

# Artificial Solutions

– Making Technology Think



# TODAY'S PRESENTERS

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**Lawrence Flynn**  
**CEO**



**Chris Bushnell**  
**CFO**



**Andreas Wieweg**  
**CTO**

# AGENDA

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1. Introduction to Conversational AI
2. About Artificial Solutions
3. Conversational AI Market Opportunity
4. Teneo Conversational AI platform
5. Scalable & Profitable Model
6. Growth
7. Financial overview
8. Experienced Management
9. Summary & Close
10. Appendix

# 01

## Conversational AI



**“By 2020, 500m+ consumers will use voice-enabled Conversational AI to purchase on digital commerce platforms”**

**Gartner**



**“By 2020, 25% of customer service and support operations will integrate virtual customer assistant technology”**

**Gartner®**



**“Conversational platforms will drive a paradigm shift in which the burden of translating intent shifts from user to computer”**

02

# About Artificial Solutions



# A CONVERSATIONAL AI PIONEER

- The world's most advanced, conversational AI platform – Teneo.
- Supports 35 languages, delivering millions of conversations annually.
- 104 staff<sup>1</sup> (inc. 52 AI, ML and linguistic experts).
- HQ in Stockholm, offices in 7 countries.
- Patents valued at \$96m<sup>2</sup>; further patents pending.

## Global Blue-Chip Clients



## Strategic Partners



# teneo

Conversational AI platform for enterprises  
that allows non-specialists to rapidly  
develop, deploy and analyze artificially  
intelligent conversational applications

# LEADING TECHNOLOGY COMPANIES TO WATCH



- In the recent independent “Emerging Technology Study” by research group ETR, Artificial Solutions was listed as a “company to keep an eye on”.

# HISTORIC RECORD & FUTURE VISION

## Investment

- Scope invests in Artificial Solutions.
- Huge 'data-lake' of human-machine language data built.
- European and Nordic heritage from start – key differentiator & core to multilingual approach.

## Transformation

- Lawrence Flynn joins as CEO.
- Company pivots to product-led conversational AI software business.
- Teneo developed by some of the best computational linguistic talent in Europe.

## Commercialization

- Expansion into US with new office in Silicon Valley.
- Strong focus on early-adopters in global enterprises.
- Addition of new-name, flagship accounts to the portfolio.

## Growth

- New customers with '2nd generation' projects for conversational systems secured.
- Global partner network endorse technology & deliver scalability

2008

2010-14

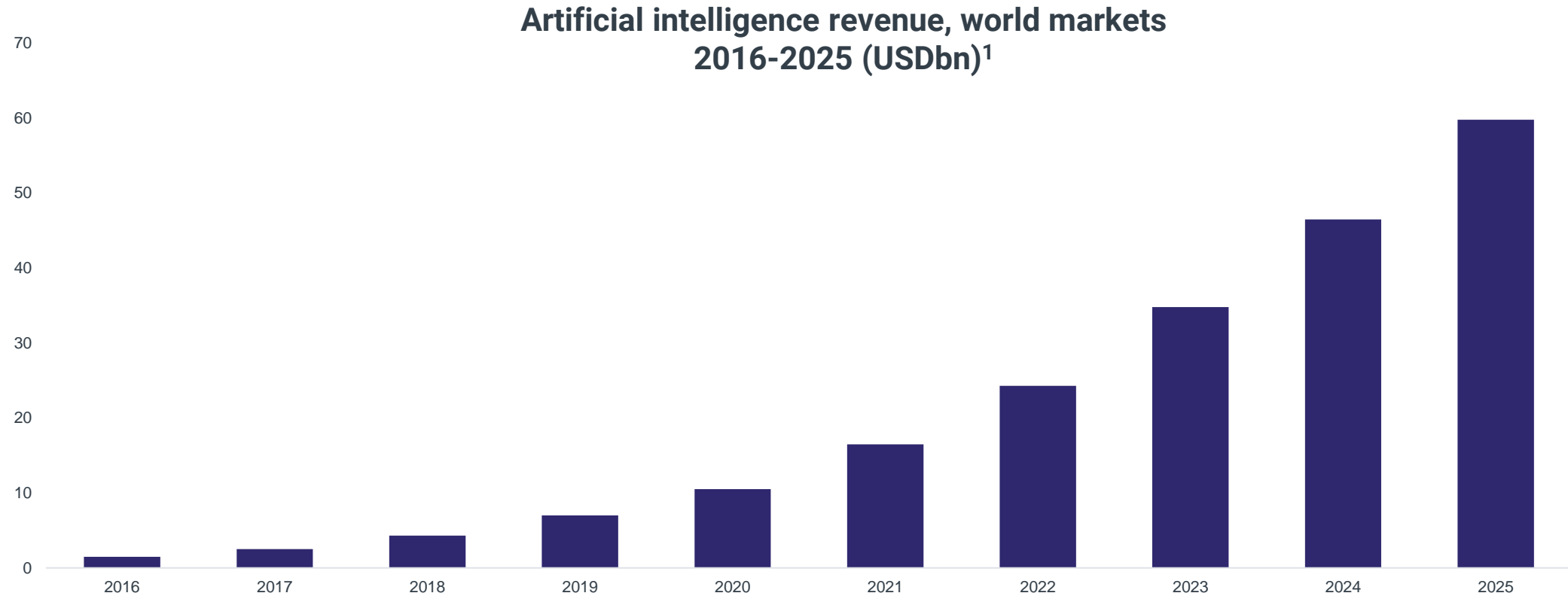
2015-18

2019-

03

# Conversational AI Market Opportunity

# MARKET OPPORTUNITY FOR CONVERSATIONAL AI





**“Overall global intelligent virtual assistants market set to reach \$22.3bn by 2025<sup>1</sup>, with 38.8% CAGR 2017-23<sup>2</sup>”**

# DEMAND DRIVERS

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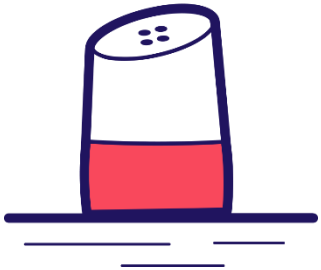
## **Customer expectations are changing.**

Increasingly, they demand conversational understanding.



## **Data is the new oil.**

Conversational data is the king of all data.



## **Amazon Echo & Google Home remove hurdles to user acceptance.**

Not designed as enterprise strength platforms; they do not easily deliver cross-device capabilities and data ownership is a major concern.



# BENEFITS

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**Counter the Customer  
Disconnect**



**Reduce cost and  
optimize resources**



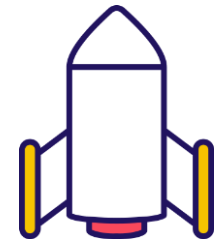
**Improve the Customer  
relationship**



**Derive actionable  
insight**



**Deliver individualized  
service to everyone**



**Vital market  
differentiation**

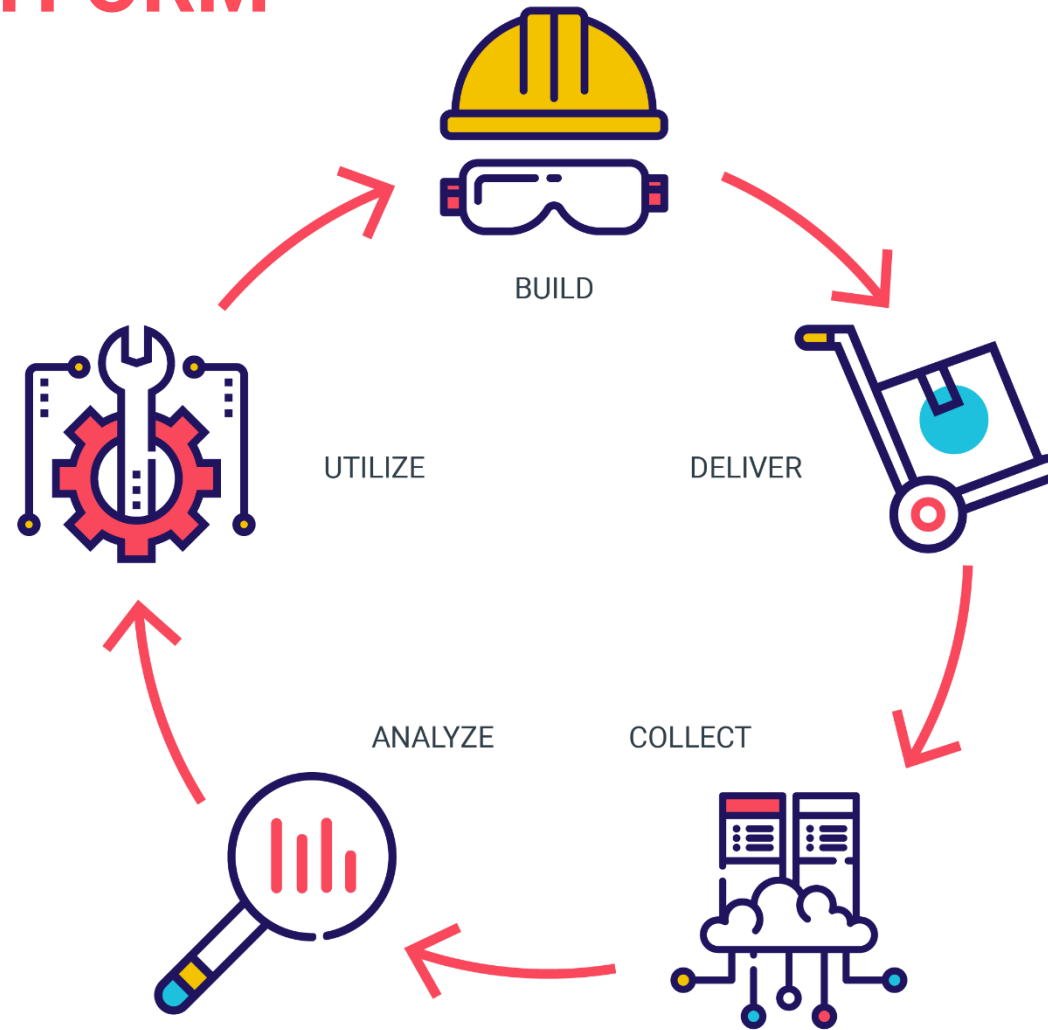
04

teneo

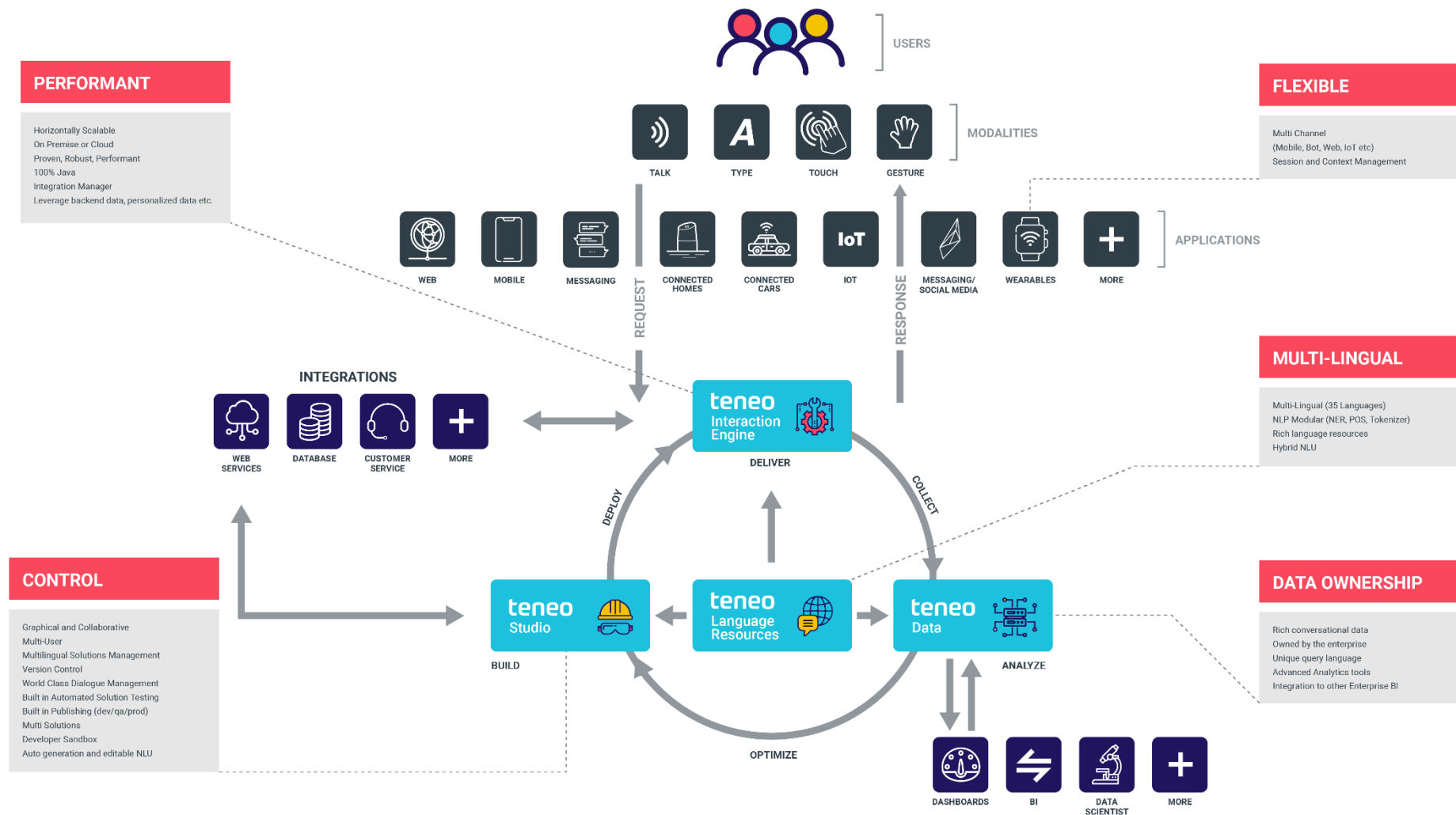
**Conversational AI for Enterprise**

# THE TENEO PLATFORM

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# TENEO ARCHITECTURE



# TENEO'S FOUNDATIONS

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## teneo Studio



- Easily create conversational apps for vast range of use cases
- Utilizes unique hybrid approach to building conversational solutions

## teneo Interaction Engine



- The 'humanlike' brain of the conversational application
- Uses rules and advanced linguistics to decide replies and actions

## teneo Data



- Analytics and reporting application provides insights into customers
- Track response and behaviour from analysing customer conversations

## teneo Language Resources



- Multilingual capabilities key - 35 languages already supported, with ability to scale
- Machine learning combined with expertise of experienced linguists, used to map out the structure of languages

# TENEO PROTECTED THROUGH IP PORTFOLIO

Five key patents valued at USD96m<sup>1</sup> underpin the majority of Artificial Solutions' product site

<b>Network of Virtual Assistants</b>	<p>A system for the operation of a virtual assistant (VA) network, comprising a plurality of VAs and related brokers operating on network-connected devices, wherein the VAs receive user requests and send these to VA brokers which delegate these to other VAs for fulfilment.</p> <p>(Patent nos 9172747; filing 12/11/2014; US)</p>
<b>Teneo: Core</b>	<p>The system comprises a dialogue interface module, a natural language engine, a solution data repository per domain and language, and a plurality of flow elements and rules for managing interactions with users, and an interface software model.</p> <p>(Patent nos 8346563; filing 30/12/2012; US)</p>
<b>Teneo: Development</b> <i>data, training, automation</i>	<p>Conversational AI applications enable users to interact with technology in a humanlike manner. This patent covers the system, methods and tools to build, test and optimise such applications in a semiautomatic manner utilising usage data in the form of transaction log files.</p> <p>(Patent nos 8892419 &amp; 8903711; filing 04/12/2012; US)</p>
<b>Teneo Data</b> (Patent pending)	<p>A system for natural language (NL) analytics, comprising a NL application data importer, a NL application data augments that enriches the data, and an analytics component which provides a means of querying and analysing structured and unstructured data.</p> <p>(Patent pending; filing 13/05/2015; US)</p>
<b>Teneo Hybrid Methodology</b>	<p>A system for combining both linguistic and machine learning approaches for developing, optimizing and executing conversational interaction applications.</p> <p>(Patent nos 10068174; filing 04/09/2018; US)</p>

# WHAT MAKES TENEO UNIQUE?

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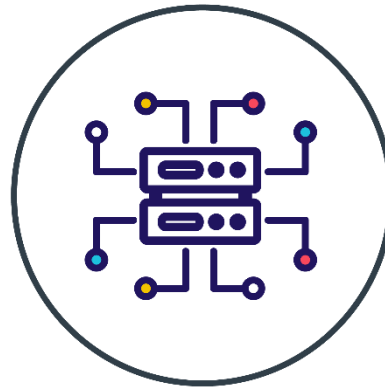
## Conversational

Delivers a humanlike, intelligent user experience



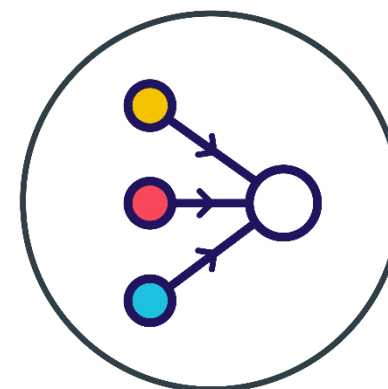
## Enterprise

Teneo is the only platform designed for enterprise use



## Hybrid

Uses linguistic and machine learning for optimal performance



## Data

Leverage conversational data to achieve a competitive edge



## Proven

Award winning and already implemented by enterprises worldwide

# DATA

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Conversational Data  
is the 'New Oil'



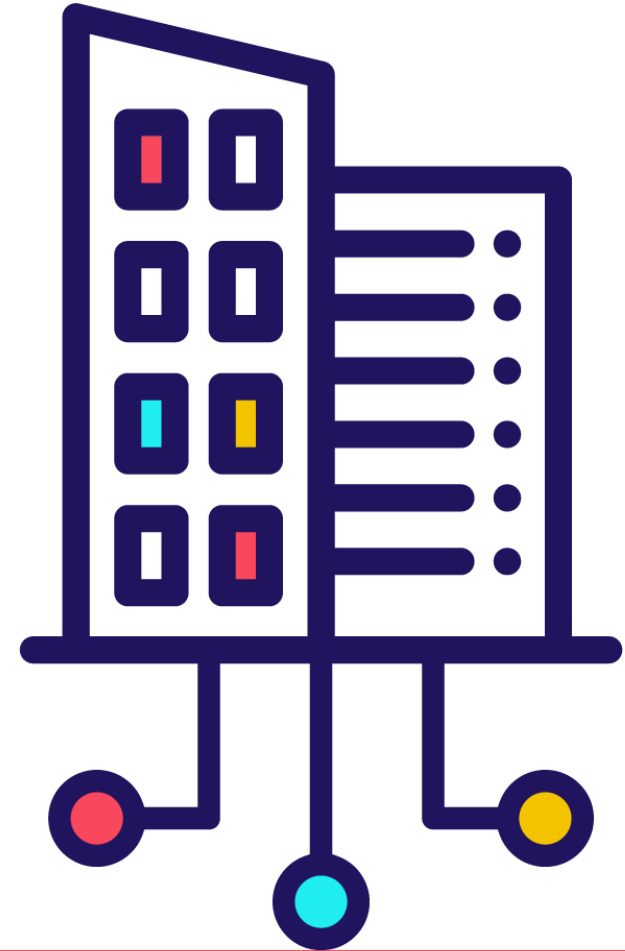
Data Privacy and Security is critical.  
Core feature in Teneo



# WHY ENTERPRISES USE TENEIO

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- New channel for customer engagement
- Adds differentiation
- Increases customer satisfaction
- Reduces churn
- Drives revenues
- Reduces costs

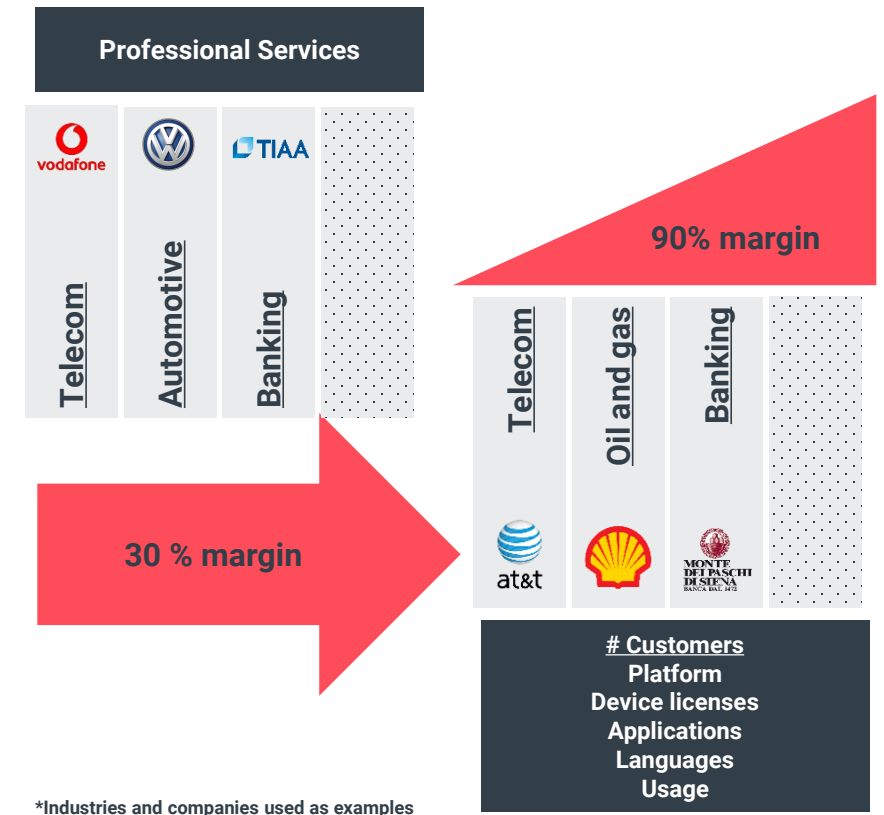


# 05

## Scalable and Profitable Model

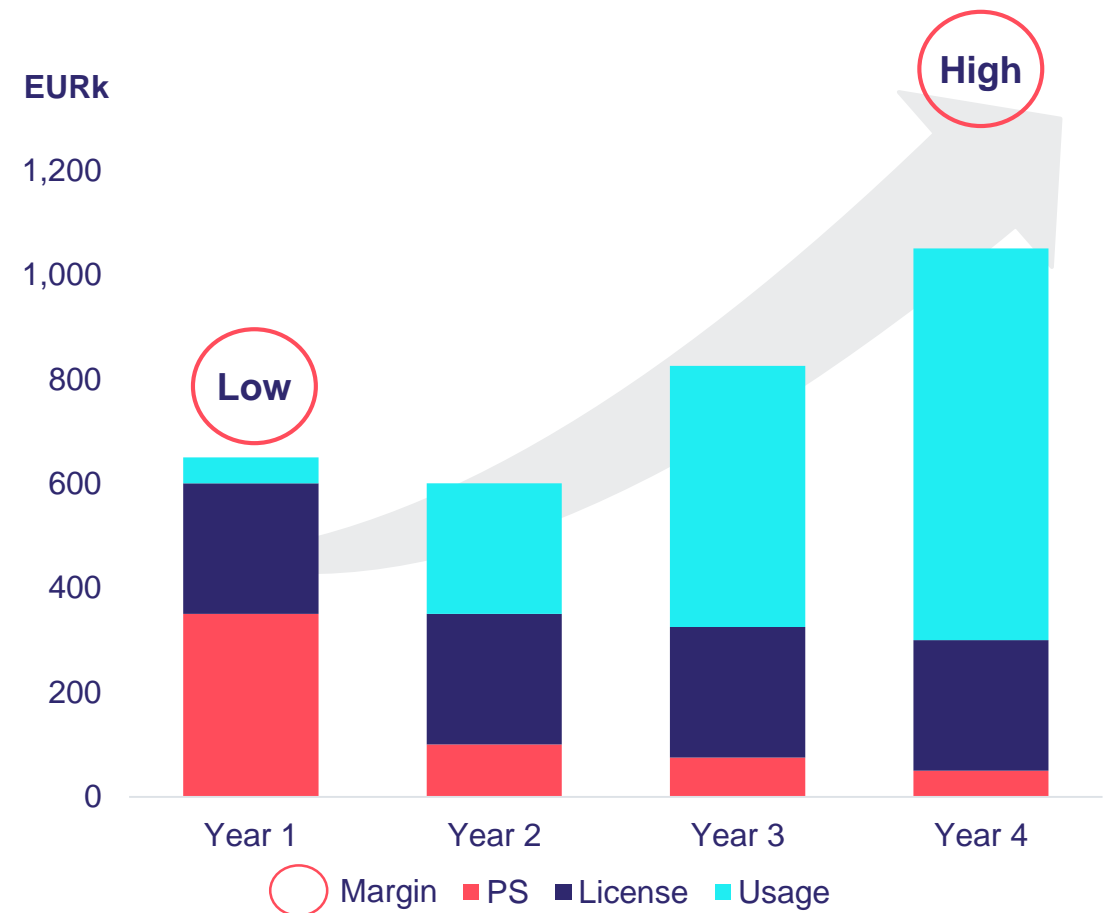
# POSITIONED FOR RAPID GROWTH

- Highly **scalable** and **profitable** business model.
- **Utilize partner channel** for sales and services to drive fast growth.
- **35 languages** differentiates and provides opportunity to **target new geographies**.
- During 2018-20, revenue will shift to **higher gross margin license/usage fees**.
- **Usage fees grow** as client usage increases.
- **License and usage fee grow** as each client implements **new use cases** (additional channels, languages, applications).



# LEVERAGING THE PLATFORM FOR SCALABILITY

- The initial installation of the platform is a low gross margin business rolled out with the help of partners
- After the lower gross margin of the revenue decreases, the allocation is skewed towards the higher margin license and usage fees
- After the initial investment, companies often add services and products with high margins
- Once the Teneo platform and its additional offerings have been implemented, customer stickiness is achieved



# 06

## Growth

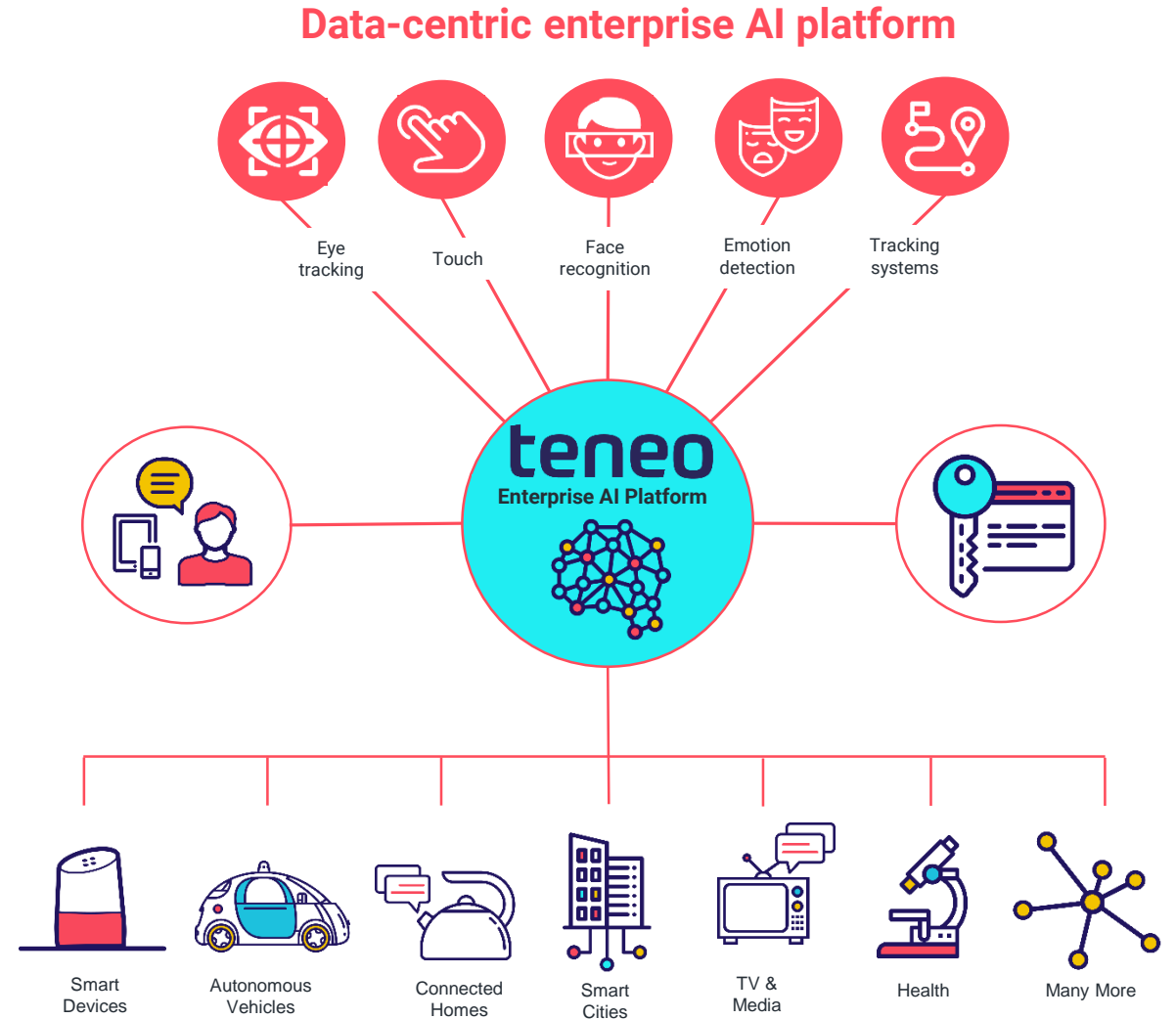
# STRONG ORGANIC GROWTH PLAN

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- **Lighthouse accounts secured:**
  - Expand within same verticals.
  - Across similar use-cases.
- Partner channel of **global SIs** and **digital agencies** established.
  - Global sales channel, **direct access to C-level contacts** in target enterprise accounts.
  - Services delivered through partners providing reliable scalability.
- Model underpinned by **proven technology**.
- Majority of **R&D costs complete** - when revenue grows, dev costs will remain flat.

# THE FUTURE AI POWERHOUSE

- Conversational AI is the 'face of AI'. Teneo is **already proven** in this sector, delivering enterprise-strength solutions.
- Conversational AI is critical but only part of the story:
  - The next step will be to **extend Teneo**, turning it into a **full-stack AI Platform** for enterprises where AI assets can be seamlessly integrated.
  - This will be achieved through **in-house development, technology partnerships** and **strategic acquisitions**.
- Artificial Solutions will become the Nordic-based **AI powerhouse**:
  - Positioning Teneo in the **hyper-growth** AI sector.
- Artificial Solutions will **differentiate** through rigorous focus on the enterprise.



# 07

## Financial overview



# REVENUE MODEL

## Professional Services

- Professional Services is priced at the number of days multiplied by the applicable rate(s)

## Licenses

- License fees for a specific term, typically 1 to 3 years, and relates only to the Teneo platform
- Includes Support and Maintenance service with a price of 17% of license fee but does not include hosting support

## Success based usage fees

- Relate to customer's business – scale as usage is driven by successful outcomes with fees driven by "Sessions per annum"

### Services



Professional Services (direct or through partner)

### Licenses



Annualised Teneo License



Annualised Hosting Fee



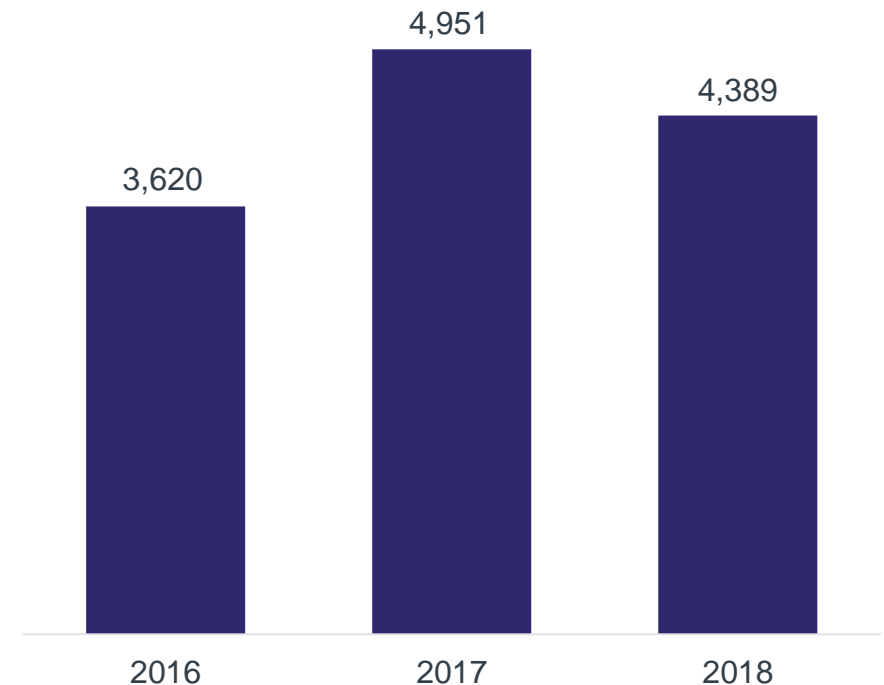
Support & Maintenance

### Usage



Success based usage recurring revenue model

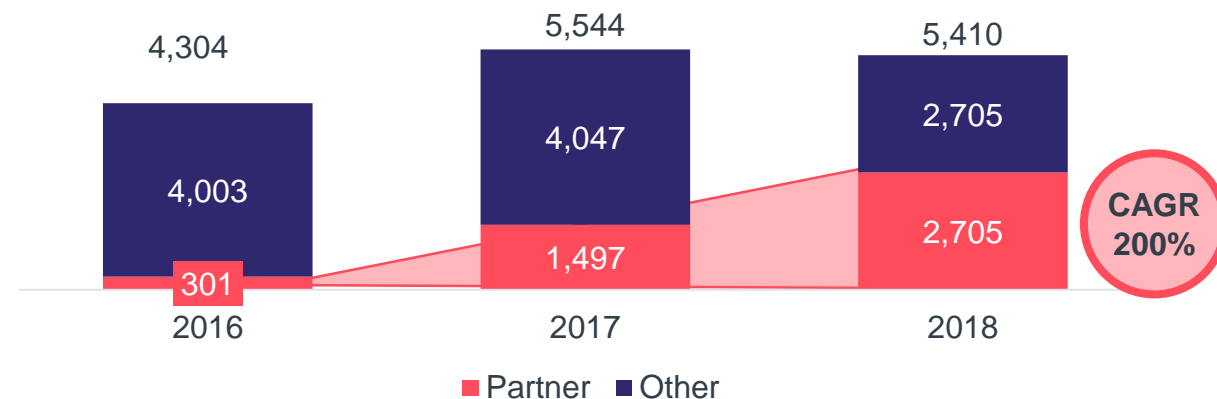
## Net sales (EURk)



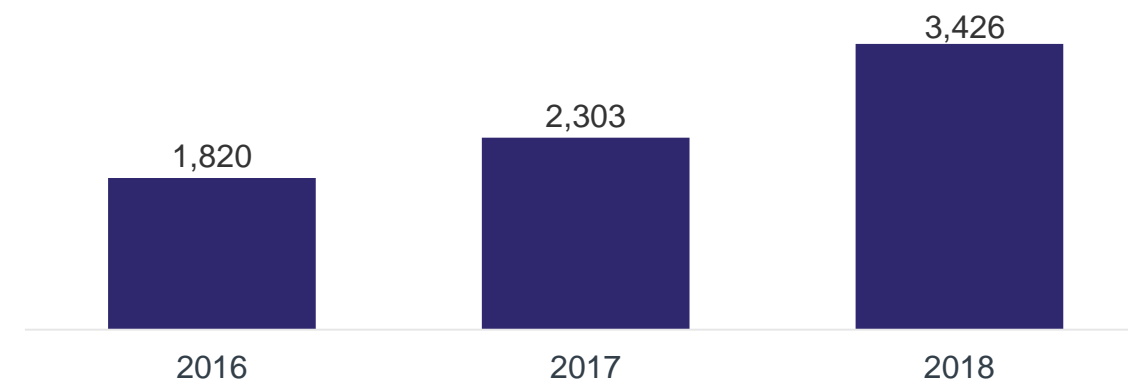
# ORDER INTAKE AND BACKLOG

- Order intake includes the value of **contractually committed orders** received from customers during the period
  - As the number of partner's grow, the share of order intake increases
  - The partner share expects to increase in the upcoming years and due to their reach, the number of received committed orders will most certainly grow
- Order backlog includes the value of **contractually committed orders** received from contractors which have **not yet been recognized as revenue**
  - Provides a projection for future revenues
  - Preferred measurement that reflects the business' future performance

Order intake (EURk)



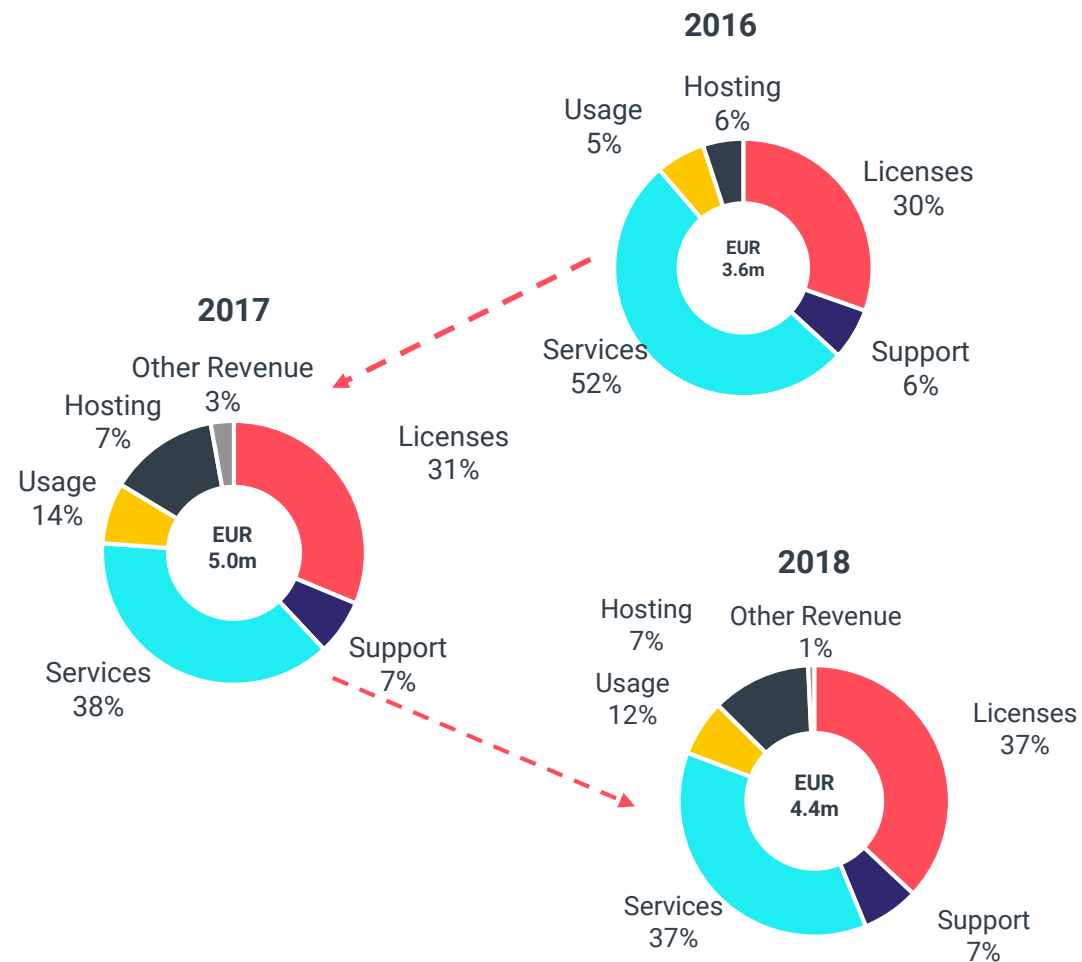
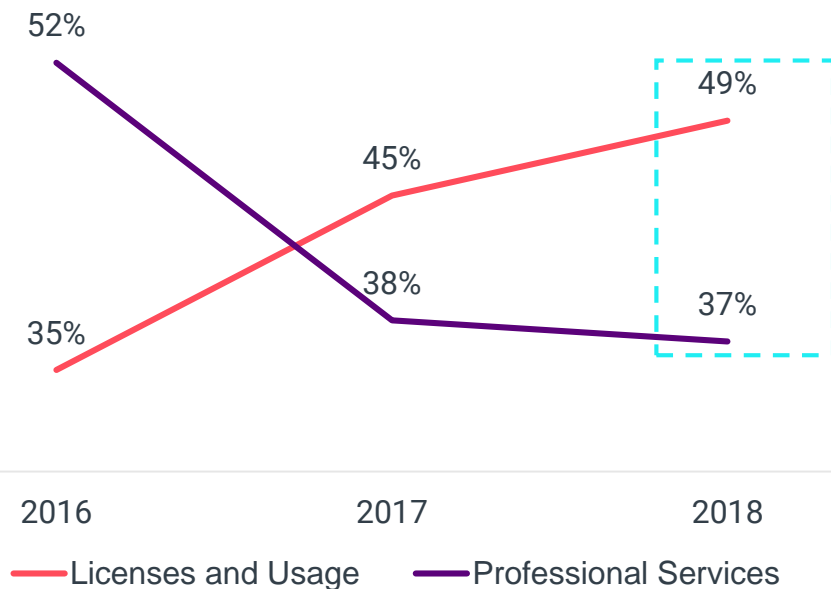
Order backlog (EURk)



# INCREASING PROFITABLE REVENUE TYPES

Clear shift towards more **profitable revenue** types boosting gross margin YoY

Share of revenue (%)



# CUSTOMER CONCENTRATION

Artificial Solutions catering to customers in several industries



Retail



Financial services



Smart homes & IoT



Automotive



Telecom



Energy & Utilities

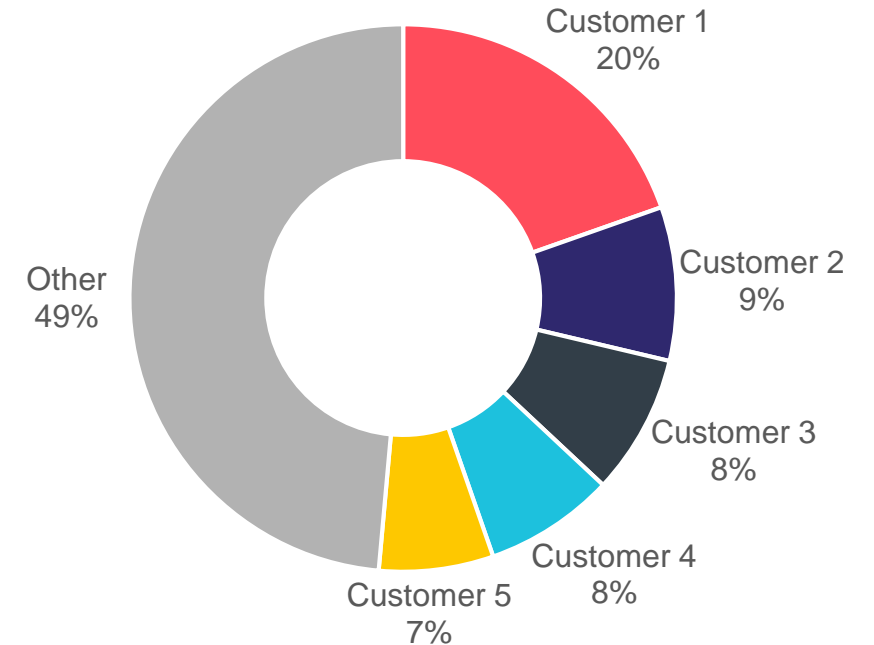


Travel & Leisure



Entertainment

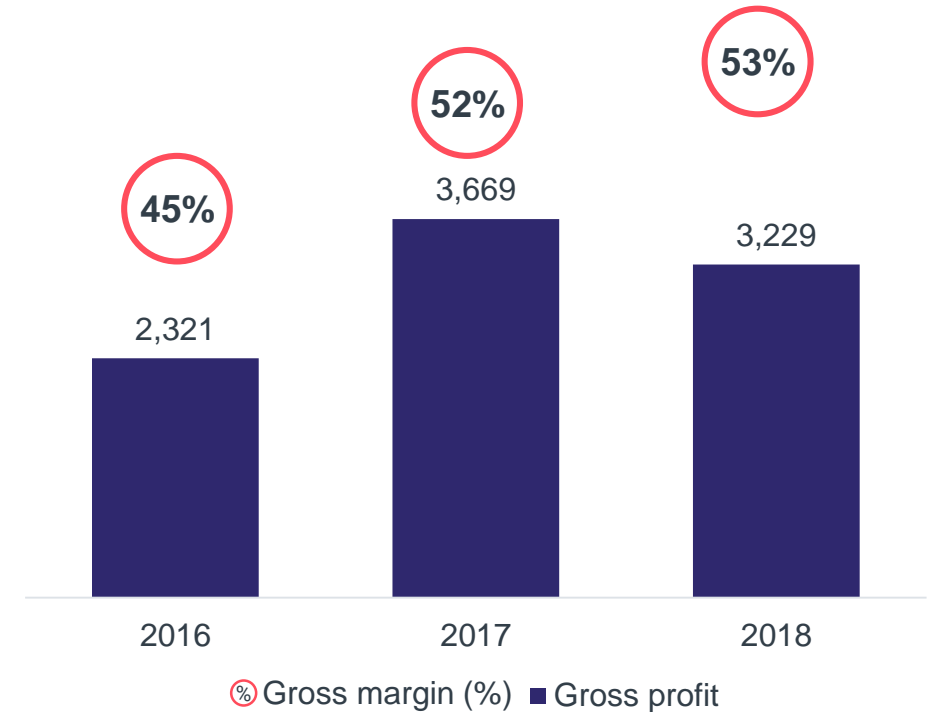
Top 5 largest customers, 2018



# PARTNER FOCUS BOOSTING GROSS MARGIN

## Reasons for increase in gross profit

- ① Increasing share of high margin revenue
- ② Increasing sales through partners
  - The **reach** and **scalability** achieved through the partner channel drives an **increased gross profit** and **higher margins**
    - Lower cost associated to sales through the partner channel
    - Possibility to further increase gross profit and gross profit margin through a larger Partner network, which is in focus



# PARTNERSHIP VS DIRECT SALES

## Partner sales channel

- **Shifting sales model to partners** as a strong complement to the traditional direct sales model
  - Artificial solutions ensures **scalability** by including partner sales channels
  - Ensures easy **geographical expansion** through global partners at no extra cost
  - Quality **leading partners** validate the Teneo software
  - Direct sales will still support order intake going forward

## Trusted Partners

NIIT

KPMG

accenture  
High performance. Delivered.

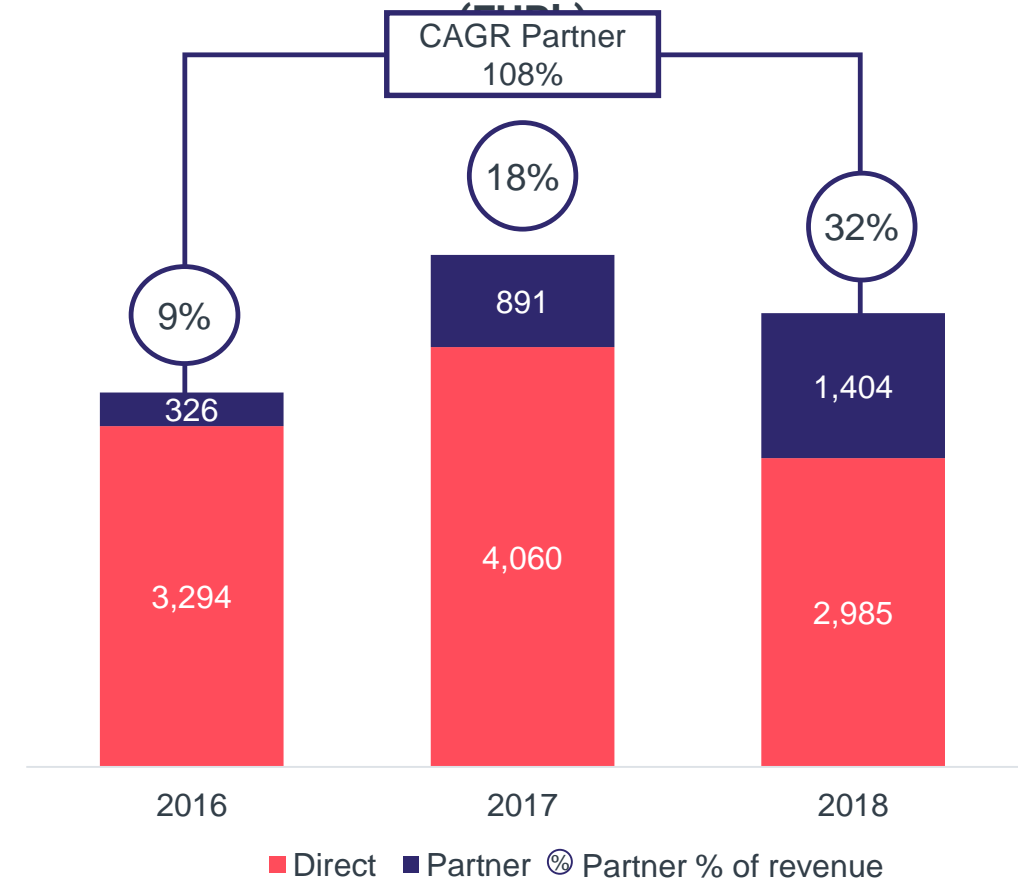
Deloitte.

Cognizant

Teleperformance  
each interaction matters

SAPIENT  
RAZORFISH

## Partner share of revenue,

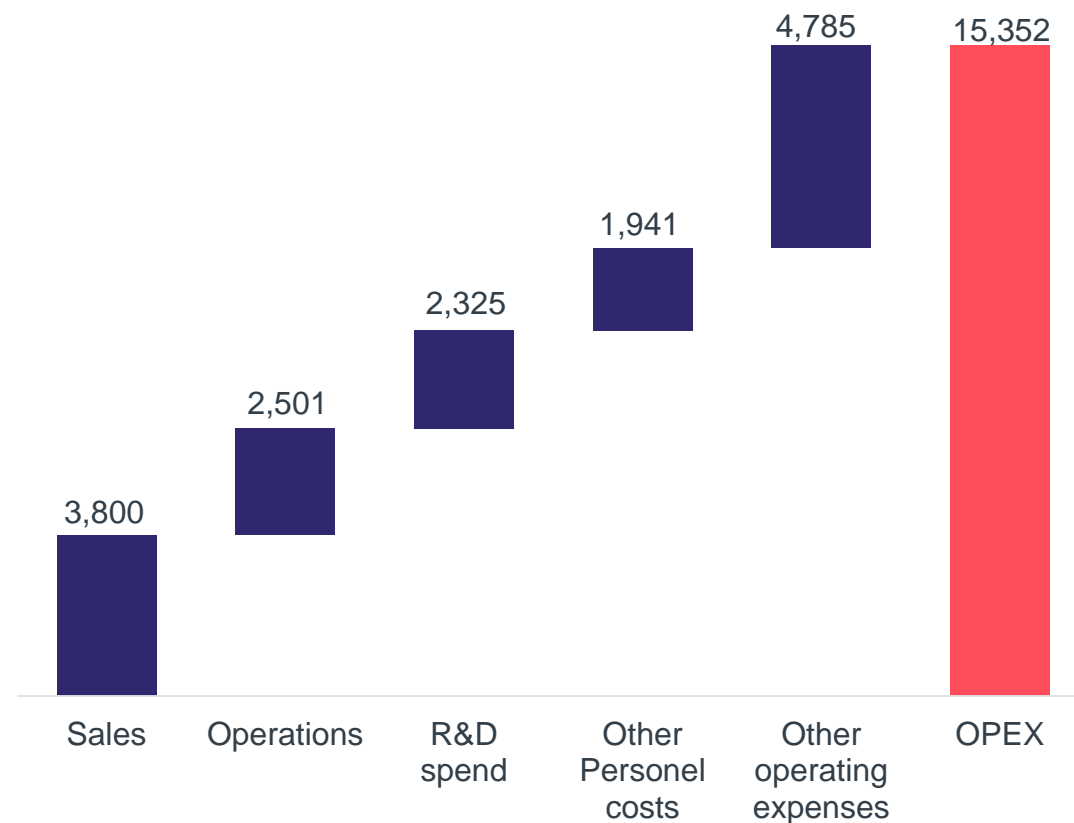


# OPERATING EXPENSES

## Comments

- An increase in personnel costs due to a change in mix of staff and new hires
- The raise in costs of existing and new personnel is a result of the need of building sales and partner channels and boost market awareness
- New offices in Chicago and Barcelona

## OPEX (EURk), 2018

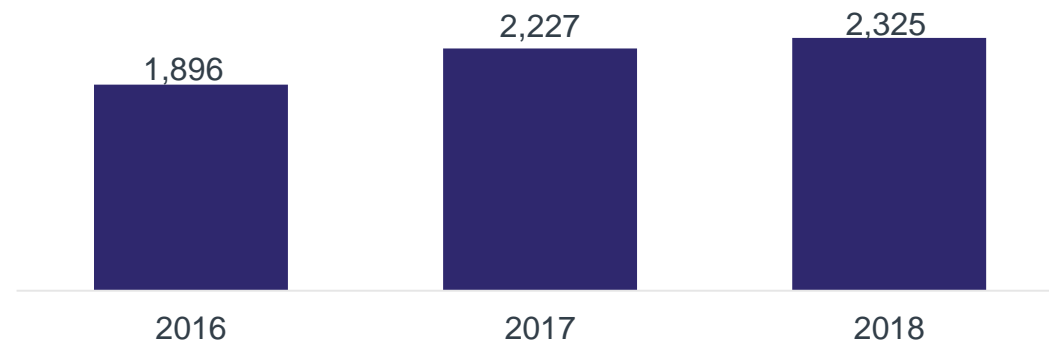


# R&D SPEND

## Comments

- Majority of **R&D costs complete**
- An increase in investments for R&D operations 2018 to facilitate **the continuing improvement of the Teneo Platform**
- Additional investments for 2019 mainly consisting of R&D financed through **funds currently available**
- Artificial Solutions has its own dedicated organization for R&D with **highly experienced software engineers and data specialists**

Total spend R&D (EURk)

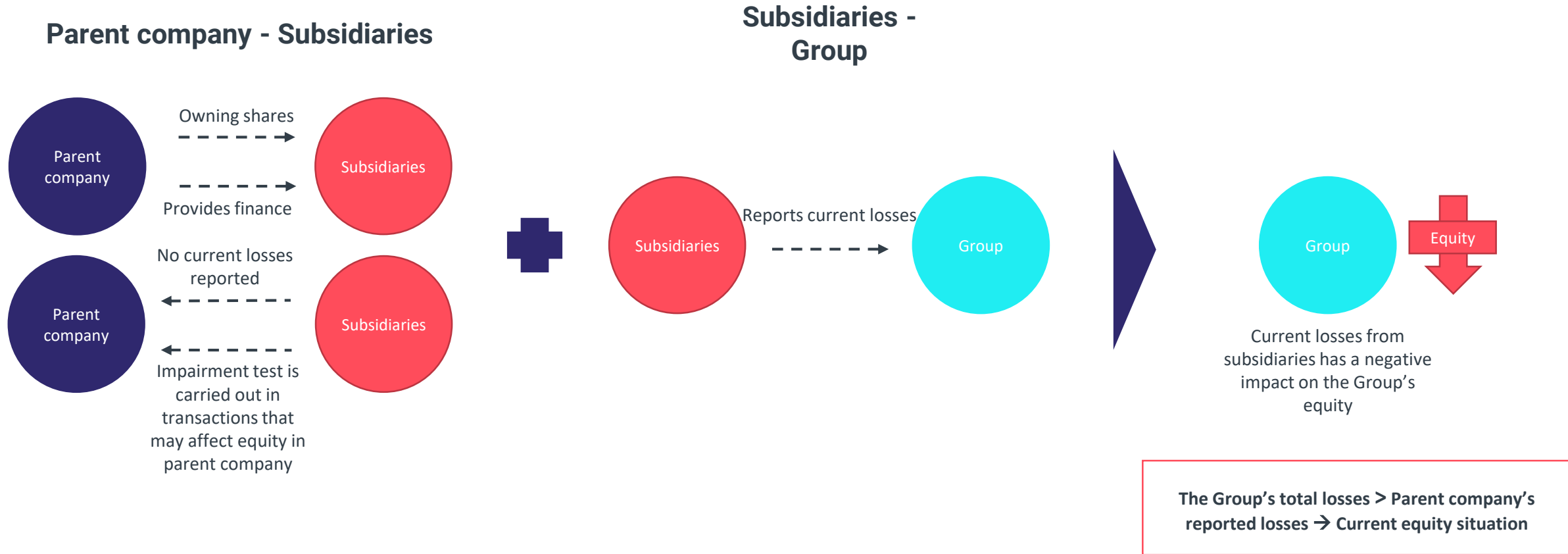


Total capitalised R&D (EURk)



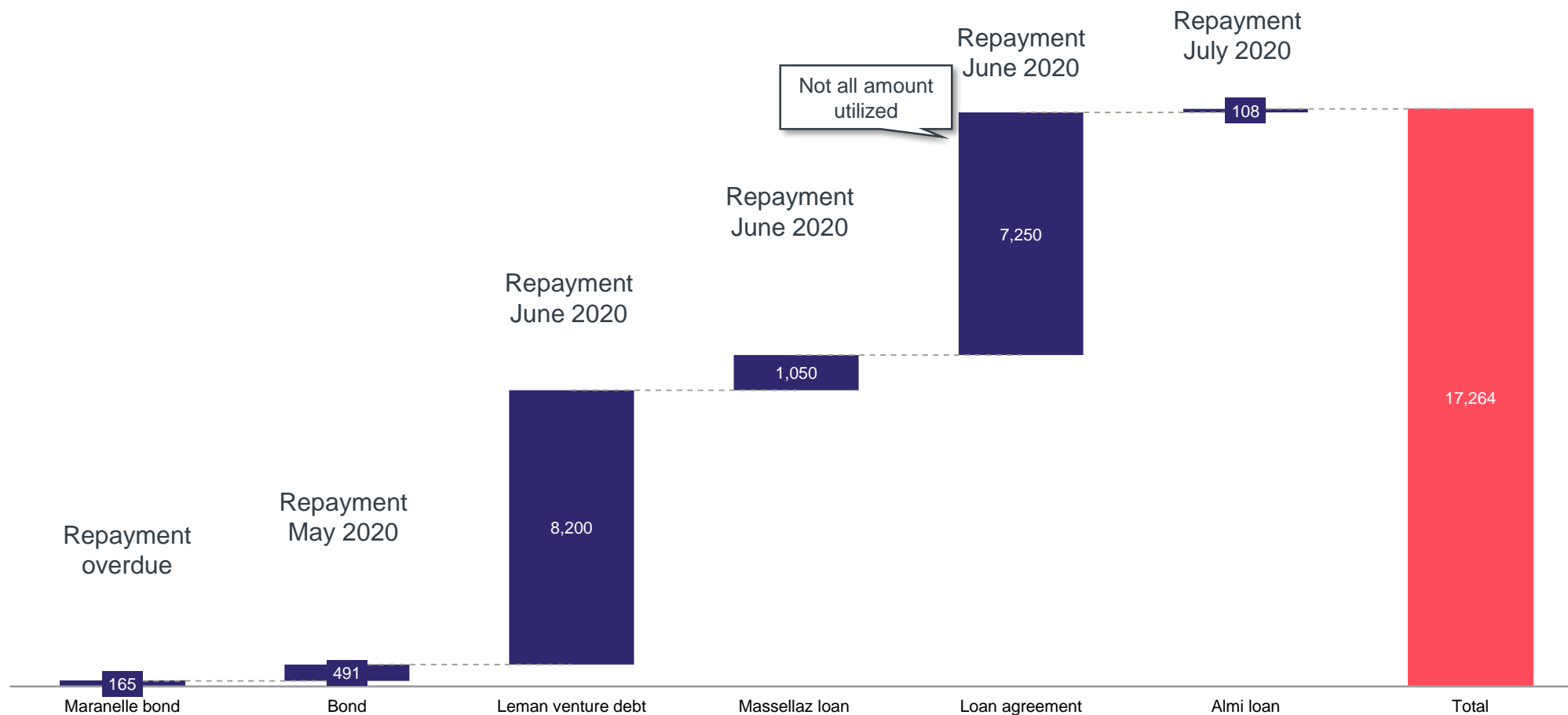


# NEGATIVE EQUITY – WHY?



# DEBT STRUCTURE POST RTO

Total debt post RTO (EURk)



# FINANCIAL TARGETS

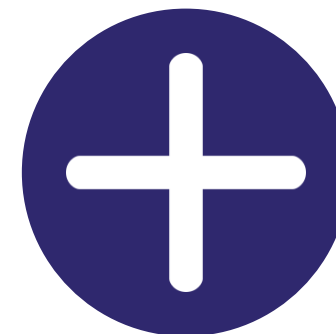
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**Order intake on medium and long term shall grow in excess of NLP market**



**Gross margin above 70 per cent as from 2020**



**Positive cash flows from operations as from 2020**

# 08

## **Experienced Management**

# BOARD OF DIRECTORS



**Åsa Hedin (1962) – Chairman of the Board since 2019.  
Board member since 2019.**

Chairman and CEO of ASH & Partners AB. Board member of Tobii AB, E. Öhman J or Fonder AB, Nolato Aktiebolag, CellaVision AB, C-Rad AB, Immunovia AB (publ), All Tomorrows Parties AB, Fidemso AB, HerMed Group Holding AB, BoardClic AB and Neonode, Inc.



**Jan Uddenfeldt (1950) – Board Member since 2019.  
Within the Group since 2015.**

Board member of GLO AB. Senior Advisor at Telefonaktiebolaget LM Ericsson and Sony Corporation America, Inc. Advisory Board member of Swift Navigation, Inc, Redshift Networks, Inc., Agnity Global, Inc. and Sentons USA, Inc.



**Johan Ekessiöö (1954) – Board member since 2019.**

Chairman of MetaForce AB and T&V Holding AB. Chairman and CEO of Johan Ekessiöö AB. Board member of Aktiebolaget Svensk Bilprovning, WTS Positioning Solutions AB, Zenterio AB (publ), Ripasso Energy AB (publ) and Lingit AS..



**Bodil Eriksson (1963) - Board member since 2019.**

Chairman of Sunfleet Carsharing AB. Board member of Swedbank AB. CEO of Volvo Car Mobility AB.



**Fredrik Oweson (1968) – Board Member since 2019.  
In Artificial Solutions Holding since 2008.**

Chairman of Mijesi Advisory AB and Mijesi Aktiebolag. Board member of Scope Capital SA, Zenterio AB (publ) and Woffel SA. Co-founder and partner of Scope Capital Advisory AB.



**Johan Gustavsson (1963) – Board member since 2019.  
In Artificial Solutions since 2001 (co-founder).**

Chairman of Aros Bostadsutveckling AB, Vencom AB, Vencom Property Partners AB, Vencom Residential AB, Hop Lun International Ltd, Hobbex New Retail AB, Hober Medical AB, Improva Plastikkirurgi AB, Lidrup AB, Roslagsterminalen AB, Getängsvägen AB, Bromma Blocks Centrumhandel AB, Trafikflyget 1 i Stockholm AB, Trafikflyget 3 i Stockholm AB, Trafikflyget 5 i Stockholm AB, Trafikflyget 7 i Stockholm AB and Trafikflyget 9 i Stockholm AB

# PROVEN MANAGEMENT TEAM

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**Lawrence Flynn**  
**CEO**  
*25+ years experience*



**Chris Bushnell**  
**CFO**  
*25+ years experience*



**Andreas Wieweg**  
**CTO**  
*20+ years experience*



**Andy Peart**  
**CMO**  
*25+ years experience*



**Peter Roost**  
**COO**  
*25+ years experience*



**Darren Ford**  
**VP Global Customer Services**  
*20+ years experience*



**Gareth Walters**  
**VP Innovation & Community**  
*20+ years experience*



**Dave Parsin**  
**VP Strategic Sales**  
*25+ years experience*

# 09

## Summary

# SUMMARY

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1. Enterprise software company operating in the AI sector, a **\$59.8 billion market**<sup>1</sup> by 2021
2. Patented AI platform that allows people to interact in **35 languages** with connected technology and devices in an **intelligent, humanlike, conversational way**
3. Positioned to **scale rapidly in a high growth addressable market**
4. Success based usage fees on top of license model creates **attractive recurring revenue model**
5. Technology **validated by global blue-chip customers**: conversational AI platform of choice for **global network of system integrators**.
6. **Highly experienced senior management team** with track record of successful IPOs and exits



# 10

## Appendix

# INCOME STATEMENT

EUR ' 000	FY 2016	FY 2017	FY 2018
Net Sales	3,620	4,951	4,389
Capitalised amount for own accounts	636	872	1,187
Other operating income	901	1,234	517
<b>Total income</b>	<b>5,158</b>	<b>7,057</b>	<b>6,093</b>
<b>Operating Expenses</b>			
Other external costs	(3,379)	(4,278)	(5,022)
Personnel costs	(7,873)	(9,572)	(10,326)
Depreciation & Amortisation	(2,293)	(2,641)	(2,320)
Other operating expenses	(2)	(0.3)	(3)
<b>Operating loss</b>	<b>(8,389)</b>	<b>(9,435)</b>	<b>(11,579)</b>
Interest income and similar items	278	449	366
Interest expenses and similar items	(2,059)	(1,941)	(3,023)
Tax	(3)	-	(2)
<b>Net Loss / Profit</b>	<b>(10,174)</b>	<b>(10,927)</b>	<b>(14,238)</b>

# CASH FLOW STATEMENT

EUR ' 000	FY 2016	FY 2017	FY 2018
<b>Operating activities</b>	(audited)	(audited)	(audited)
Operating loss	(8,389)	(9,435)	(11,579)
<i>Adjustments for items excluded from cash flow statement</i>			
Depreciation	2,293	2,641	2,320
Other items excluded	1,036	320	30
	<b>(5,061)</b>	<b>(6,474)</b>	<b>(9,229)</b>
<b>Interest received</b>	208	363	298
Interest paid	(879)	(888)	(1,740)
Taxation paid and received	(513)	140	0
<b>Cash flow from operating activities before changes in Working capital</b>	<b>(6,245)</b>	<b>(6,858)</b>	<b>(10,671)</b>
<i>Cash flow from changes in working capital</i>			
Increase/decrease in receivables	66	359	(1,961)
Increase/decrease in liabilities	(435)	360	740
<b>Cash flow from operating activities</b>	<b>(6,613)</b>	<b>(6,139)</b>	<b>(11,810)</b>
<b>Investing activities</b>			
Payments to acquire tangible fixed assets	(112)	(63)	(25)
Payments to acquire intangible fixed assets	(640)	(882)	(1,244)
<b>Cash flow from investing activities</b>	<b>(752)</b>	<b>(945)</b>	<b>(1,269)</b>
<b>Financing activities</b>			
New share issue	8,267	3,833	12,820
Cost of new share issue	(179)	(187)	(346)
New issues of shares non-registered	1,245	-	-
Change in loans	(1,304)	3,118	4,678
<b>Cash flow from financing activities</b>	<b>8,029</b>	<b>6,764</b>	<b>17,152</b>
Net change in cash and cash equivalent	664	(320)	4,073
Cash and cash equivalents beginning of the year	147	810	491
<b>Cash and cash equivalents end of the year</b>	<b>810</b>	<b>491</b>	<b>4,564</b>

# BALANCE SHEET

EUR ' 000	FY 2016	FY 2017	FY 2018
<b>ASSETS</b>			
<b>Fixed assets</b>	(audited)	(audited)	(audited)
<i>Intangible assets</i>			
Capitalised expenditure for licences software & content development	3,480	3,107	2,870
Goodwill	2,081	767	0
<i>Tangible assets</i>			
Equipment, furniture and fittings	240	227	174
<b>Total fixed assets</b>	<b>5,801</b>	<b>4,100</b>	<b>3,044</b>
Other non-current receivables	380	517	538
<b>Total non-current assets</b>	<b>6,181</b>	<b>4,618</b>	<b>3,581</b>
<b>Current assets</b>			
<i>Current receivables</i>			
Accounts receivables - trade	734	399	560
Tax receivables	515	369	883
Other receivables	109	88	329
Prepaid expenses and accrued income	609	583	470
Cash and bank balances	810	491	4,564
<b>Total current assets</b>	<b>2,777</b>	<b>1,930</b>	<b>6,804</b>
<b>Total assets</b>	<b>8,958</b>	<b>6,547</b>	<b>10,386</b>

# BALANCE SHEET

EUR ' 000	FY 2016	FY 2017	FY 2018
<b>Equity &amp; Liabilities</b>			
<b>Equity</b>	(audited)	(audited)	(audited)
Share capital	2,849	3,092	3,646
Share premium reserve	58,128	62,776	75,566
Other Equity including result	(62,784)	(73,394)	(87,638)
<b>Total equity</b>	<b>(1,807)</b>	<b>(7,526)</b>	<b>(8,427)</b>
<b>Long term liabilities</b>			
Liabilities to other lenders	4,715	2,537	5,102
<b>Total long-term liabilities</b>	<b>4,715</b>	<b>2,537</b>	<b>5,102</b>
<b>Current liabilities</b>			
Liabilities to other lenders	2,609	7,776	9,132
Accounts payable – trade	167	395	364
Income tax liability	11	5	2
Other liabilities	183	241	347
Accrued expenses and deferred income	3,080	3,119	3,866
<b>Total current liabilities</b>	<b>6,050</b>	<b>11,536</b>	<b>13,711</b>
<b>Total equity and liabilities</b>	<b>8,958</b>	<b>6,547</b>	<b>10,386</b>

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