

PROJECT « CENTAUR » - PITCH DECK

“Improve productivity

with on-site logistic flow software solutions and cooperative robots”

helping humans”

INTRODUCTION

WHY E-COBOT?

When I was 10 years old, I was working with my grandfathers, one a garage owner and the other a carpenter. As they grew older, their strength and agility diminished, despite their persistent desire to put on their overalls

What if it was possible to design solutions that would help people in their daily lives by improving their performance?

This idea supported by my passions - industry, robotics, artificial intelligence, biomechanics - allowed me to create in 2016: E-COBOT

E-COBOT aims to design cobotized solutions improving human performance with Cobots (collaborative robots).

Sébastien ECAULT
President E-COBOT



COBOTICS

WHAT IS IT ?

The basis of cobotics is the **cooperation of a robot with a human**, not its replacement.



« The "**cobot**", a machine designed **not to replace** a worker and take his job, but **to help him** do the job more efficiently and with reduced risk of injury. »

Jon Van (11 décembre 1996)
Mechanical Advantage. Chicago Tribune.

ADDRESSING MAJOR PRODUCTIVITY ISSUES WITH COOPERATIVE ROBOTICS TECHNOLOGIES

Global MegaTrends

- Rising labor costs
- Increasing labor turnover and shortages
- Need to optimize on-site operational flow with easily implementable and user-friendly robotic solutions

Number of sectors have to modernize operations to remain competitive by increasing the level of automation and implementing cooperative robot technology



E-COBOT : SIMPLIFYING ACCESS TO COBOTICS WHILE ADDRESSING COMPLEX SUPPLY CHAIN SITUATIONS

COOPERATIVE AUTOMATION: IT'S MORE THAN JUST A ROBOT !

Various solutions exist with apparent very close performance levels but significant differences in complexity of installation, efficiency, reliability, flexibility, consideration for safety of goods ... and cost

Beyond robot technology, added value for end users can only be guaranteed if they have access to a global SW/HW/Services solution to optimize their operational flow



e-cobot : unlocking access to on-site operational flow management solutions

Simplified project assessment

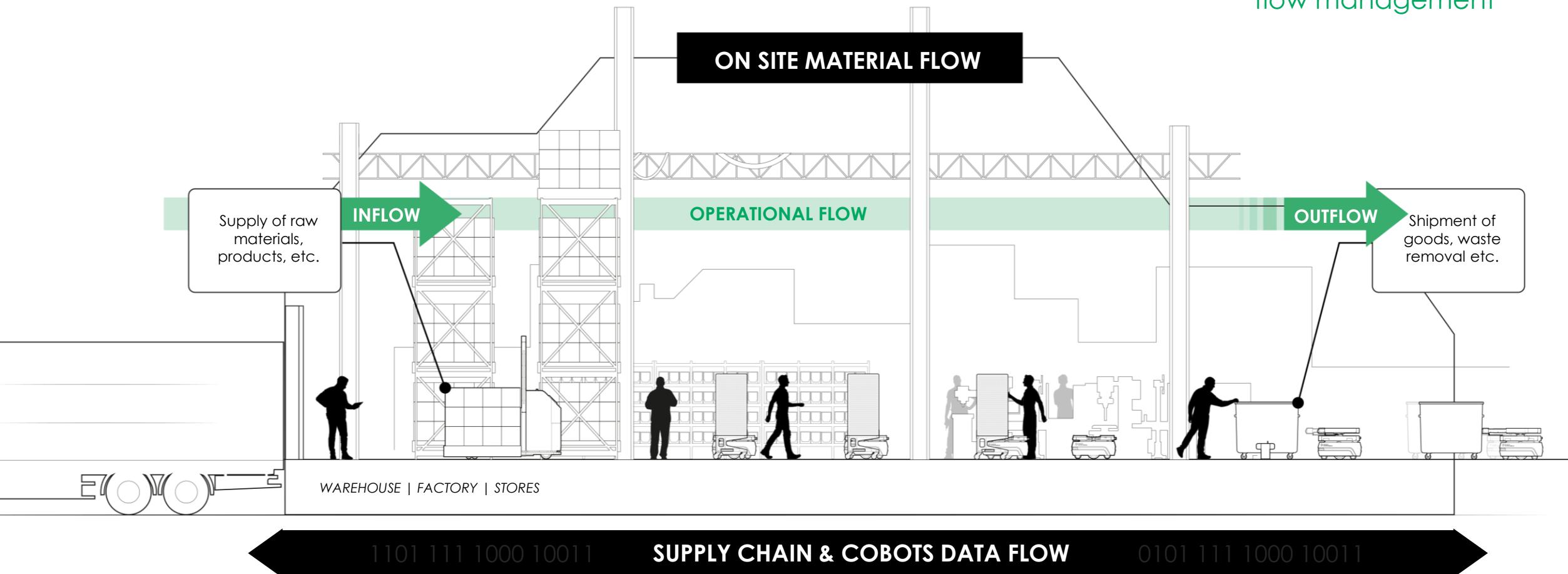
Smooth implementation

Optimized operations

OPERATION FLOW OPTIMIZATION SOLUTIONS

TO IMPROVE EFFICIENCY, SAFETY & PROFITABILITY

Facilitating on-site logistics
flow management



COBOTICS POTENTIAL

GLOBAL MARKET SIZING

Only **4.8%**

Of the total industrial robots installed globally were cobots in 2019

4,300 cobots sold in the world in 2015

15,000 in 2019, 50% growth forecast every years up to

>170,000 units in 2025

670 M\$

Market size in 2015

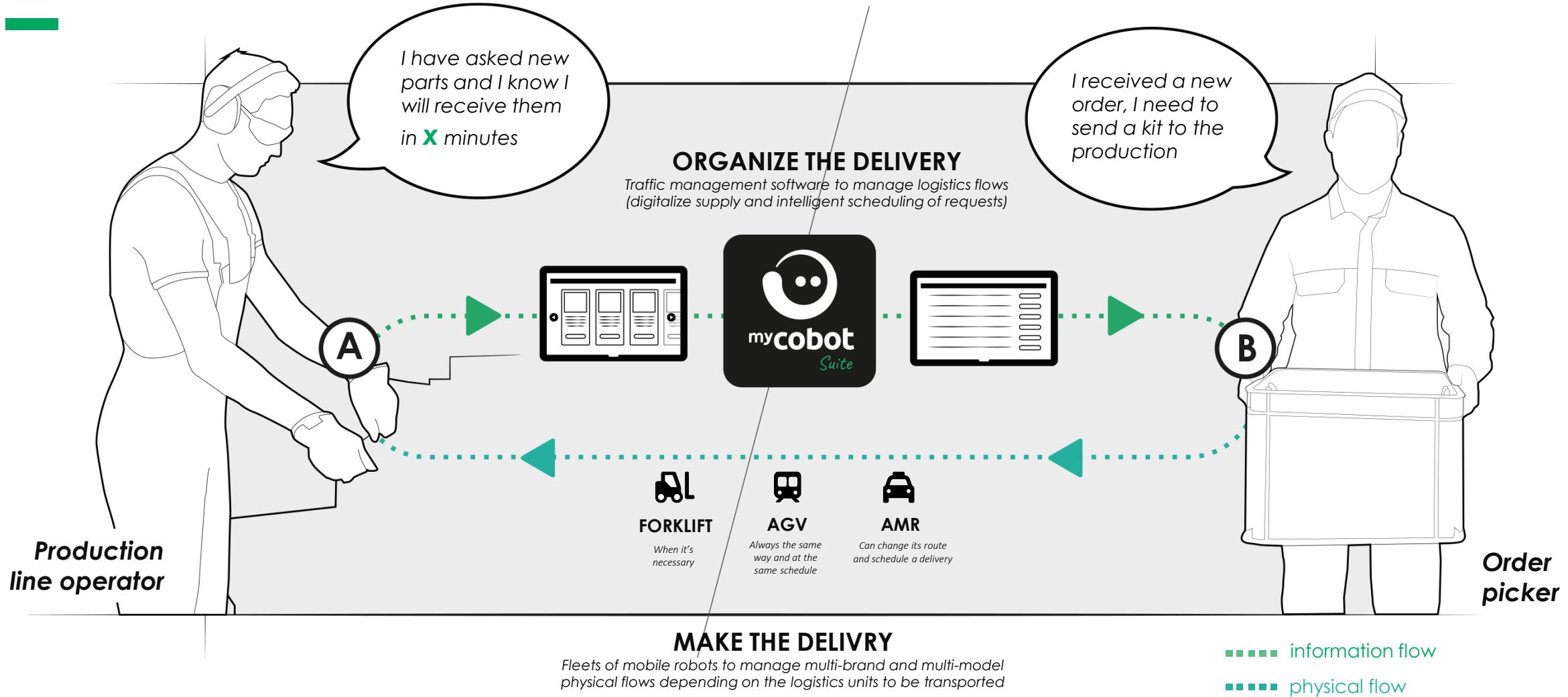
>9,300 M\$

Market size by 2027

Sources : Statista, Venturebeat, Menafn

END-TO END SOFTWARE & COBOT (1/2)

OUR SOLUTION



END-TO END SOFTWARE & COBOT (2/2)

PROPRIETARY TECHNOLOGIES

INTELLIGENT MOBILE ROBOT

Embedding Mobile cobot operating system:

Localization | Physical & cyber security |
Navigation | Communication | Pack
synchronization

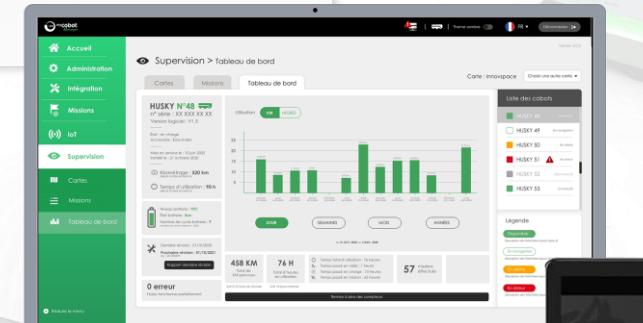


+ A catalog of products

MYCOBOT MANAGER

Configuration, supervision & management software

Create maps | Create assignments |
Mission management | Supervision |
Dashboard | Product and user
configuration



+ A catalog of extension
modules for specific
business needs

MYCOBOT USER

Flexible user interface

Control | Mission launch |
Cycling mission | Simplified
configurable interface



+ MyCobot IoT: Range of intelligent
control equipment (sensor,
controller, actuator, etc.)

HUSKY (1/3)

MAIN FEATURES

MADE IN FRANCE



A SMART MOBILE COBOT

3 operating modes



Follower



Autonomous



Remote controlled



MyCobot



Tows up to
1 ton



Carries up to
250 kg



Battery life
16 hr



Safety vision
360°



HUSKY (2/3)

A LARGE PRODUCT RANGE ADDRESSING VARIOUS USE CASES



68

HUSKY
Produced

+15 000

Km travelled

25

Customer sites
with HUSKY
Installations

12

Different use
cases of HUSKY

400

Accessories &
devices in the
catalog

+150 000

Hours of Development in
Development, Validation, POC
and Integration



HUSKY (3/3)

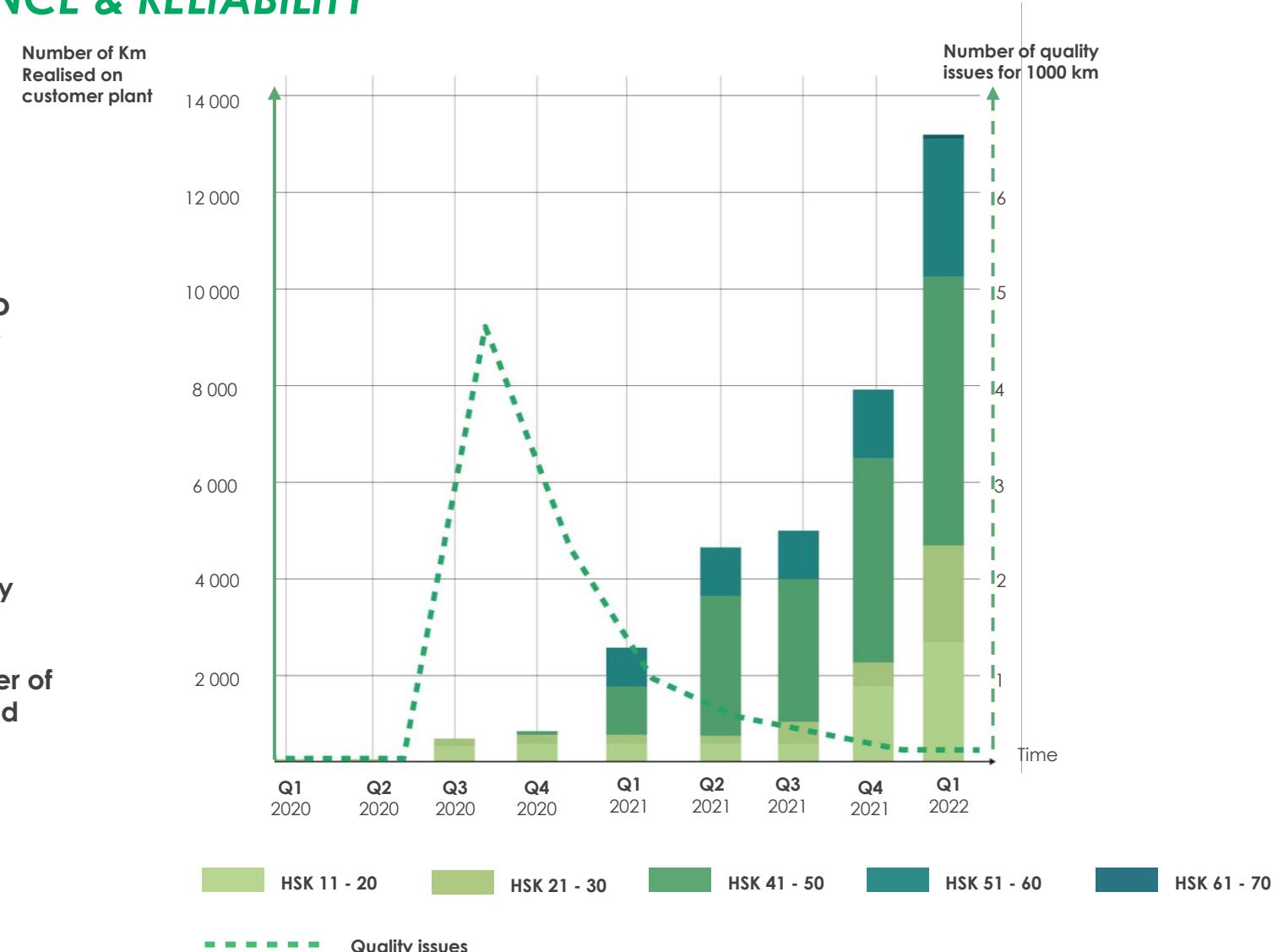
IMPROVING HUSKY'S PERFORMANCE & RELIABILITY

From Q1 2019 to Q2 2020, HUSKY ran less than 800km

Strong acceleration since Q3 2020 thanks to R&D progress and bug solving (bugs mainly linked to the diversity of customers' environnements)

Distance travelled by HUSKY fleet since they received an improved OS version (1.5.0.)

Quality issues KPI - representing the number of Quality issues identified for 1000km travelled

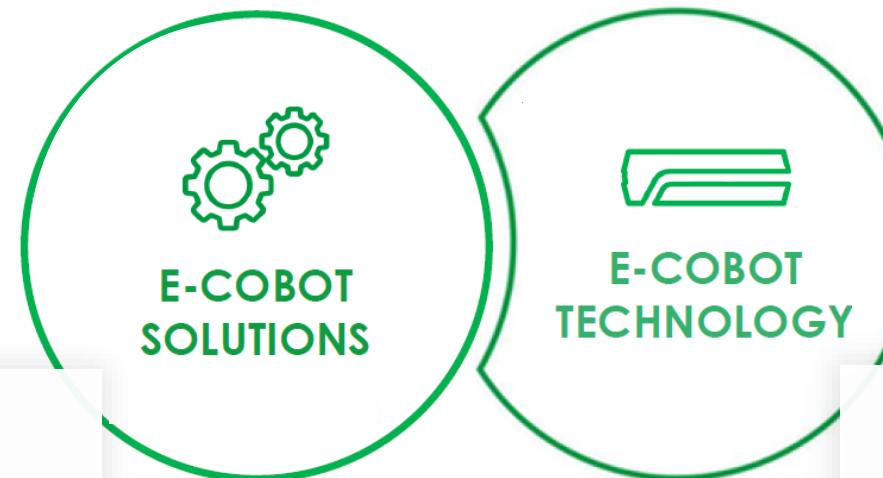


COVERING THE WHOLE COOPERATIVE ROBOTIC VALUE CHAIN

E-COBOT chose to carve out those activities in a 100%-owned subsidiary in 2022

The historical activities remain in the parent company E-COBOT

The integrator activities have been transferred to E-COBOT Solutions



OEM & SYSTEM INTEGRATOR (10% CA)

- Use case/flow analysis
- Solution design
- Integration & Installation

Advantage

Our main advantage is to focus each activity on its core business

We also have a global view of what our customers want

HW MANUFACTURER & SW DESIGNER (90% CA)

- Robotics and software R&D & Manufacturing
- Data analytics
- After-sale & maintenance services

OUR OFFER

BUSINESS MODEL



Acquisition

Clients buy the HUSKY with an integration service. The average price is 50 k€ for the Product + Integration



Rent

(less than 800 hours of use per year)

Clients pay a one-off integration service and rent the HUSKY through an organization like Grenke*.

The service cost is about 6,000 € and the rental cost is around 1,500 € / month



CaaS**

(from 800h of use per year)

Clients pay a one-off integration service and buy their own equipment. For the HUSKY, they pay a subscription fee based on a time commitment which gives them a minimum number of hours of use over a specific period. In case of overrun, they pay the delta at the contract rate

Notes: (*) A German leasing company (** CaaS: Cobot-as-a-Service

ADDRESSING KEY ON-SITE LOGISTIC FLOW ISSUES IN VARIOUS SECTORS



 **HEALTHCARE
FACILITIES**



 **RETAIL STORES /
SUPERMARKETS**



 **INDUSTRY /
LOGISTICS**

ISSUES

- Increasing labor turnover and shortages / Rising labor costs
- Burden of moving large number of logistics units in long round trips between workstations, for shelf restocking, preparation of drive-in orders, catering distribution, etc.
- Dedicating workers to non-productive tasks (moving empty containers, supplying or clearing logistics unit, removing cardboard packaging, etc.)

E-COBOT ADDED VALUE

- Optimize working time by eliminating unnecessary workers' trips
- Flexible flow management adapted to process timing constraints and peak hours
- Improve staff working conditions and safety
- Improve productivity

TRACK RECORD IN INTEGRATION OF INTELLIGENT COBOTS' SOLUTIONS



Specializing in precision mechanics, Halgand meets the demands of the aviation, rail, medical and nuclear industries. 300 employees

Challenge:

Improve productivity

Objectives:

Clearing of metal waste skips by logistics unit towing and automatic hitching

Solution:

INTEGRATION OF THE AUTOMATIC HUSKY GRABBER MOBILE ROBOT



COMPAGNIE
DES ÉQUIPEMENTS
TECHNIQUES
ET INDUSTRIELS
POUR L'HABITAT

Specializing in the housing envelope and energy-efficient refurbishment sectors. 1 300 employees

Challenge:

Improvement of intralogistics performance

Objectives:

Integration of an autonomous mobility solution for full/empty trolleys transiting between two buildings

Solution:

INTEGRATION OF THE AUTOMATIC HUSKY GRABBER MOBILE ROBOT



Specializing in selling clothing, home, and food products in both urban and rural areas

Challenge:

Improvement of Drive performance

Objectives:

Help with in-store order pickup and autonomous delivery shuttle to the Drive

Solution:

INTEGRATION OF THE AUTOMATIC HUSKY DRIVE MOBILE ROBOT



COMPETITION (1/2)

POSITIONING – AGV/AMR



- Follow fixed infrastructure
- Stop when facing obstacles
- Work under defined conditions
- Nav. requiring additional infra
- High costs & time integration
- Expensive site reconfiguration

B2A TECHNOLOGY ASTI

DS AUTOMOTION EXOTEC



- Free navigation
- Navigate around obstacles
- Able to follow humans
- Highly intelligent robot
- Fast & cheap deployment
- Flexible updates

e-cobot
Performance Maker

MIR
MOBILE INDUSTRIAL ROBOTS OMRON

Main criteria to enter the competition of mobile C/robotics AMR :

- Provide a mobile robotics technology
- Own and control the embedded intelligence
- Have the ability to industrialize its products
- Have a distribution/integration network for its products
- Have a structure to innovate in AI technologies
- Integrate cognitics and user-centered design

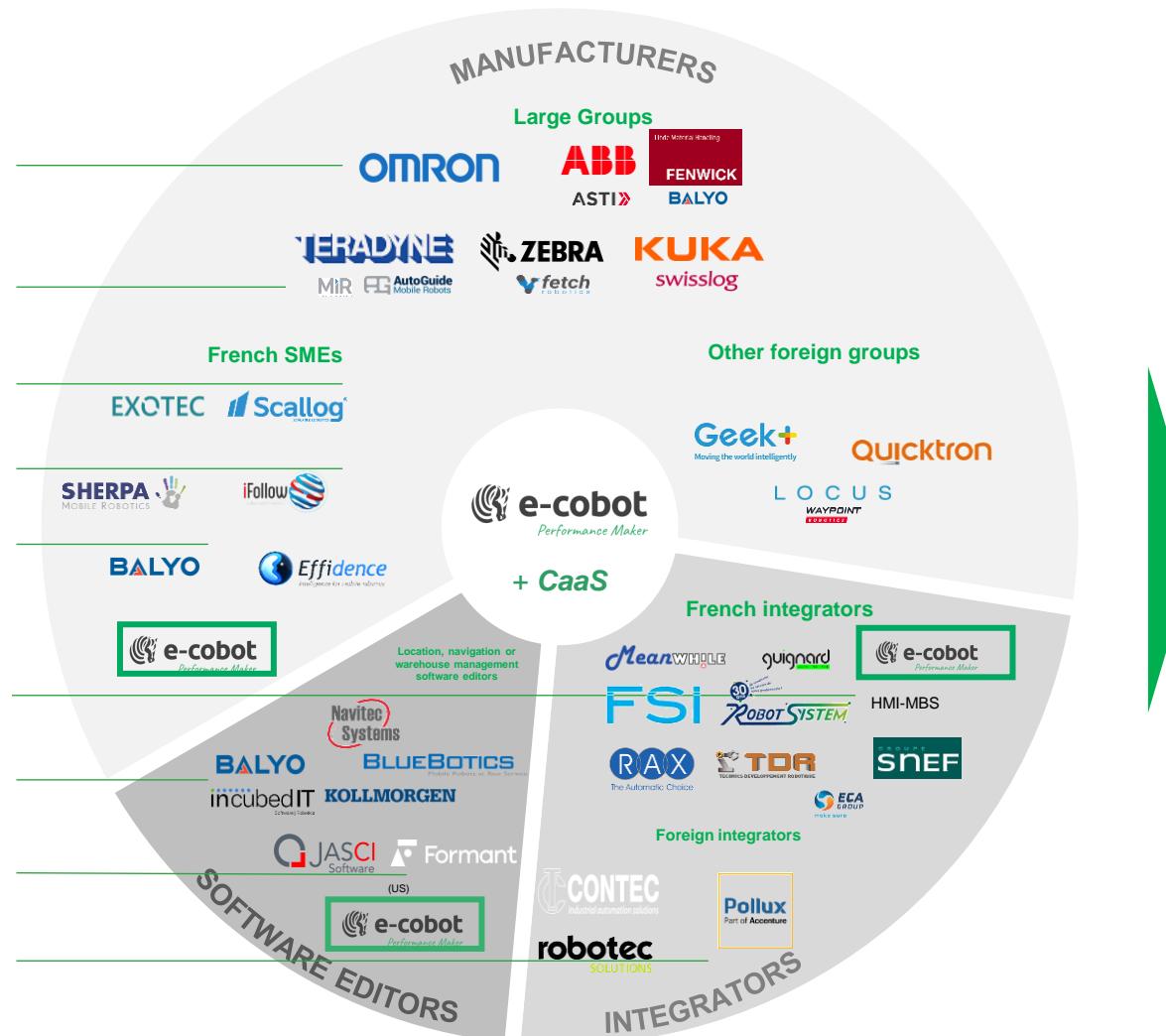
Besides e-cobot only two competitors meet these criteria in the global market

However, their management software are limited to basic supervision features and do not include data flow management

COMPETITION (2/2)

POSITIONING - GLOBAL

- Omron**
 - Lack of flexibility for integration (only one integrator in France)
- MIR**
 - No direct distribution in France
 - Less efficient software
- EXOTEC & Scallog**
 - Need for complex infrastructure
- Sherpa & iFollow**
 - Single sector solutions
- Balyo**
 - Stackers/lift trucks only
- FSI, Robot System & HMI MBS**
 - Long-time players who have not demonstrated significant growth
- Balyo, Kollmorgen, Incubed IT, BlueBotics, Navitec System**
 - Location and navigation software suppliers
- JASCI & Formant**
 - No presence in France
- Pollux**
 - No presence in France



Smart mobile robots

Management software

Data flow management

CaaS

Integrator

E-COBOT AT GLANCE



OUR TEAM

A SKILLED TEAM OF PROFESSIONALS WITH SIGNIFICANT TRACK-RECORD IN ROBOTICS, IA AND ENGINEERING



Sébastien
ECAULT
C.E.O.

IA Engineer
MBA at the University of Poitiers
DU News trends in Mgmt at the HAAS SCHOOL
of BERKLEY
15 Years XP

Sébastien pilots and coordinates the vision of the project on the technological, industrial, marketing, commercial, HR and CFO aspects.

This achievement is based on his previous experiences coupled with a committed and competent team,



Marion
PAUTHIER
Projects &
Processes Director



Élodie
GROLLEAU
HR delegated



Christophe
SCHEID
Partnership &
Business Dev. Director



Alexandre
AMBHIEL, phd
Program R&D
Director



Julien
RABALAND
Technical
Director



Clément
LAURENCE
Chief Design
Officer

5
FTE

Management

1 CEO

1 R&D director

1 Design Officer

1 HR

1 assistant

24
FTE

Technical

11 research & AI

5 Integration

5 mechatronics

3 Auto/Elec/Robotics

6
FTE

Project & process

4 Project Manager

1 Purchasing

1 Financial Controller

5
FTE

Partnership & Business Dev

4 Bus Dev

1 Presales Engineer

BUSINESS PIPELINE FOR 2022

€3,800k

expected revenues
for 2022

Signed
Secured Revenues

€1,150k

Short listed
Advanced stage

€1,020k

Negotiation
Under analysis

€6,000k

Leads
First contact

€7,900k



including:



including:



including:



including:



ROAD MAP

TECH & BUSINESS

2022

2023

2024

PRODUCT RANGE SEGMENT

Range improvement by minor product changes and according to opportunities
HUSKY INDEX 500 kg available payload on standard shelves

90% Recyclable with existing recycling processes
Including 50% of recycled material or reused (in weight)
HUSKY turtle with up to 1200 kg of payload

Lifetime of over 10 years by design
Autonomous pallet stacker up to 3m high

MYCOBOT

Software stabilization - the 2022 version is covering 80% of intralogistics applications and fulfills 100 % of our current customers' needs
First non E-COBOT mobile robot product integrated in MyCobotManager

Integration of camera system software for step-by-step object avoidance and recognition in several environments
Improvement of mission management and traffic management
Integration of another brand of product in MyCobotManager for software market extension

Opening of the MarketPlace around MyCobotManager for easy IOT integration and placement of MyCobotManager as a warehouse control system
Traffic management of AMR and AGV of several brands
Visual traffic management

BUSINESS

Develop a freemium offer for myCobot

Development : Dubai, UK, Spain, Poland



PROCESS

Optimize the Supply Chain & triple sourcing the critical component

Increasing production to >100 HUSKY/year

Project to develop an autonomous production tool "HUBBEE" (capacity to increase production to >1,000 HUSKY/year)

BUSINESS PLAN

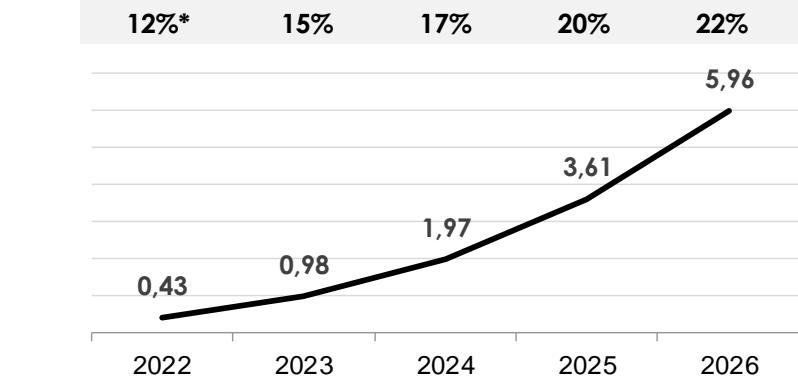
P&L

P&L in €k, 31st Dec.	2021	2022	2023	2024	2025	2026
Husky sold	1 505	3 170	5 572	9 826	15 608	21 843
One-off	2 801	4 795	8 335	12 995	17 700	
Recurring	369	777	1 491	2 613	4 143	
Husky rented - CaaS	98	319	730	1 419	2 465	
One-off	39	117	247	423	650	
Recurring	59	202	483	997	1 815	
Collaborative arm	345	495	945	1 425	2 190	
Other services	486	100	-	-	-	-
Total revenues	1 991	3 712	6 386	11 501	18 452	26 498
Growth %	n.a.	86%	72%	80%	60%	44%
+ Change in inventory	(15)	225	229	346	528	1 014
+ Capitalized production	1 304	1 046	1 626	2 512	3 768	5 416
- COGS	(1 010)	(2 171)	(3 345)	(5 614)	(8 573)	(11 851)
Gross Profit	2 269	2 813	4 896	8 746	14 175	21 077
as % of revenue		76%	77%	76%	77%	80%
- Oprating expenses	(856)	(888)	(905)	(1 008)	(1 194)	(1 515)
- Payroll	(1 782)	(2 329)	(3 805)	(5 041)	(6 988)	(10 019)
+ Grants	23	60	60	-	-	-
EBITDA	(345)	(346)	245	2 696	5 992	9 543
as % of revenue		-9%	4%	23%	32%	36%
Head-counts	37	51	73	90	133	174

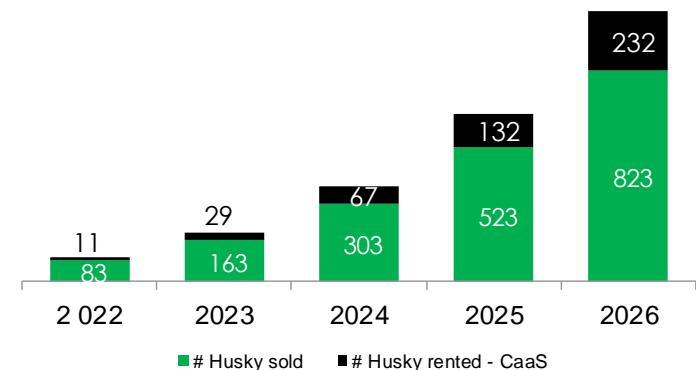
Note: (*) change in reporting, amounts directly reported in the one-off / recurring business lines

ARR evolution (in €m)

(*) As % of revenue



Cumulative HUSKY sold & rented



RAISING €7m

To become a leader of on-site logistic flow solutions

**Enhance E-COBOT solutions
and keep competitive edge**

Further develop myCobot Manager & User solutions

Improve HUSKY's intelligence & product line

**Expand Business activities
in France and Europe**

Extend sales initiatives & customer relationship

Secure and build out commercial deployments



Thank you for your attention

« The difference between a dream and a project is a date. »

Walt Disney



e-cobot

Performance Maker

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