



# BALYO

## AUTONOMOUS VEHICLES FOR SMART INDUSTRY

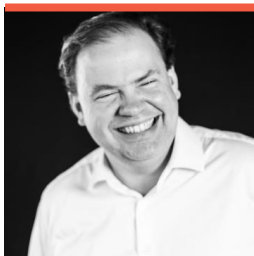
March 2019

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This presentation does not constitute an offer to sell, or a solicitation of an offer to buy, BALYO shares.

# Your contacts



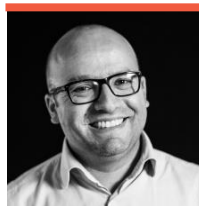
**Fabien Bardinnet**  
*Chairman & CEO*

ESCEM in Tours  
S&W Associés  
Exco, Cora Hungary, Credigen Bank,  
Sofinco, Aldebaran Robotics, Violet



**Stanislas Piot**  
*CFO*

Université Panthéon Assas - Paris II  
Advanced degree in Economy & Finance  
Crédit Lyonnais, Oddo, Natixis, Ipsogen, Stentys



**Pascal RIALLAND**  
*COO*

Pepsi Co, Homesun,  
ALTRAN,  
EK Automation

# BALYO: A smart and global robotic solution, easy to integrate



# Two strategic alliances for a global reach



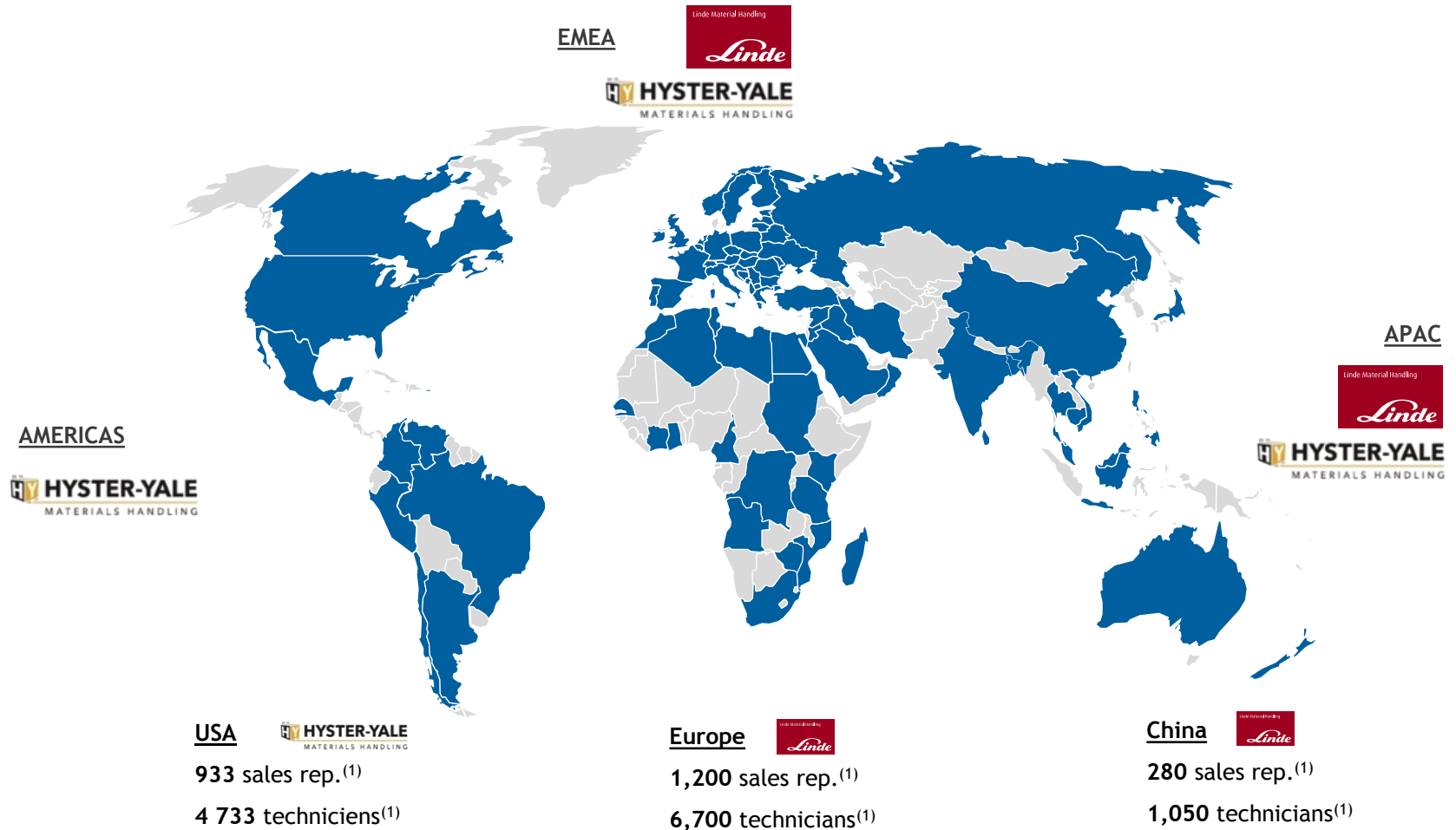
No.2 worldwide  
No.1 in Europe  
No.3 in Asia  
More than 33,000 employees  
€8.0 billion revenue in 2018



No.5 worldwide  
No.2 in the United States  
More than 6,500 employees  
€3.2 billion revenue in 2018

# Global Partnership

70% of worldwide market addressable through Linde MH and Hyster-Yale Group



(1) Note : Linde MH and Hyster-Yale Group



# Win/Win partnership



- ▶ Response to customer demand
- ▶ Development of turnkey robotics solutions
- ▶ Access to a new growth driver
- ▶ Networks quick adoption
- ▶ Steady 1<sup>st</sup> level maintenance

## Value sharing



- ▶ Access to global sales and maintenance networks
- ▶ Access to material handling expertise and a range of standard products
- ▶ Ease to international deployment with limited investments
- ▶ Long-term global agreements with our partners

# Major commercial agreement with Amazon



amazon

- ▶ Potential entry of AMAZON in BALYO's capital up to 29%
- ▶ Depending on the level of orders by AMAZON up to EUR 300m
- ▶ Strong expectations from Amazon towards BALYO's technology

**A 7 years  
commercial  
agreement**



BALYO

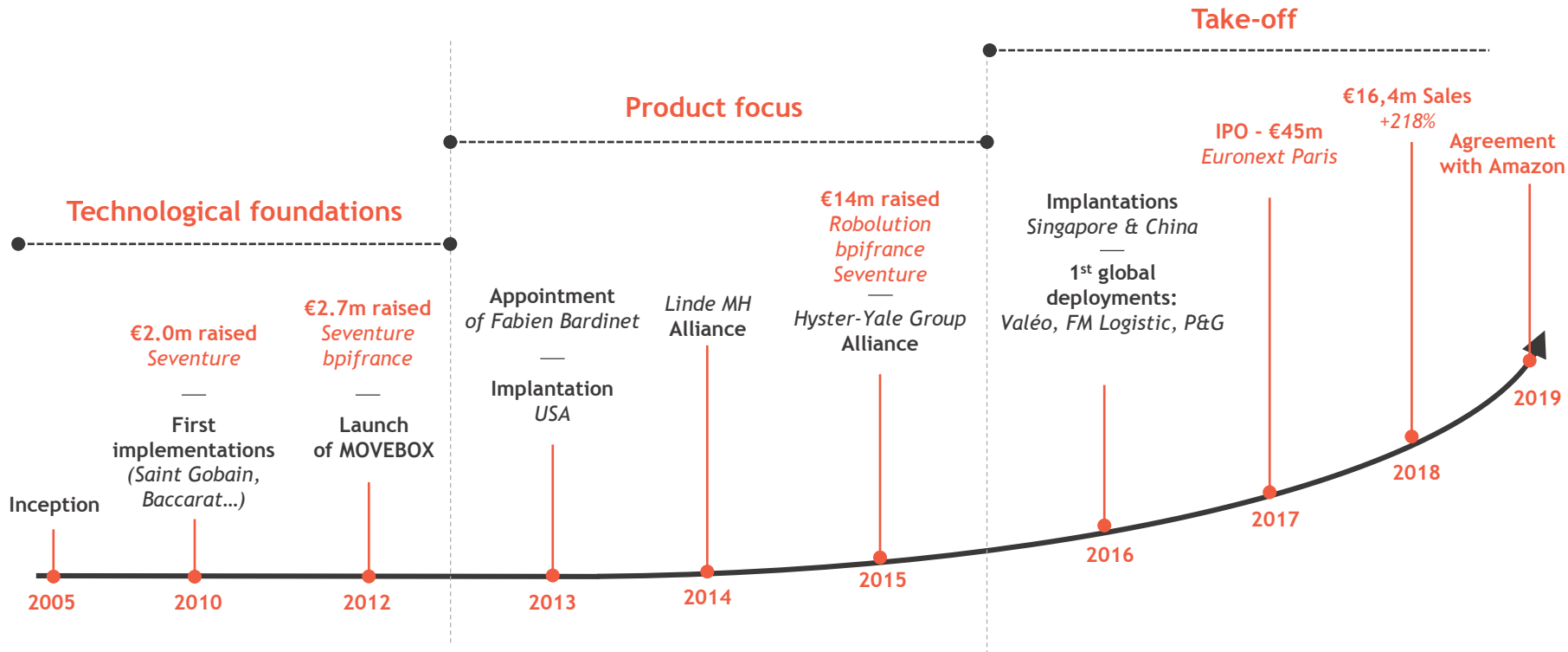
- ▶ Confirmation of the added value of BALYO's robotic solutions
- ▶ A decisive step in BALYO's development to boost the deployment of its solutions
- ▶ A unique agreement that provides strong visibility



Agreement supported by **BALYO's industrial partners** and **major shareholders**



# A pioneer taking off



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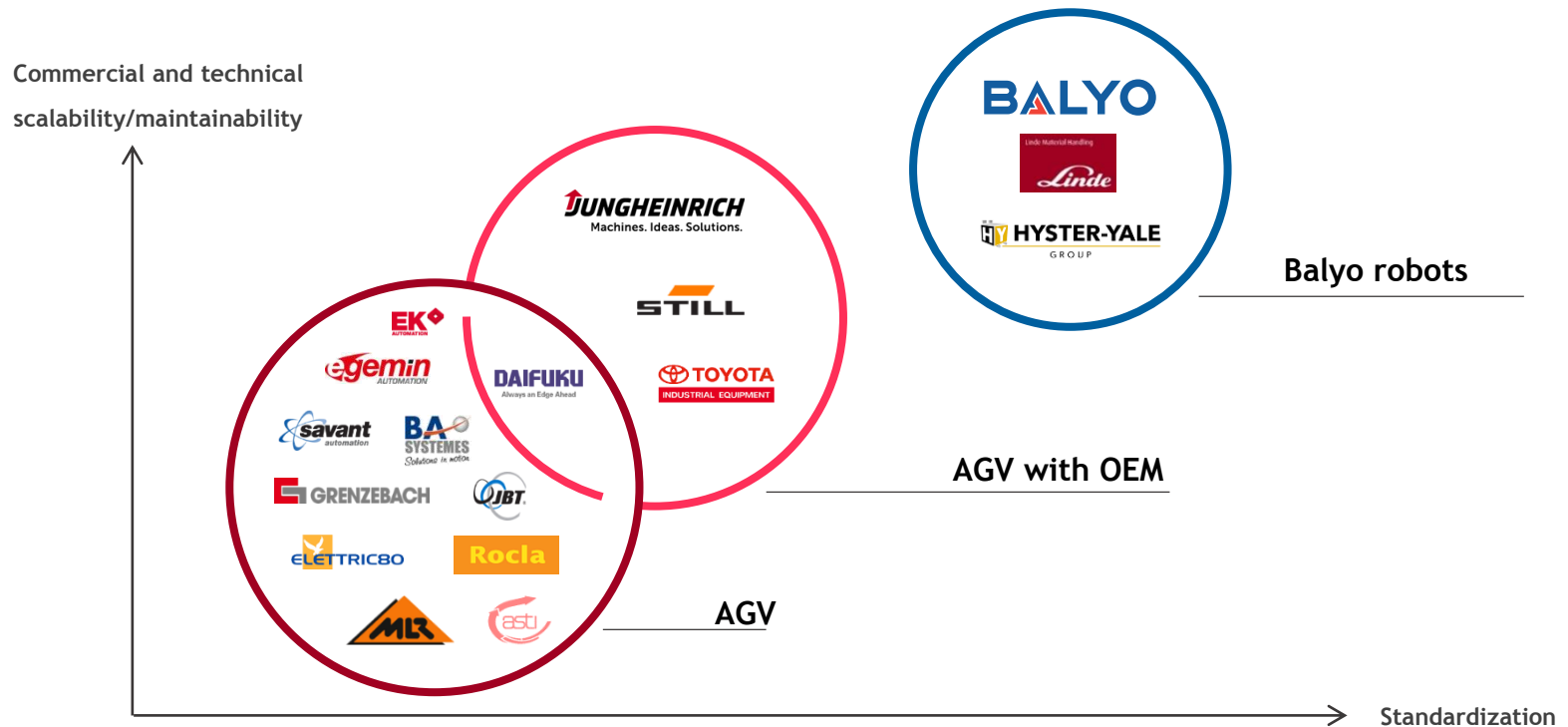
# MARKET & COMPETITION

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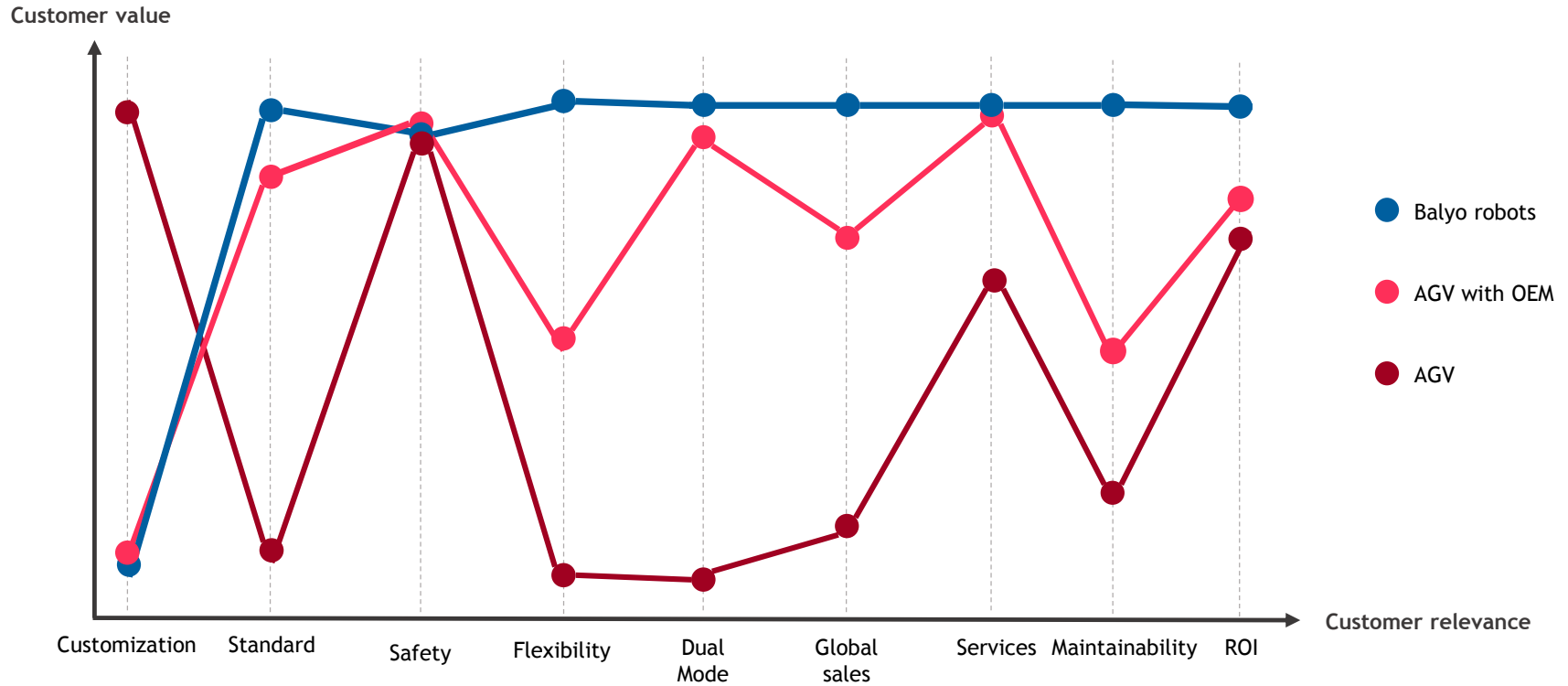
*Logistics "robolution" of industry 4.0*



# Competition: compelling advantages



# Positioning: compelling advantages



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# OUR STRENGTHS

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*Technological response  
to manufacturers' constraints*



# BALYO's autonomous vehicle

## Navigation & traffic management

- ▲ SLAM
- ▲ Geo-navigation
- ▲ Logistic process optimization
- ▲ Flexible
- ▲ Evolutive

## Robot integration

- ▲ Calculator integration in standard trucks
- ▲ Application-specific equipment
- ▲ Standard interface between Balyo technology and standard truck
- ▲ Dual mode: manual use and auto

## Customers' system integration

- ▲ Connection to ERP/WMS
- ▲ Interface with customer environment Cobotique
- ▲ Cobotics
- ▲ Safety assessment
- ▲ Customer training

**30,000**

man-days  
invested in R&D

**25% revenues**

allocated to R&D in 2018



BALYO has eliminated technological constraints in terms of **mobility, maintainability and scalability**

# Serving global clients

More than 30 clients on 3 continents including:



Lenze



BERRY  
PLASTICS



BASF

## 3 major references



**\$80 billion** revenue

**110,000** employees

**300** locations

**150** manufacturing sites

**150** distribution centers

**8,500** material handling vehicles  
fleet



**\$1.1 billion** revenue

**20 000** employees

**3,300,000** m<sup>2</sup> of warehouse  
worldwide

**4,200** material handling  
vehicles fleet

**33%** of warehouse area operated in  
France

**28** distribution centers in France



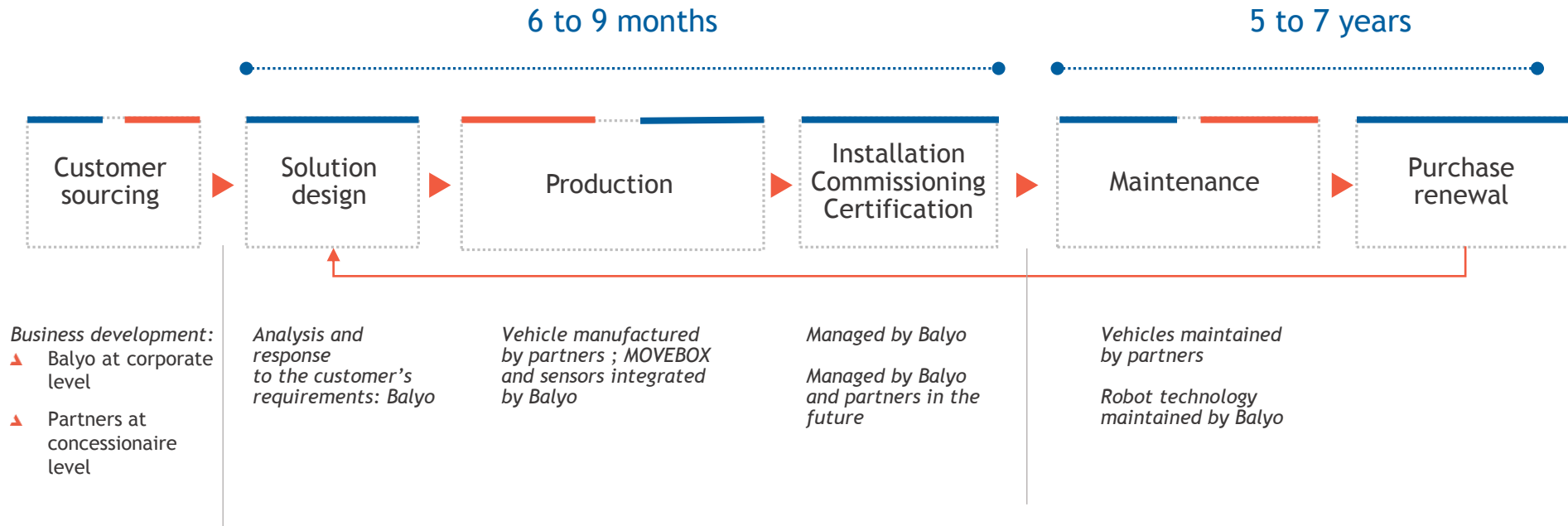
**\$51 billion** revenue

**120,000** employees

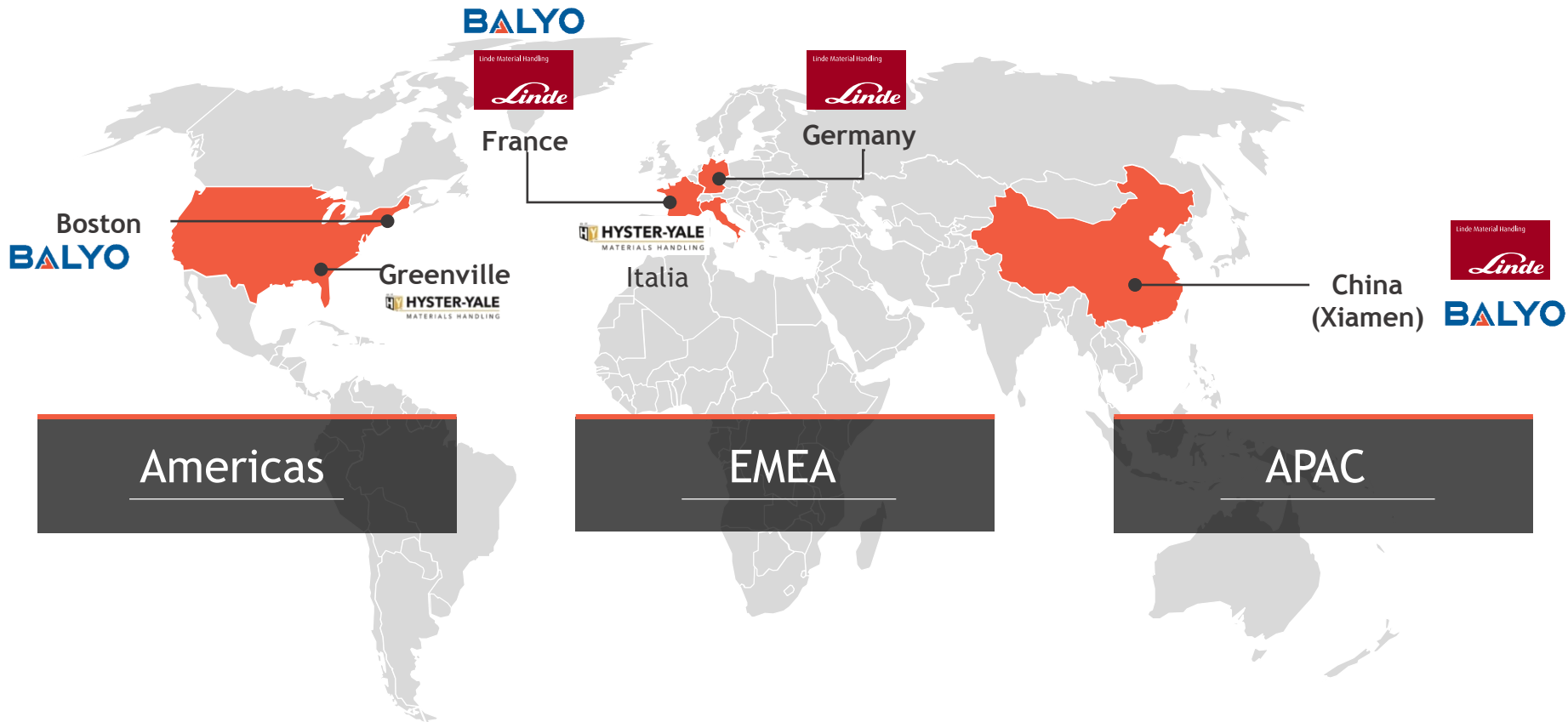
**38** industrial sites



# An integrated business model



# An established industrial organization



Current production capacity of **1,000 robots/year**

Potential production capacity: several thousand robots/year, using our partners' production capacity

# A model driven by a structured team



**Fabien BARDINET**  
Chairman and CEO  
*Credigen Bank, Sofinco,  
Aldebaran Robotics*



**Pascal RIALLAND**  
COO  
*Pepsi Co, Homesun,  
ALTRAN,  
EK Automation*



**Karim MOKADDEM**  
CTO  
*IFP, PSA, AAQIUS*



**Stanislas PIOT**  
CFO  
*Crédit Lyonnais,  
Oddo, Natixis,  
Ipsogen, Stentys*

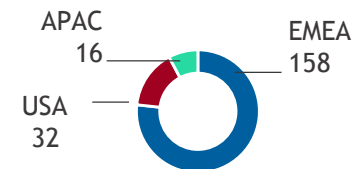


**Alec LAFOURCADE-JUMEMBO**  
CMO  
*DxO  
Aldebaran Robotics*



**206**  
employees in 5 countries<sup>(1)</sup>

**Workforce breakdown by Region**  
(% of total workforce as of 31.12.18)



Note : (1) as of December 31, 2018

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# FINANCIAL PERFORMANCE

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*A scalable business model*

# Multiple sources of revenue

6 to 9 months

3 payments (advance, truck delivery, system installation)

5 to 7 years

Recurring revenue

Balyo's product sales: 70%

Balyo's software, services & maintenance sales: 30%

Sale of robots  
(+ embedded software)

50% Partners  
50% Balyo

+

Sale of hardware accessories

100% Balyo

+

Sale of software  
("Robot manager")

100% Balyo

+

System installation

100% Balyo

+

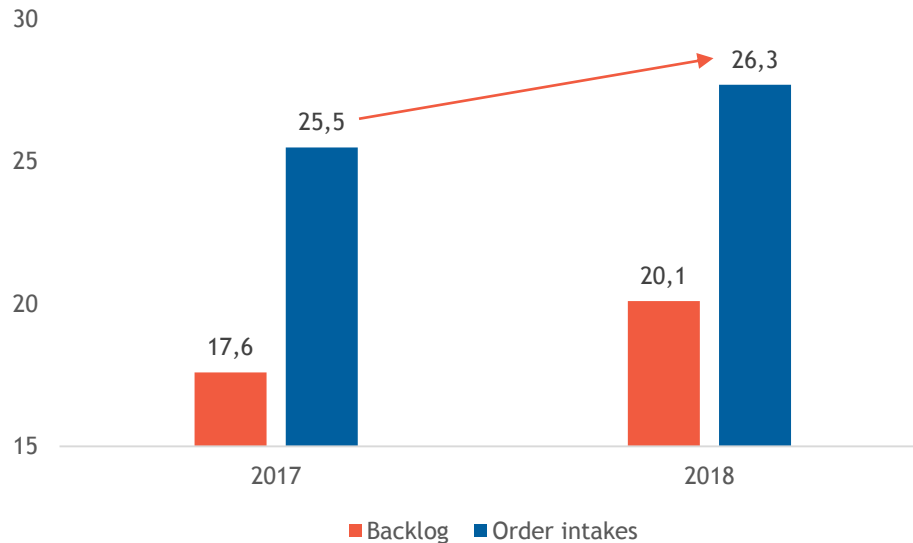
Maintenance

Hardware: Partners  
Robots: Balyo

# Further sustained growth in 2018

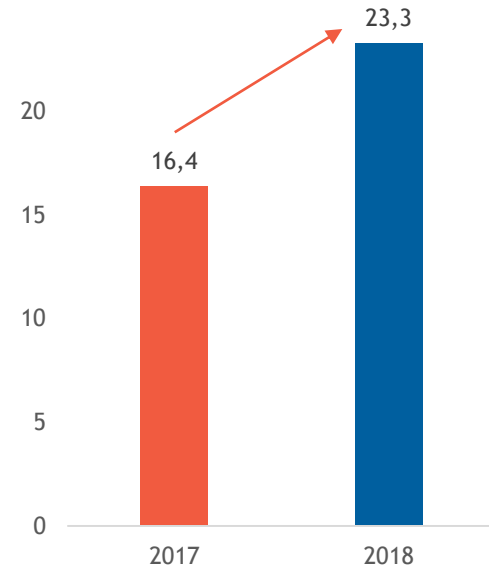
+

## Backlog & Order intakes (€m)



+

## Revenue (€m)



42% increase in sales revenue for 2018: €23.3 million

# 2018 full-year results

IFRS (€k)	31/12/17	31/12/18
Revenue	16,409	23,261
COGS	-10,973	-16,977
Gross margin	5,436	6,285
Margin (%)	33.1%	27.0%
R&D	-5,567	-5,741
Sales & Marketing	-4,049	-4,638
G&A	-4,828	-6,796
Share-based payment	-1,094	-1,246
Operating profit	-10,102	-12,137
Financial result	- 525	244
Net result	-10,627	-11,893

1

Revenue in 2018: +42% increase compared to 2017, illustrating the dynamic commercial trend

2

The decline in gross margin is due to:

- Difficulties encountered in deploying solutions on site
  - Installation times were higher than expected
- Increase in gross margin has been observed in H2 2018

3

Increase in R&D, Sales & Marketing and G&A expenses are due to:

- The launching of new structuring projects
- New recruitments
- New Head office in Ivry

4

IFRS Accounting treatment of Amazon Warrants:

- Considered as a selling price discount
- IFRS2 expenses recorded in parallel with revenue recognition
- Expenses recorded on a quarterly basis



# Cash Flow analysis as of December 31, 2018

IFRS (€k)	31/12/17	31/12/18
Cash used for operating activities	(12,073)	(14,483)
Cash used for investing activities	(2,405)	(1,141)
Cash provided for financing activities	41,575	(143)
Change in cash	27,046	(15,752)
Cash & cash equivalents	30,680	14,928

1

Cash used for operating activities increased:

- Increase of net losses (10 003 k€)
- Increase of Working capital need (4,462k€)

2

Capex mainly related to the production of prototypes/software and new Head Office in Ivry sur Seine

# Balance sheet as of December 31, 2018

IFRS (€k)	31/12/2017	31/12/18
<b>Non-current assets</b>	<b>3,737</b>	<b>4,050</b>
Inventories	2,822	3,181
Trade accounts receivables	13,029	19,279
Other receivables	3,700	4,507
<b>Cash &amp; cash equivalents</b>	<b>30,680</b>	<b>14,963</b>
<b>Total assets</b>	<b>53,969</b>	<b>45,980</b>

<b>Shareholders' equity</b>	<b>32,626</b>	<b>22,165</b>
<b>Financial debt (long term)</b>	<b>1,414</b>	<b>784</b>
Non-current liabilities	1,560	1,025
Trade notes and accounts payables	9,231	10,942
Tax and employee-related payables	2,039	2,391
Other current liabilities	7,457	8,256
<b>Total liabilities</b>	<b>53,969</b>	<b>45,980</b>

Financial debt (€k)	31/12/17	31/12/18
Bank loans		35
Bonds		
Grants and repayable advances	2,471	1,951
<b>Total gross debt</b>	<b>2,471</b>	<b>1,986</b>
<b>Total net debt</b>	<b>- 28,209</b>	<b>- 12,978</b>

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# STRATEGY

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*Support orders exponential growth  
and accelerate business transformation*

# 1 – Maintain technological leadership



## Intelligence

### + Innovation

- ▲ FLYBOX
- ▲ Obstacle avoidance
- ▲ Outdoor navigation
- ▲ Superbrain

### + Improvement

- ▲ Autonomous Path finding
- ▲ 3D Pallet detection
- ▲ Load counting
- ▲ Opportunity charging
- ▲ Circuit modification feature
- ▲ 360° Safety
- ▲ Transport double-pallet
- ▲ Fail over
- ▲ Station & flows management

### + Technological independence

- ▲ New calculator
- ▲ Omni Safety
- ▲ Virtual I/O
- ▲ LTO battery

### + Big Data

- ▲ Customer reporting
- ▲ Statistics
- ▲ Feedback log



## Simplification

### + R&D

- ▲ OS 4.0

### + Operations

- ▲ Missions editor
- ▲ Pref editor
- ▲ Circuit editor
- ▲ Rack editor
- ▲ MAPBOX

### + Marketing

- ▲ Customer Journey Automation (e-learning, e-budget)

### + Service

- ▲ E-Ticketing
- ▲ Hotline 24/7

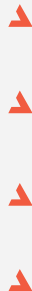
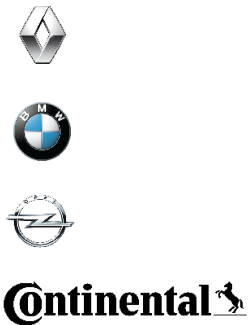
## 2- Business expansion



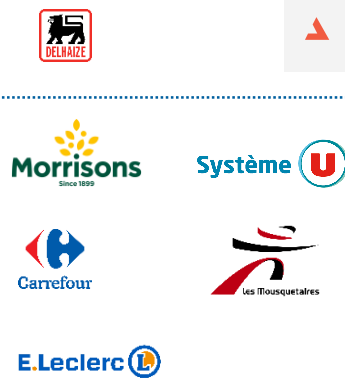
Our sales targets

Tier 1, in 4 sectors and 3 geographic areas

### AUTOMOTIVE



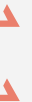
### RETAIL



### LOGISTICS



### CONSUMER GOODS



▲ Signed and/or delivered projects

# Confirmation of the profitability target and sales objectives

**2022**



**Revenue  
> €200m**

**Long term**



**Long term  
Operating profit  
~20%**

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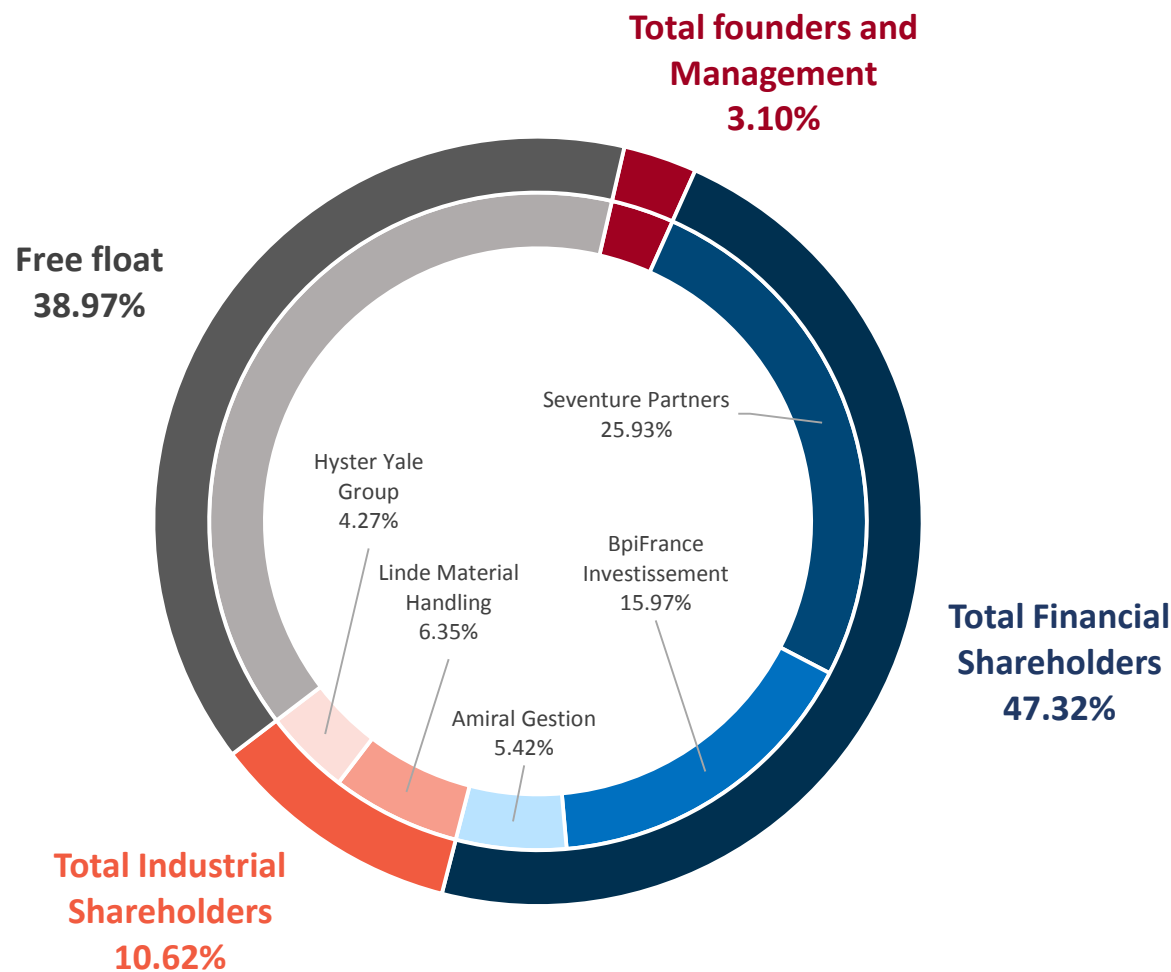
# APPENDICES

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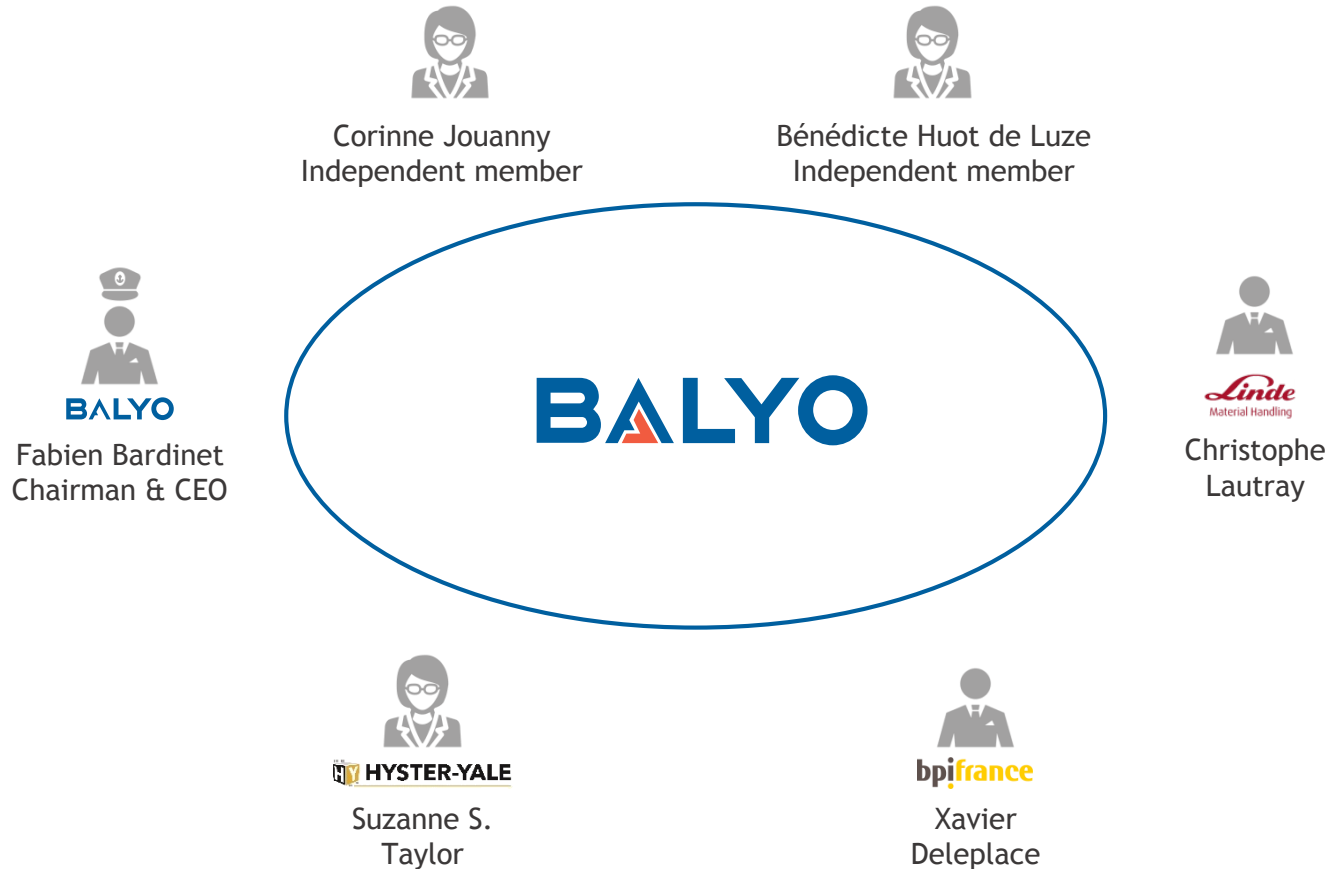


# Shareholding structure 31 /12/2018 (excluding dilution)



# Board of directors

A board that reflects the shareholding structure and complies with Middelnext Corporate Governance Code



# Material handling, a major challenge for industry



**More than 5 million**

Material handling vehicles deployed around the world

**€33 billion**

Annual global expenditures on material handling

**More than 80%**

Of handling vehicles operating costs  
related to driver costs

**€200 billion**

Annual global expenditures on pallet handling

**\$380 million**

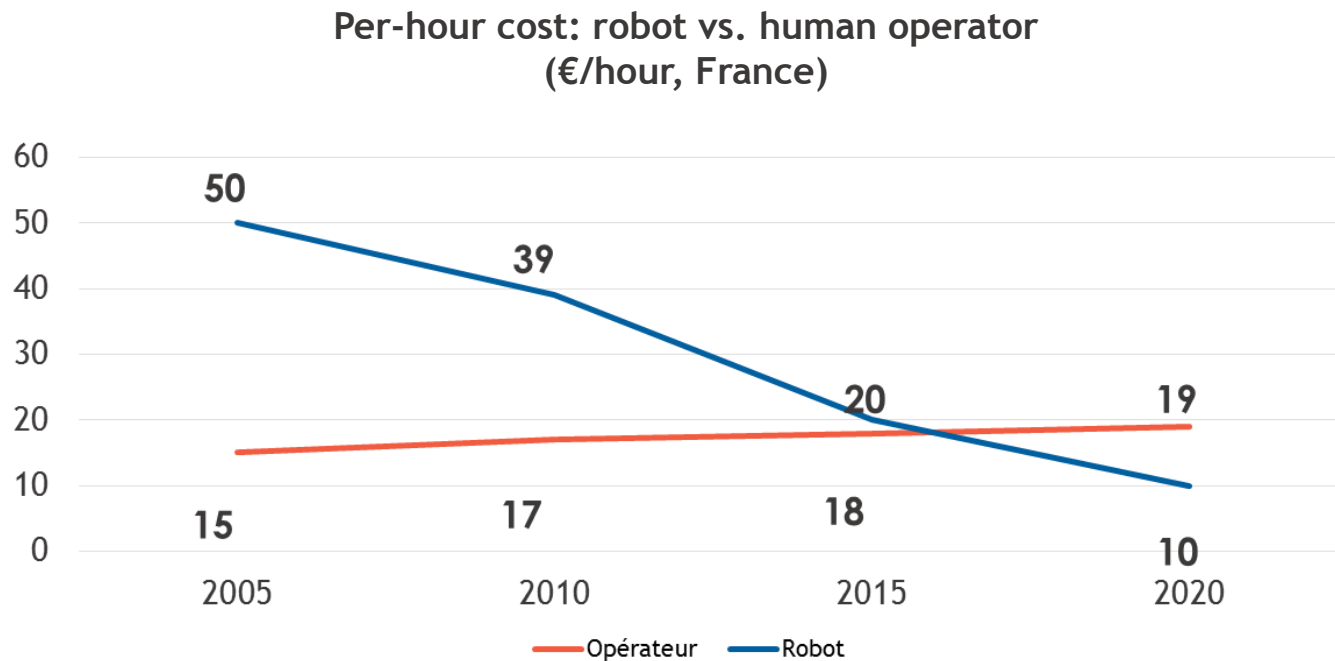
Estimated annual expenditures on material handling of a major  
client

*Company estimates*

# Our response



# Robotization: a tangible economic impact for the industry

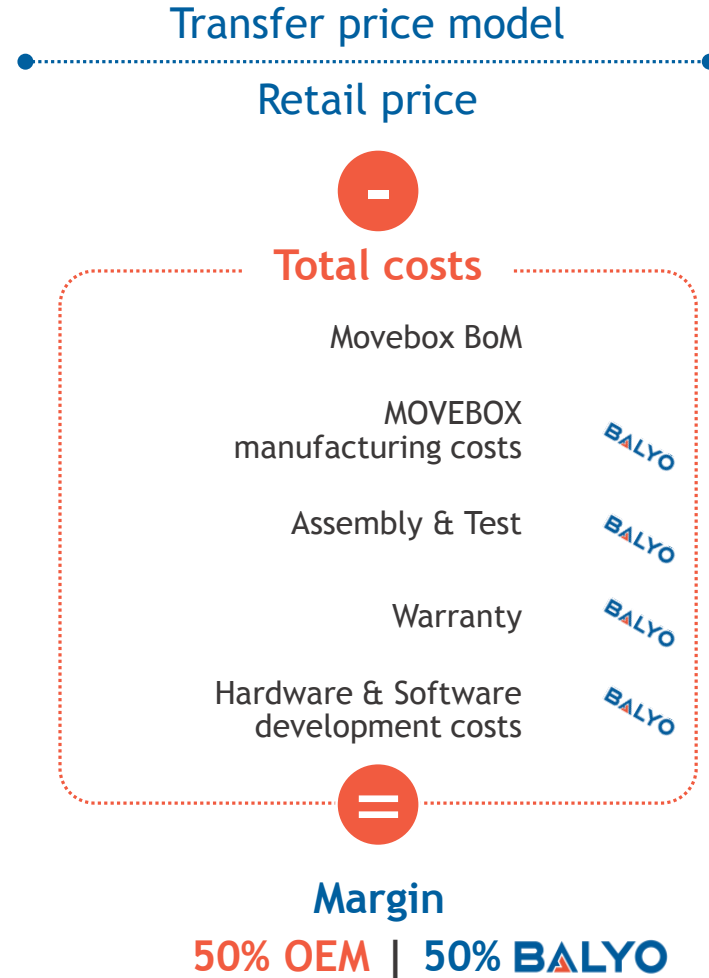


Source : IFR, INSEE, Eurostat - Roland Berger Of Robots and Men-in logistics Towards a confident vision of logistics in 2025

# Balanced margin sharing mechanism



**Robots sales**  
including embedded  
software



Note (1): For the sake of clarity, Balyo transfer price to OEM (=unit revenue) is equal to the sum of BALYO costs listed above and BALYO margin (corresponding to 50% of total margin)

# BALYO: a disruptive solution

## Two coexisting approaches

### AUTOMATED GUIDED VEHICLES (AGV)

Traditional automatic vehicles

- ▲ Custom-built vehicles
- ▲ Navigation requiring additional infrastructure
- ▲ High costs and long-time integration
- ▲ Non-evolutive solution
- ▲ High maintenance

Niche market  
Low volumes  
Low gross margin

### ROBOTICS

Autonomous vehicles

- ▲ Standard vehicles
- ▲ Geo-navigation
- ▲ Quick integration with limited resources
- ▲ Flexibility
- ▲ Simple, global maintenance

**BALYO**



# Market potential

“ Autonomous driving is the future! The combination of technology innovation, competitive forces, benefits and regulations are fueling this transformation.”

*Roland Berger study - Autonomous driving  
November 2014*

## Global market for material handling vehicles in 2016

●-----● **739 841 units/year**

Market conversion assumption	10%	15%	20%
Robotization rate	1.5	1.5	1.5
Number of robotic vehicles sold/year	110,976	166,464	221,952
Global market for robotic material handling vehicles <sup>(1)</sup>	€6.3bn	€9.5bn	€12.7bn

## Balyo - OEM market share

●-----● **20%**

Note : (1) Sur la base d'un prix de vente moyen de 57 K€

# 3 growth factors

1



Well defined and controlled regulatory framework

2



Productivity gain on cost saving as a perpetual goal for industrials

3



Market led by global industrials /no turn-back syndrome

# 3- Acquisitions

