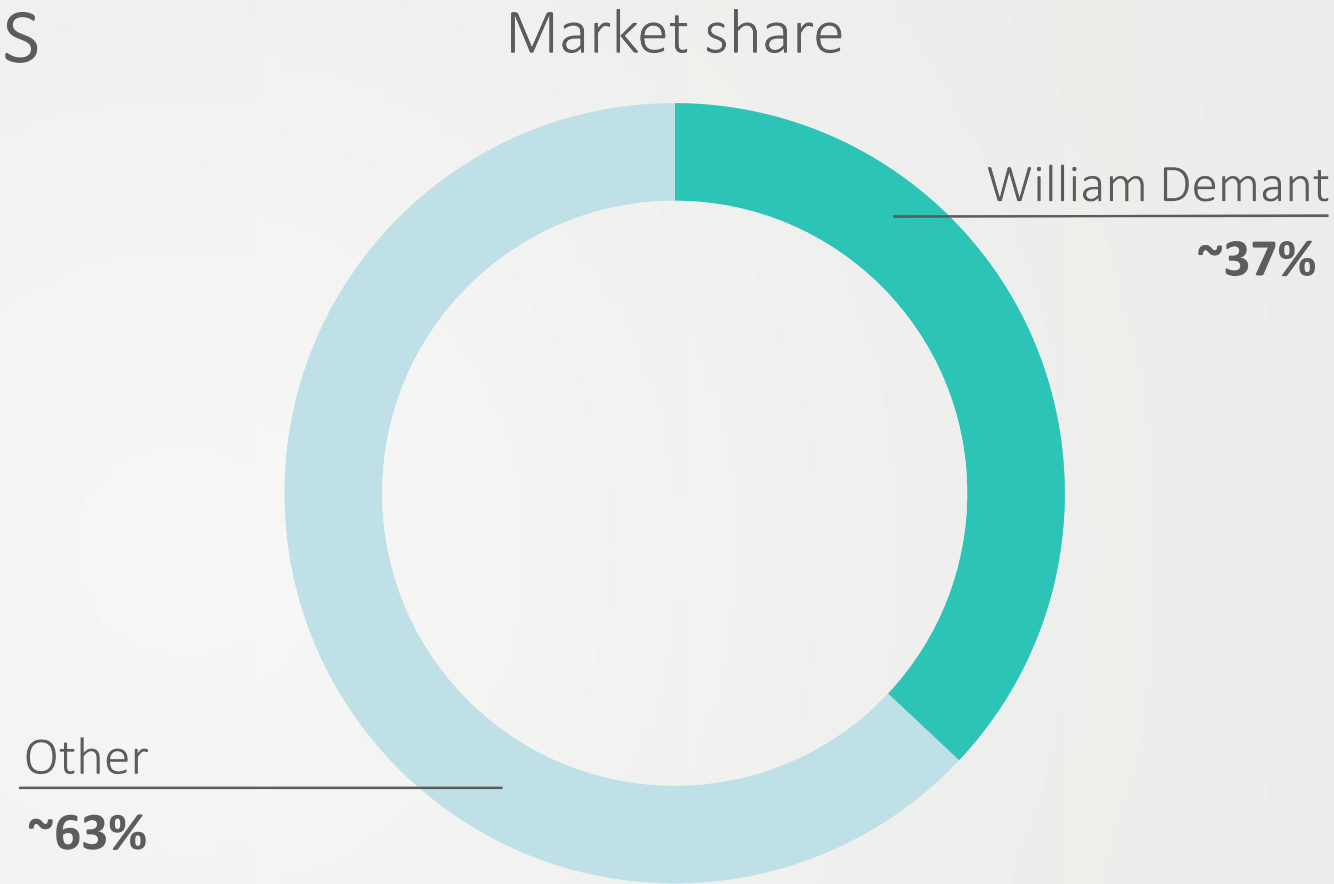
- Diagnostic Instruments in William Demant
- The value chain and distribution
- Areas for future growth
- Synergies in William Demant
- Q&A

William Demant

Diagnostic Instruments
William Demant

Diagnostic Instruments

- DKK 1,072 billion in sales in 2015
  - +1% from 2014 in local currencies
- ~1,000 employees
- Global presence
- Market leader – ~37% market share
- Multi-brand company



Interacoustics

Micromedical Technologies

MAICO

gsi Grason-Stadler

amplivox

MedRx

Business model

Diagnostic Instruments

Interacoustics	Micromedical Technologies	gsi Grason-Stadler	MAICO	MedRx	amplivox
Sales	Sales	Sales	Sales	Sales	Sales
R&D	R&D	R&D	R&D	R&D	R&D
Marketing	Marketing	Marketing	Marketing	Marketing	Marketing
PM		PM	PM		

R&D platform development

Production/logistics

Quality

SID distribution in the US

Product range overview

	gsi Grason-Stadler	Interacoustics	MAICO	MedRx	Micromedical Technologies	amplivox
Audiometers	✓	✓	✓	✓		✓
Impedance	✓	✓	✓			✓
Fitting		✓		✓		
ABR*	✓	✓	✓			
OAE*	✓	✓	✓			
VNG*		✓			✓	

*Note: ABR: Auditory Brainstem Response; OAE: Otoacoustic Emissions and VNG: Videonystagmography

Customer segments

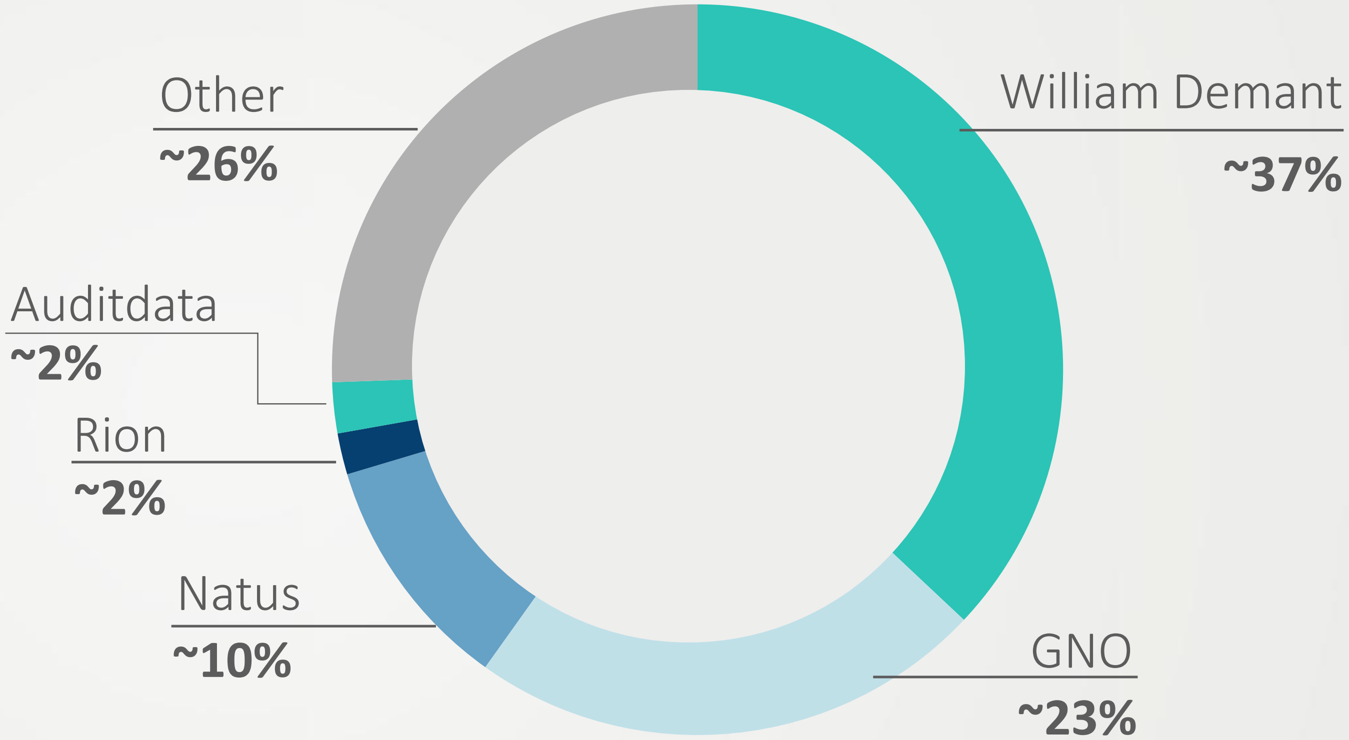
- New-born screening
- ENT doctors
- University clinics
- Schools
- Paediatricians
- Army
- Audiologists
- Hearing aid dispensers
- General practitioners
- Balance centres
- Neurologists
- Chiropractors
- Emergency rooms
- Physical therapists

Total market 2015

Growth of 1-2%
in 2015

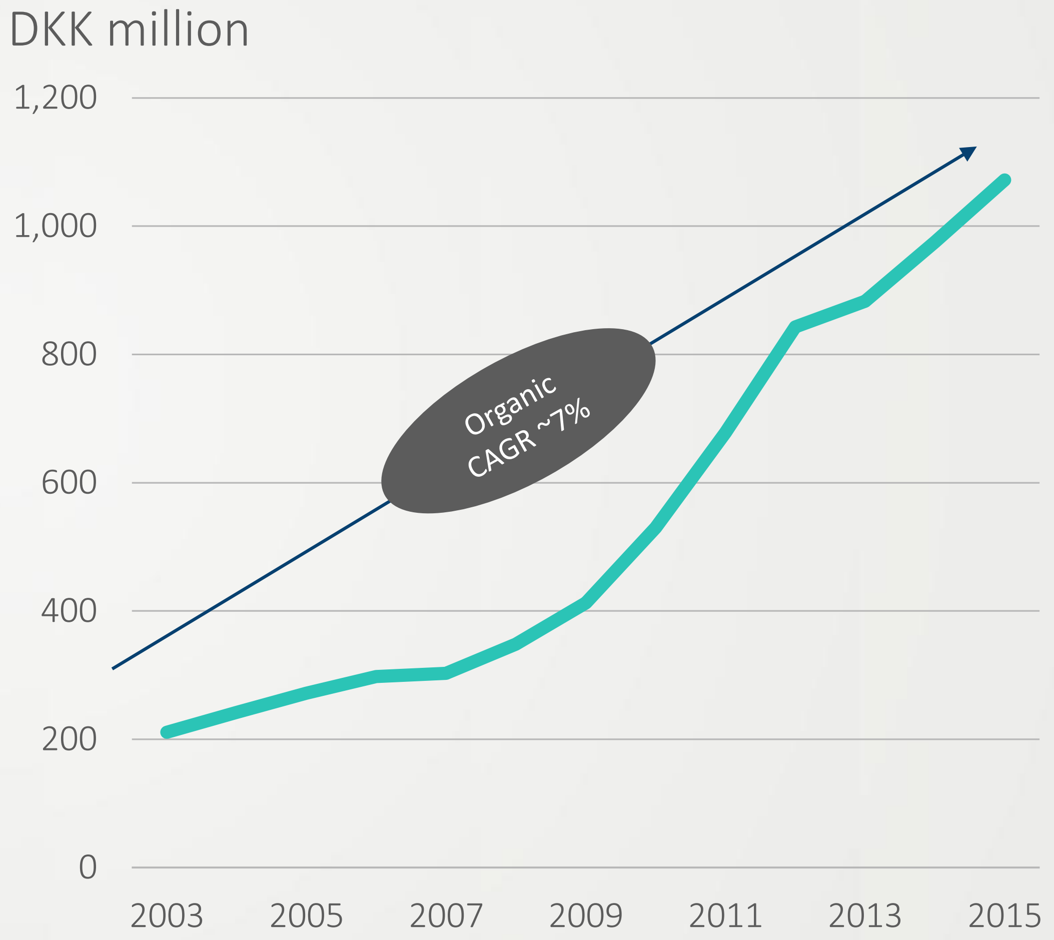
Total market
USD ~265 million
in wholesale value

Instruments only



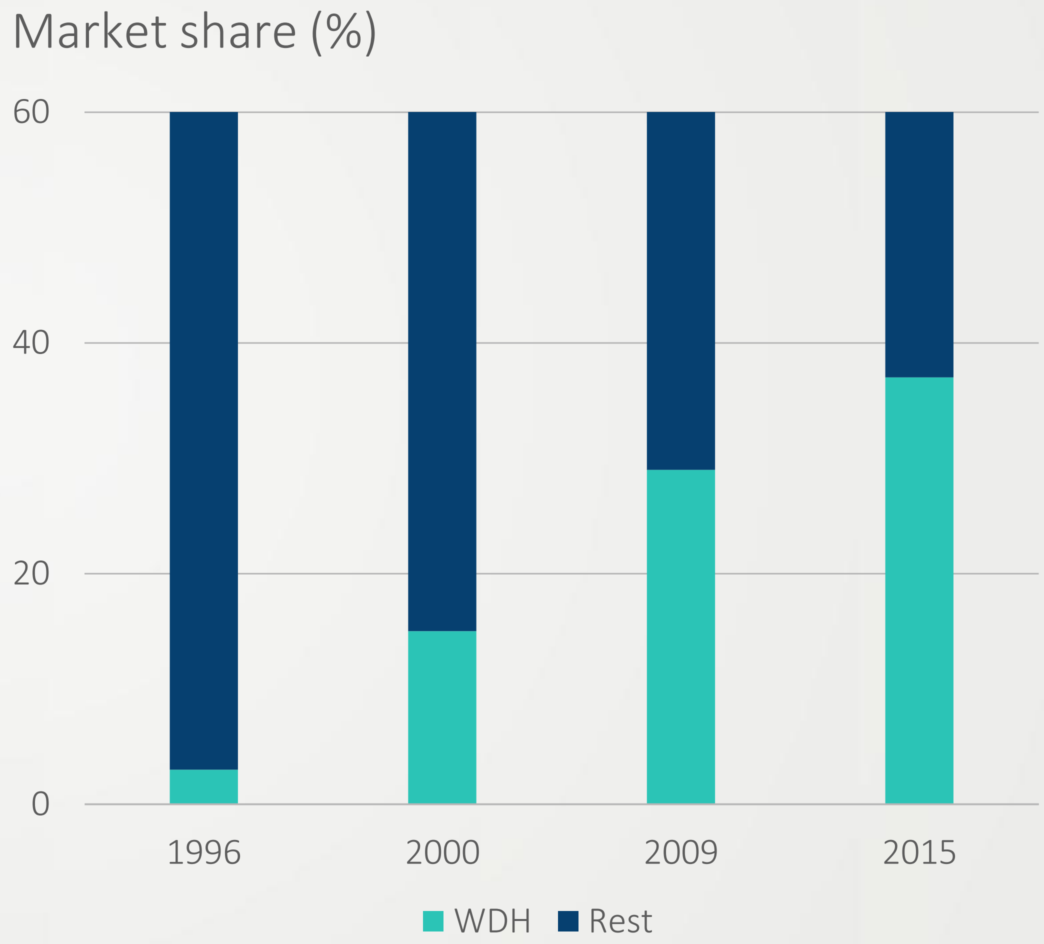
Sales per year

- Acquisitions on top of strong organic growth of 7% per year
- CAGR of 18% from 2010-2015



William Demant's market share development

Since we entered the market in 1996, we have continued to grow our market share to ~40% measured in value



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Production in Poland

- Production site with 200 employees
- Distribution and production centre for Diagnostic Instruments worldwide

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Interacoustics HQ and Diagnostics innovation centre

Grason-Stadler – new product family

The value chain and distribution

William Demant

Diagnostic instruments value chain

	Suppliers	Manu-facturers	Resellers and service providers	End-users/ payers
Percentage of value chain	~15%	~55%	~30%	100%

Suppliers
- Components
- Sub-assembly

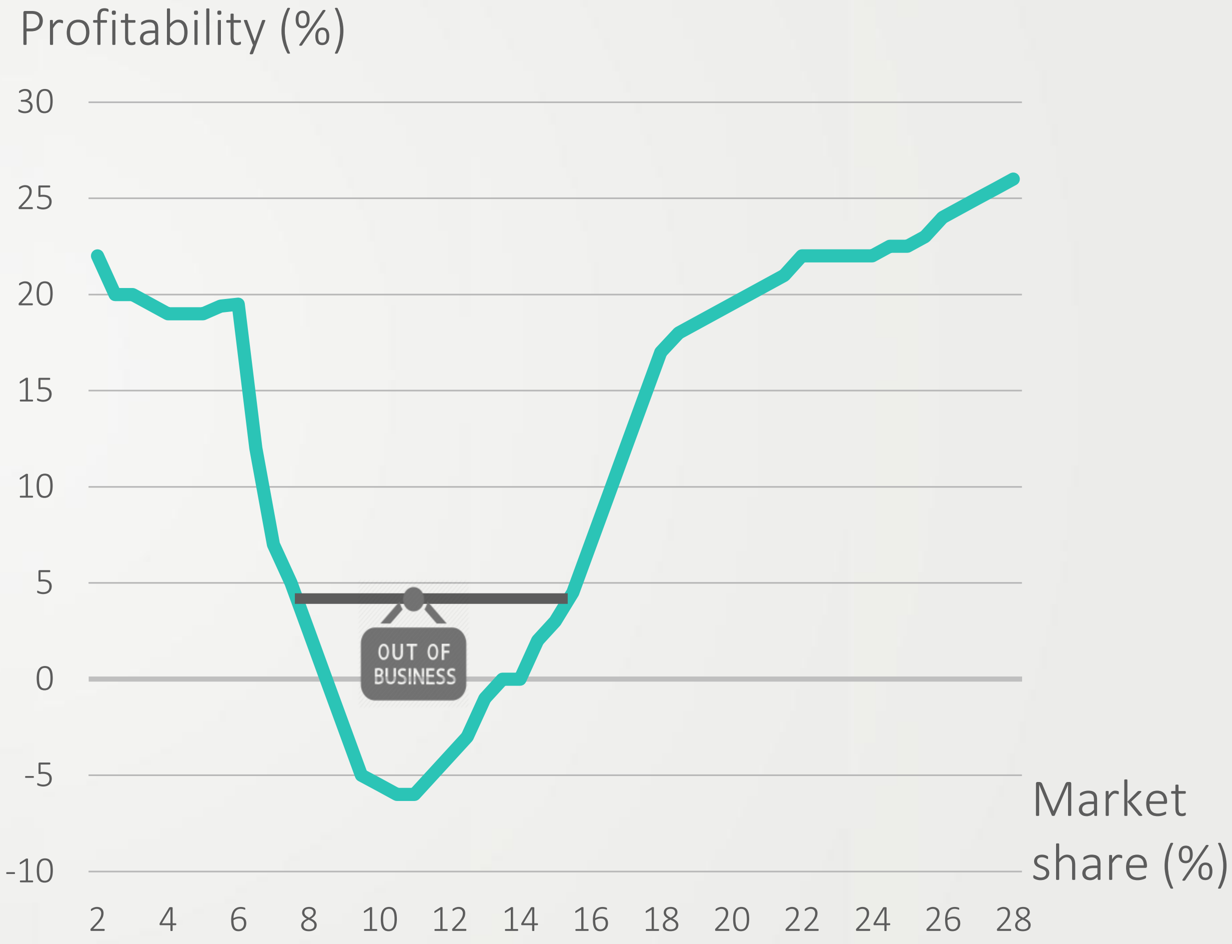
Manufacturers
- Three large players
- Critical mass is crucial
- Wide range of product segments to address

Resellers and service providers
- BtB
- SIDs
- Consolidation in main market

End-users/payers
- Hearing aid dispensers
- Hearing clinics etc.
- Government services
- ENTs and general practitioners

Market share and profitability

Size matters – still opportunities for acquisitions



Source: Michael Porter

Interacoustics

MedRx

amplivox

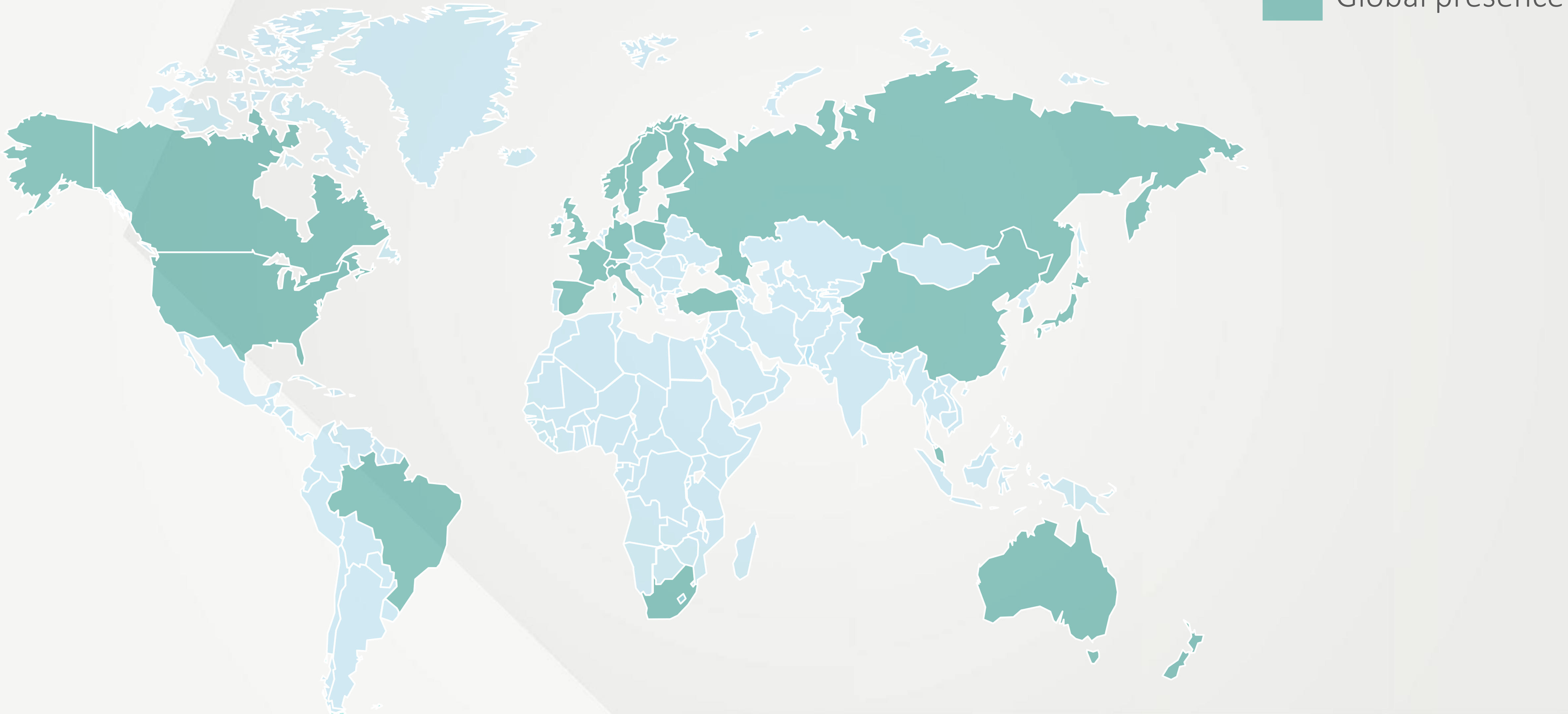
MAICO

Micromedical TECHNOLOGIES

gsi Grason-Stadler

William Demant

"Sales companies"



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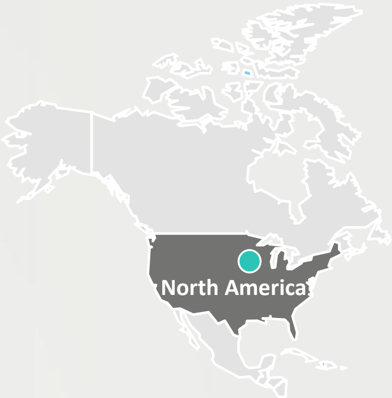
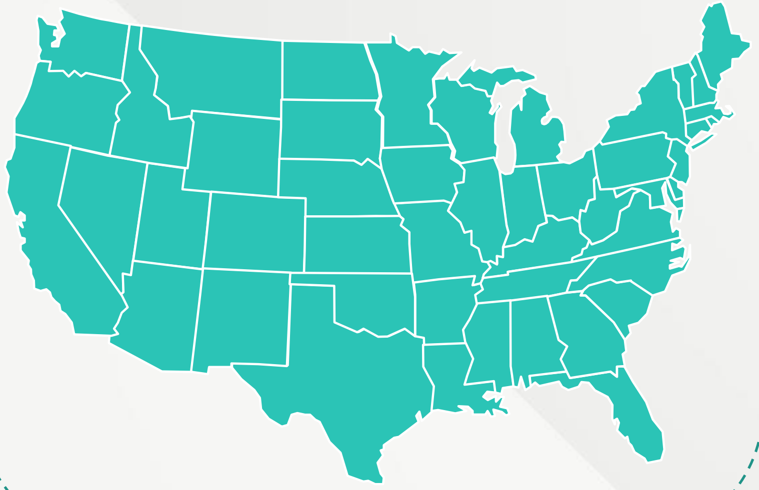
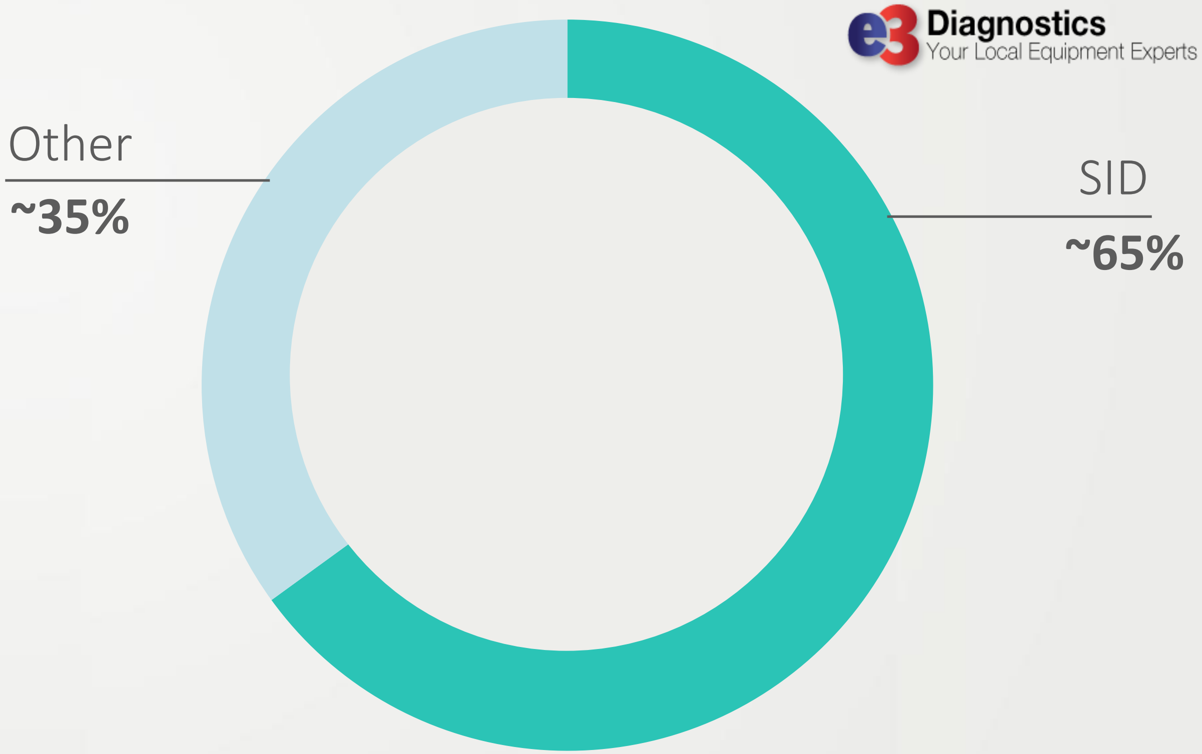
US market for hearing and balance equipment



Total market
USD ~160 million
(end-user value)



Sales split



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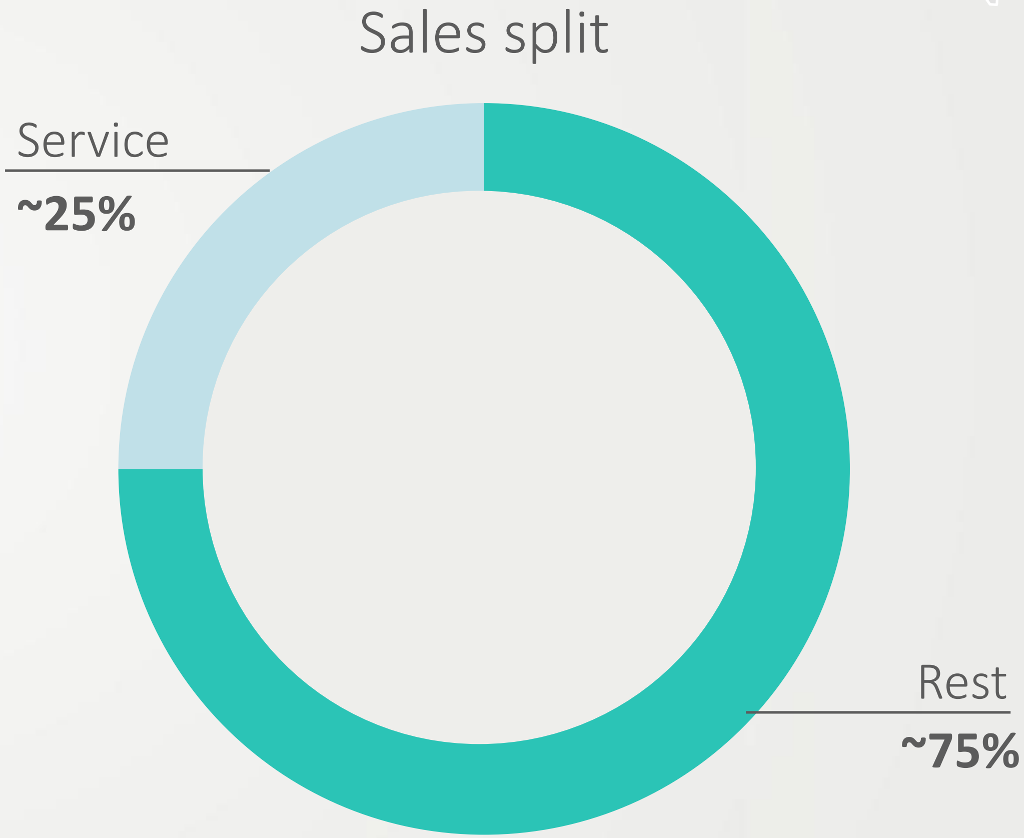
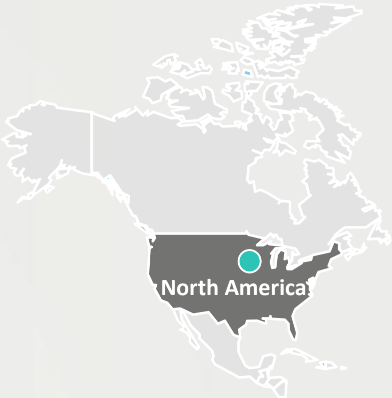
What is a SID?

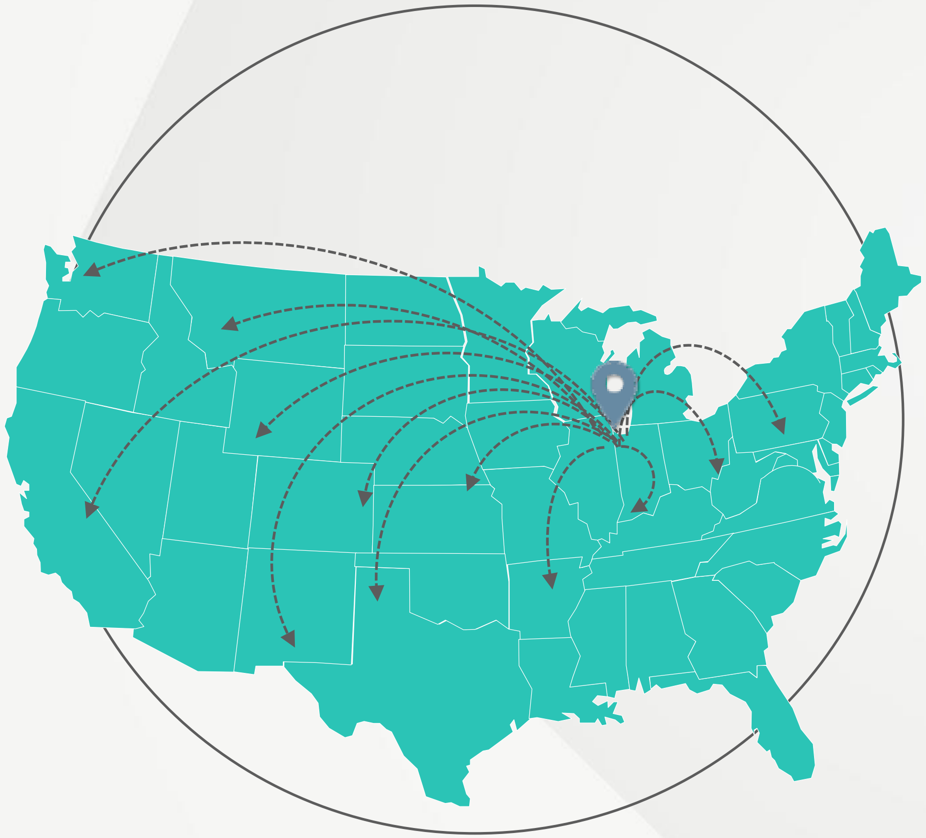
- Special Instrument Distributor – a distribution channel focusing on hearing and balance
- Focus on selling, servicing and supporting equipment in hearing and balance
- Optimal size of territory is 6-8 million citizens per sales person
- Size, service and calibration business are key to profitability



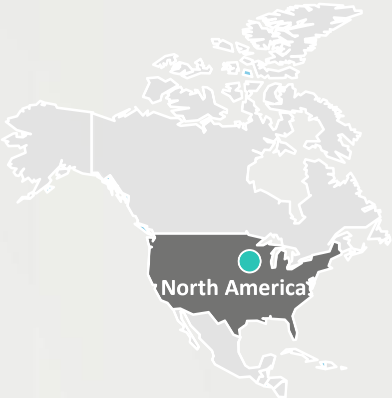
William Demant

William Demant – strong distribution in US





- Acquired and merged 20+ independent SIDs from 2011
- 200+ employees including 45 sales people and 100 service technicians
- All offices on the same business system – designed to run an efficient SID business



Leading SIDs joining forces

Northeastern Technologies Group

Gordon N. Stowe and Associates

Audiometrics

MSR West

e3 Northeastern Technologies Group
Your Local Equipment Experts

e3 Gordon Stowe
Your Local Equipment Experts

e3 Audiometrics
Your Local Equipment Experts

e3 Diagnostics
Your Local Equipment Experts

Future growth

William Demant

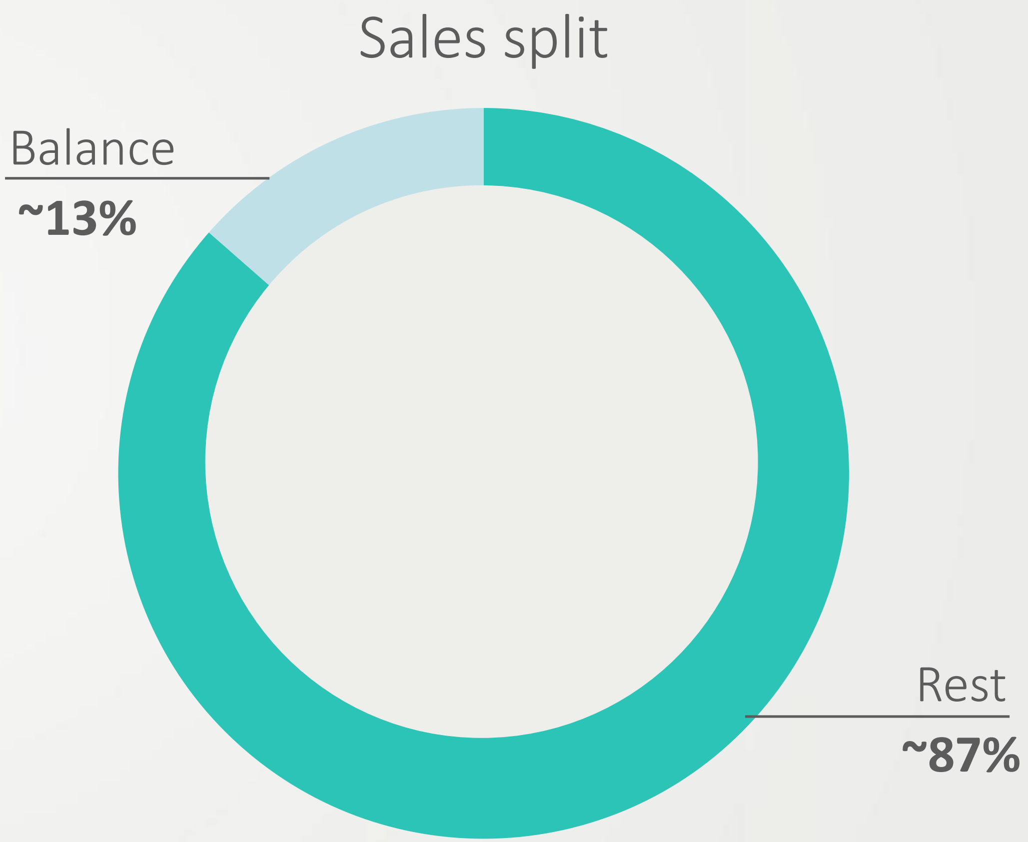
Potential growth areas

- New-born hearing screening
- Consumables
- Service and calibration business
- Hearing aid fitting systems
- China/Asia
- Balance

Great opportunities for future growth

Balance market

- Instrumentation for diagnosing and treating dizziness and balance disorders
- Growing awareness and market opportunities
- Link to hearing instrument market



Interacoustics Academy

Interacoustics

- Interacoustics Academy is the academic sparring partner for end-users of Interacoustics' specialised technologies and procedures
- Actual clinical end-user value hugely depends on their skill and insight – Interacoustics Academy makes this increased value possible

Examples of projects from 2015

Face-to-face academic or technological training; more than 3,000 end-users trained

15 webinars and more than 1,500 monthly off-line downloads

E-learning courses with more than 700 students per year

IRU – Interacoustics Research Unit

IRU
Interacoustics Research Unit

- The "R" in R&D is an avenue to increased growth through new unique applied technologies
- Three full-time researchers benefit from the inspiring location at the Technical University of Denmark – one of the world's leading hearing research environments
- Extensive project cooperation with local and external researchers

EriksholmResearchCentre PART OF OTICON
REGION H Bispebjerg Hospital
AARHUS UNIVERSITY
Universitätsklinikum Würzburg Klinik und Poliklinik für Hals-, Nasen- und Ohrenkrankheiten, plastische und ästhetische Operationen
REGION H Rigshospitalet
Imperial College London
MANCHESTER 1824 The University of Manchester
University of Southampton

William Demant

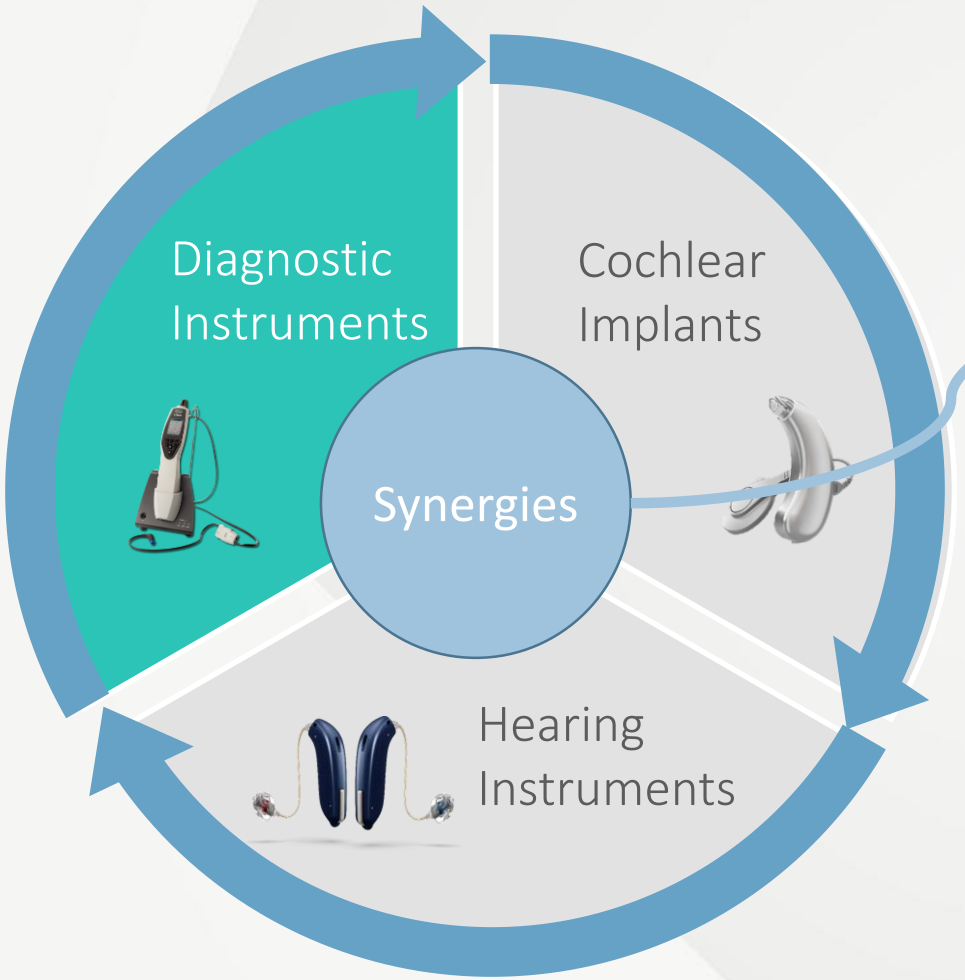
IRU - Interacoustics Research Unit

Current IRU research projects include

- Validation of hearing aid fitting in infants by measuring electrical brain potential
- Improving diagnosis of vestibular nerve tumors
- ”Hidden Hearing Loss” (diagnosing a previously unknown type of noise induced hearing loss)
- Optimising signal analysis in electro-physiological testing

Synergies in William Demant

Synergies with other William Demant activities



- Access to customers
- CRM
- Fitting process
- Emerging markets


William Demant
Thank you

Sennheiser Communications A/S

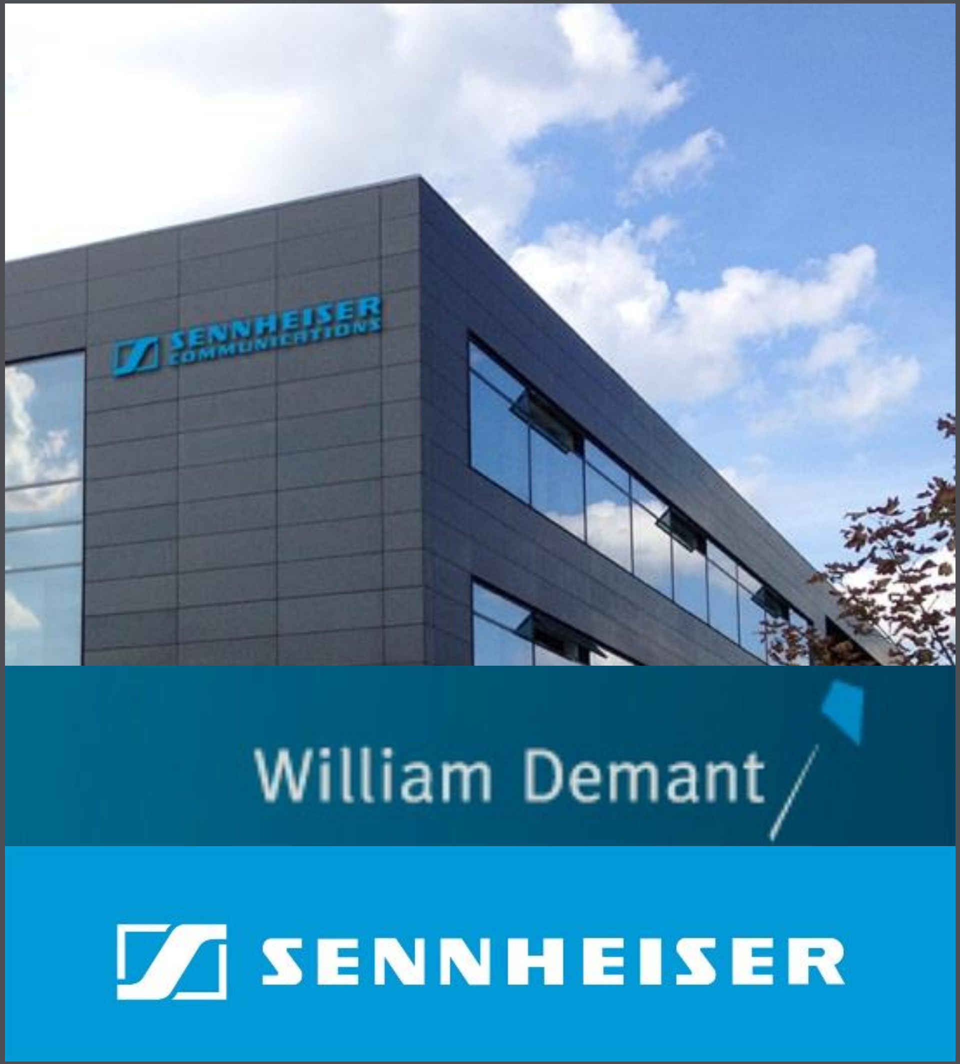
Company presentation
Jeppe Dalberg-Larsen, President

Jeppe Dalberg-Larsen

- Born 1969
- M.Sc. in Economics from Aarhus University
- Employed with the William Demant Group since 1996
- CIO – Head of Global IT, William Demant (Oticon) 1998 to 2001
- General Manager, Danacom A/S 2001 to 2003
- President, Sennheiser Communications since 2003

SENNHEISER COMMUNICATIONS

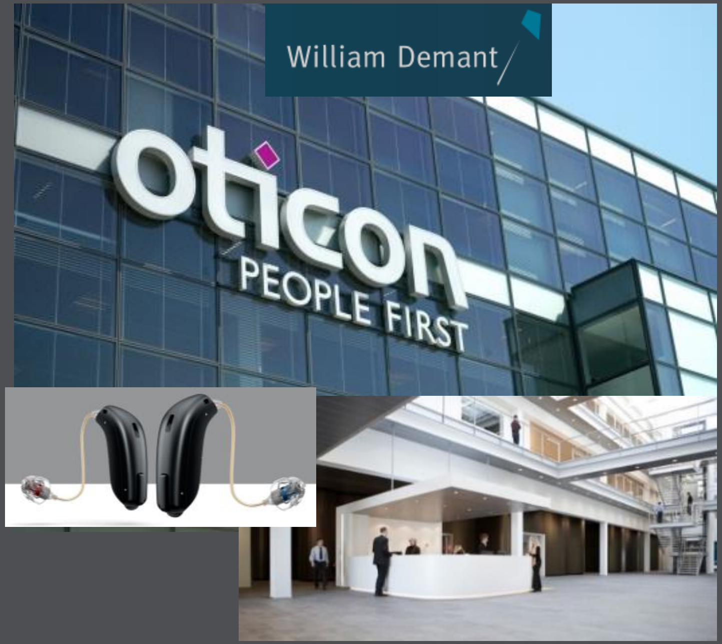
Sennheiser Communications at a glance



- Joint venture established in 2003:
  - William Demant Holding 50%
  - Sennheiser electronic GmbH & Co. KG 50%
- Main product areas:
  - CC&O: Headsets for mobile phones, contact centres, offices and Unified Communications (UC)
  - Consumer: Headsets for gaming and mobile
- Locations:
  - Headquarters in Ballerup, Denmark
  - Offices in Hong Kong and Dongguan in China
  - Headcount: 176

SENNHEISER COMMUNICATIONS

A strong foundation



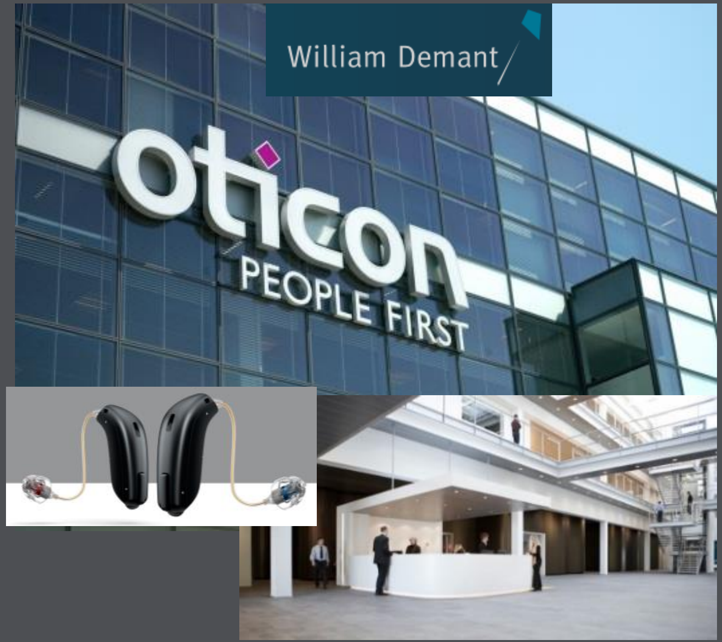
Sennheiser electronic

- Founded in 1945
- Premium positioning: Shaping the future of audio
- Main product categories:
  - Headphones
  - Microphones
  - Wireless transmission systems

William Demant Holding

- Founded in 1904
- Hearing healthcare company
- Hearing solutions, audiometric equipment, personal communication systems

Capitalising on synergies



- Premium brand positioning
- Distribution network
- R&D and technology
- Best practice
- Supply chain scalability

- R&D
  - Miniaturisation
  - Noise cancelling
  - DSP
  - Wireless technology
  - Speech intelligibility
- Back office
  - IT, HR, Legal, Finance, Quality etc.

A global set-up

Sennheiser Communications headquarters
in Denmark

R&D
in Denmark, Hong Kong and China through internal Sennheiser Communications staff

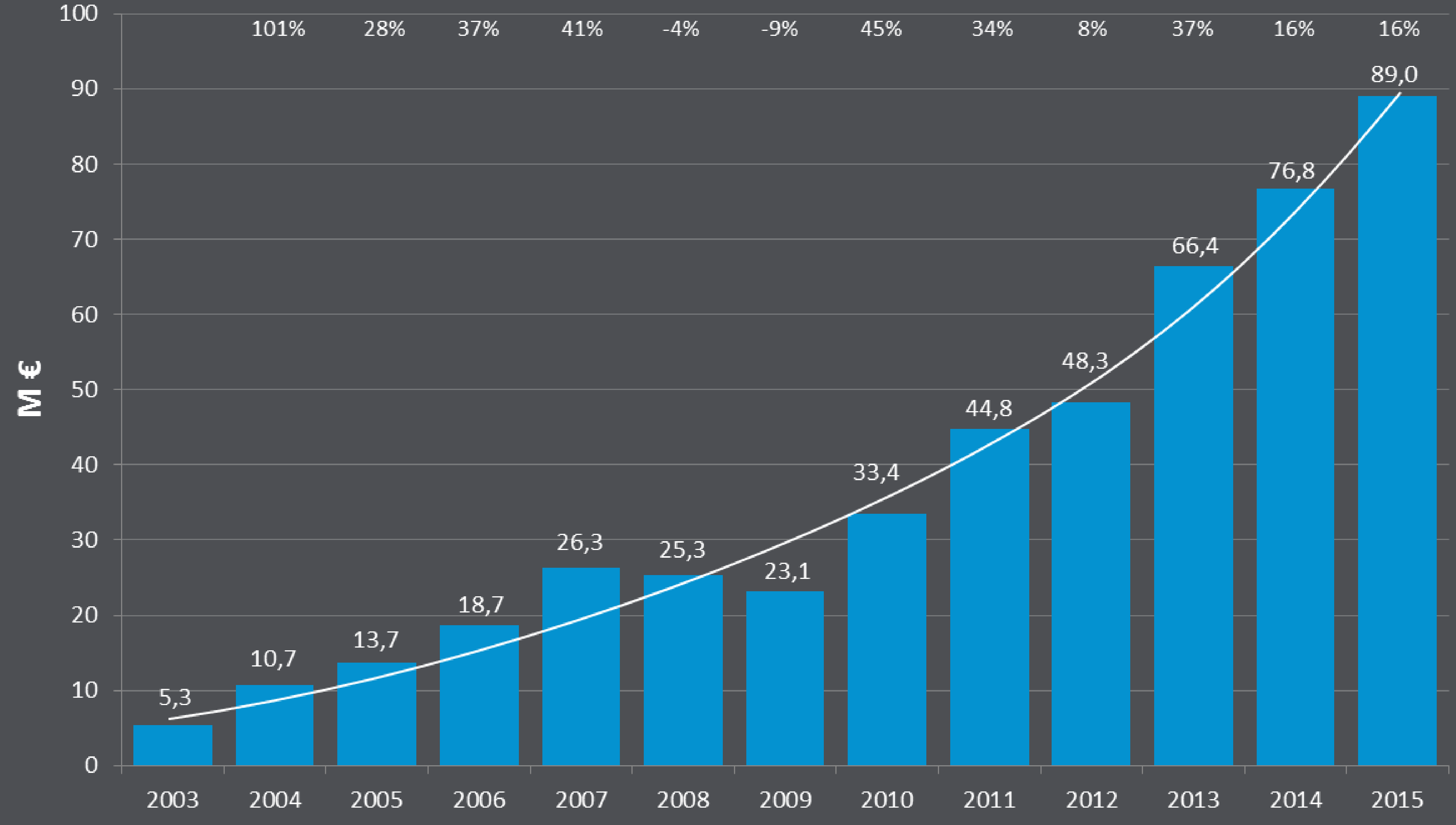
Production in China and Taiwan
via strategic alliances with production facilities

Global distribution centre
central stock in cooperation with German logistics company

World-wide sales
through globally focused Sennheiser CC&O teams, distribution partners, independent distributors and dealers in more than 50 countries

SENNHEISER COMMUNICATIONS

Total year revenue - out of factory



CAGR 26.5%

Actual exchange rates

Business segments

Contact Centre and Office (CC&O)

Wired
Wireless

Consumer mobile

Mobile communication
Mobile music

Gaming

Gaming
Music and entertainment
VoiP

SENNHEISER COMMUNICATIONS

Gaming

- Growing market – growth rate of 7-8% (-2019)*
- Premium positioning
- Trends → VR and 3D sound
- Gaming platforms

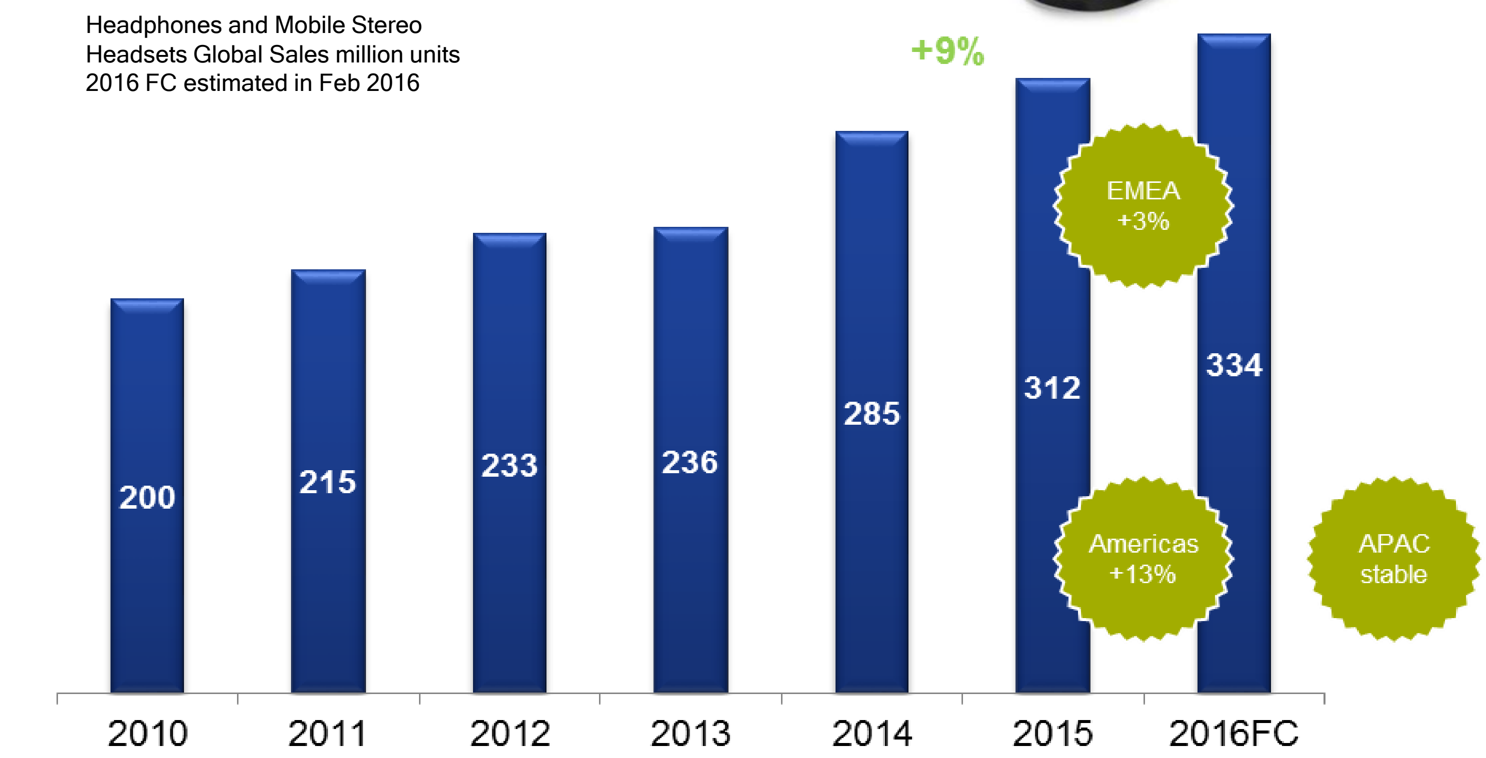
*Research and Markets 2015

SENNHEISER COMMUNICATIONS

Gaming headsets

Mobile music headsets

- Total market size expected to exceed USD 13bn by the end of 2016*
- Well established premium brand
- Trends:
  - Increased use of smartphones and music applications (Spotify, YouTube, Twitch etc.)
  - Premium positioning



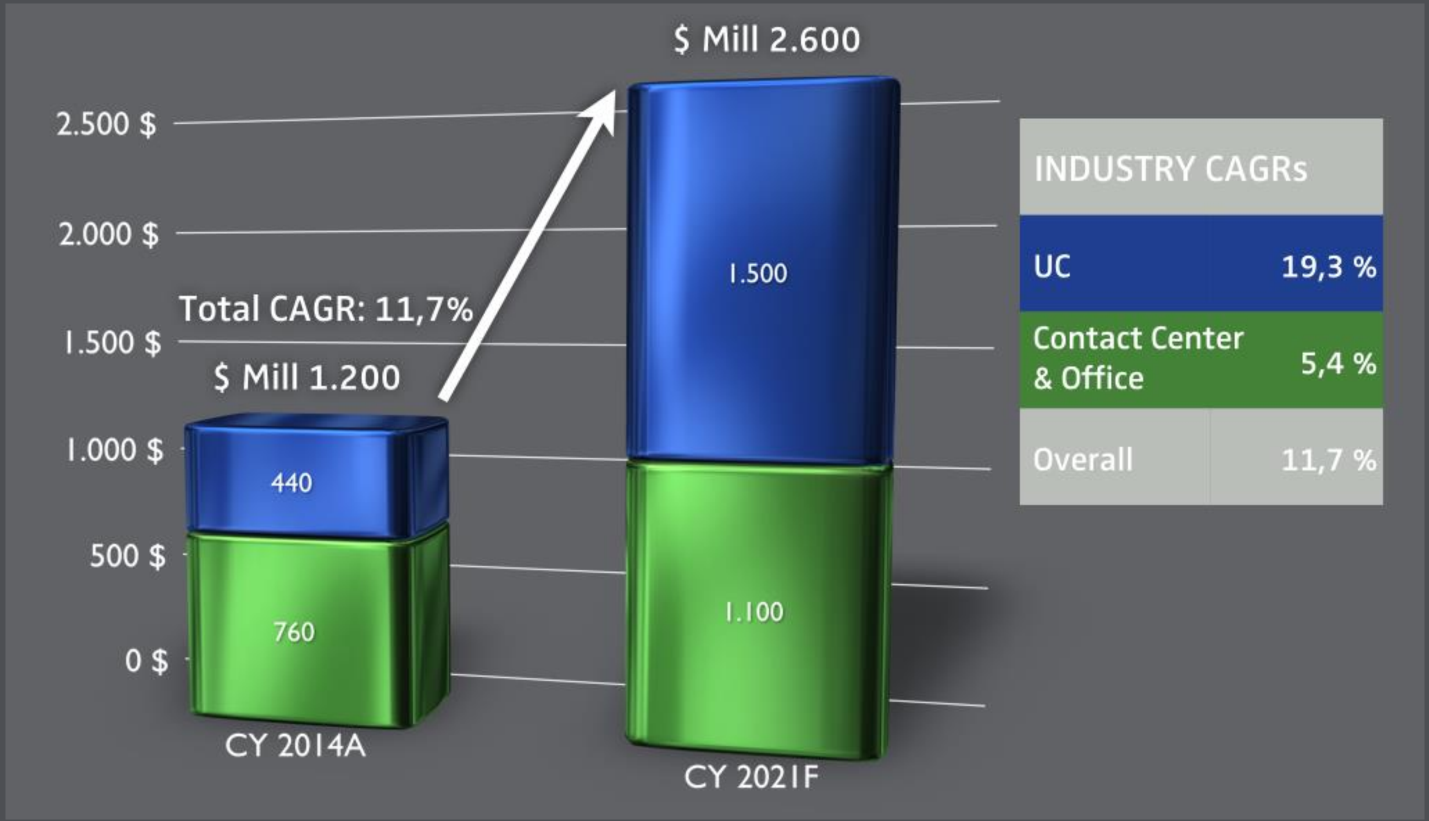
Source: EPSNews*

SENNHEISER COMMUNICATIONS

Mobile communication/music headphones

Contact Centre & Office
Global industry revenue expectations CY14-CY21

- UC trend is driving growth
- Our expectation: CAGR of approx. 10%



Source: Frost & Sullivan, 2014

From "simple phone accessory" to a "complex IT device"

2003 → Desk phone telephony

- Wired headsets
- One-product strategy
- Deskphone interoperability

2010 → Internet telephony

- BT product category
- DECT product category
- USB product category
- Speaker phone product category
- Development and maintenance of wireless product platforms

2014 → UC telephony

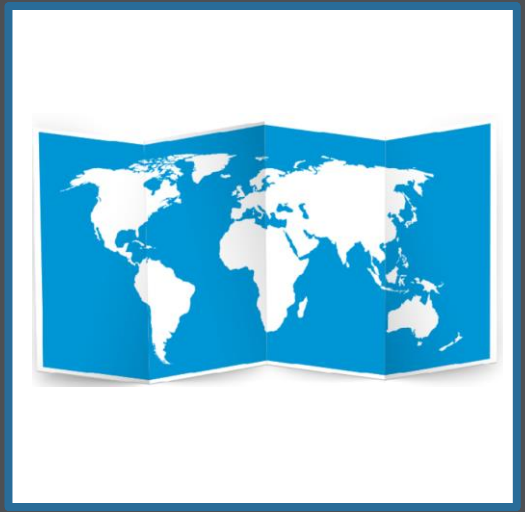
- Cloud-based IT solutions
- Ecosystems with diagnostics, configuration, asset management etc.
- Flexible swapping of calls between multiple platforms (mobile, tablet, PC and Mac)
- Interoperability with multiple phone vendors (Skype4B, Cisco, Avaya etc.)
- Global regulatory compliance
- Fighting noise in open-office environments
- Encryption
- Internet of things
- Contextual intelligence

SENNHEISER COMMUNICATIONS

Key to success

Full product portfolio

Strategic partnerships



Global impact

IT eco systems

SENNHEISER COMMUNICATIONS

Unified Communications - changes the way we work

Desk Worker

When you spend less than 10% of your time away from your desk and you're not required to answer calls away from your workstation.

Office Worker

When you need to be able to handle calls while away from your desk – although you probably spend most of your time at your workstation.

Mobile Worker

When you have no dedicated office desk and no fixed location but should be available while on the road.

SENNHEISER COMMUNICATIONS

Trends

- **Open-office environments** continue to emerge, prompting professionals to seek business grade headsets to boost productivity

- **Multiple Device Integration** becomes the centre of Unified Communications; seamless interaction between all devices will be crucial

- The importance of **software** for enterprise communication devices is growing, leading to new wireless solutions, features and capabilities in professional headsets

SENNHEISER COMMUNICATIONS

Strategic alliance partners

- Certification and compatibility with latest software deployments
  - Warranty
- Long-term relationships
  - Sales
  - Marketing
  - R&D
- Integrated solutions ensuring a smooth and productive user experience

SENNHEISER COMMUNICATIONS

Global impact

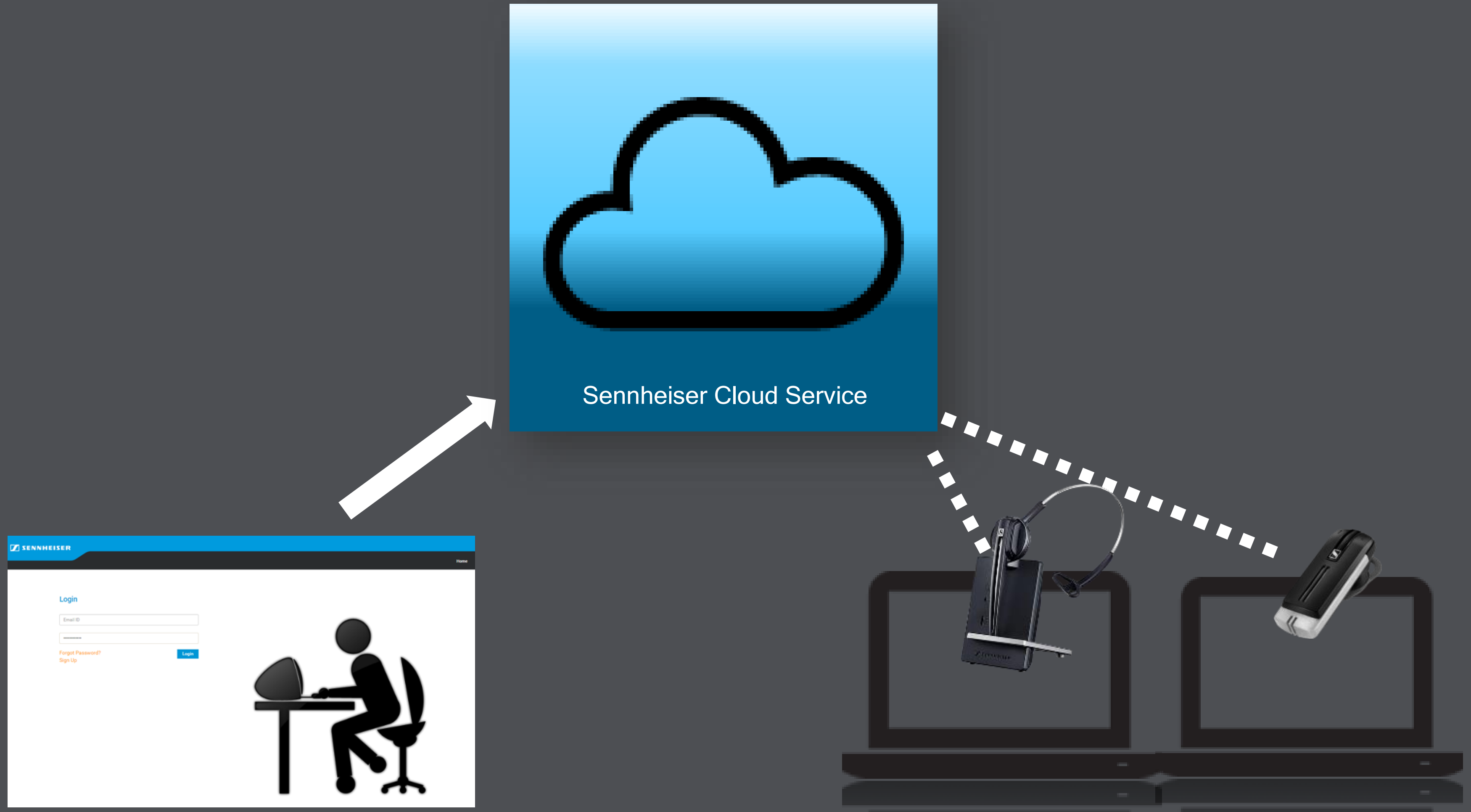
- True global partner
  - GLOBAL: Ability to make global deals – terms and conditions, service level agreements
  - LOCAL: Product fulfilment and delivery of premium service and support

IT eco systems

- Device management software
- HeadSetup™ Pro Manager - cloud-based IT management tool
- Important for winning large UC deals
- Centralised, efficient overview and management of CC&O products

SENNHEISER COMMUNICATIONS

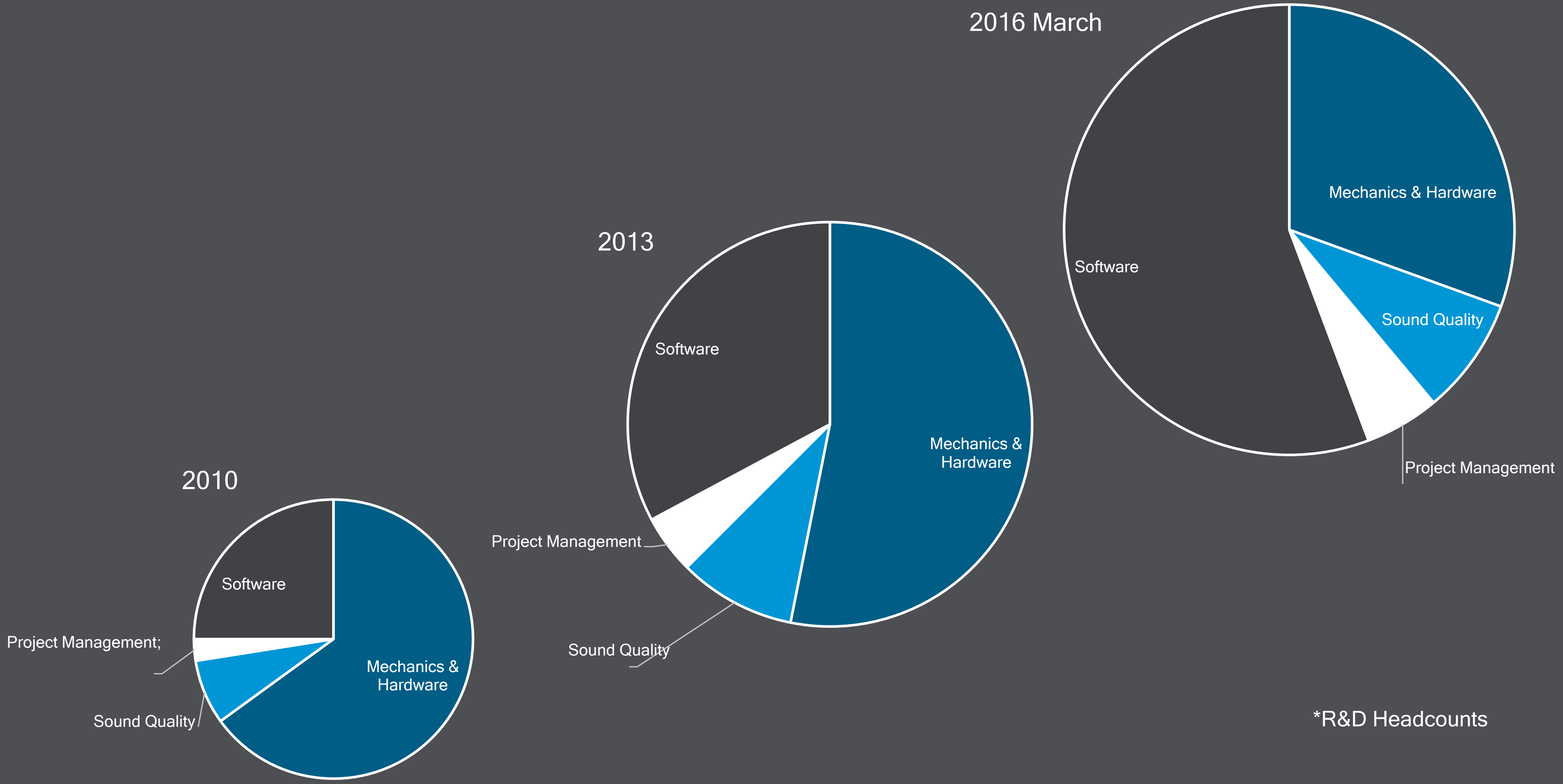
HeadSetup™ Pro Manager



IT administrator
HeadSetup™ Pro Manager

HeadSetup™ Pro
End-users in the company

R&D competence development



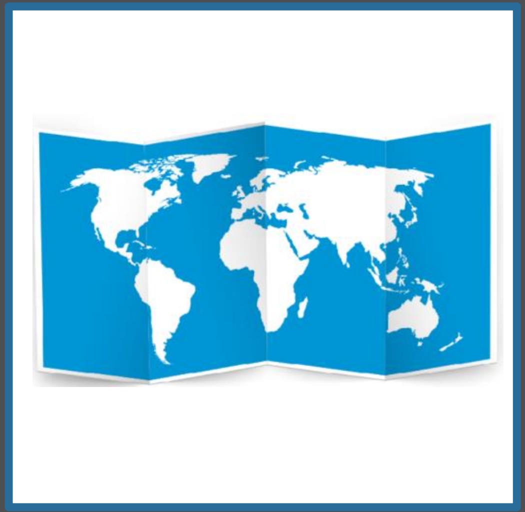
*R&D Headcounts

SENNHEISER COMMUNICATIONS

Key to success – from products to solutions

Full product portfolio

Strategic partnerships



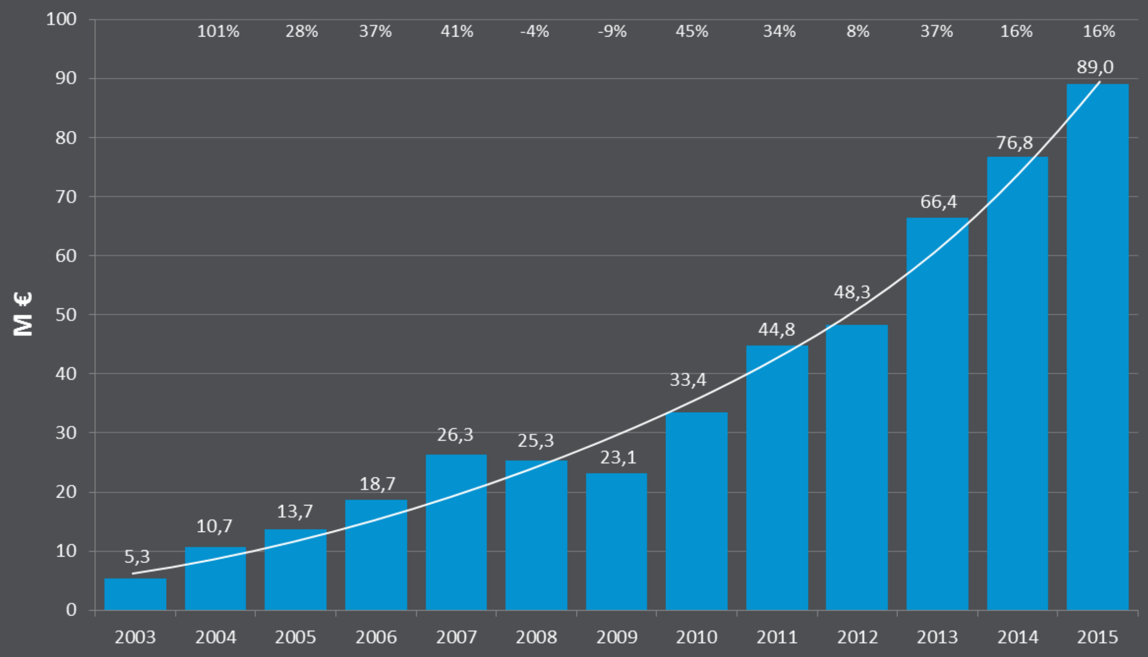
Global impact

IT eco systems

SENNHEISER COMMUNICATIONS

Conclusion

- Attractive market conditions
- Foundation based on synergies
- Complete premium product portfolio
- From products to solutions
- Global focus and reach



→ GEARED FOR CONTINUOUS GROWTH

Questions?

SENNHEISER COMMUNICATIONS

William Demant

Capital Market Days 2016
Agenda

Søren B. Andersson

VP IR, William Demant

William Demant

Agenda

08:30	Registration and breakfast
09:00	Welcome and agenda • *Søren B. Andersson*
09:15	Hearing Implants • *Jes Olsen*
10:30	Product demonstrations
11:30	Lunch
12:30	DGS • *René Schneider*
13:30	Oticon Opn • *Søren Nielsen and Thomas Behrens*
14:30	Final remarks and Q&A


William Demant
Thank you

William Demant

Hearing Implants

Jes Olsen

President, Hearing Implants

William Demant

Jes Olsen

President, Hearing Implants

Curriculum

- Born 1960
- B.Sc. in electronic engineering and electroacoustics
- Employed with the William Demant Group since 1986
- General Manager, Oticon AB, Stockholm 1993-1996
- Various senior management roles in Oticon, including Vice President of R&D, 1997-2008
- President, Hearing Implants since 2008

Agenda

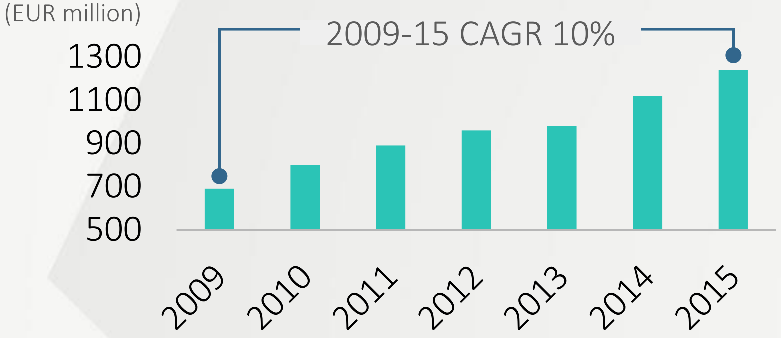
- Hearing implant market
- Our hearing implant journey
- Our strategic ambition
- Technology, innovation and products
- Roadmap principles
- Global distribution
- Q&A

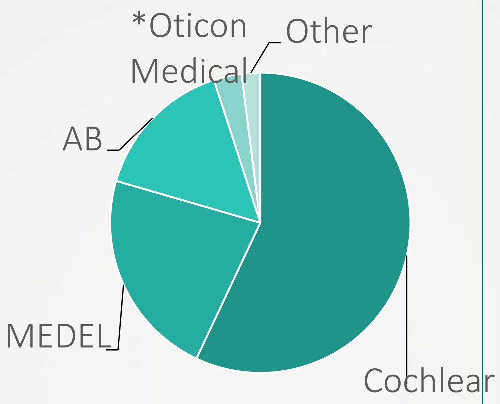
Hearing implant market

Strong fundamental growth drivers

William Demant

Cochlear implant (CI) market

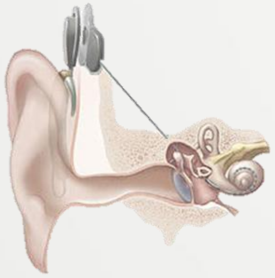




2.5%

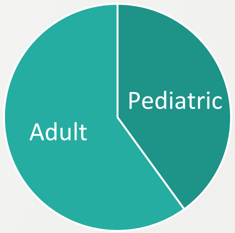
of all aged 75+ have a hearing loss that qualifies them as CI candidates

130K+ potential new CI candidates per year with severe/profound hearing loss



Growth drivers

Education, reimbursement, new indications, new markets, innovation, ageing population



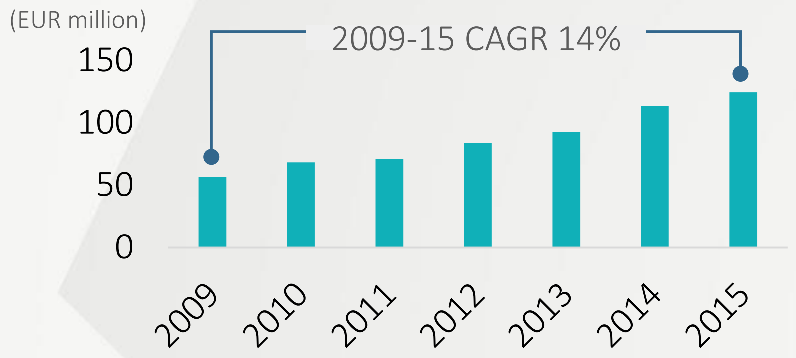
40/60 split between paediatrics/adults in a market of ~55K implantations per year

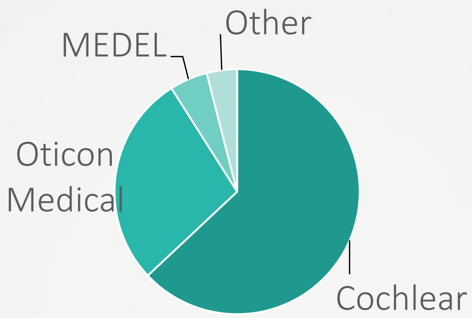
Total market size of EUR 1.2bn and estimated annual growth rate of 10-12%

*Oticon Medical is present in a limited part of the global CI market and has only recently been approved to sell in several key European markets.

William Demant

Bone-anchored hearing systems (BAHS) market

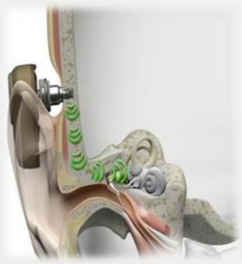




~5%

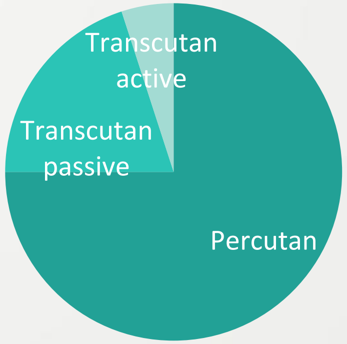
Penetration rate and only approx. 25K implantations per year

150K+ users across the world and fastest growing hearing implant segment



Growth drivers

Education, awareness, reimbursement, innovation, cosmetics



Total market size of EUR 125m and estimated annual growth rate of 10-15%

William Demant Hearing Implants

Journey and strategic ambition

William Demant

William Demant's hearing implant journey

Bone-anchored hearing systems (BAHS)

2007
Oticon Medical established in Gothenburg, Sweden

oticon MEDICAL

2009
Launch of the Ponto System, bringing digital sound quality to BAHS

2011
Ponto Pro Power
– the first bone-anchored digital power processor

2012
Wide Ponto Implant
– the industry's largest bone-to-implant contact

2013
Oticon Medical/William Demant acquires Neurelec

2013
Ponto Plus and Ponto Plus Power
– the first and most powerful family of processors with wireless connectivity

2014
14mm OptiFit™ abutment
– the most extensive abutment family for all skin thicknesses, power processor

Today
Minimally Invasive Ponto Surgery (MIPS)
– a truly new perspective on tissue preservation

Ponto BHX Implant
– bone bonding, the next level of osseointegration

Cochlear Implant Systems (CI)

1976
First multi-channel cochlear implantation in France by Prof. Chouard

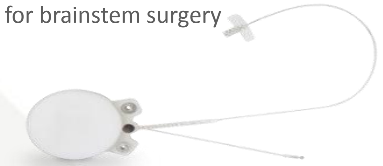
1977
Development and production of cochlear implants established in Nice, France

1992
Digisonic DX10 – the first digital multi-channel cochlear implant

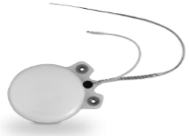
2001
Digisonic BTE
– our first BTE sound processor

2004
Digisonic SP
– 20-channel implant

2006
Digisonic SP ABI
– for brainstem surgery



2012
Digisonic® SP EVO
– the atraumatic electrode array to preserve residual hearing



2013
Saphyr Neo Collection
– better speech understanding in noise with Voice Track & Crystalis XDP

Today
Launch of the Neuro system
Neuro Zti implant – an ultra-compact design with a powerful and future-proof technology

Neuro One sound processor
– Oticon technology inside, designed for better speech understanding

Our strong position

Long-term ambition of becoming a leading hearing implant company

William Demant Group synergies

- The power house of hearing
- Research capabilities
- Technological power and clinical support tools
- Financial strength and global distribution
- Patient support

Strong know-how to create new growth

- Century-long history in sound processing and audiology
- Three decades of cochlear implant experience
- Decades of bone-anchored experience in the organisation
- Successful track record and experienced senior management team

William Demant's Hearing Implant organisation

Strong and complementary local competencies

Nice

- Neuro stimulation and CI audiology
- Hearing implant technology
- Class 3 manufacturing and OC

Copenhagen

- Audiology and signal processing
- Design of externals and micro mechanics
- Fitting software, firmware and usability

Gothenburg

- BAHS implant technology
- BAHS audiology
- Vibrator technology

William Demant

Technology and innovation

Product update and roadmap principles

CI Neuro update

Designed for a future of sound

- 130+ patients in more than 10 countries
- Excellent feedback from surgeons
- Good audiological outcomes – even though it is still early days
- No implant failures after implantation
- No hardware design errors detected in neither implant nor BTE
- New fitting software and firmware with small improvements in fitting flow and usability released end of March
- Takes time because of training, monitoring and new clinics

CI Neuro Zti

The receiver

- Overall Impression
  - Ergonomics: 9.0/10
  - Ease of use: 9.0/10
  - Compactness: 9.0/10
  - Profile/Height: 8.9/10
- General design highly appreciated
- Everybody really appreciated
  - The compactness of the device (small surgical footprint and low height)
  - The general ergonomics of the device
  - The ease to handle and insert under the skin
- The average mark for the ergonomics is currently 9.0/10, equivalent to very good

CI Neuro Zti

Fixation screws

- Evaluation details
  - Stabilisation of the receiver on the skull: 8.9/10
  - Ease of use: 10/10
  - Efficiency: 9.3/10
- Surgeons very much appreciated the screw fixation system
  - Rated as being easy to use, very convenient, easily and efficiently stabilising the receiver on the surface of the skull
- The average mark of the fixation system is currently a 9.39/10, equivalent to very good.

CI Neuro Zti

The EVO electrode array

- Overall impression
  - Lead: 7.9/10
  - Ease of insertion: 6.9/10
  - Softness: 7.2/10
- All surgeries were performed with the EVO electrode, and it is generally very well perceived
- The "lead" being rated as very good
- The softness of atraumatic arrays can sometimes be a challenge, playing on the ease of insertion; experience with the array plays a role
- The average mark for the EVO electrode array is currently a 7.38/10, i.e. equivalent to good

CI end-user stories

Neuro CI user after activation and first experiences

*Video requires internet (link to YouTube)

”I’m able to answer my grandchildren’s many questions and can keep up with their conversations, even though they tend to go off in all directions.”

- Karin Christiansen, Neuro CI, left

“One month after it was fitted, my boyfriend read to me from a book and I listened – just with the cochlear implant – and I could understand it! I remember thinking, why on earth has he chosen that book?”

“The cochlear implant had a huge impact on my mental well-being. I insist on wearing my sound processor all the time.”

”I can also focus better on speech, even if there’s background noise, as the sounds don’t run into each other.”

CI roadmap principles

More competitive, step-by-step

Step #1 Getting the most important right

- A competitive, fully modern implant, Neuro Zti
- Competitive and innovative signal processing based on Oticon technology for highest possible outcomes, Neuro One

Step #2 Getting the important details right

- The world’s smallest CI BTE, Neuro Two
- More choices of atraumatic electrodes
- Super user-friendly fitting software, Genie CI 1.0
- All accessories for full paediatric use

Step #3 Increasing the gap

- Velox in CI, the internet-connected CI system, CAP v2, the best CI speech performance and sound quality, full EAS functionality, BrainHearing in CI

William Demant

Neuro 2 – the best sound ever designed

USB powered

17

IP 58

For all ages and situations

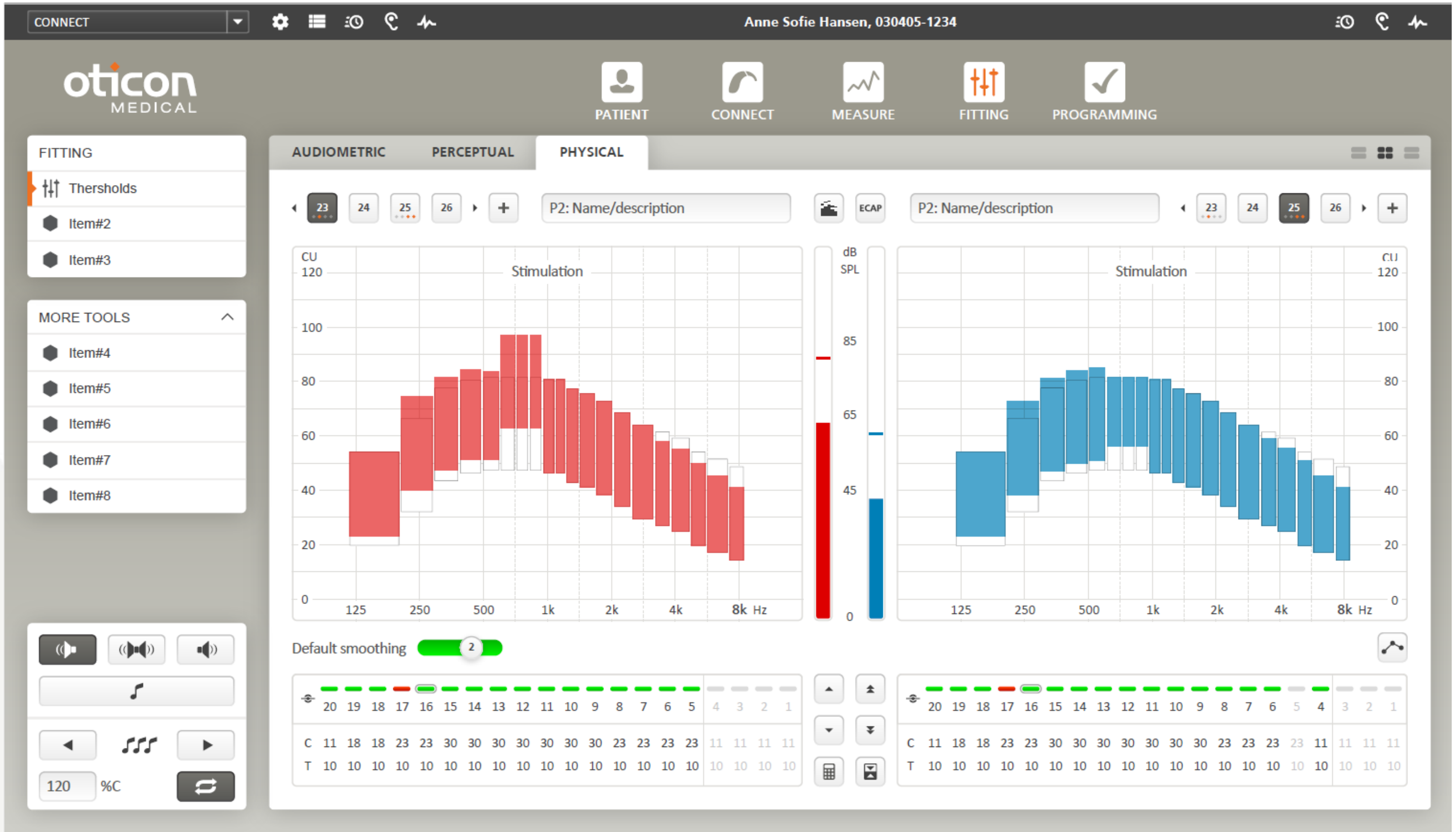
Clip

Swim kit
IP 68

Ear plug retention kit

Safety line

The first Genie Oticon Medical CI



William Demant

BAHS status

Constant improvements of what is already good

- MIPS
  - A truly new perspective on tissue preservation
  - Has the potential to become the future industry standard surgical method
- Ponto BHX implant
  - Is replacing our classic hearing implant faster than expected
  - Fuels growth because of higher price
  - Several clinical studies under preparation with leading clinics to document benefits in compromised bone and in paediatrics
- Abutment extender
  - Freedom of choice
  - No surgery
  - Seamless fit on existing abutment

BAHS roadmap principles

Three choices for optimum outcome

1

Percutaneous Direct transmission

- Most power and largest flexibility
- Well proven technology with known limitations
- Currently the golden standard of care

2

Active transcutaneous direct transmission

- Best cosmetics and higher patient acceptance
- Higher complexity and price
- Fewer skin complications

3

Non-surgical passive skin transmission

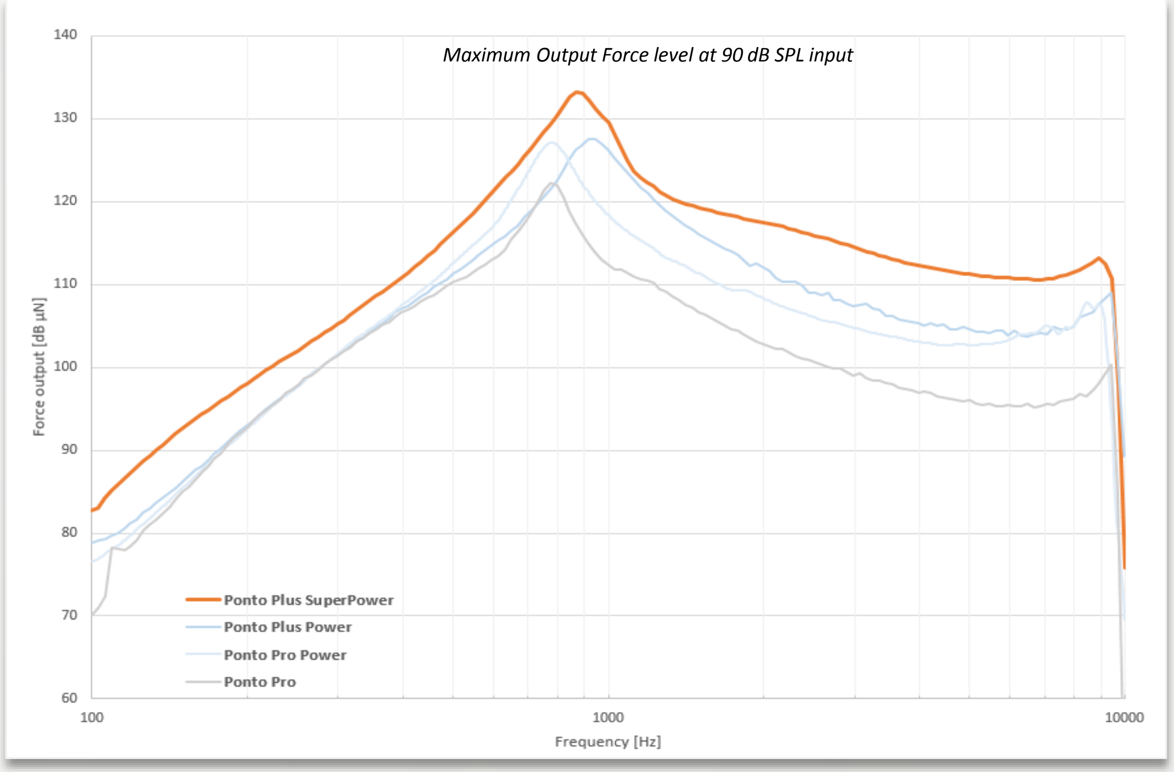
- Temporary use or where surgery is not wanted
- Known, but not well understood limitations
- Solely conductive losses

William Demant

Ponto 3 Super Power

Super Power made beautiful

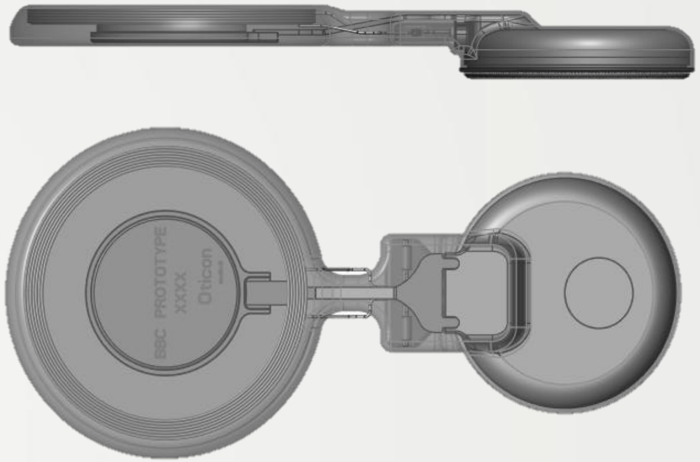
- The world's first abutment level Super Power sound processor
- Fitting range down to 65 dB HL (BC)
- Increased MFO across the entire bandwidth
- No strings attached
- Unique UltraDrive™ technology that boosts the signal to the vibrator
- Updated feedback management system to minimise the risk of feedback

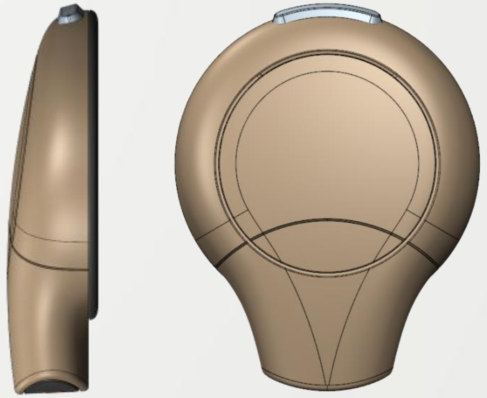


The bone conduction hearing implant

The solution for continuous strong growth of the BAHS Market

- No need for the penetrating abutment – maintains the Ponto sound quality
- Will open up the market for bone conduction solutions
- More invasive surgery
- Training and support
- Higher price





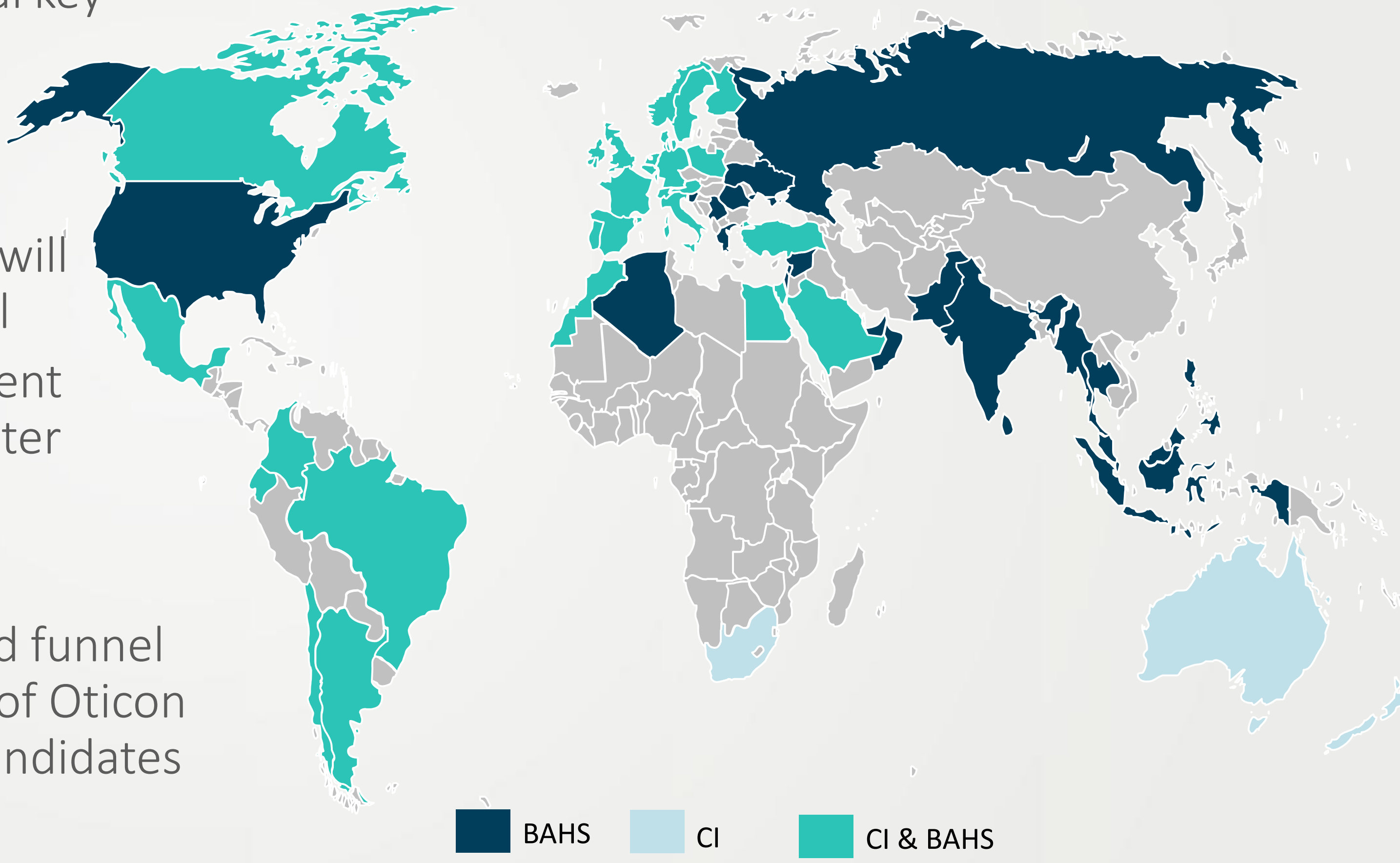
Global distribution

The core of managing a successful hearing implant business

William Demant

Aiming for global presence

- Only limited global footprint with no access to US and China and just recently approved in several key European markets
- Wholesale
  - All William Demant sales companies and most William Demant distributors will become distributors for Oticon Medical
  - Dedicated experts and sales management provide strong and global coverage better than most competitors
- Retail
  - Identify hearing implant candidates and funnel them to the right experts – thousands of Oticon Super Power BTE users are potential candidates for hearing implants
  - Off load clinics by using retail offices as service centres for users




William Demant
Thank you

William Demant

DGS

René Schneider

CFO of William Demant

William Demant

René Schneider

CFO, William Demant

Curriculum

- Born in 1973
- M.Sc. in Economics from Aarhus university
- CFO since 2015
- Employed with the William Demant since 2015

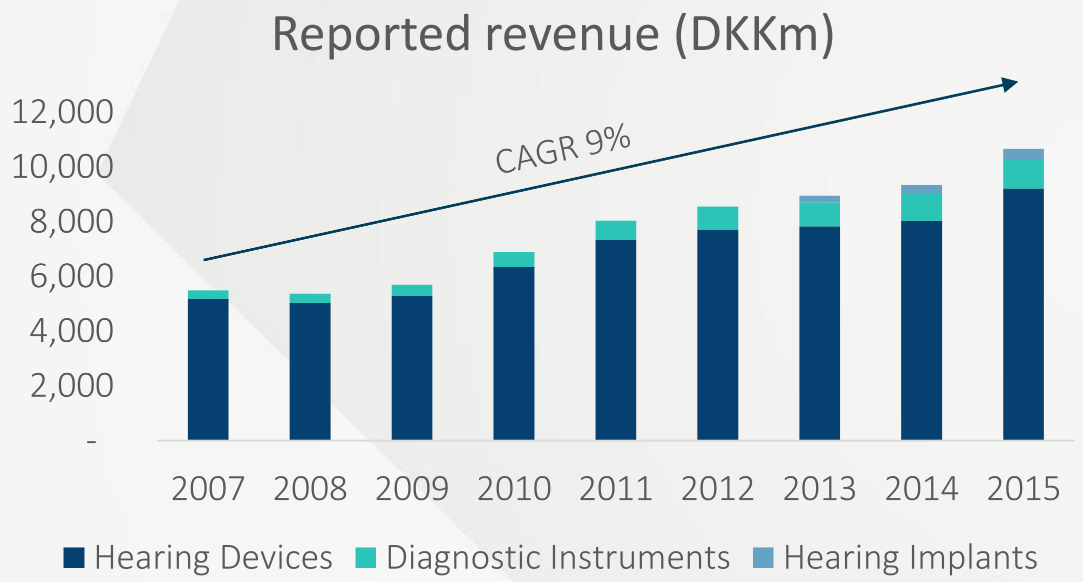
William Demant

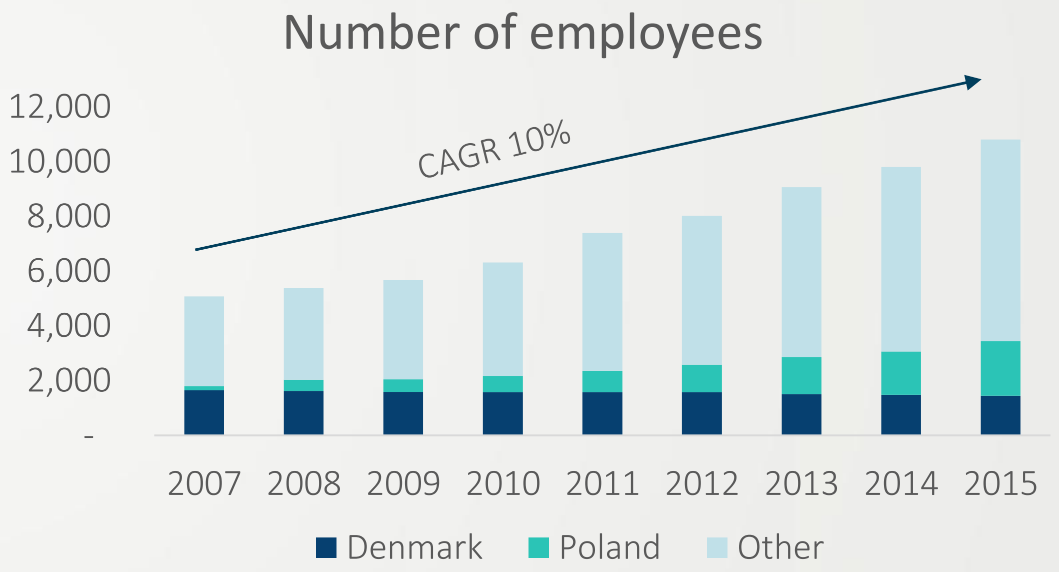
Agenda

- Introduction to DGS
- Operations
- IT
- Financial Shared Services Centre
- Case - The Netherlands


William Demant
Introduction to DGS

Need for common infrastructure to support growth





DGS established to effectively support growth

DGS is the identity for the shared services functions in William Demant

William Demant Holding A/S

Hearing Devices	Hearing Implants	Diagnostic Instruments	Personal Communication
Oticon	Oticon Medical	Maico	Sennheiser Communications
Bernafon		Interacoustics	Phonic Ear
Sonic		Amplivox	FrontRow
		Grason-Stadler	
		MedRx	
		Micromedical	

Shared functions – DGS

Operational and distribution activities

DGS vision and values

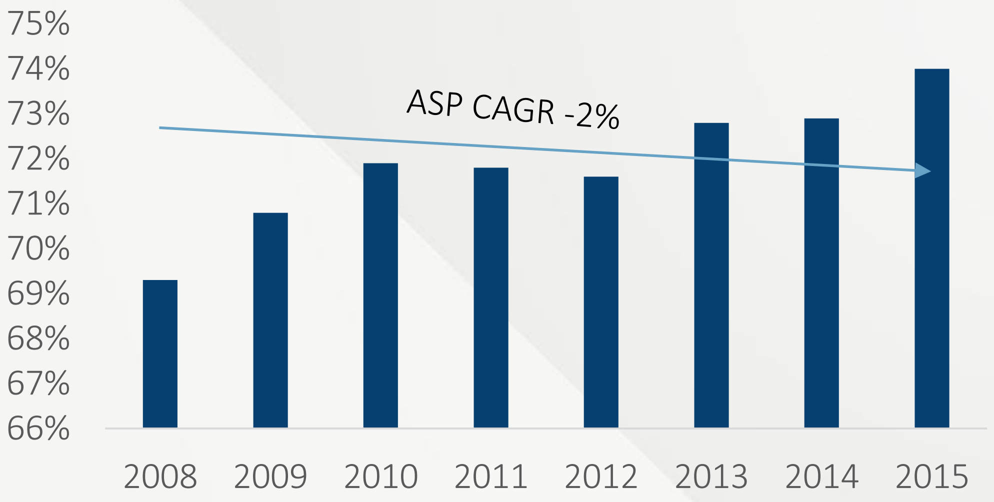
DGS – Operations

Efficiency improvements have offset lower prices

Expanding industry-leading gross margins despite lower prices

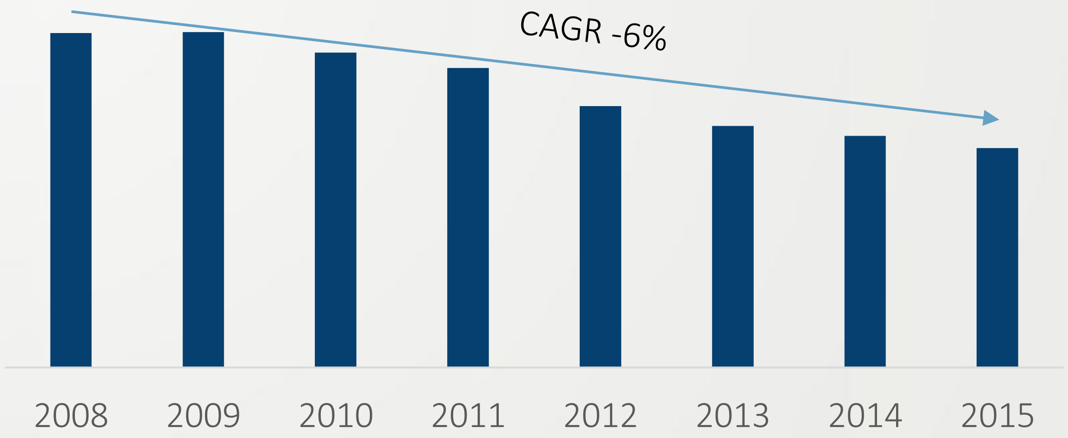
Lower prices (negative for gross margin)	Operational efficiency (positive for gross margin)	Economies of scale (positive for gross margin)	Retail acquisitions (positive for gross margin)

Gross margin development



Note: ASPs (RHS) are based on constant exchange rates

Hearing aid cost per unit



Note: Standard products are based on constant exchange rates

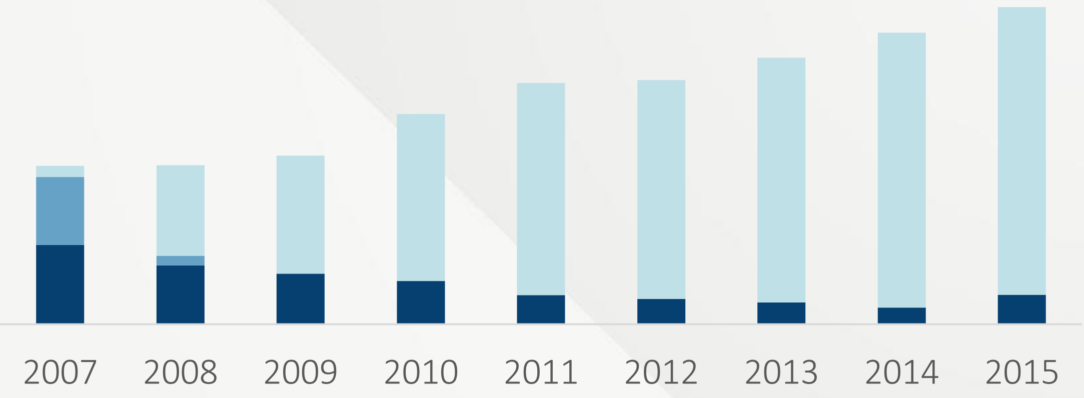
William Demant

Global operations footprint

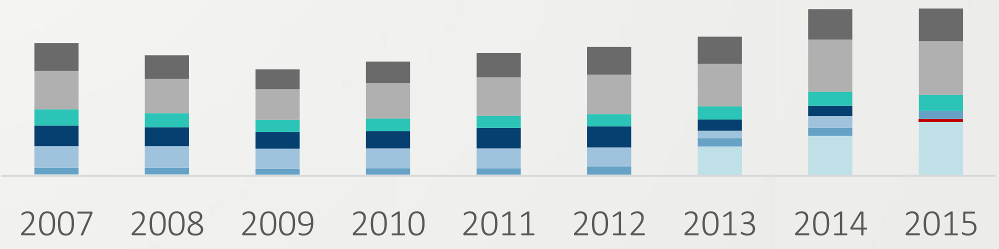
- Economies of scale
- Central production
- Future ambition to build three main production hubs

Global locations: Poland, Mexico
Major local locations: Denmark, Italy, Germany, France, USA, Canada, China, Korea, Australia and Japan

Standard production

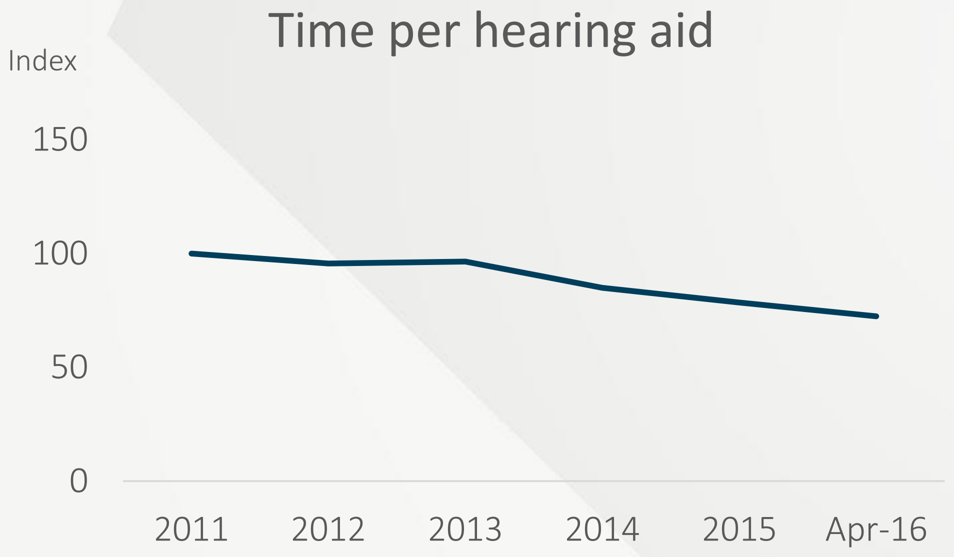


Custom production



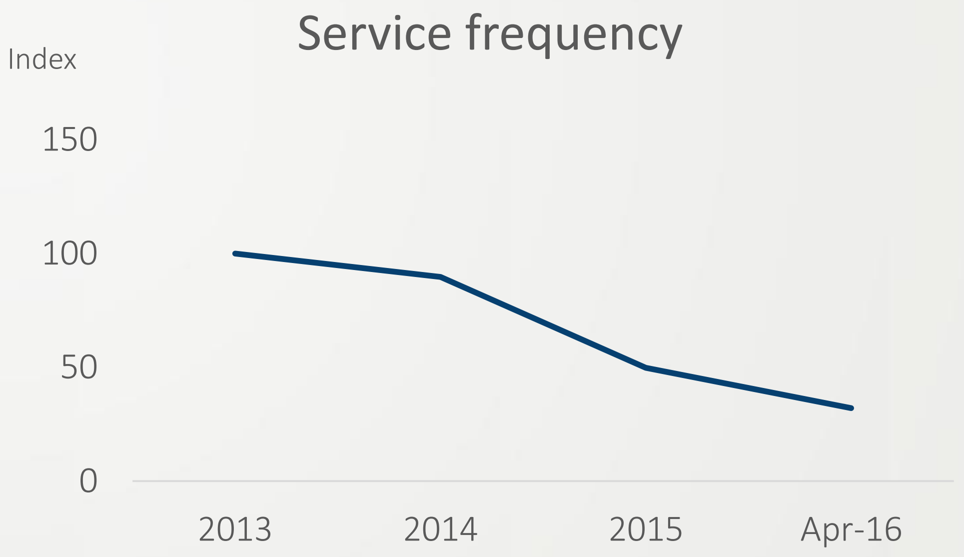
State-of-the-art hearing aid manufacturing

Lean set-up: Designed for manufacturing



Note: 2011 = Index 100

Introduction of nanocoating in 2013

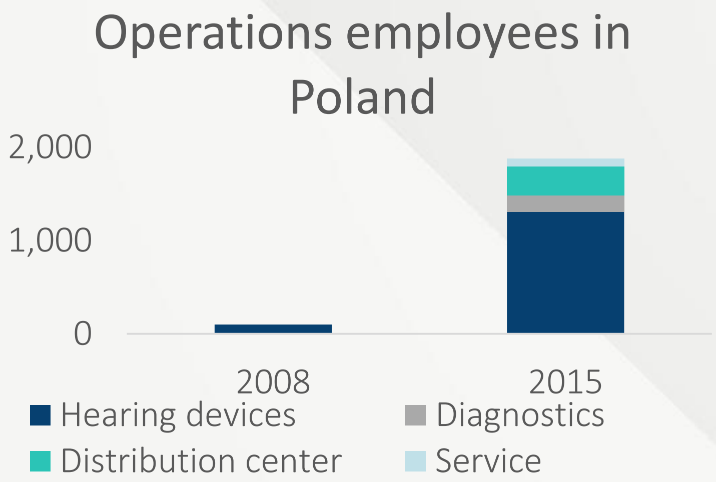


Example: Oticon US RITE

Note: 2013 = Index 100

European central hub in Poland

- ~2,000 employees
- High productivity
- Knowledge sharing
- Design for manufacturing
- Flexible and fast ramp-up
- Access to labour



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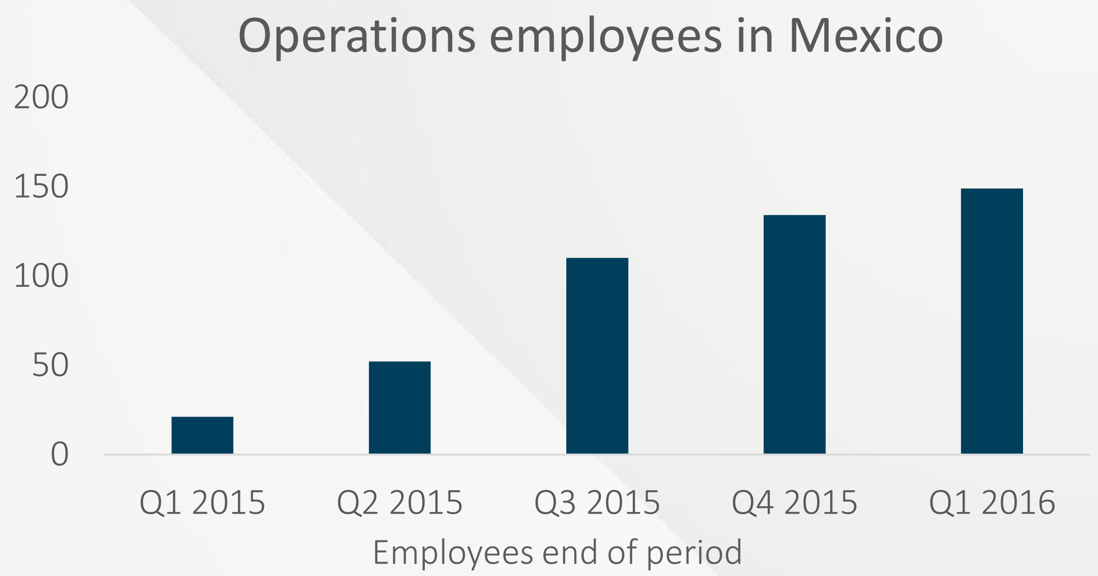
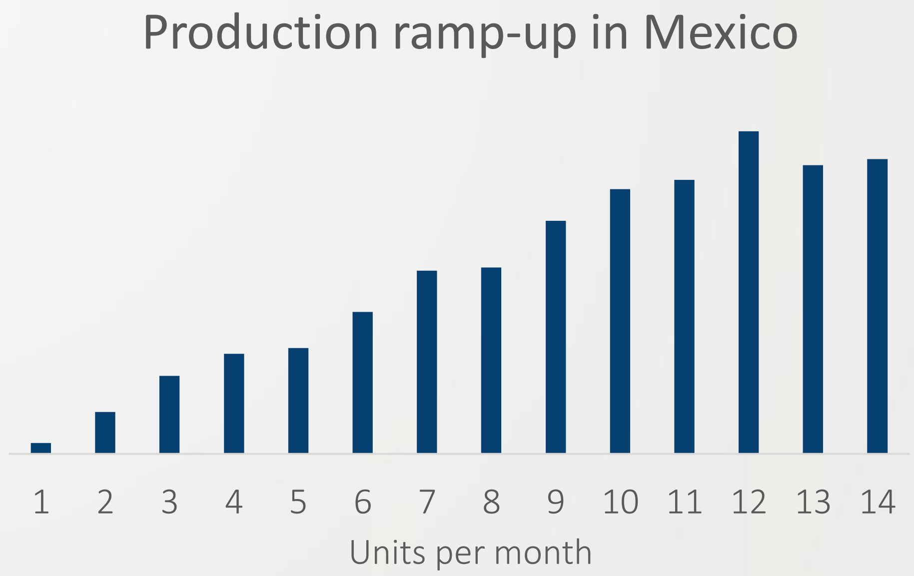
Custom production established in Mexico

- ~200 employees by end of 2016
- Flexible and fast ramp-up
- Access to labour





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DGS – IT

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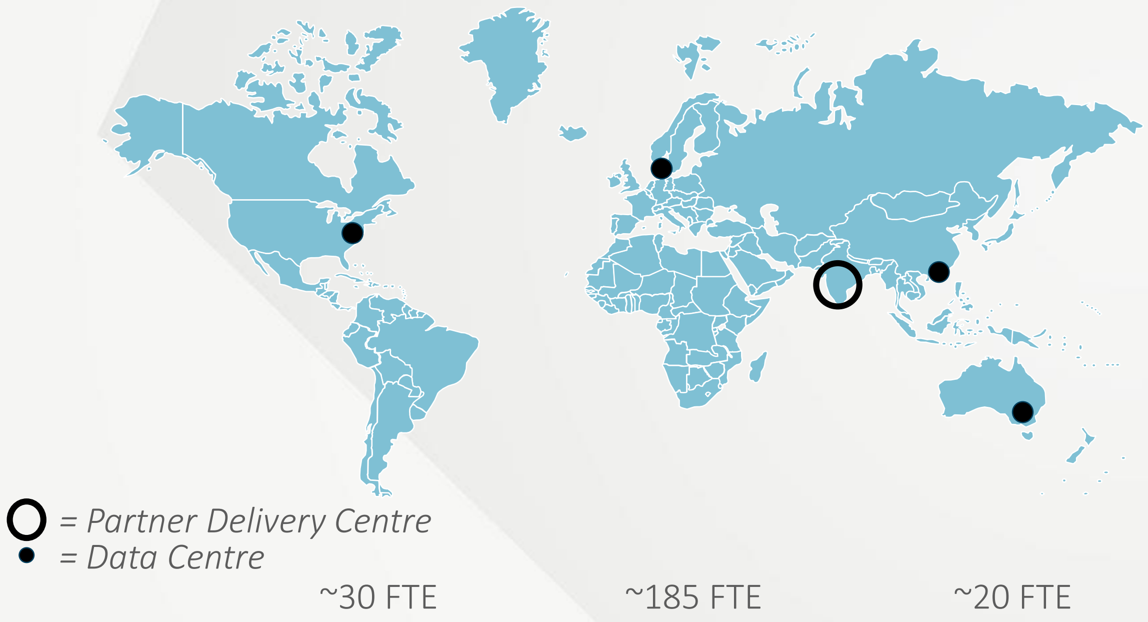
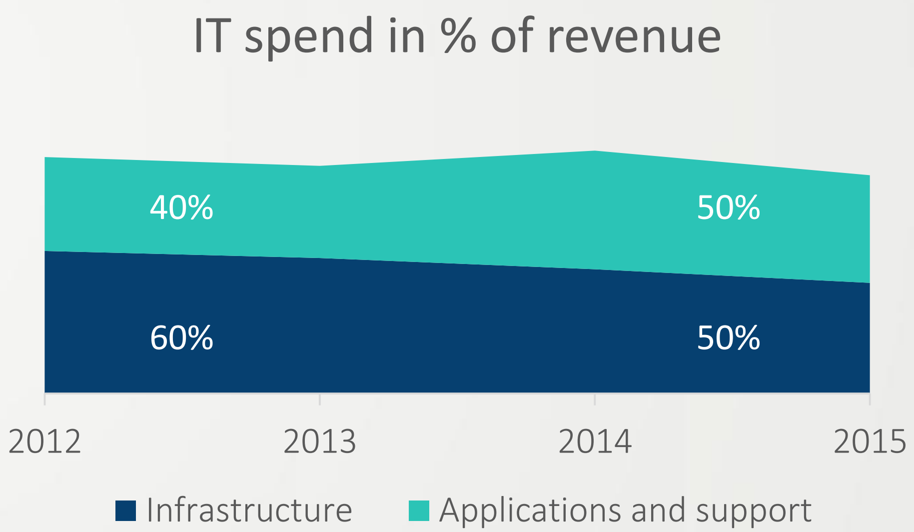
IT costs in control and investment in new ERP system

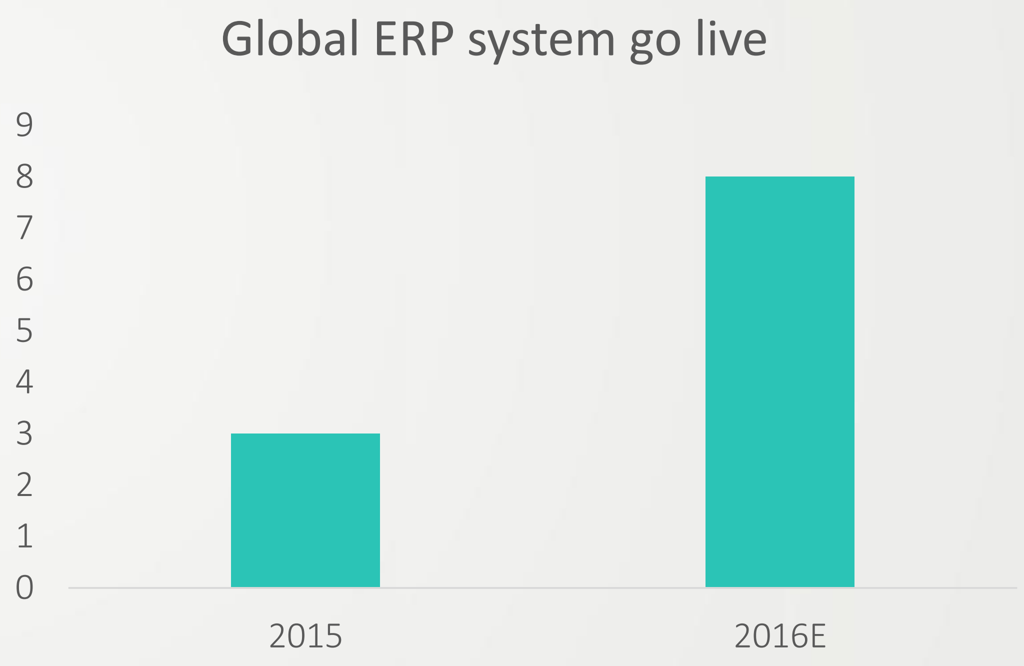




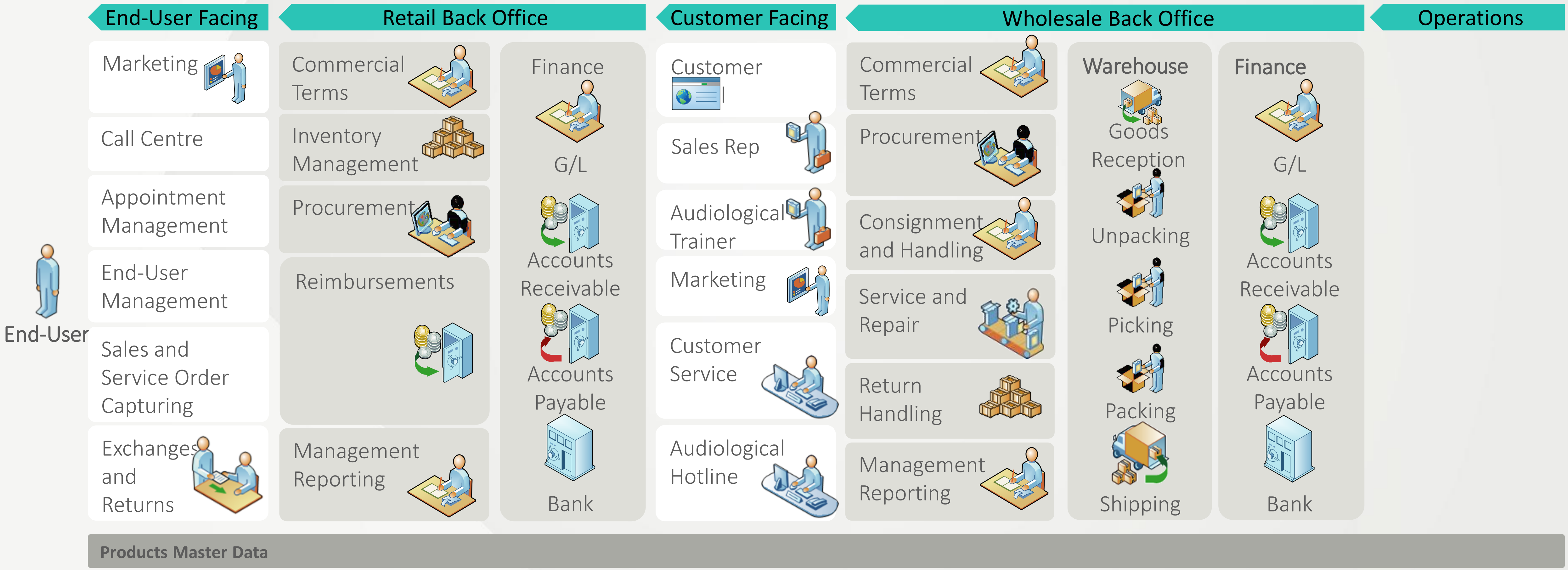
Rolling out a global ERP system

Integrated ERP and business process deployment

- Low costs
- Low risk
- Country-by-country approach



Getting more benefit from being a global company



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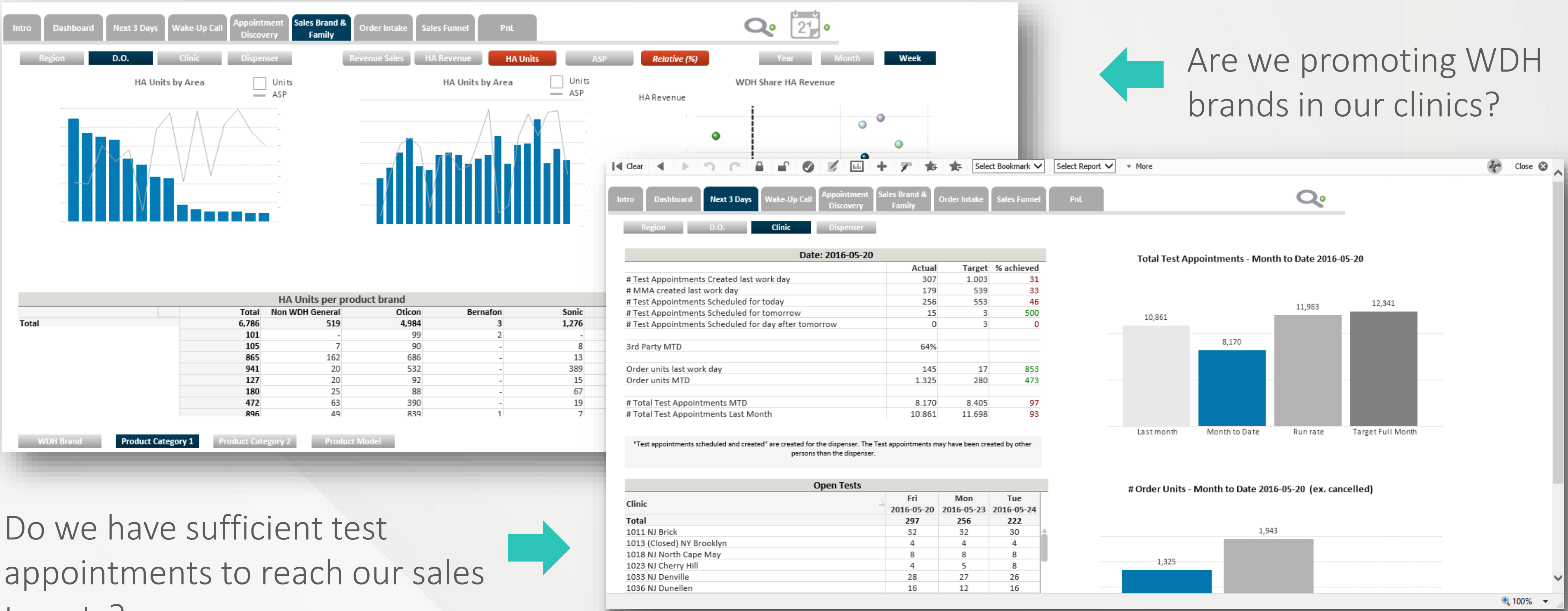
Shared retail front- and back-end



Are we promoting WDH brands in our clinics?

Do we have sufficient test appointments to reach our sales targets?

Note: Test data

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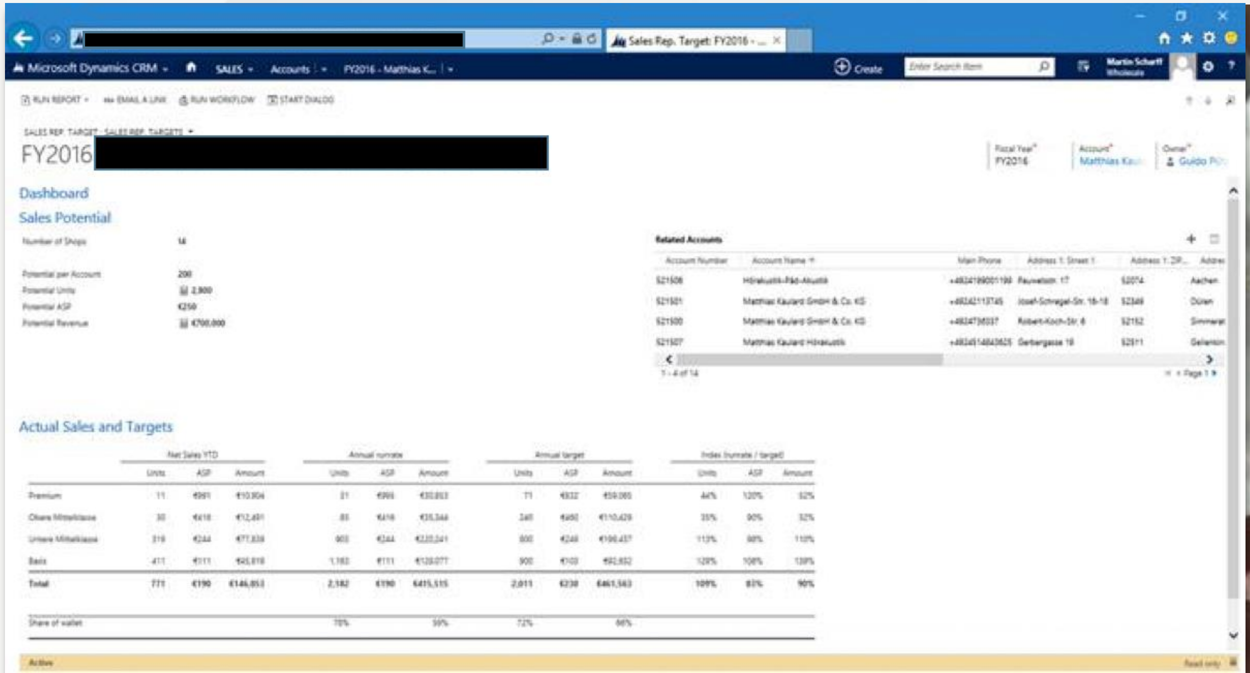
Using transactional data in sales reps' daily work



Actuals versus targets for the particular customer

Note: Test data

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DGS – Financial Shared Services Centre

William Demant

Financial Shared Services Centre in Szczecin, Poland

9 languages spoken

4 business functions supported

~50 employees

32 years average age

99% graduates

~6% attrition p.a.

Established in 2015

66% females

DGS – The Netherlands

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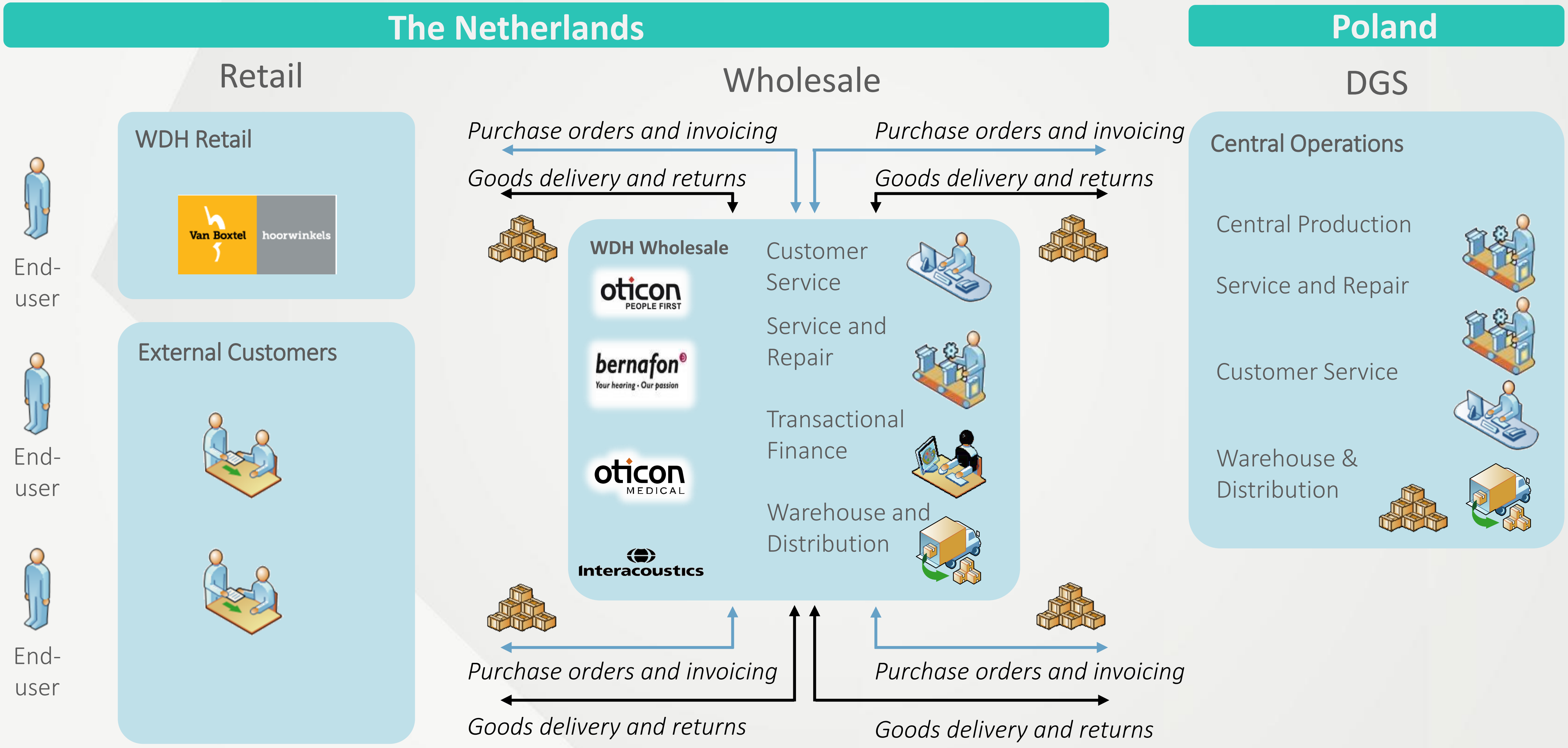
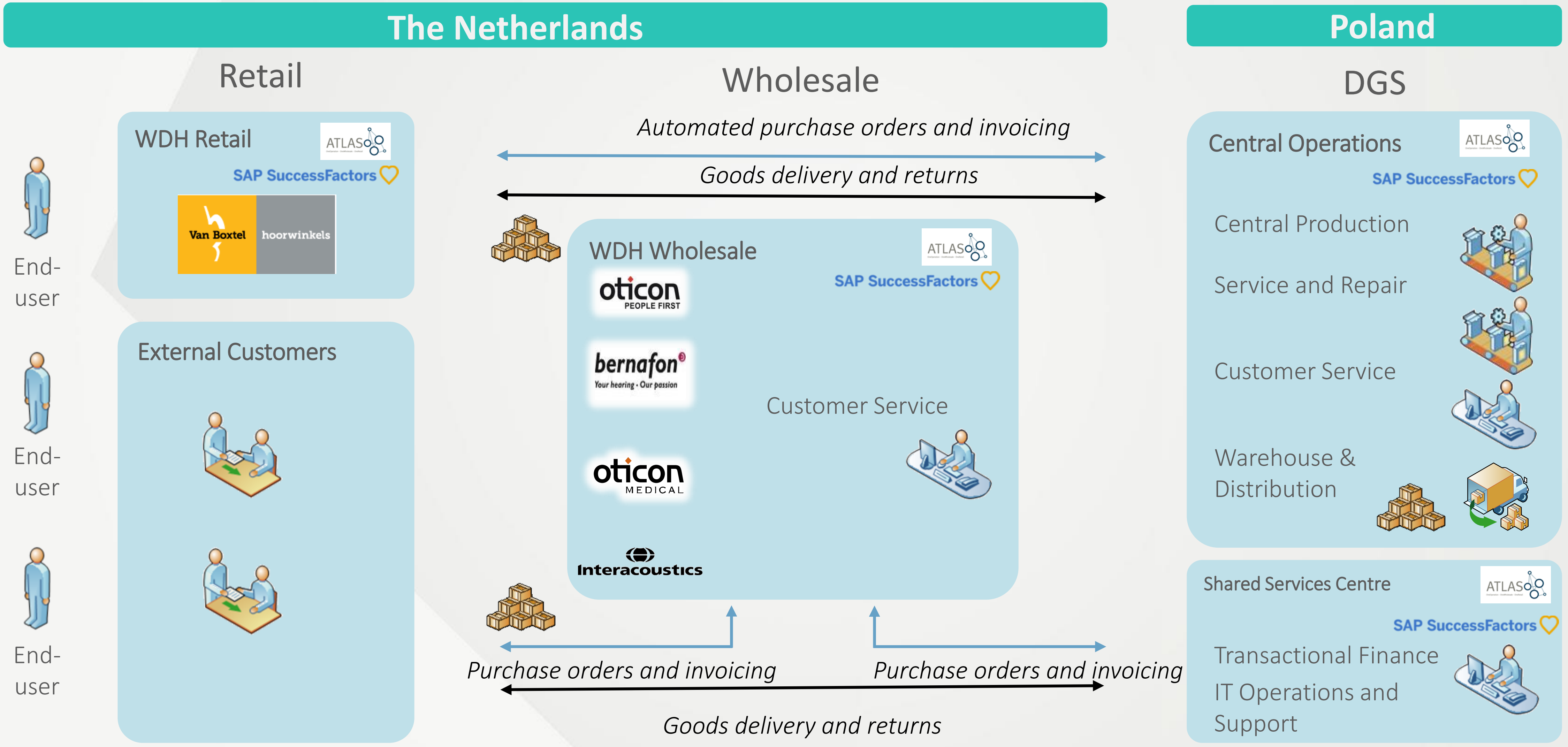
Before implementation of ERP and processes



After implementation of ERP and processes




William Demant
Thank you

Welcome to a new world of sound

Søren Nielsen
President of Oticon A/S

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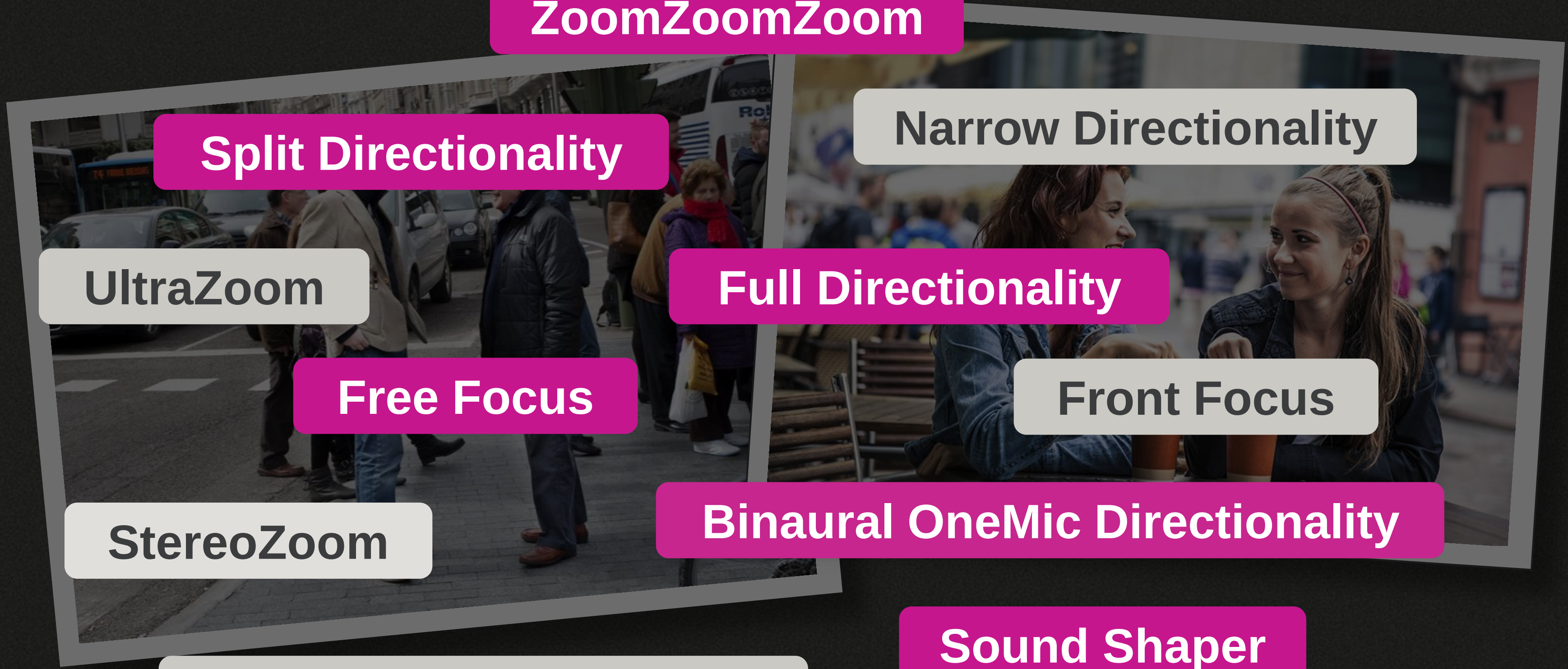

Speech Focus

Acuity Directionality

ZoomZoomZoom

Split Directionality

Narrow Directionality

UltraZoom

Full Directionality

Free Focus

Front Focus

StereoZoom

Binaural OneMic Directionality

Sound Shaper

Binaural Directionality II

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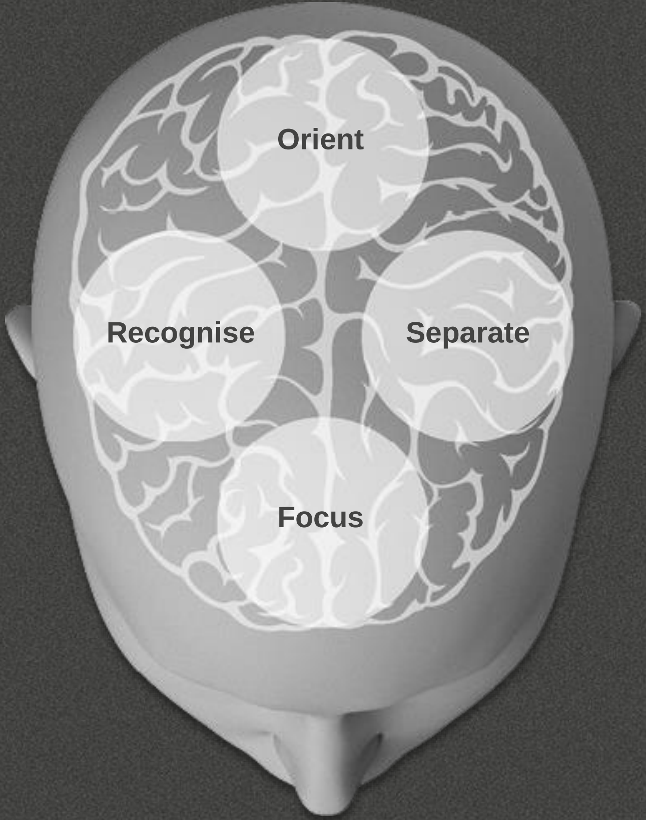
Today’s
challenge

Today’s directional technology …

When you close down sounds, you close down life!

It's your brain that hears, not your ears



Oticon BrainHearing™ Technology

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Oticon Opn empowers the brain!

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Directionality as we know it is now a thing of the past!

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Made for
iPod iPhone iPad
TwinLink
NFMI + 2.4 GHz
For the first time ever,
a hearing aid with two communication systems
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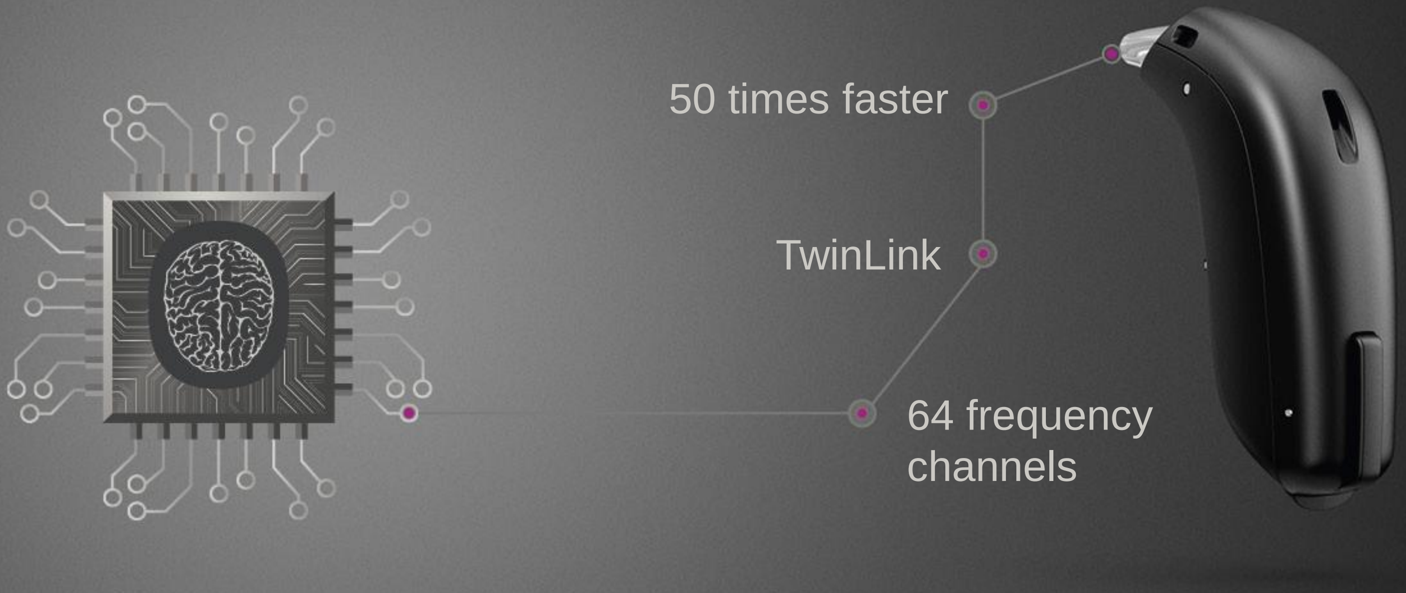
New Velox platform

Power and speed



New OpenSound experience

OpenSound Navigator

- Analyses the sound environment 100 times per second
- Balances individual sounds
- Attenuates remaining noise

Spatial Sound LX

- Total capacity: 320 kbit per second
- Exchange rate: 21 times per second
- Frequency bands: 4 bands

Proven benefits!

20% less listening effort

Remember **20%** more

30% better speech in speech understanding

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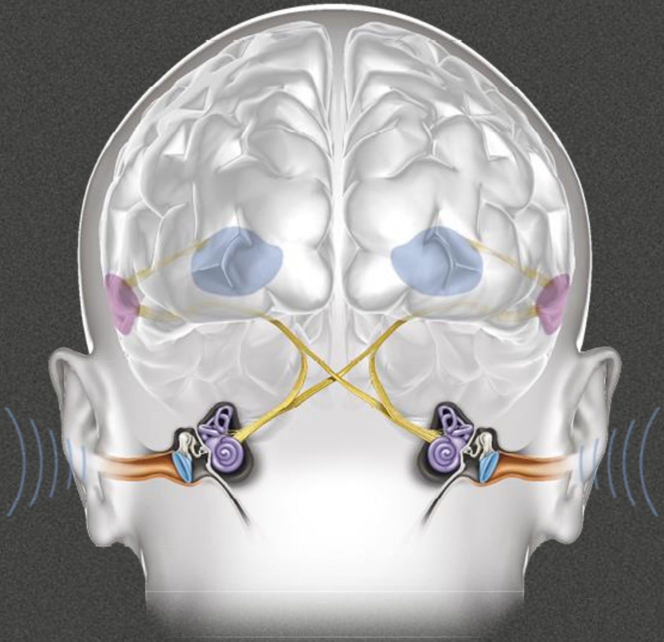
Hearing Care is Health Care™

Insufficiently treated hearing loss

Isolation

Accelerated mental decline

Higher risk of dementia



Treated hearing loss

Socially active

Stimulation of the brain

Keeps your brain fit

“This is the biggest innovation for many, many years – this will be perfect for my patients.”
Canadian dispenser

“I enjoy being able to continue to hear background noise and still be able to hear clearly the person I’m speaking with – even if it’s in a noisy restaurant.”
Female (user)

”The clearness of the sound is so natural, I find it as having natural hearing and no need for the hearing aids and ability to hear speaking from all quadrants of the table.”
Male (user)

“This is a fantastic product. We must ensure to make it known A.S.A.P. to the market!”
Italian dispenser

“I am an attorney and conducted a trial last week. My ability to listen and interact with witnesses was greatly improved, and my examinations were much more effective because I can hear all the words”
Male (user)

“Magnificent sound, I am now able to hear conversations from behind”
Male, 64 (user)

“Today, I´m letting the patient choose between two different instruments. With Opn, I will only recommend Opn – simply the best”
Canadian dispenser

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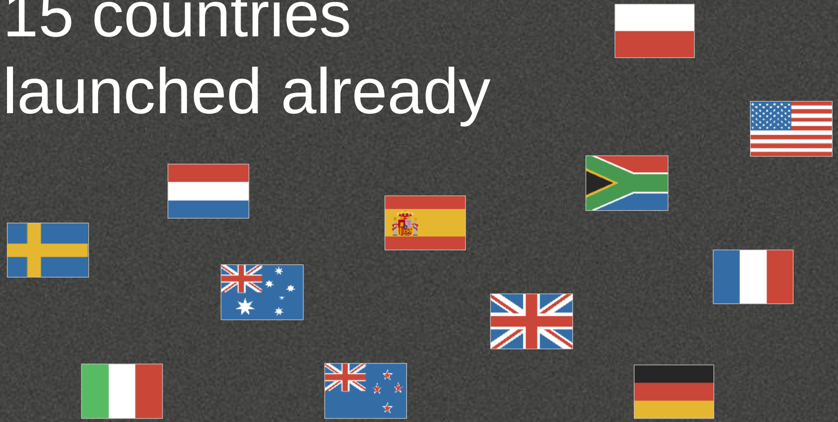
Full steam on shipment!

15 countries
launched already

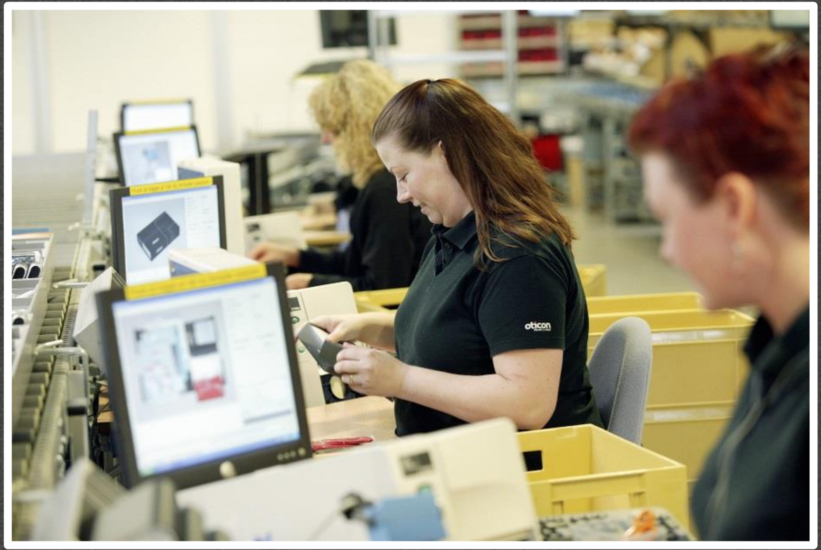


... and more coming
up in June

Canada

Denmark

Japan



Welcome to a new world of open sound experience

21 May 2016

BrainHearing – benefit for the patient

Thomas Behrens
Head of Audiology
Director, Centre for Applied Audiology Research

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Independent research activities 2015-2016

Centre for Applied Audiology Research

Supporting the 20+ scientific publications we have behind Oticon Opn

A BrainHearing solution for speech in speech and noise

From zero to when it really gets tough!

- Complex situations
  - Many sound sources
  - Moving around
  - Dynamically coming and going
  - Unpredictable
- This is where people with a hearing impairment have the largest unmet need!

Gatehouse & Akeroyd, 2006

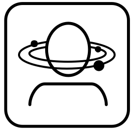
The hidden cognitive load of hearing loss

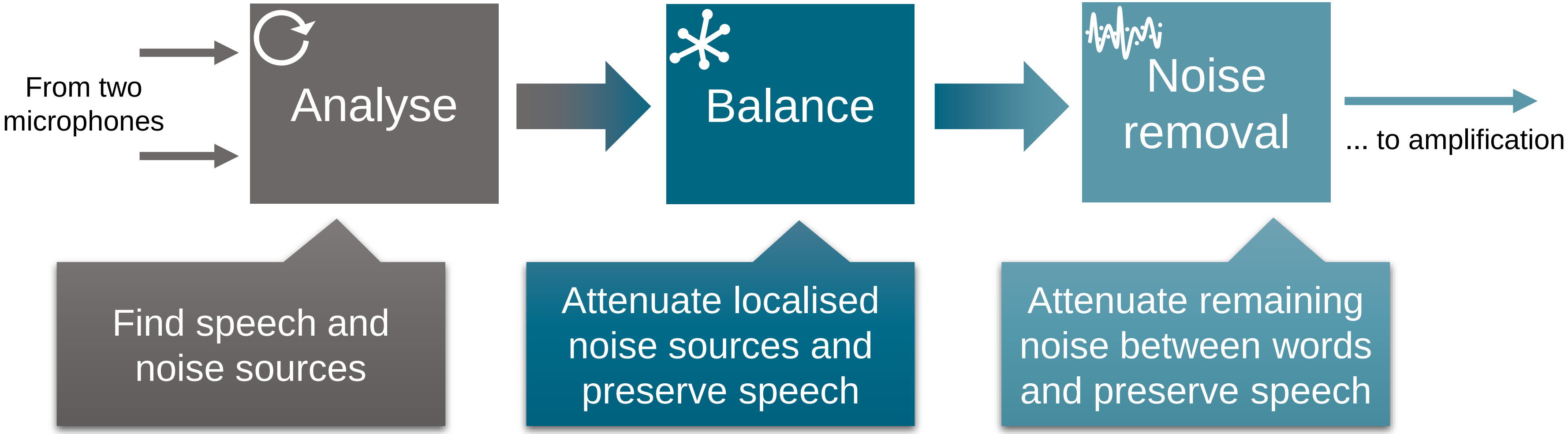
The path to improved ability to listen to speech in speech and noise

 Rönnberg et al 2013, Wendt et al 2015


BrainHearing™

OpenSound Navigator





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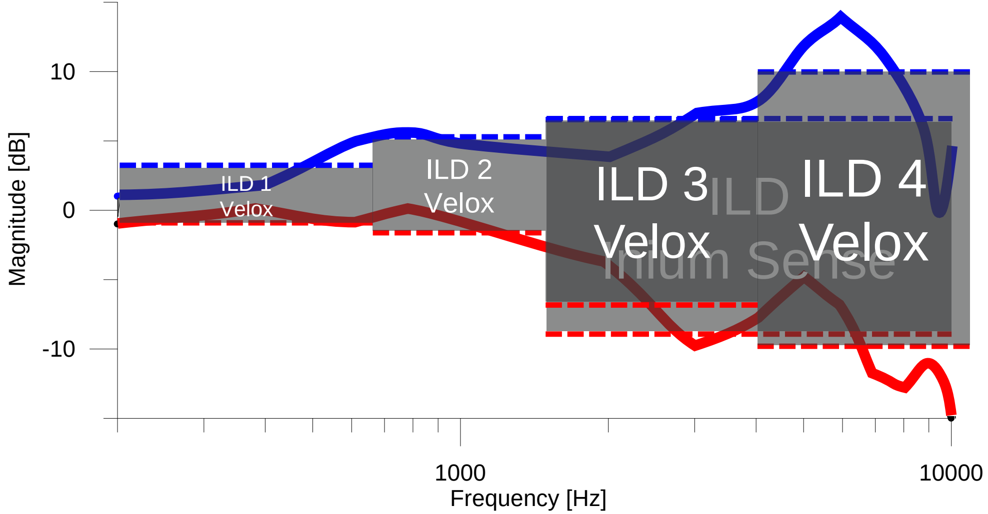
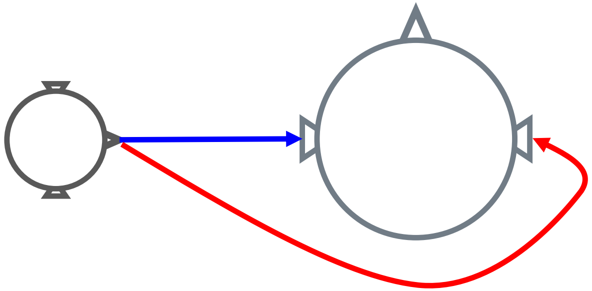
Spatial Sound^{LX}

Powered by TwinLink

- 200%+ increase in binaural communication capacity
  - Total capacity: 320 kbit/sec vs. 96 kbit/sec in Inium Sense
  - Exchange rate: 21 times per second vs. 5 in Inium Sense
  - Frequency bands: 4 bands vs. 1 band in Inium Sense
- OpenSound:
  - More accurate and updated information on where the sounds are coming from
  - Supports the **OpenSound** experience by making it easier to **locate** sounds





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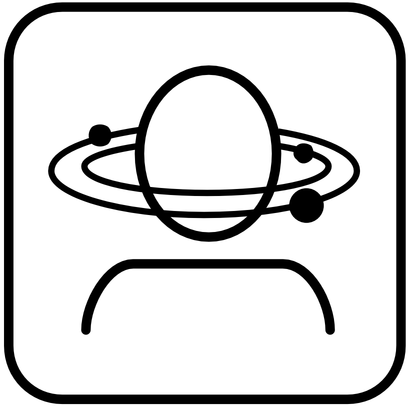
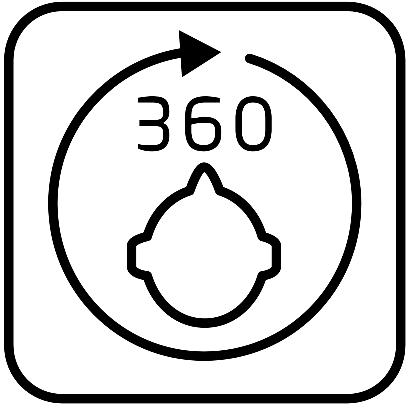
Platform and features to deliver OpenSound experience

Ensure that the elements of a sound scene continue to be accessible

OpenSound Navigator + Spatial Sound^{LX} = OpenSound experience





TwinLink
NFMI + 2.4 GHz

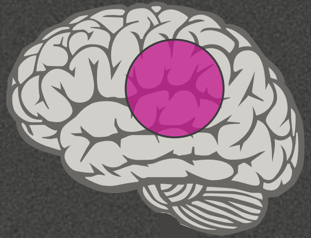
Oticon Opn has the following new or updated functionality

BrainHearing benefits 2.0

New objective and proven methods for hearing research

Pupillometry to document reduced load on the brain

Recall more from conversations to enrich social interaction



Speech understanding to continue to improve well-known benefits

The hearing aid that makes it easier on the brain

Tested in conditions representing everyday communication

20% less load on the brain*

helps remember 20% more**

and understand 30% more***

* Wendt et al 2016
** Ng et al 2016, Individual benefit will depend on prescription
*** Ng et al 2016

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Pupillometry study at Eriksholm

The first of six Opn research studies completed

Pupil reacts to changes in sympathetic nervous system (SNS)

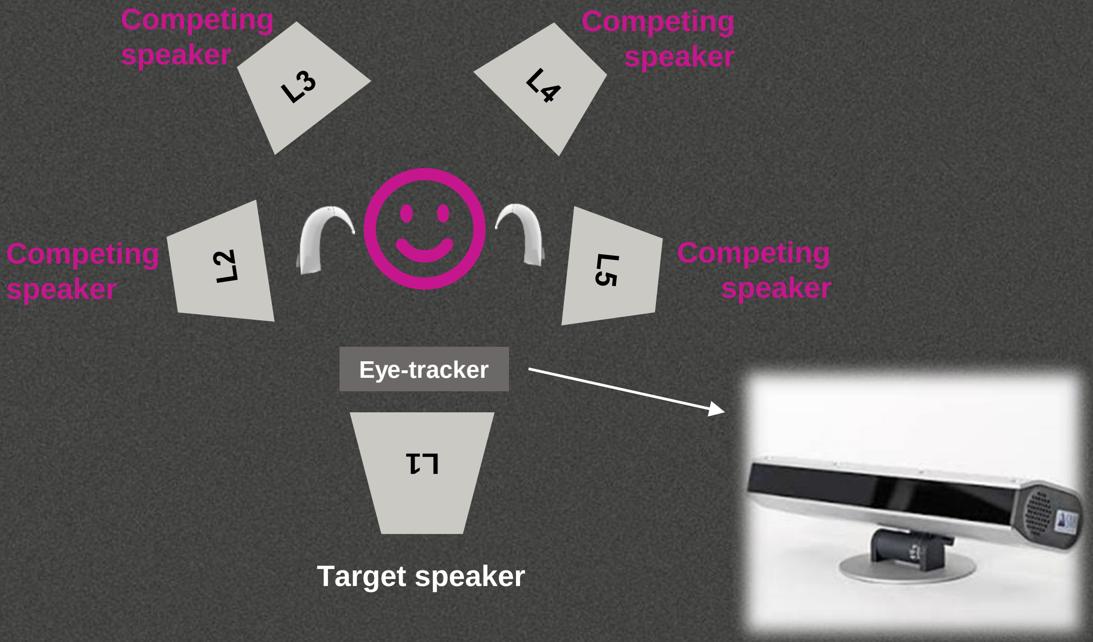
- A reaction due to perceived stressful conditions

Pupillometry in audiology and hearing science

- More challenging task indicated by a larger pupil (*Kahneman,1973*)
- Pupil size can quantify effort required for speech recognition in noise *(e.g. Kramer et al., 1997, Koelewijn et al., 2012, 2014)*
- Pupillometry is a sensitive and valid cognitive load index (Zekveld et al 2012)

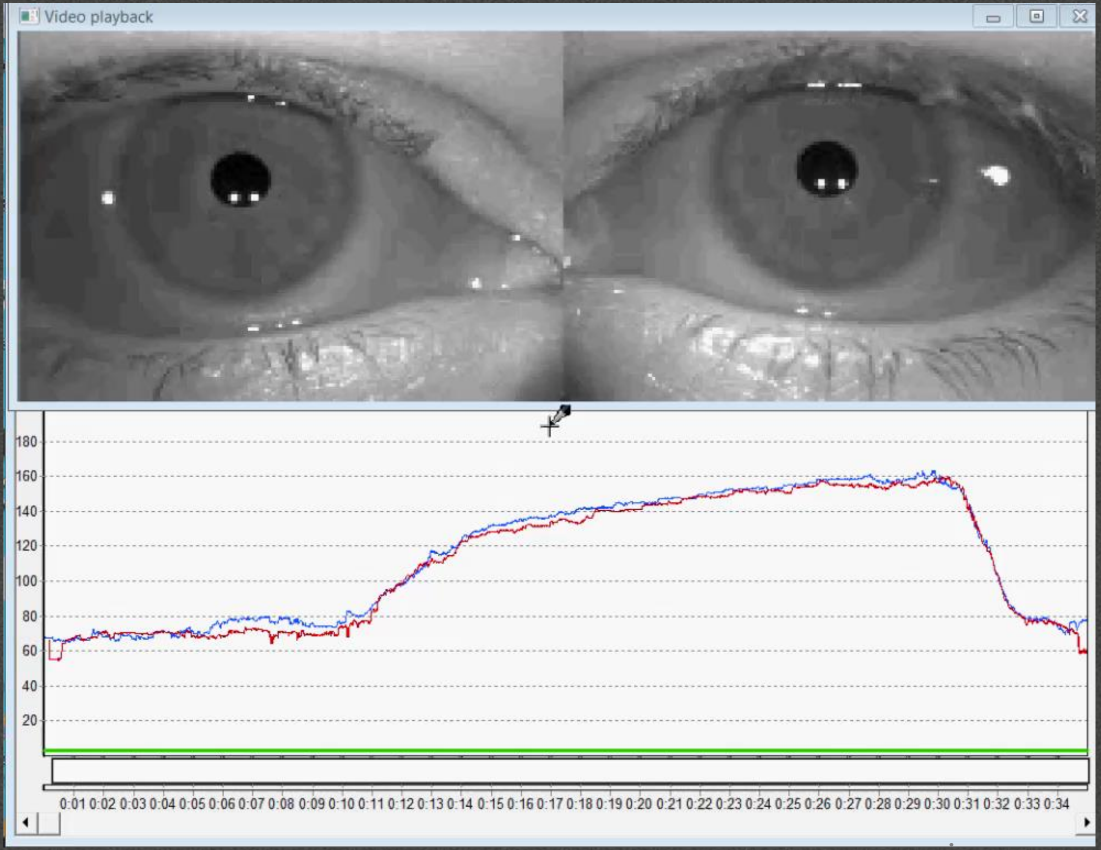
Set-up to mimic complex listening environment

24 people with hearing loss tested in the Cognitive Hearing Science lab at Eriksholm



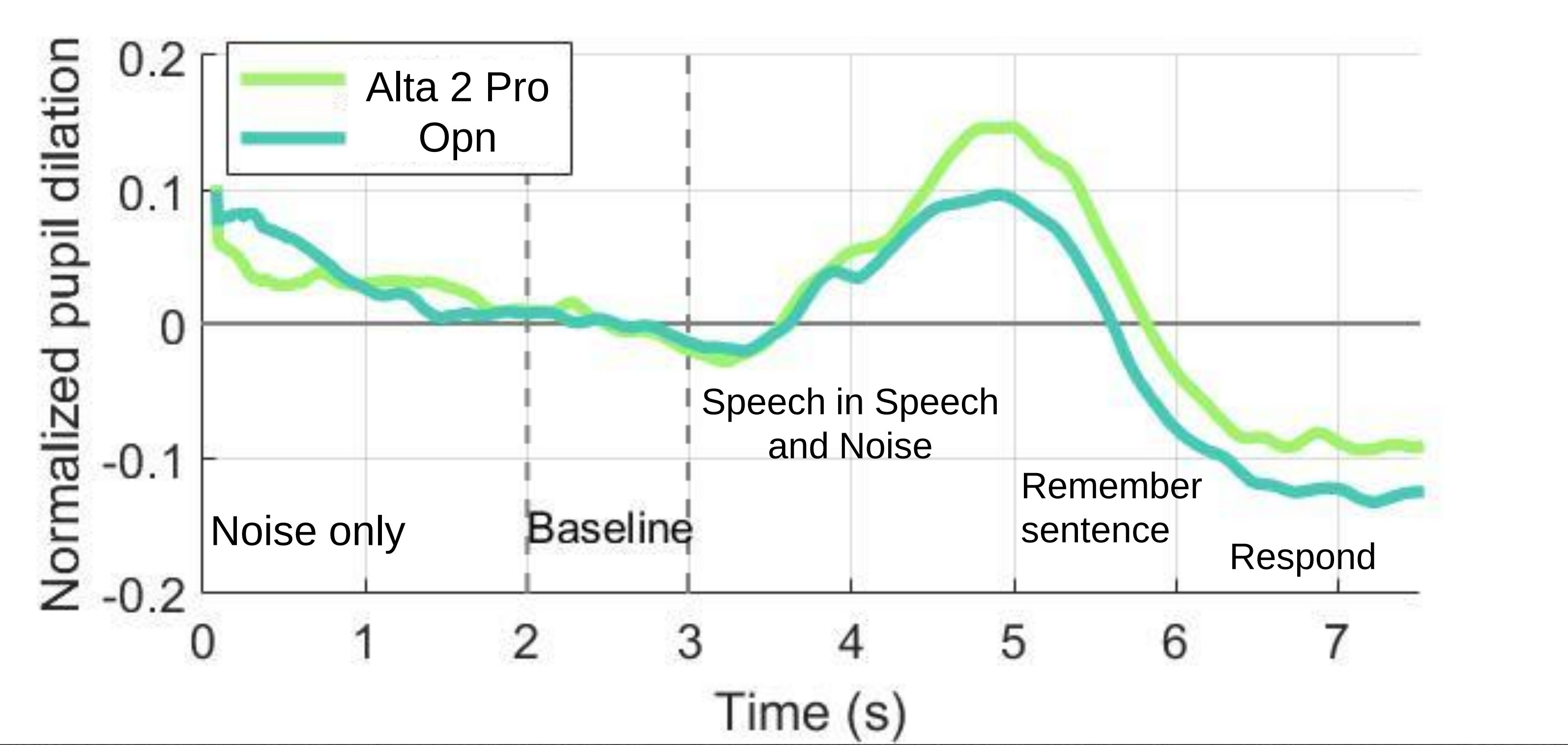
 Wendt et al 2016

Pupillometry for testing listening effort



Results: Opn versus Alta2

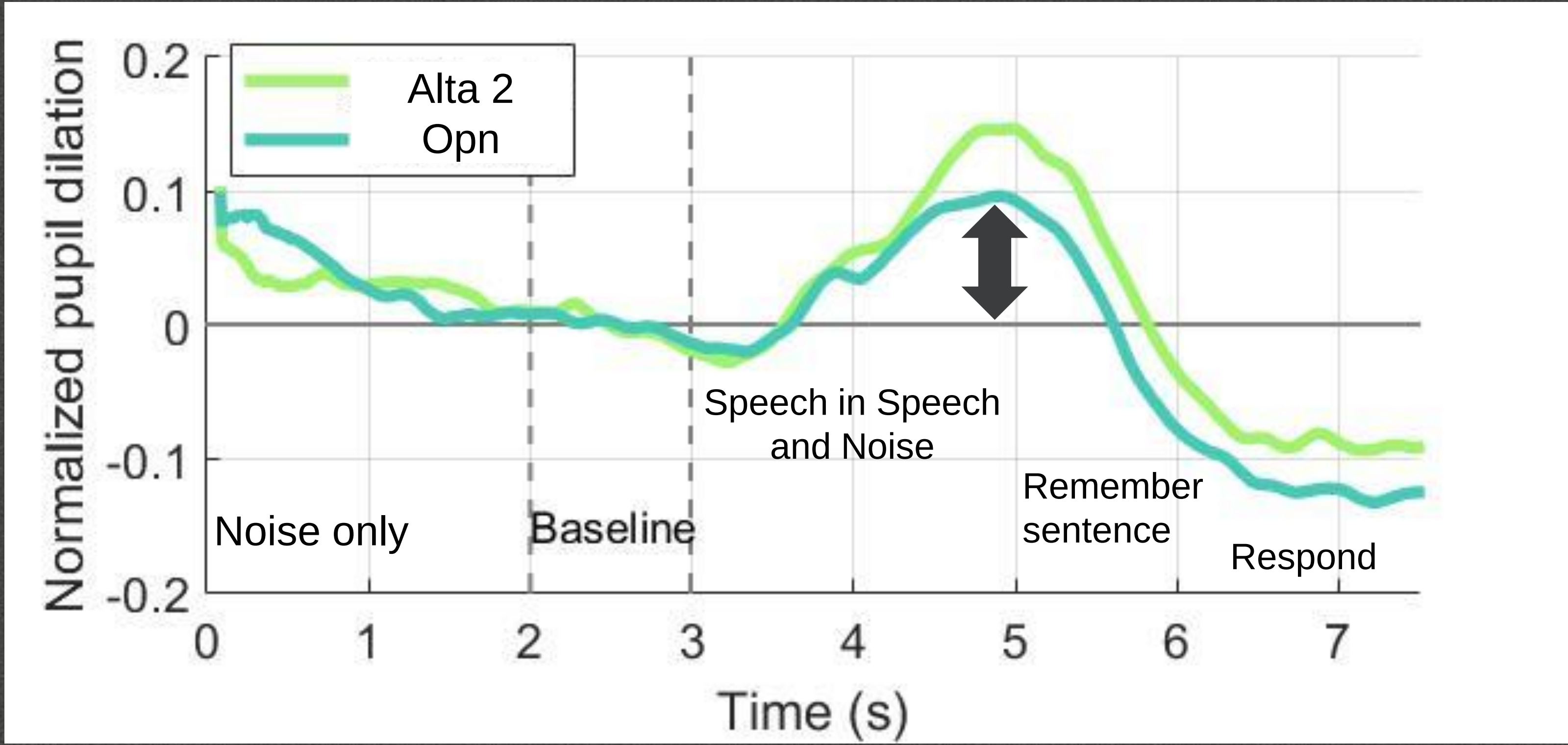
Speech understanding is at 95% or above during testing



Wendt et al 2016

Results: Opn versus Alta2

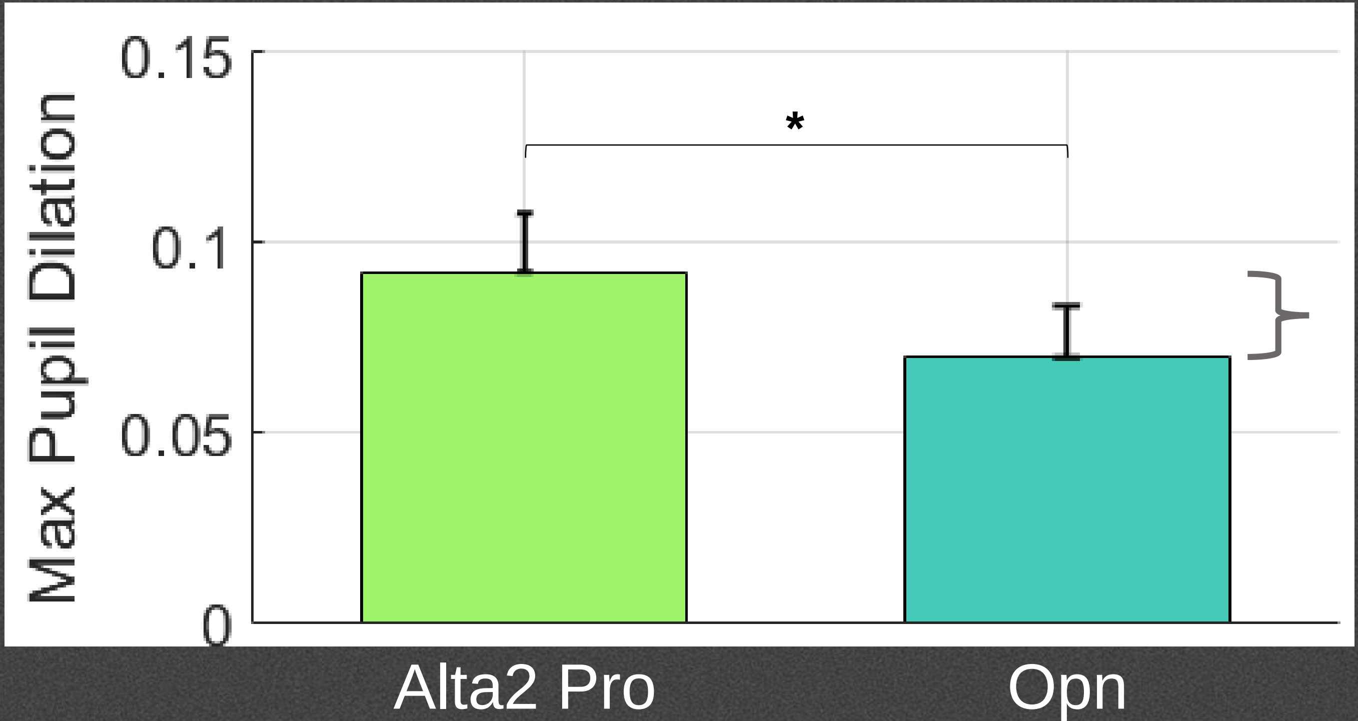
Speech understanding is at 95% or above during testing



Wendt et al 2016

Results: Opn versus Alta2 Pro

Speech understanding is at 95% or above during testing – 24 participants



Significant difference

28% reduction in pupil size

 Wendt et al 2016

First study showing noise reduction can improve recall!

The second of six Opn research studies completed

- Test conditions representing everyday communication

- Two types of situations tested:
  - Medium difficulty (95% speech recognition)
  - Increased difficulty (70% speech recognition)
- OpenSound Navigator on versus off
- 26 participants

Improved memory for speech heard in noise using a real-time noise reduction algorithm in hearing aids

Elaine H. N. Ng[1], Thomas Lunner[1,2], Jerker Rönnberg[1]

Background

Noise impairs speech understanding and has a negative impact on remembering the heard speech. Use of noise reduction signal processing in hearing aids may potentially improve memory for target speech heard in noise.

Ng et al. (2013, 2015) demonstrated that, using the Sentence-final Word Identification and Recall (SWIR) test, a hearing aid signal processing algorithm improved memory for speech heard in noise. In these two studies, auditory stimuli were pre processed with the signal processing.

The present study aimed to measure the benefit of a noise reduction algorithm implemented in hearing aids. All auditory stimuli were processed real-time. Another aim of the study was to compare the benefit in terms memory performance at different presentation levels (SNRs predicting 95% and 70% speech intelligibility in noise). These levels were chosen because the auditory stimuli would be presented in on average positive SNRs, at which everyday communication (ecological listening condition) takes place (Lunner et al., 2016; Smeds et al., 2015).

Methods

Participants

Twenty-six experienced hearing aid users of 38 to 69 years of age (mean=63.5, SD=6.5) with symmetrical sensorineural hearing loss of 37 to 66 dB HL (mean=49.1, SD=7.0) were tested.

Sentence-final Word Identification and Recall test

- All participants listened to 40 lists of sentences in the presence of a 4-talker babble. Each list contained 7 sentences.
- The task was to 1) repeat the final word after listening to each sentence, and after listening to all 7 sentences, 2) report back in any order, all final words in a list.

Presentation levels were individualized to optimize equality in listening effort across participants. Auditory stimuli were presented at SNRs predicting 95% (mean=4.0 dB SNR, SD=2.44) and 70% (mean=1.6 dB SNR, SD=2.22) speech recognition in 4-talker babble.

- Two signal processing conditions were employed:
  1) OSN Pinna (noise reduction off)
  2) OSN Max (noise reduction on)

Procedure

Listeners were seated in an anechoic room equipped with five loudspeakers on a circle with radius of 1 meter and the listener in the center. Speech stimuli were presented from the front (0°). Four tracks of one-talker babble were presented from loudspeakers placed at 90°, 135°, 225° and 270°.

Results

Figure 1. Percentage of correctly recalled words in OSN Pinna and OSN Max at both 95% and 70% speech intelligibility across all participants. In general, recall performance was significantly higher, F(1, 25)=15.2, p<0.01, in OSN Max (bars in red) than in OSN Pinna (bars in blue).

Figure 2. Percentage of correctly recalled words in OSN Pinna and OSN Max at both 95% and 70% speech intelligibility as a function of list position. Statistical analyses reveal that at 95%, OSN Max improved recall across all list positions. At 70%, similar results were found and in particular, the improvement was the greatest in primacy position (1st and 2nd final words).

Conclusions

➢ This is the first study showing that a real-time noise reduction algorithm significantly improves memory for speech heard in noise.

➢ At 95% speech understanding: When speech understanding approaches 100%, noise reduction improves memory across all list positions. This suggests that noise reduction frees up cognitive resources and reduces the adverse effect of noise on memory for heard speech.

➢ At 70% speech understanding: Such benefit was greatest in remembering words in early-list positions when speech understanding is relatively more challenging. Better performance in early-list positions corresponds to better encoding of words into long-term memory, which is an ecologically important aspect of speech understanding under adverse conditions.

LINKÖPING UNIVERSITY

SWEDISH INSTITUTE FOR DISABILITY RESEARCH
LINNAEUS CENTRE HEAD GRADUATE SCHOOL

Ng et al, 2016, manuscript under preparation

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Testing for recall from memory

SWIR (Sentence-final Word Identification and Recall)

- Listen to HINT sentence in background speech
- Repeat what you heard
- …
- Seven sentences in total
- Remember the last word
- …
- Recall as many last words as you can

Number	Word	Recalled from	Used for outcome
1	Garden	Long term memory	Yes
2	Mirror	Long term memory	Yes
3	Lunch	In transfer	?
4	Sister	In transfer	?
5	Train	In transfer	?
6	Box	Short term memory	Yes
7	Driver	Short term memory	Yes

Ng et al., 2013 + Ng. et al., 2015

Testing for recall from memory

SWIR (Sentence-final Word Identification and Recall) – 26 participants

- 25% improvement in long-term memory (70% condition, less in 95% condition)
- 5% improvement in short-term memory

Number	Word	Recalled from	Used for outcome
1	Garden	Long term memory	Yes
2	Mirror	Long term memory	Yes
3	Lunch	In transfer	?
4	Sister	In transfer	?
5	Train	In transfer	?
6	Box	Short term memory	Yes
7	Driver	Short term memory	Yes

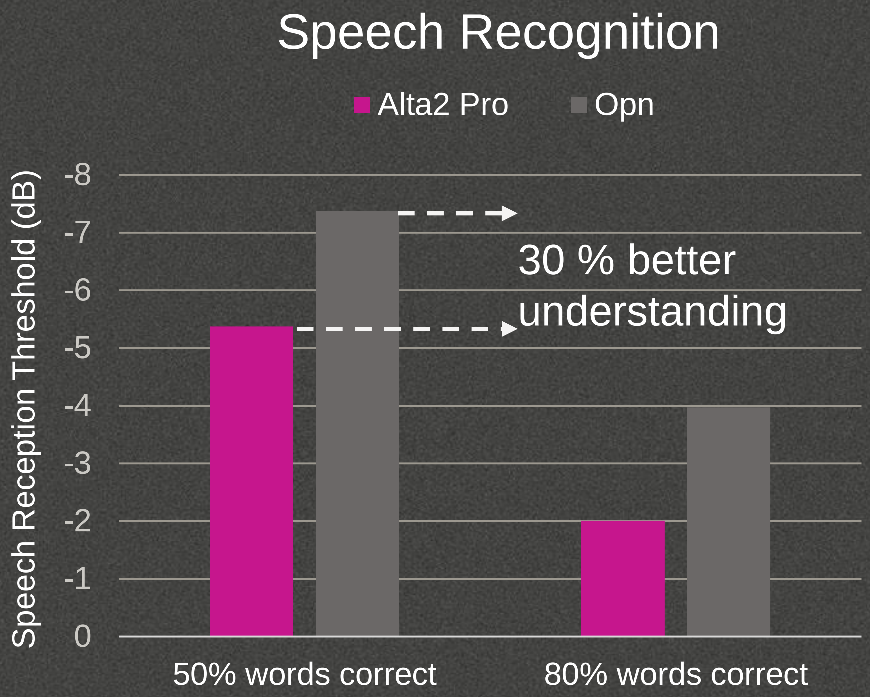
 Ng. et al. 2016

Speech understanding

Also improvements in standard measures of speech recognition

- Test representing everyday communication

- Two types of situations tested:
  - Difficult (80% speech recognition)
  - Very difficult (50% speech recognition)
- 26 participants



 Ng. et al 2016

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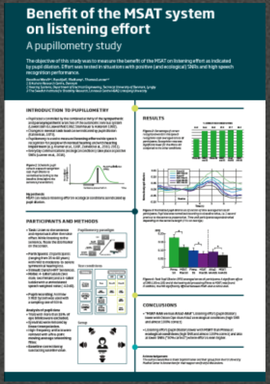
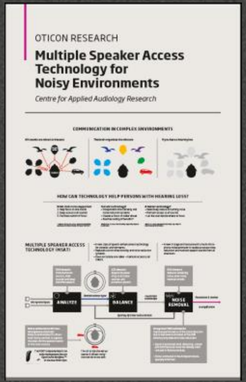
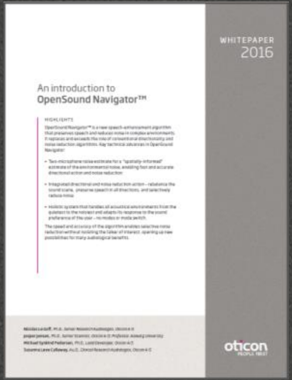
Evidence overview

Opn BrainHearing research





Opn audiology white papers



Acknowledgement: Ng et al, Kramer et al, Wendt et al, Le Goff, Weile

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The hearing aid that makes it easier on the brain

Clinically proven by scientifically recognised and published research methods

20% less load on the brain*

helps remember 20% more**

and understand 30% more***

* Wendt et al 2016
** Ng et al 2016, Individual benefit will depend on prescription
*** Ng et al 2016

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