



BALYO

AUTONOMOUS VEHICLES

FOR SMART INDUSTRY



A SMART AND ROBOTIC SOLUTION
FOR LOGISTICS

MATERIAL HANDLING

A MAJOR CHALLENGE FOR INTRALOGISTICS

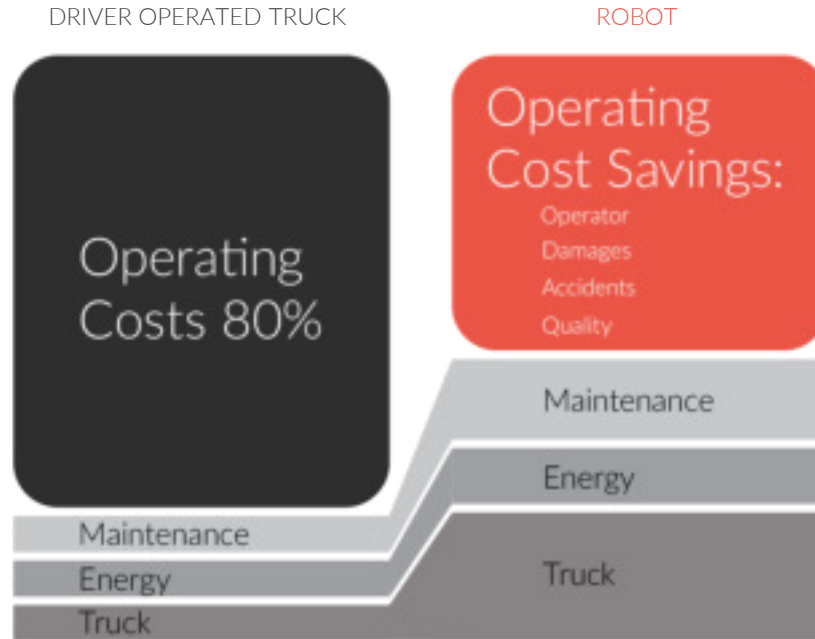


- **More than 5 million**
Material handling vehicles deployed around the world
- **€33 billion**
Annual global expenditures on material handling
- **More than 80%**
Of handling vehicles operating costs related to driver costs
- **€200 billion**
Annual global expenditures on pallet handling
- **\$380 million**
Estimated annual expenditures on material handling of a major client

But, less than 1% of pallets moved today by robots !

Company estimates

WHY ROBOTICS FOR MATERIAL HANDLING ?

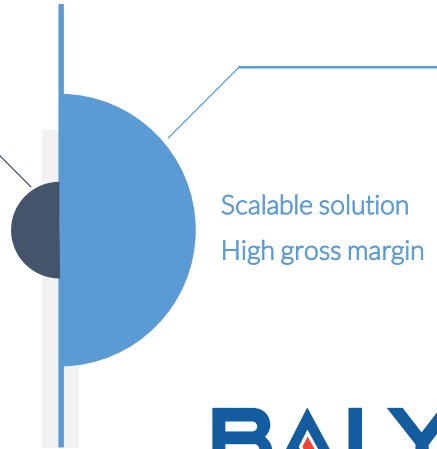


BALYO: A DISRUPTIVE SOLUTION

AUTOMATED GUIDED VEHICLES (AGV)

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

Low volumes
Low gross margin



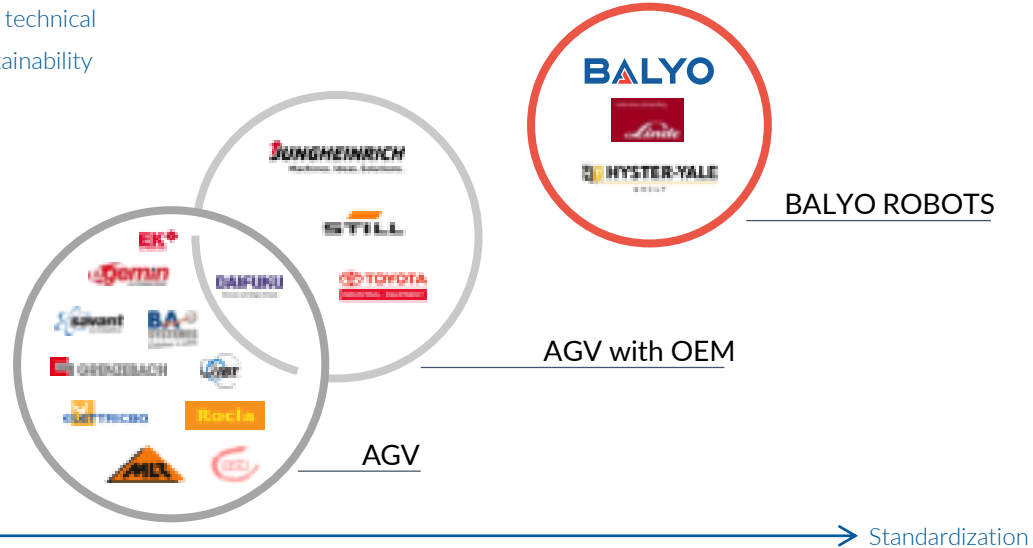
ROBOTS

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

KEY PLAYERS

SCALABILITY, MAINTAINABILITY, STANDARDIZATION

Commercial and technical
scalability/maintainability



BUSINESS EXPANSION

200+ SITES use 500+ ROBOTS in 30 COUNTRIES over 4 CONTINENTS!

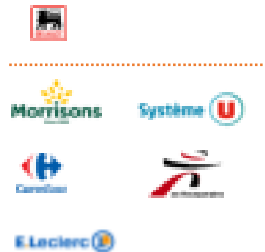


Our sales targets : Tier 1, in 4 sectors and 3 geographic areas

AUTOMOTIVE



RETAIL



LOGISTICS



CONSUMER GOODS



BALYO AT THE FOREFRONT OF INNOVATION

THANKS TO AN AMBITIOUS R&D STRATEGY

21 M€

25% of 2019 revenues

50 patents



allocated in R&D since 2015



allocated in R&D, through high value added projects



granted since 2016 including 15 in 2019

Localization

Safety

Perception

Installation tools

Navigation

Energy Management

Fleet Management

Communication Management

Remote control

AN EXPERIENCED MANAGEMENT TEAM



Pascal
RIALLAND
CEO



Karim
MOKADDEM
CTO



Alec
LAFOURCADE
COO



Philipp
SCHMIDT-
HOLZMANN
CSO



Franck
BELLONE
CXO -
Experience



Benoît de
LA MOTTE
CFO



180
employees in 5 countries⁽¹⁾

Workforce breakdown by Region ⁽¹⁾
(% of total workforce)



Note : (1) as of December 31, 2019

BOARD OF DIRECTORS

A BOARD THAT REFLECTS THE SHAREHOLDING STRUCTURE
AND COMPLIES WITH MIDDLENEXT CORPORATE GOVERNANCE CODE





Linde robotics
STRATEGY

KEY MILESTONES ACHIEVED IN 2019

Installation teams reinforcement

- ✓ Trainings
- ✓ Reviewed allocation

Optimized R&D strategy

- ✓ 15 patents granted in 2019
- ✓ Enhanced technological performance

Quality control strengthened

- ✓ Increased controls
- ✓ Remote supervision

Partnering model streamlining

- ✓ Better payment terms - Order commitment
- ✓ Ability to refocus on its core competencies

3 BUSINESS LINES FOR 2020 AND BEYOND

Strengthening
of the two historical
partnerships



Improved industrial and
commercial efficiency

Sales of robotic solutions
to independent
intralogistics integrators



Wider market reach
Adapt to the APAC market

Test
for a pallet-movement
"As a Service" offering



Disruptive approach
3rd development line with limited
impact on 2020/21 revenue

STRENGTHENING OF THE TWO PARTNERSHIPS



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

NEW PHASE OF COLLABORATION



- ✓ Stronger involvement in the assembly and installation activities
- ✓ Higher contribution of commercial network evidenced in order commitment to BALYO

Each side
fully
dedicated
to its area
of expertise

- ✓ Focus on R&D and innovation
- ✓ Sale of turnkey robotic solutions to independent intralogistics integrators

SALES TO INTRALOGISTICS INTEGRATORS

COMPLEMENTARY EXPERTISE



Sale of turnkey projects integrating
BALYO's innovative technologies



Second business line of the commercial strategy complementing
BALYO's historical partnerships, particularly in the Asia-Pacific region

TEST OF PALLET-MOVEMENT "AS A SERVICE"

Unique response to the three main constraints to robotization of material handling



- ELIMINATE the need for capital expenditure for customers with pay-per-use billing
- INCREASE the performance of robotic solutions: integrating a tele-operator capable of taking control of the robot remotely
- SIMPLIFY technology adoption: packaged and operated solution for customers missing specific technical resources

PROFITABILITY TARGET AND SALES OBJECTIVES

Short-term



Revenue 2020
>€30m

Mid-term



Revenue
> €200m

Long-term



Long term
Operating profit
~ 20%



PRODUCTS AND APPLICATIONS

PALLET STORAGE MODALITIES



Standard
rack



Very narrow
aisles



Gravity
racking



Canteliver



Shuttle
rack



Mobile
rack



Block
storage



Double deep
2019



Drive
in



Push
back

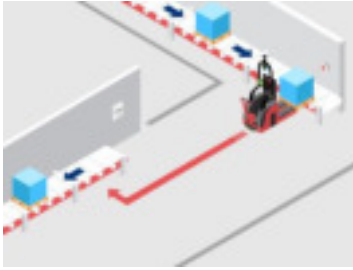
GO

SOON

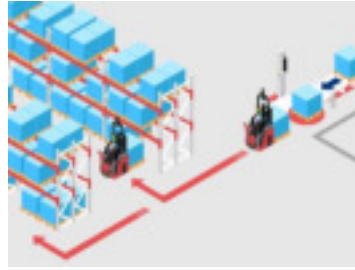
NO GO

ROBOTS APPLICATIONS FOR MATERIAL HANDLING

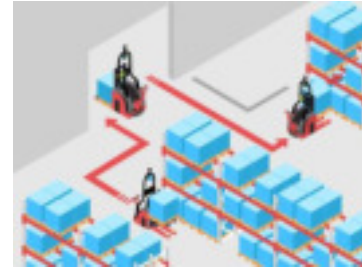
CONVEYORS
INTERFACE



END OF LINE
& STORAGE



STACKING



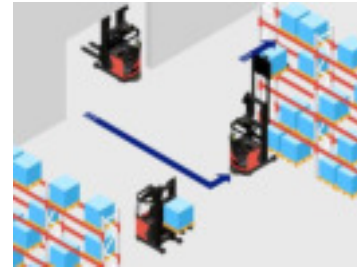
MACHINES INTERFACE



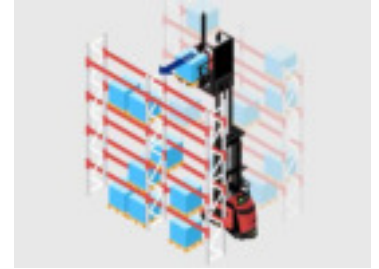
LOGISTICS TRAIN



HIGH STORAGE



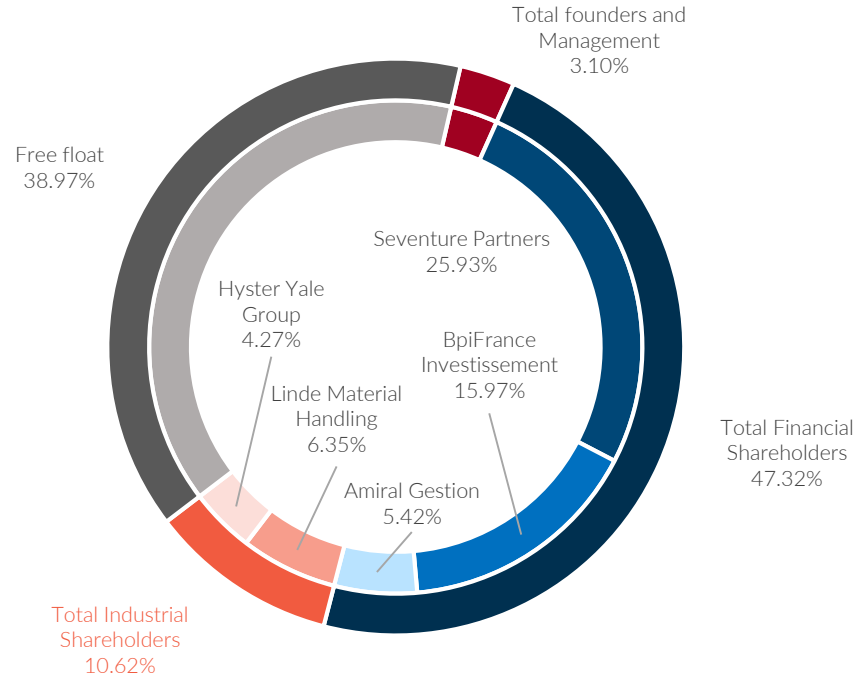
VERY HIGH STORAGE





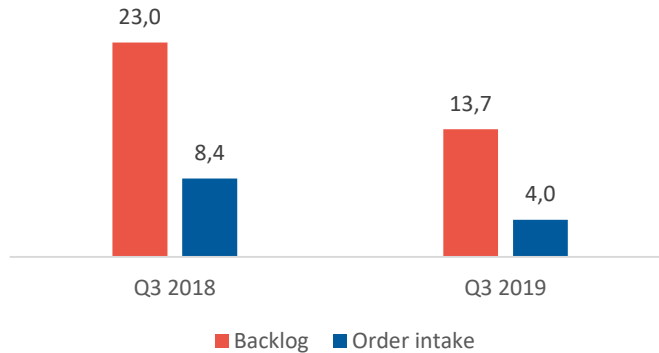
APPENDIX

SHAREHOLDING STRUCTURE 31/12/2018 (EXCLUDING DILUTION)

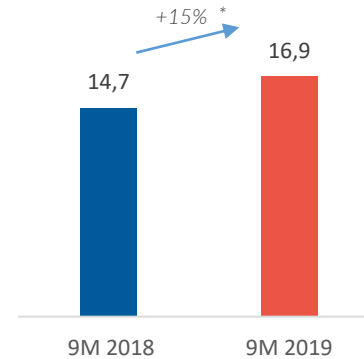


SALES FOR 9M 2019: +15%* INCREASE

+ Backlog & Order intakes (€m)



+ Revenue (€m)



* Growth of 20% to €17.6m excluding the restatement related to the inclusion of the IFRS2 charge relative to the allocation of BSAs

2019 HALF-YEAR RESULTS

IFRS (€k)	June 30, 2018	June 30, 2019
Sales revenue	9,71	12,14
IFRS 2 charge related to the Amazon BSAs	-	-0,69
Sales revenue reported	9,71	11,45
COGS	-7,56	-9,71
Gross margin	2,15	1,74
Margin (%)	22%	15%
R&D	-3,17	-2,70
Sales & Marketing	-2,71	-3,27
G&A	-3,37	-3,55
Share-based payment	-0,76	-0,16
Operating profit	-7,86	-7,94
Financial result	0,16	-0,13
Net result	-7,70	-8,08

1

Revenue in H1 2019: +25% increase compared to H1 2018, before accounting for the IFRS2 charge, hampered by temporary slowdown in sales momentum

2

The decline in gross margin is mainly due to the IFRS 2 charge as, without the adjustment, the gross margin would equal 20%.

3

Increase in Sales & Marketing and G&A expenses are due to the launching of more sales and marketing initiatives this year

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 JUNE 30, 2019

IFRS (€k)	June 30, 2018	June 30, 2019
Cash used for operating activities	-10,846	-5,504
Cash used for investing activities	-0,754	-0,597
Cash provided for financing activities	0,150	-0,841
Change in cash	-11,491	-6,938
Cash & cash equivalents	19,190	7,990

1

Cash used for operating activities decreased following the adjustment of the terms of payment with the industrial partners

2

Capex mainly related to the production of softwares (ERP to manage all phases of a robot's life, from production to remote management)

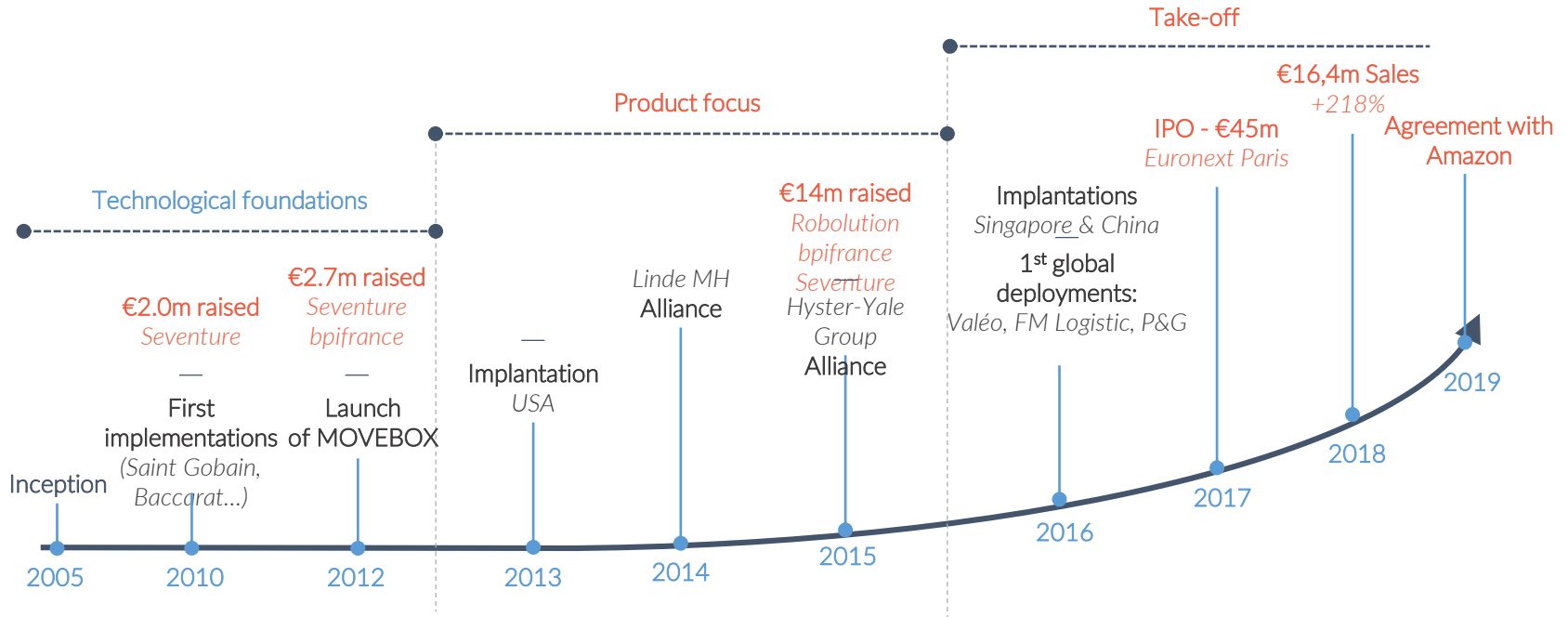
BALANCE SHEET AS OF JUNE 30, 2019

IFRS (€k)	Dec. 31, 2018	June 30, 2019
Non-current assets	4,050	9,001
Inventories	3,181	5,080
Trade accounts receivables	19,279	15,741
Other receivables	4,507	3,596
Cash & cash equivalents	14,963	8,146
Total assets	45,980	41,563

Shareholders' equity	22,165	14,981
Financial debt (long term)	784	4,700
Non-current liabilities	998,3	4,964
Trade notes and accounts payables	10,942	10,699
Tax and employee-related payables	2,391	2,803
Other current liabilities	8,256	6,061
Total liabilities	45,980	41,563

Financial debt (€k)	31/12/18	30/06/19
Bank loans	35	156
Bonds		
Grants and repayable advances	1,951	6,591
Total gross debt	1,986	6,747
Total net debt	- 12,978	- 1,253

A PIONEER TAKING OFF



PRODUCTS – LINDE RANGE



L-MATIC AC

L12 AC

L16 AC

L-MATIC

D12 HP

P-MATIC

P50C

T-MATIC

T30

K-MATIC

R-MATIC

R16 HD

PRODUCTS – HYSTER-YALE RANGE



TUGGER

PALLET TRUCK

CB STACKER

END RIDER PALLET
TRUCK

M070A

MO25A

MC10-15

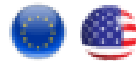
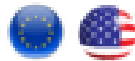
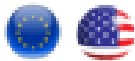
MPE80 US ONLY

L0 2.5A - Serie E444

L0 2.5 - Serie E444

S1.0 - 1.5 B447

B80ZHD - Serie B257 US
ONLY



BALYO ROBOT - DETAIL



Navigation laser

Blue spot

Curtain laser or 3D camera

Radio or Wimesh or Wifi option antenna

Movebox with HMI interface and 2 emergency stop

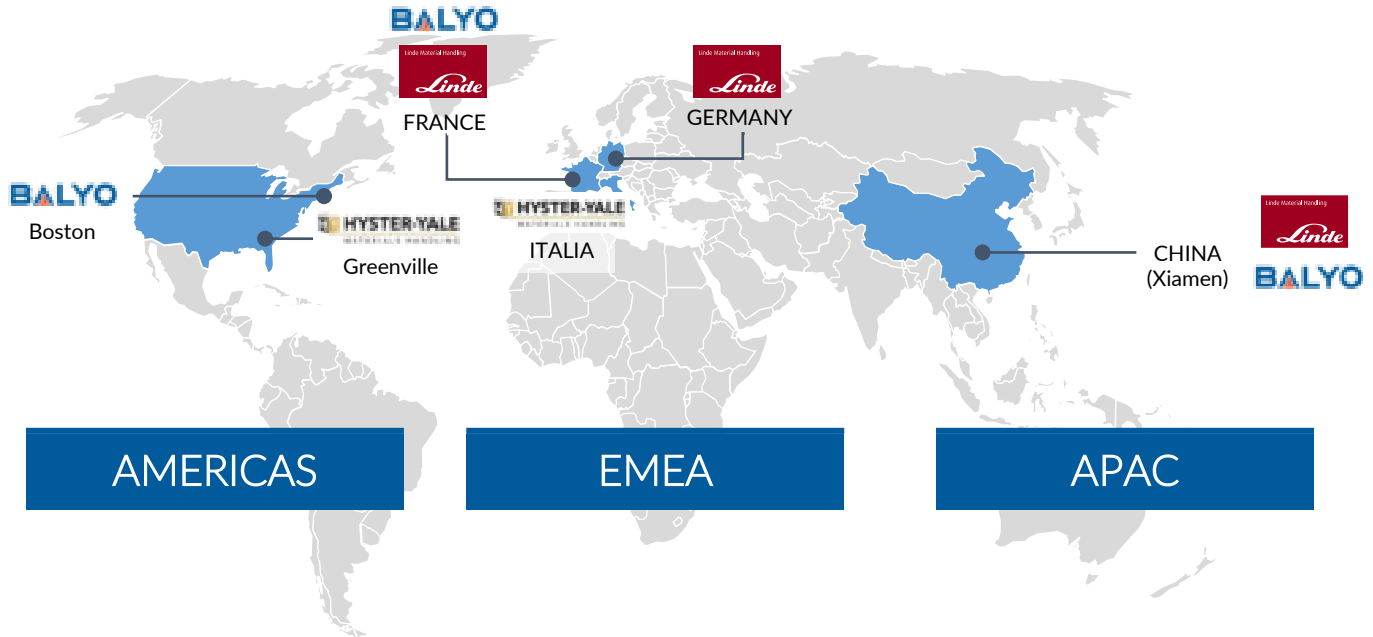
Rear laser for PLd safety

Side laser for PLd safety

Front laser for PLd safety

AN ESTABLISHED INDUSTRIAL ORGANIZATION

MARKET ADDRESSABLE THROUGH LINDE MH AND HYSTER-YALE GROUP



ENABLERS TO MAINTAIN TECHNOLOGICAL LEADERSHIP



Intelligence

+ Innovation

- 📌 Obstacle avoidance
- 📌 Multilayered navigation
- 📌 Autonomous Path finding: Routes vs Circuit
- 📌 Induction Charging
- 📌 AMR Product Range Devt – « follow me »

+ Improvement

- 📌 3D Pallet detection & learning
- 📌 NextGen Calculator
- 📌 Mobile Station Opp charging
- 📌 360° Safety « Multilayered »
- 📌 Load counting
- 📌 Circuit modification feature
- 📌 Transport double-pallet
- 📌 Fail over
- 📌 Station & flows management

+ Robots complements

- 📌 NextGen COMBOX « Touch », Battery powered, Laura Comm°
- 📌 Virtual I/O
- 📌 LTO & Li-Ion batteries

+ Big Data

- 📌 Daily Statistics
- 📌 Cloud-based fleet access
- 📌 Customer reporting



Simplification

+ R&D

- 📌 OS 4.x in 2019
- 📌 OS 5.x in 2020

+ Operations

- 📌 Robotics as a Service
- 📌 Remote robot operations & controls
- 📌 Missions editor
- 📌 Pref editor
- 📌 Circuit editor
- 📌 Rack editor
- 📌 MAPBOX
- 📌 « Scratch-like » installation

+ Marketing

- 📌 Customer Journey Automation (e-learning, x-tra)
- 📌 Partner Journey Automation (e-budget, e-learning, x-tra)
- 📌 Digital Marketing & Inbound
- 📌 Online ROI
- 📌 Partner Elearning Platform

+ Service

- 📌 Online spares ordering
- 📌 E-Ticketing
- 📌 Hotline 24/7