

MASINOVA OY

The fastest industrial robot in the world

INVESTOR PRESENTATION FOR SEED FUNDRAISING 6/2023

MAMBA ROBOT

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Masinoa Experience

40 YEARS OF GLOBAL DESIGN AND DELIVERIES

- 1 Design and innovation company for avant-garde robot solutions
- 2 Real world experience of designing and delivering wide range of robotic solutions based on various technologies and generations
- 3 Designed cutting edge solutions for JOT Automation, MAG, Ginolis, Fastems, Head Investment, Gold&Green foods, Ionix, Cryotech Group etc.
- 4 Solid track record in delivering higher productivity, lower costs, increased worker safety, improved quality and faster manufacturing times
- 5 Portfolio of innovations and 2 patents



Vesa Hirvonen

FOUNDER OF Masinoa Oy
FOUNDER OF Master Automation
Group OY (MAG)

"The robot designer name world-
wide"

Designer of first A4 desktop robots
for Nokia to assemble Mobile
phones in China factory. 140
robots delivered.

Same generation desktop robots
were used in various life science
installations in the USA.

The world of industrial robots today



- 1** Multibillion market with 14% growth (CAGR). Every year 630.000 new robots of which 10-20% are small robots equivalent to Mamba
- 2** Many current industrial robots are outdated, slow and lack modularity
- 3** Current robots require a lot of floor space, heating and electricity. Difficult to meet sustainability needs
- 4** EU and US are massively increasing robot adaptation to compete against Asia. A growing trend relocating production from China back to Europe (SME) and rise of small robots

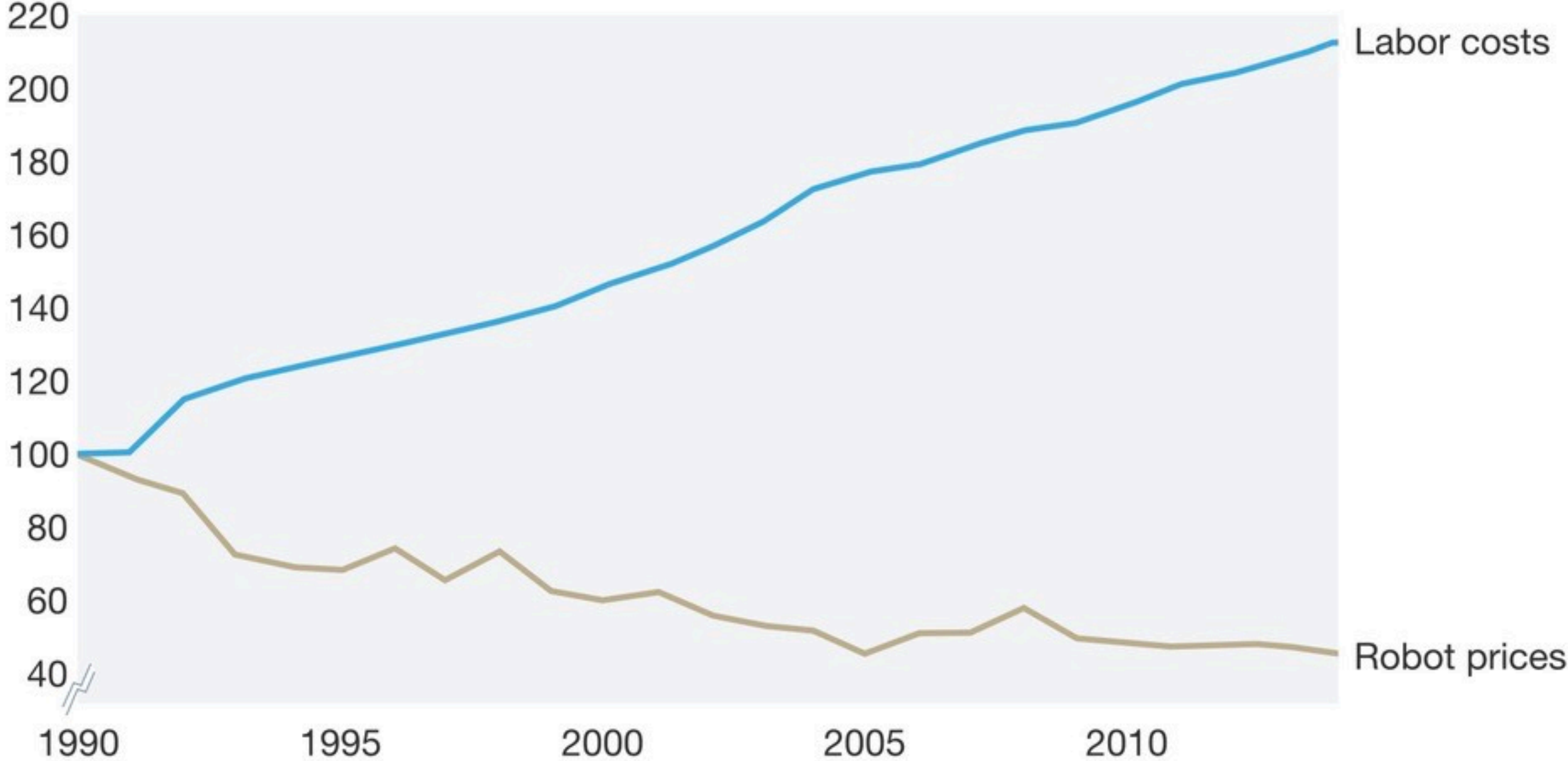
Robot Adaptation is Booming

BUSINESS CASE HAS BECOME INCREASINGLY LUCRATIVE > SME'S AND SMALL ROBOTS DRIVE GROWTH

Robot prices have fallen in comparison with labor costs.

Cost of automation

Index of average robot prices and labor compensation in manufacturing in United States, 1990 = 100%



Source: Economist Intelligence Unit; IMB; Institut für Arbeitsmarkt- und Berufsforschung; International Robot Federation; US Social Security data; McKinsey analysis

What is Mamba Spindle Robot?

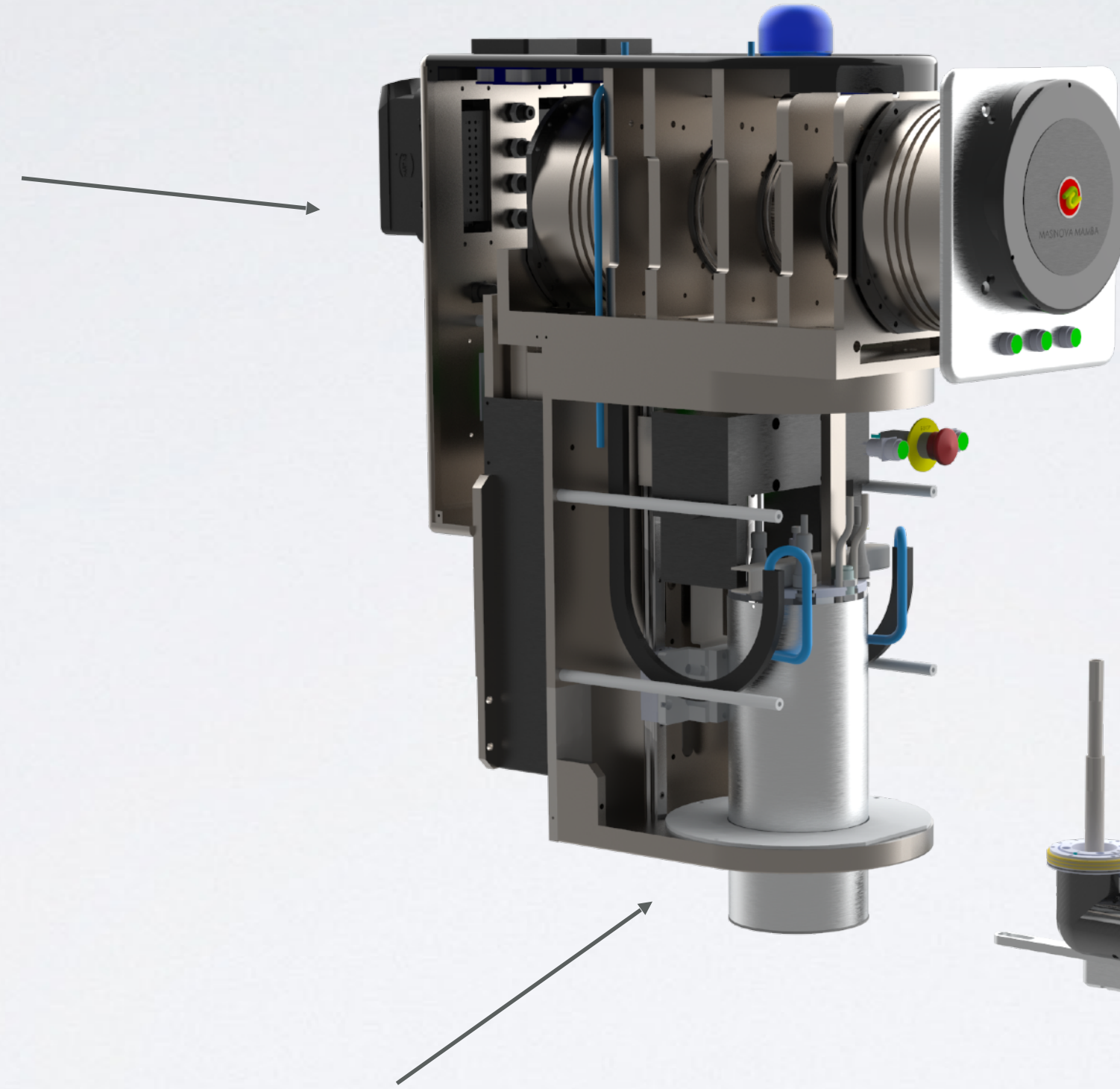


- 1 5 years and 700 days of design work. Two global patents pending
- 2 2-3 times faster than current industrial robots. Smart and accurate, dust and water proof
- 3 Compact, saves floor space, energy and investment costs, lower maintenance cost due to easy to change component structure
- 4 Fits excellently in assembly work, packing, light machining, laser cutting, dispensing and high speed pick ups
- 5 Ideal in pharmaceutical, life science electronic and recycling business. Scalable to practically any set up

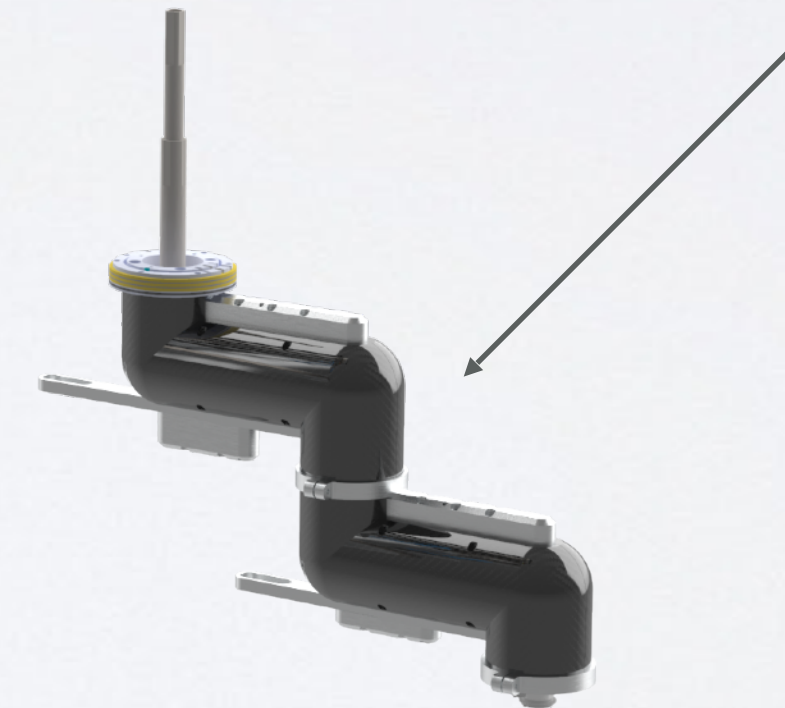
3 separate inventions

Crankshaft / balancing system

Enables high speed and small size

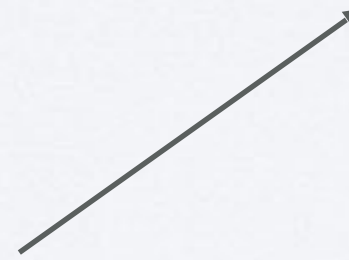


Modular arm can hold several different tools such as pickers, laser beam, machinery vision, liquids pneumatics, electrics, cutting tools, exhaust vacuum system etc.



Hollow shaft-motor packet

Unlimited 360 degree work area



Competitive Edge 10x

1 Performance 3x

- The fastest independent Scara-type robot in the world
- Minimum 100% capacity improvement to existing rivals

2 Space & Energy Savings 3x

- Requires 1/3 of floor space compared to current robots
- 200% improvement in utilization of production facilities
- Huge energy savings

3 Easy Adaptation 2x

- Plug&play
- Works together with existing robots and operating systems
- Easy to program

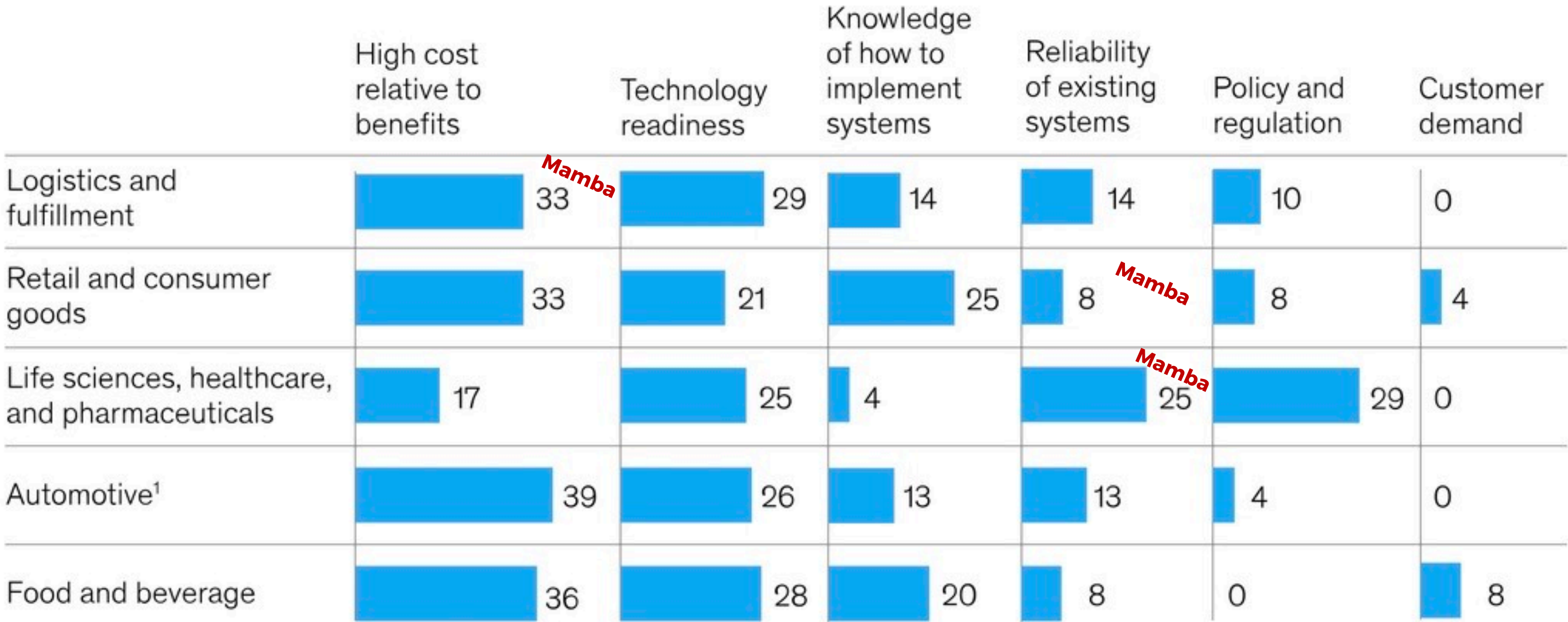
4 Production flexibility 2x

- Modular
- Quick change of arms and grippers for different products
- Dust and waterproof (important for electronic, life science and pharmaceuticals)

Major bottlenecks of automation adaptation

Costs and a lack of knowledge are major bottlenecks in industrial companies' adoption of automation.

Bottleneck to automation adoption, by sector, % of respondents



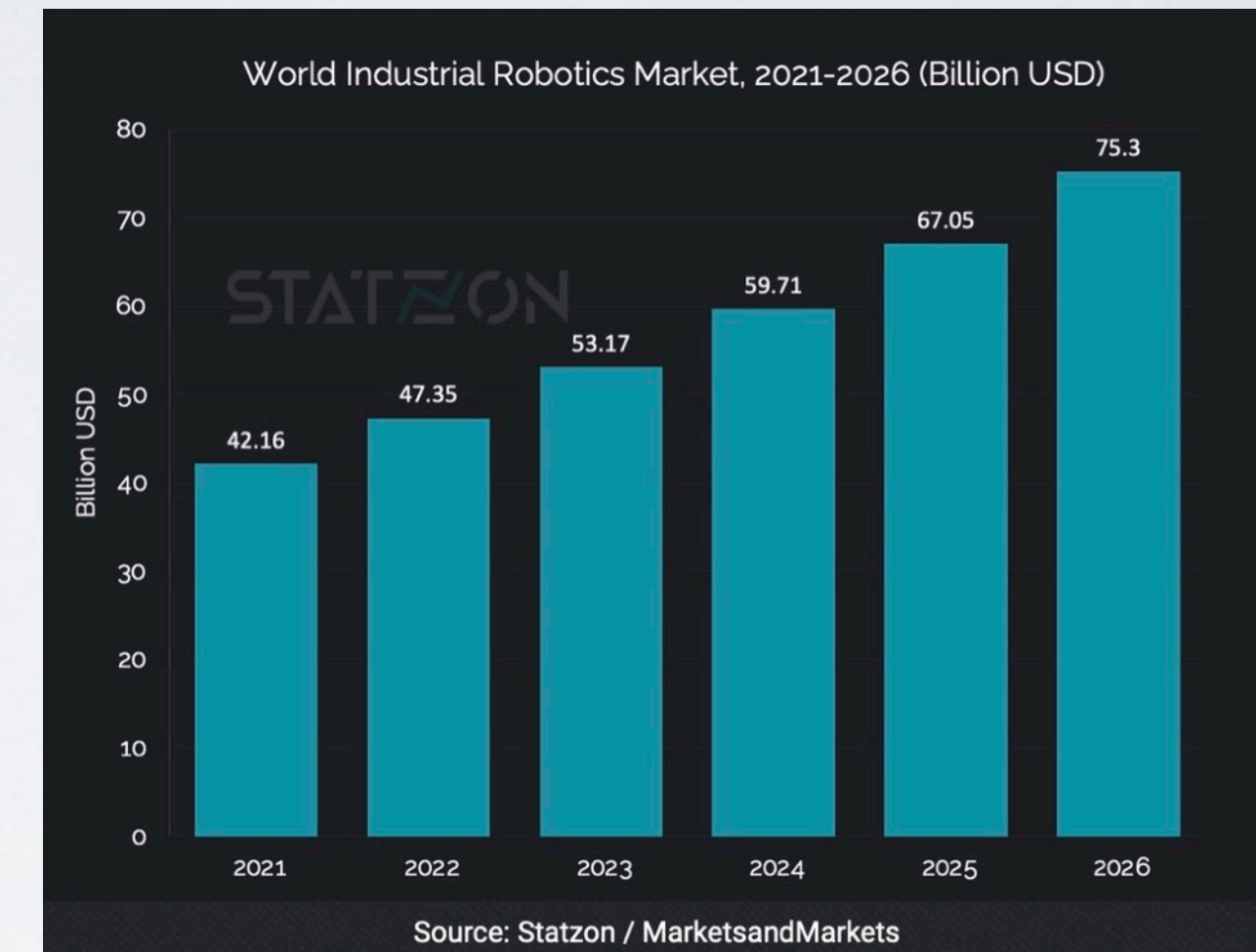
¹4% selection of "other (please specify)," listing "complexity."
 Source: McKinsey Global Industrial Robotics Survey, 65 senior leaders and executives in automotive; food and beverage; life sciences, healthcare, and pharmaceuticals; logistics and fulfillment; and retail and consumer goods sectors, August 2022

Market and trends

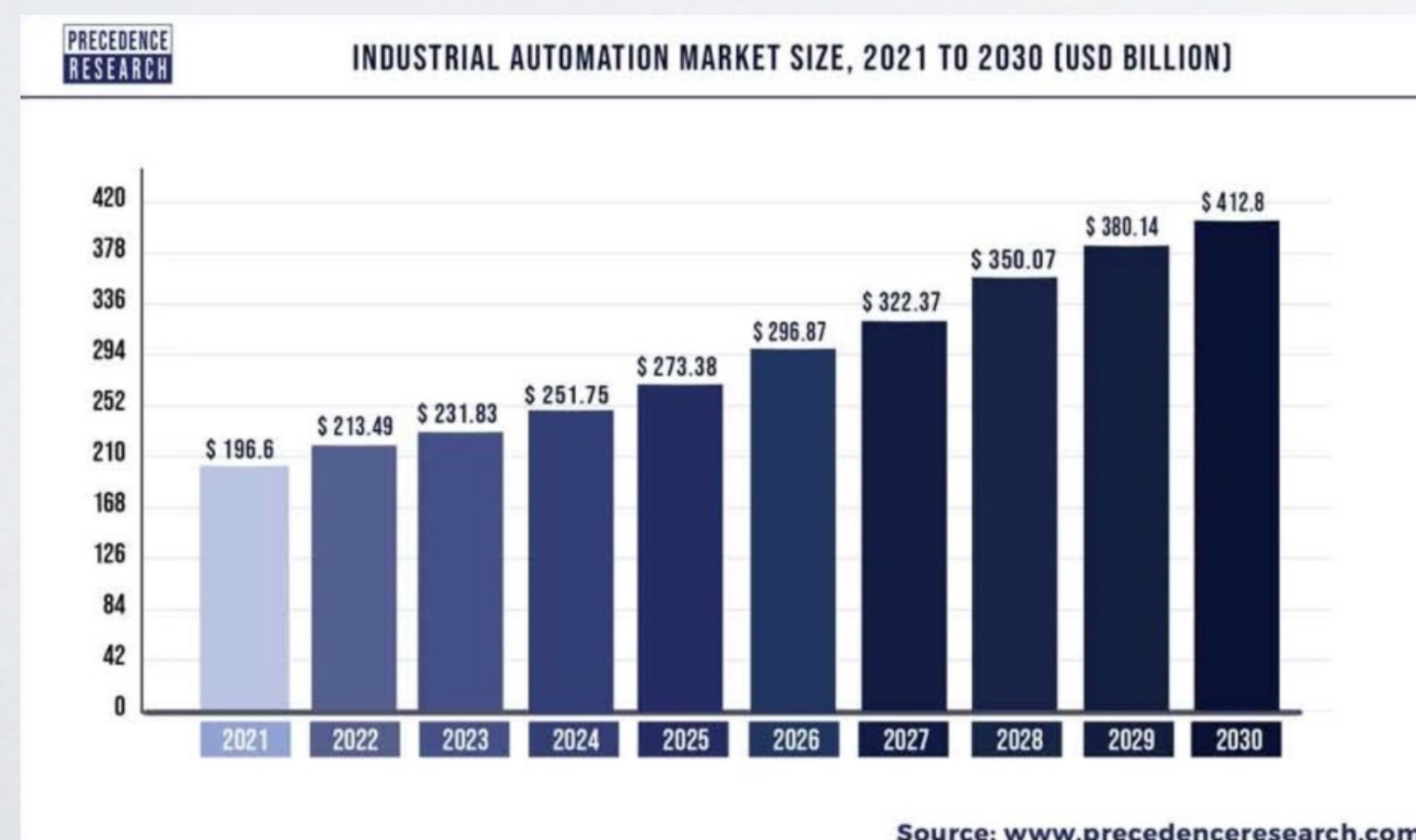
MULTIBILLION MARKET WITH HIGH GROWTH

- 1.65 million operational robots in total in 2018
- 420.000 new robots in 2018
- 630.000 estimated new robots in 2021
- Small and light robots count 10-20%, of the total markets = 60K-120K robots annually
- Industrial robot market growth (CAGR) is 14%
- Current operational robot density globally per 10.000 is 74 (in South Korea almost 631!)
- EU and US are forced to massively increase robot investments to compete against Asia

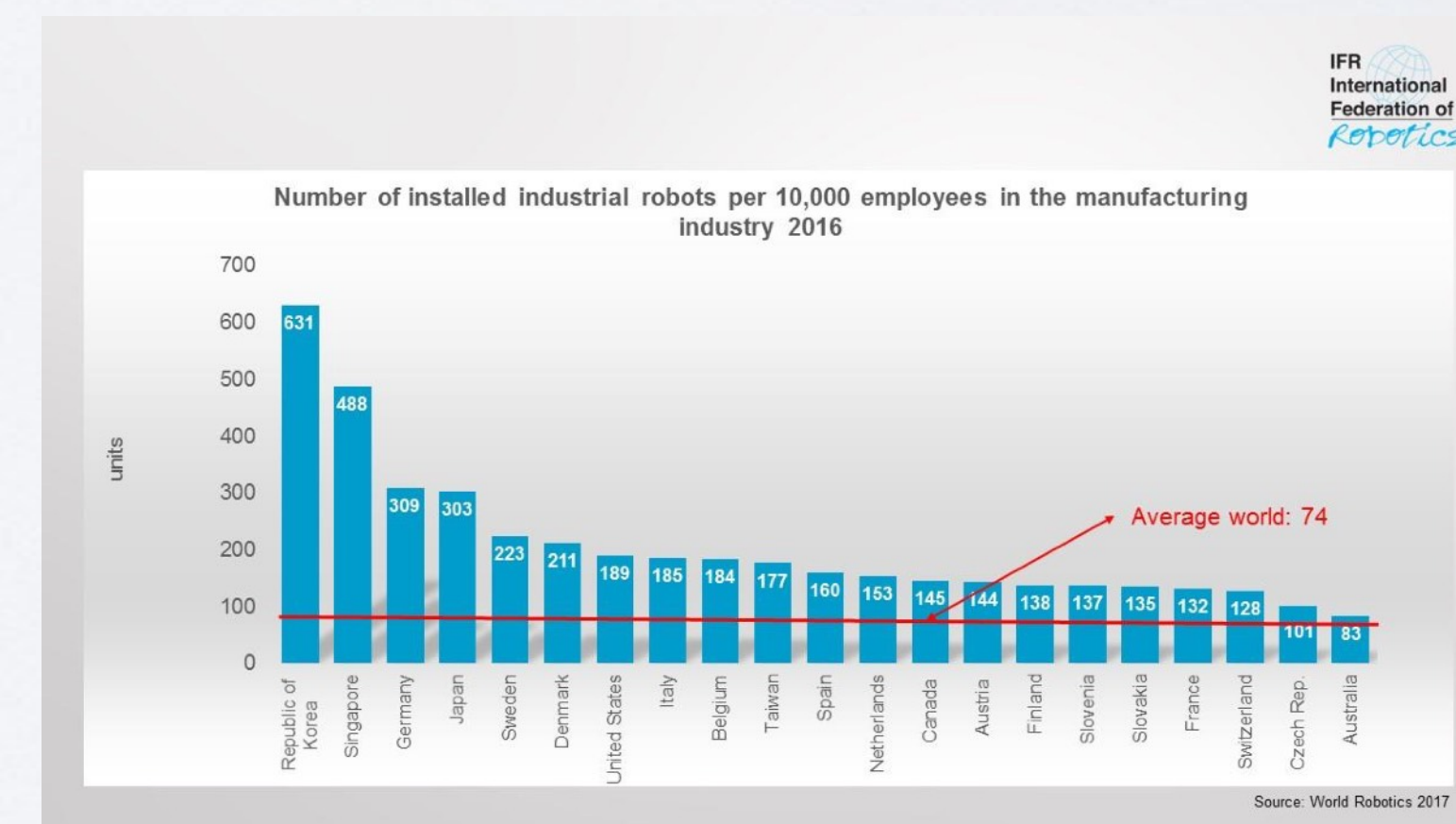
Robotics market is 42 billion (USD)



Industrial automation market total is 200 billion (USD)



Asia leads the adaptation > fastest growth in EU & US

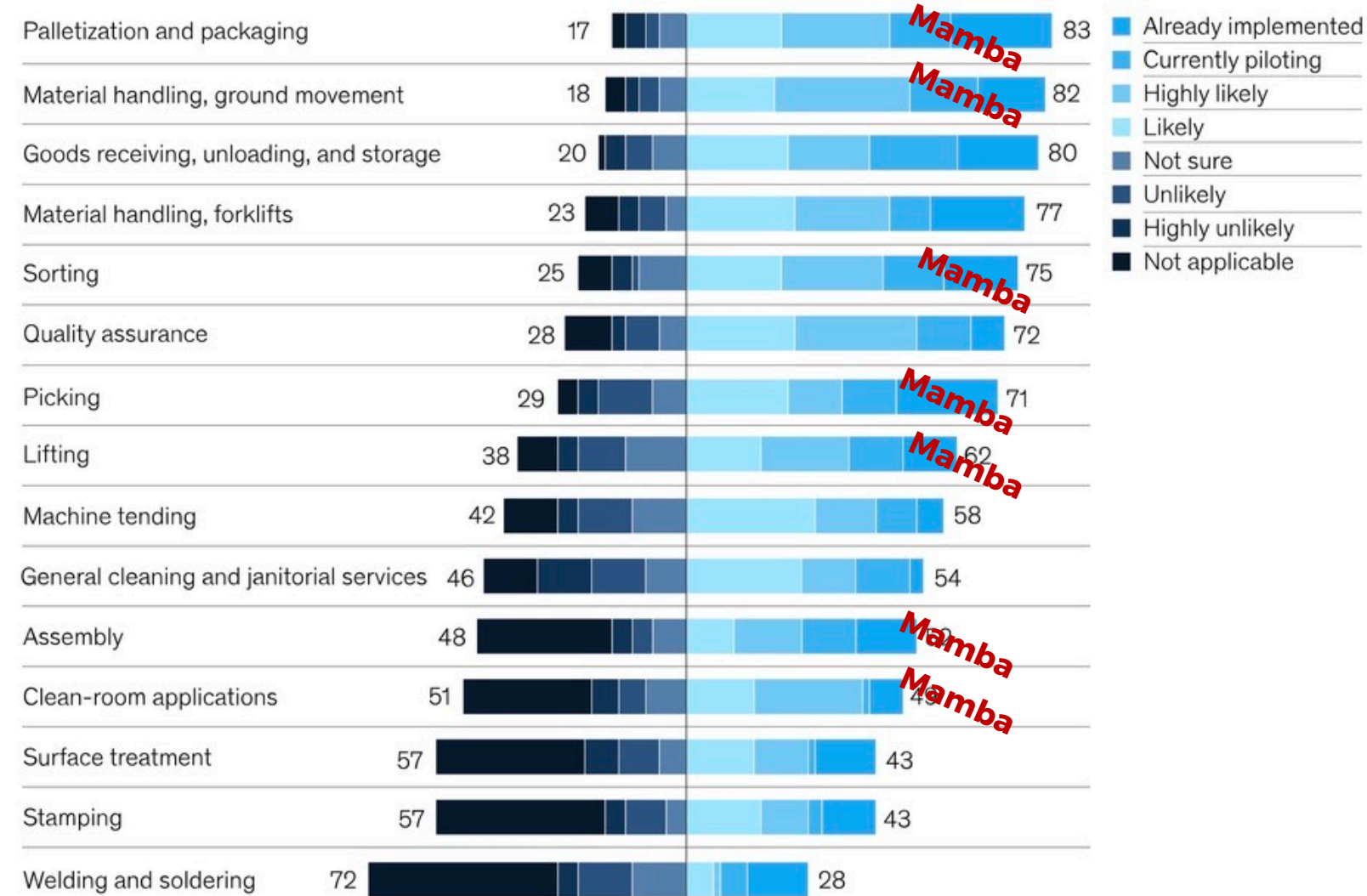


Key Use Cases

SUSTAINABILITY, COST EFFICIENCY AND SAFETY DRIVE ADOPTION

The key use cases for automation in industrial companies include material handling, palletization, and sorting.

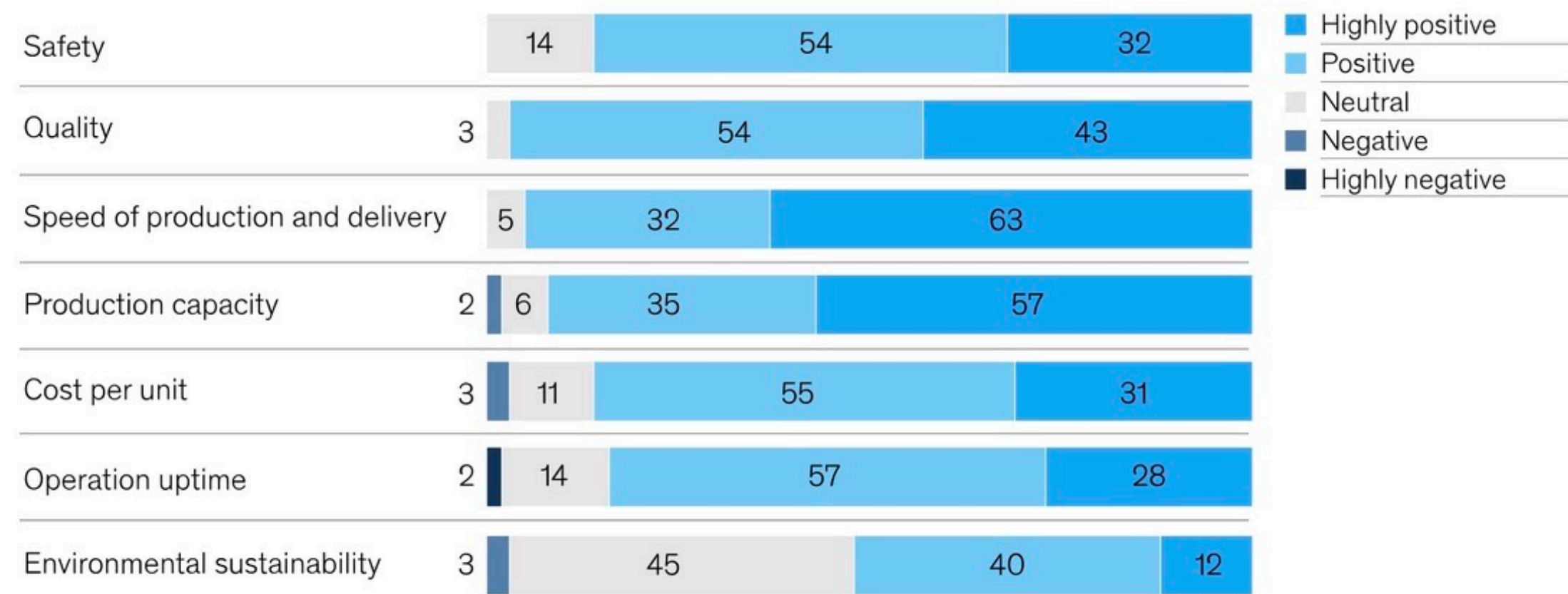
Likelihood of automation adoption, by use case, % of respondents



Source: McKinsey Global Industrial Robotics Survey, 65 senior leaders and executives in automotive; food and beverage; life sciences, healthcare, and pharmaceuticals; logistics and fulfillment; and retail and consumer goods sectors, August 2022

Automation will have a positive impact on speed, safety, quality, and capacity.

Impact of automation, by type, % of respondents



Source: McKinsey Global Industrial Robotics Survey, 65 senior leaders and executives in automotive; food and beverage; life sciences, healthcare, and pharmaceuticals; logistics and fulfillment; and retail and consumer goods sectors, August 2022

Current Competition

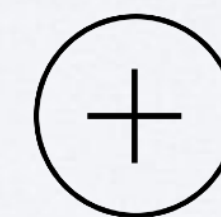
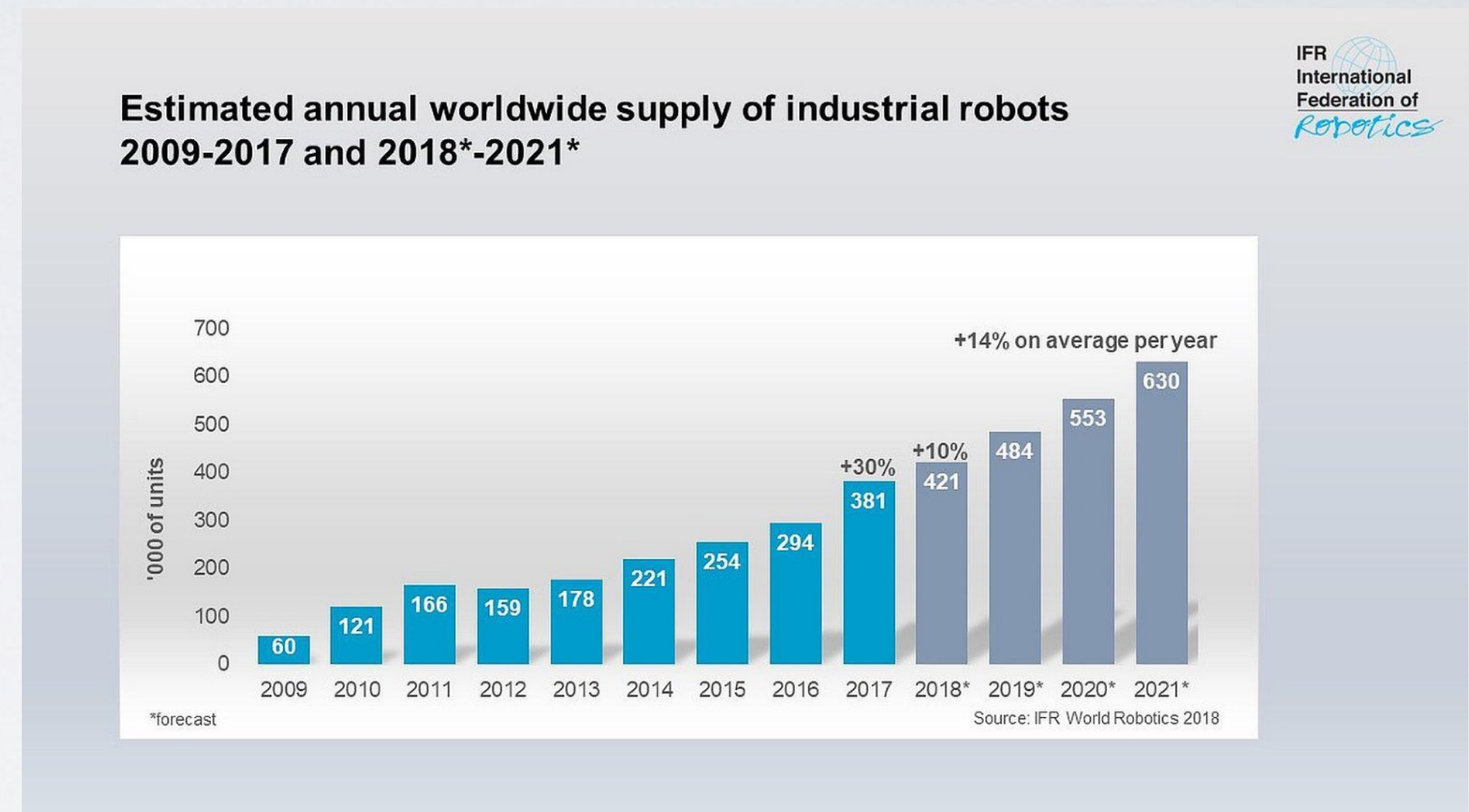
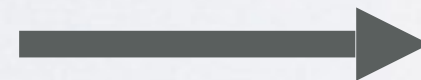
LARGEST ROBOT MANUFACTURERS



1. Fanuc 400.000
2. ABB 300.000
3. Yaskawa 300.000
4. Kawasaki 110.000
5. Nachi 100.00
6. Kuka 80.000
7. Denso 80.000
8. Mitsubishi 70.000
9. Epson 55.000
10. Staubli 45.000
11. Foxconn 40.000
12. Comau 30.000
13. Omron 30.000
14. Universal 10.000

*No of robots manufactured yearly

Masinova
benchmark



Potential buyers for Mamba robot license

Business Model and Exit Options

1

Establish world's leading robot manufacturing company based in Finland focusing on sustainability needs



Utilization of patents and design in global scale

2

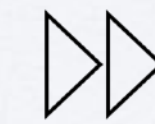
Sell manufacturing license and patent rights to robot manufacturers



By industry
By geography
All (one timer)

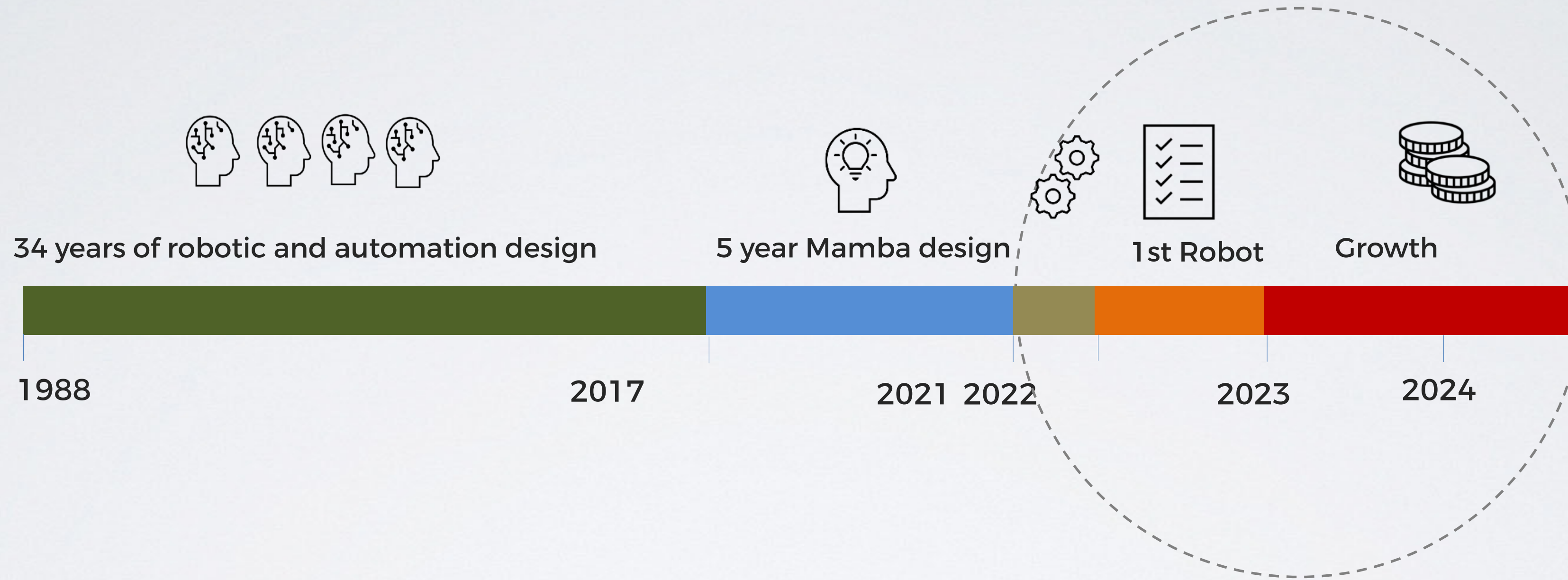
3

Hybrid



Sell limited manufacturing license e.g. for one industry
AND
Start manufacturing robots for another industry

Planned timeline plan - early exit



Planned growth timeline

SCALE UP TO 120 MILLION TURNOVER IN 10 YEARS



First robot made by Kaptas Oy & TechGroup As.

After first year we can start to build our own manufacturing for robots.

Business Model

CRITICAL COMPONENTS

MANUFACTURING PARTNERS

DISTRIBUTION & PARTNERS

TARGET INDUSTRIES

HOLLOWSHAFT MOTORS (TECHNOTION)

CONTROL SYSTEMS (BECKHOFF)

DISPLAYS

TOOLING PARTS

MOULDED PARTS

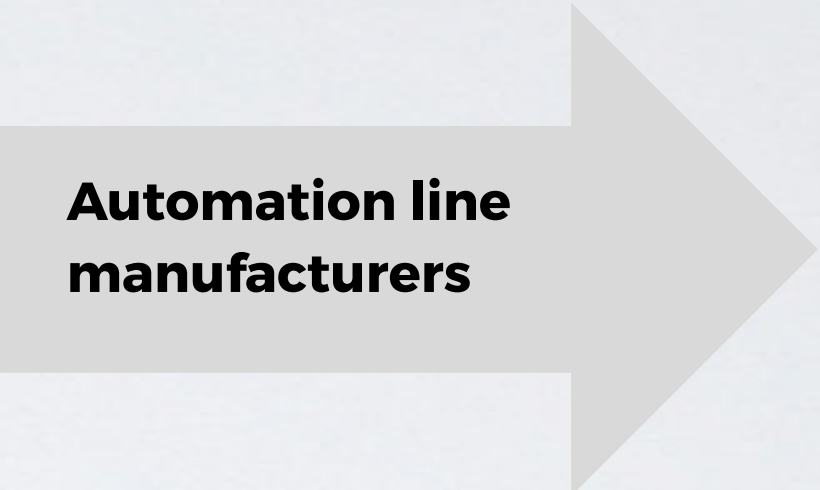


ROBOT MANUFACTURING AND ASSEMBLY
E.G KAPTAS & TECH GROUP, GT AUTOMATION (US)

MASINOVA

OFFERING
Mamba Robots
Software
Consulting
Maintenance
Spare parts

FUNCTIONS
Sales
Marketing
Product development
Partner support
Subcontracting mgmt



Pharmaceutical
Life Science
Electronic

Maintenance, Help Desk, Consulting
2-5% of robot price

Maintenance & Help Desk
10% of robot price

Selling price
€ 35000

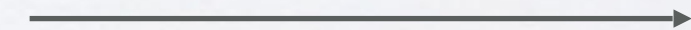
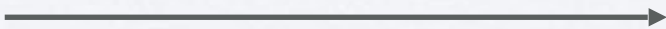
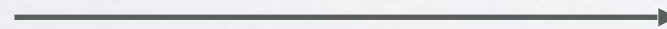
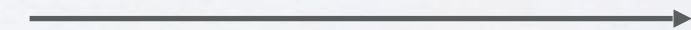
System price
€ 100K - 20M

Component cost
€ 10000

Assembly cost
€ 5000

=

Manufacturing cost
€ 15000



Payment for components

Payment for assembly

Payment for robots

Payment for products

Payment for robotic lines

Current Team

COMBINING 80 YEARS OF EXPERIENCE IN GLOBAL ROBOTIC DESIGN,
DELIVERIES, LICENSING BUSINESS AND GROWTH



VALTTERI HIRVONEN
CEO

15 years in automation:

Various roles in Master Automation Group and Masinova Oy. Versatile understanding of global robot business

Global branding & marketing for

- Ferrari, BMW, Canon, Nokia, Helen, Konecranes, Suunto, Ålandsbanken, Iittala, Marimekko



VESA HIRVONEN M.Sc.(eng.)
TECHNICAL DIRECTOR

40 years in automation:

- Abloy Oy Joensuu
- MM-Group Oy
- Actec Engineering Oy
- GWS Systems Oy
- JOT-Automation Oy
- Master Automation Group Oy
- Masinova Oy Espoo
- Cryotech-Finland Oy



PEKKA LEMETTINEN
Finance & Strategy

25 years of global experience in strategy, financing, technology and growth, e.g.

- POP Bank Group CEO
- POP Insurance CEO
- Sonera Smart Trust Asia & Middle East
- Various board and chairman positions

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THANK YOU!

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ANNEXES

Two patents pending (liitteet)

FINNISH PATENT AND REGISTRATION OFFICE COMMUNICATION OF ACCEPTANCE – section 29 a of Patents Decree

07.11.2022

Heinonen & Co, Attorneys-at-Law, Ltd
 Fabianinkatu 29 B
 FI-00100 Helsinki
 FINLAND

Patent application number 20185101
 Applicant Masinova Oy

Agent Heinonen & Co, Attorneys-at-Law, Ltd
 Agent's reference P203717

Deadline 07.02.2023

Please give the number of the patent application in your letter to the Finnish Patent and Registration Office.

OPINION ON PATENTABILITY

For an invention to be patented, it must meet the basic requirements of sections 1 and 2 of the Patents Act:

Section 1(1) of the Patents Act: Anyone who has, in any field of technology, made an invention which is susceptible to **industrial application**, or his or her successor in title, is entitled, on application, to a patent and thereby to the exclusive right to exploit the invention commercially, in accordance with this Act.

Section 2(1) of the Patents Act: Patents may only be granted for inventions which are **new** in relation to what was known before the filing date of the patent application, and which also **involve an inventive step** with respect thereto.

Fulfilment of basic requirements of patentability

Novelty

Patent claims: 1-8 Yes

Patent claims: No

Inventive step

Patent claims: 1-8 Yes

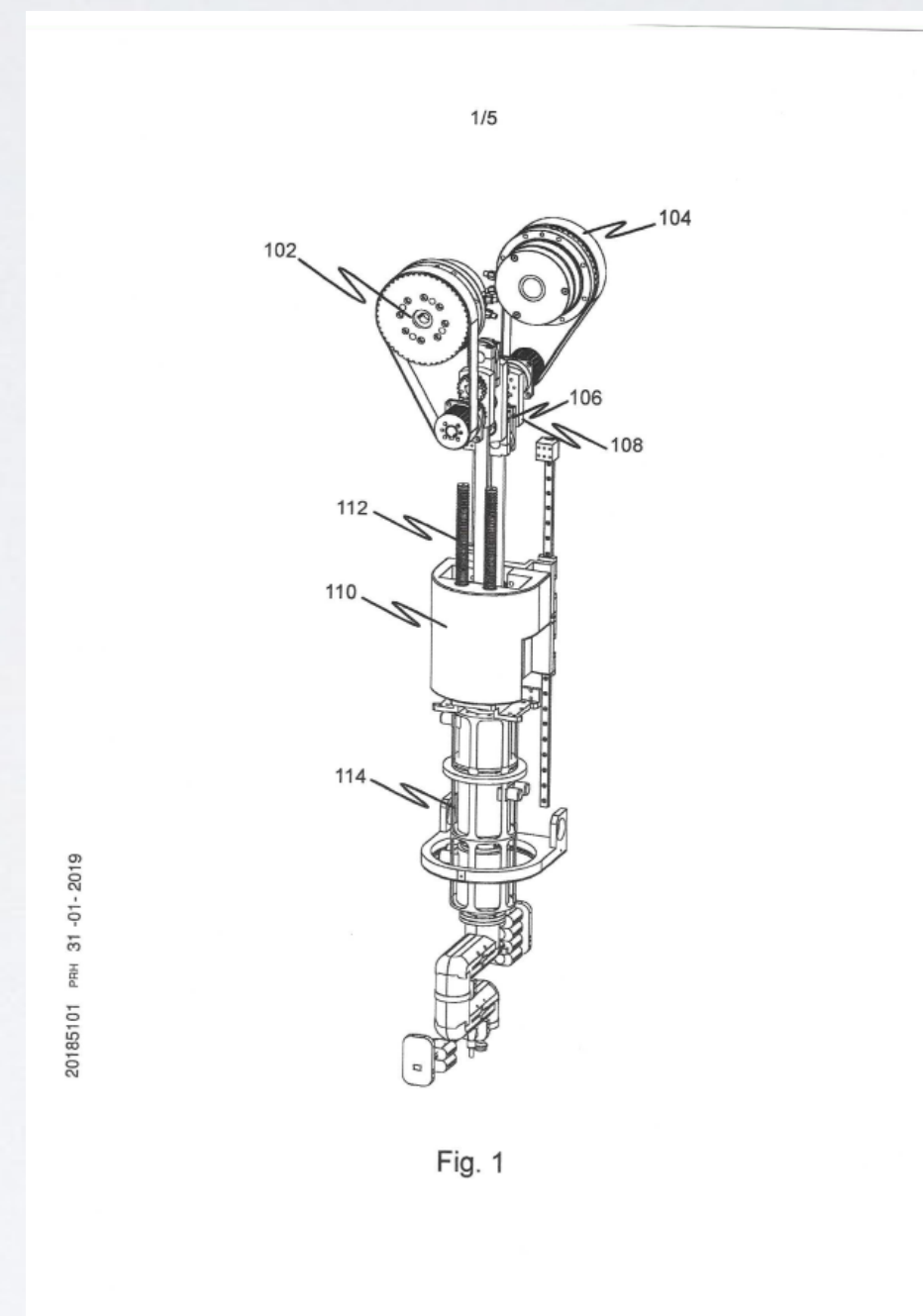
Patent claims: No

Industrial applicability

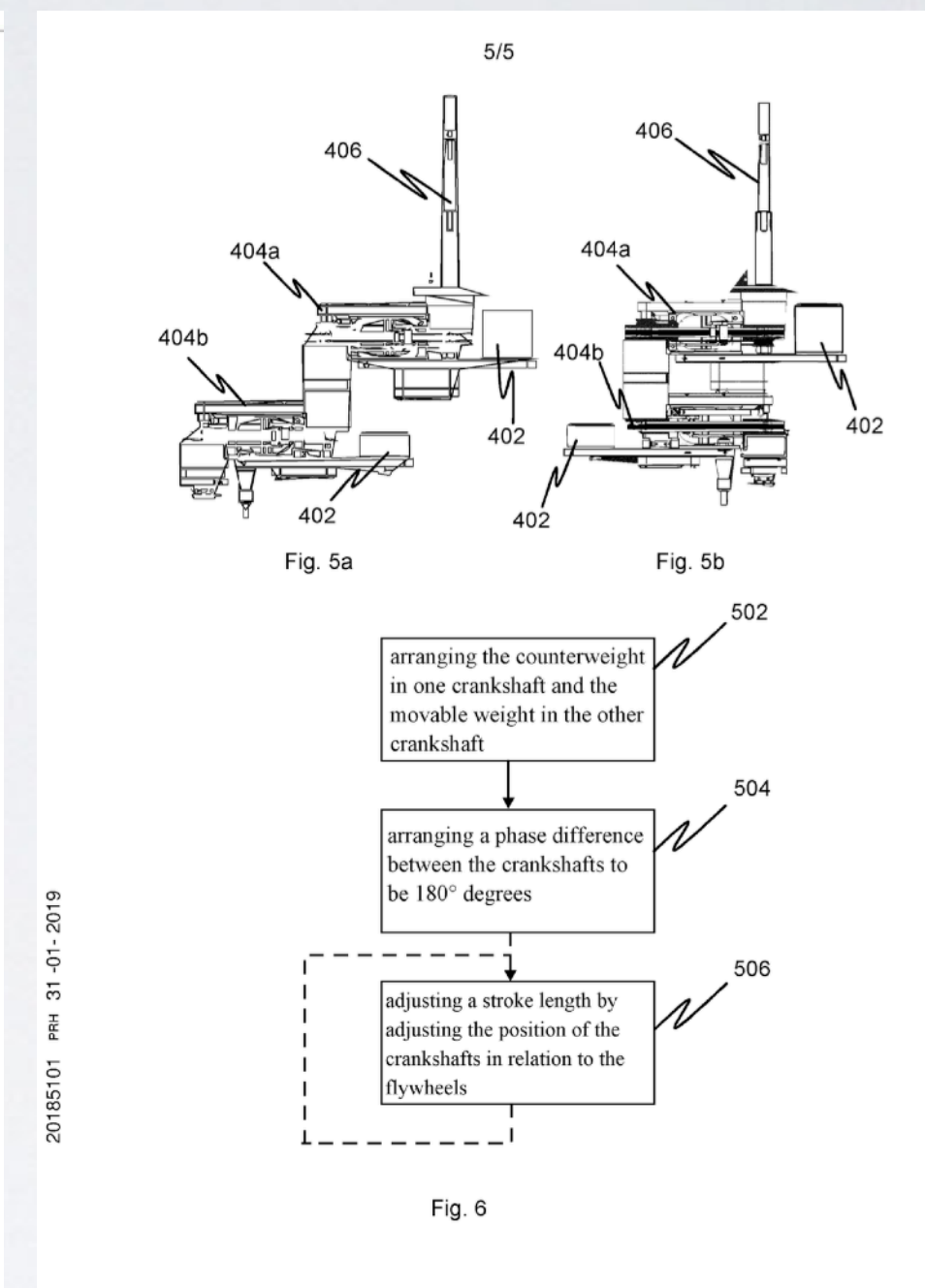
Patent claims: 1-8 Yes

Patent claims: No

Post	Finnish Patent and Registration Office FI-00091 PRH FINLAND	Street Sörnäisten rantatie 13 C Helsinki	Telephone 029 509 5000
Bank	Danske Bank A/S, Finland Branch FI34 8919 9710 0007 32 DABAFIHH		Nordea Bank Abp FI97 1660 3000 1042 27 NDEAFIHH



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