Business Need & Approach:
Robotics

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1. Industry Needs
2. Challenges (examples)
3. Actions to enable adoption

SPARC OBJECTIVE

€2.8 billion to strengthen EU lead in robotics

Press Release
3 JUNE 2014 AT 9.30 AM CET

€2.8 billion to strengthen EU lead in robotics

• The European Commission and euRobotics AISBL today launched the world's largest civilian research and innovation programme in **robotics** at AUTOMATICA 2014.

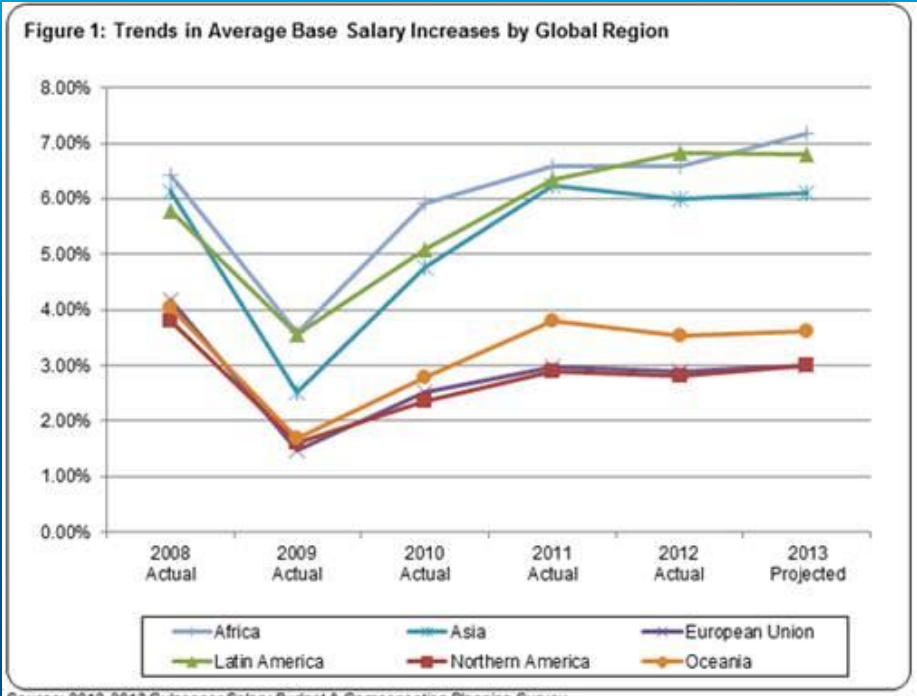
• The initiative – called SPARC – is to **maintain and extend** Europe's leading position in this strategic area, whose overall market volume could reach more than €60 billion by 2020. SPARC is expected to create over **240,000 jobs in Europe**.
• The European Commission will invest €700 million in SPARC under its new research and innovation programme Horizon 2020. The European industry's overall investment will amount to €2.1 billion.

• This public-private partnership (PPP) will increase Europe's competitiveness in the **production and use of robotics in industry, agriculture, health, transport, civil security and households.**

Adobe Acrobat Document

Business Need > Robotic Automation

Leverage the flexibility and affordability offered by the current and future automation technologies, to reduce manually repetitive tasks in our workforce, thereby releasing such resources for more complex value added tasks.



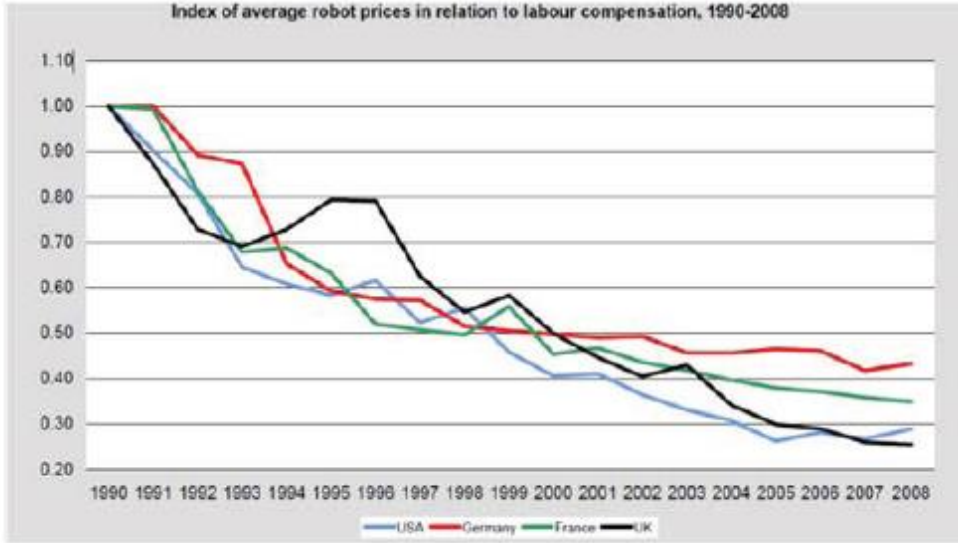
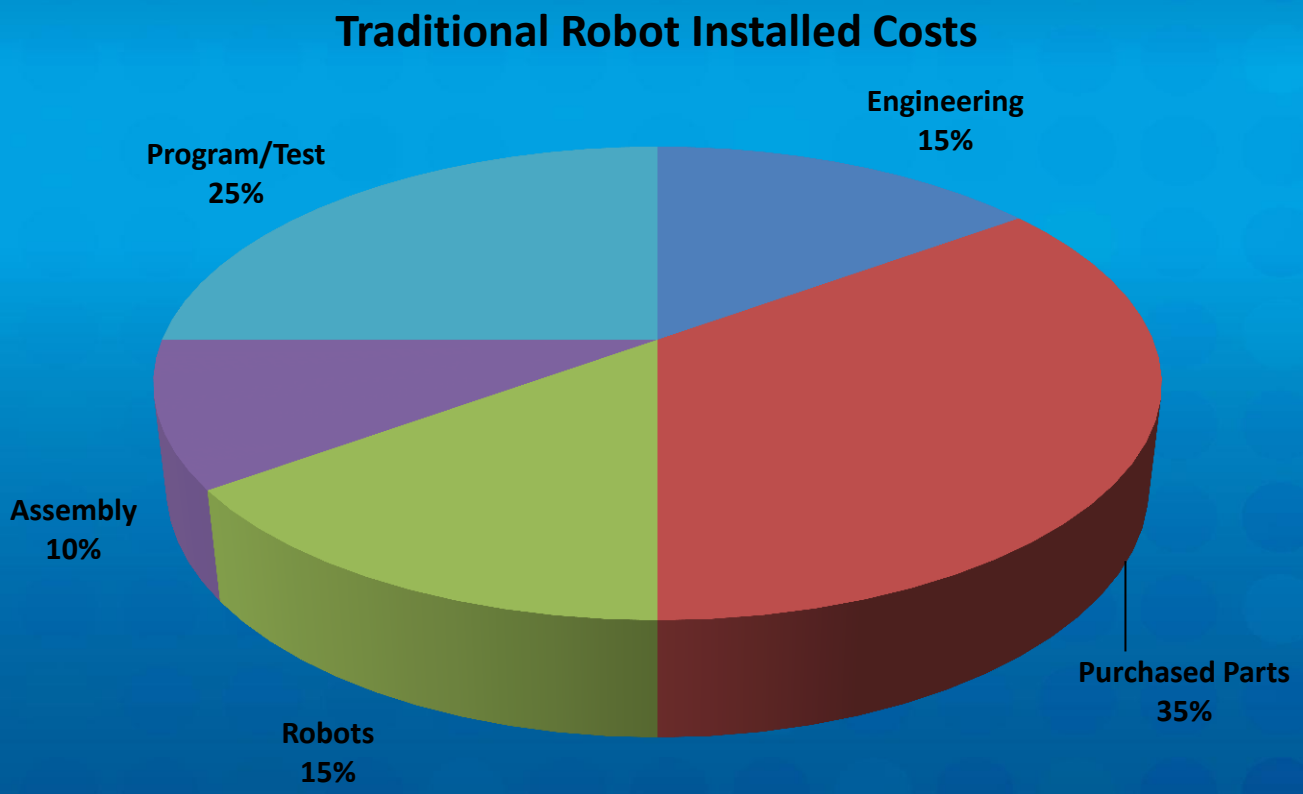
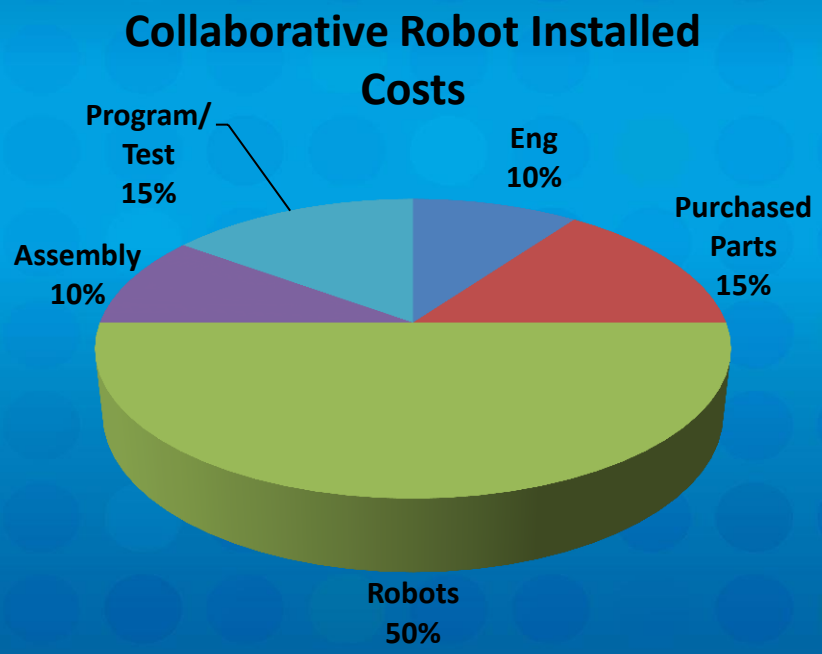


Figure 17. Index of average robot prices in relation to labour compensation, 1990-2008

Source: World robotics industrial robots, 2009

Cost Challenge > Installed Robot Cost





Vectors to enable broader ROBOTIC Adoption

Robot Technologies	***"Build the Menu of Affordable Solutions…".***
Robot Suppliers	***"Influence future Robot Designs and Capabilities.."***
Robotic Integrators & Consortiums	***"Deliver New Solutions and Affordable Scale…"***
Robot Capabilities & Systems	***"Address conflicting standards / barriers.."***
Robot Innovations	***"Breakthroughs in cost, safety, functionality..."***

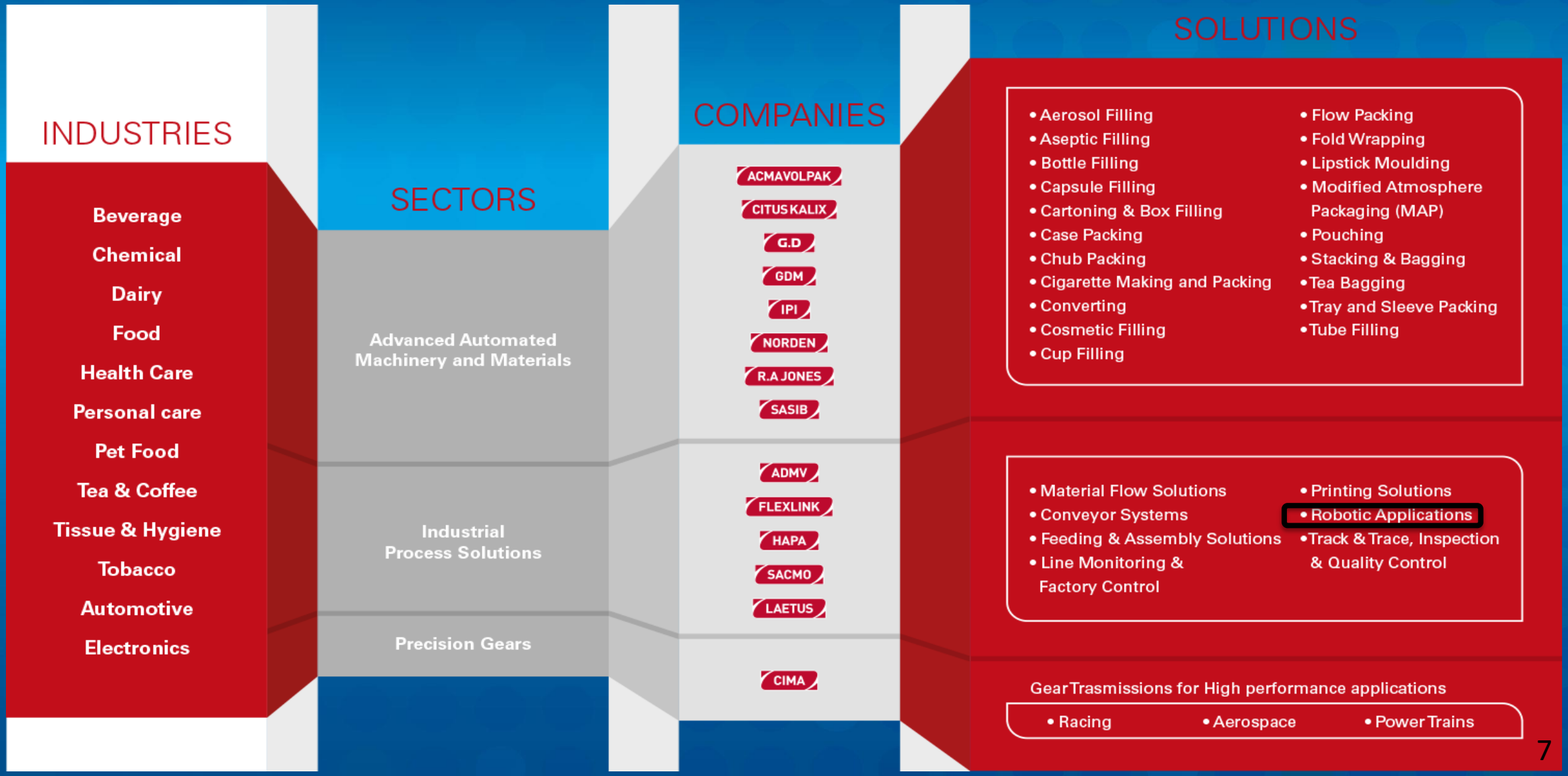
Integrators > Scale

•Every Integrator has a challenging role: truly understand the NEEDS of the customer

•A Global Integrator is a unique opportunity for Global players:
  •Supports scale of engineering investment and true innovation
  •Supports customers' market trend -> AFFORDABILITY, AGILITY, ADAPTABILITY

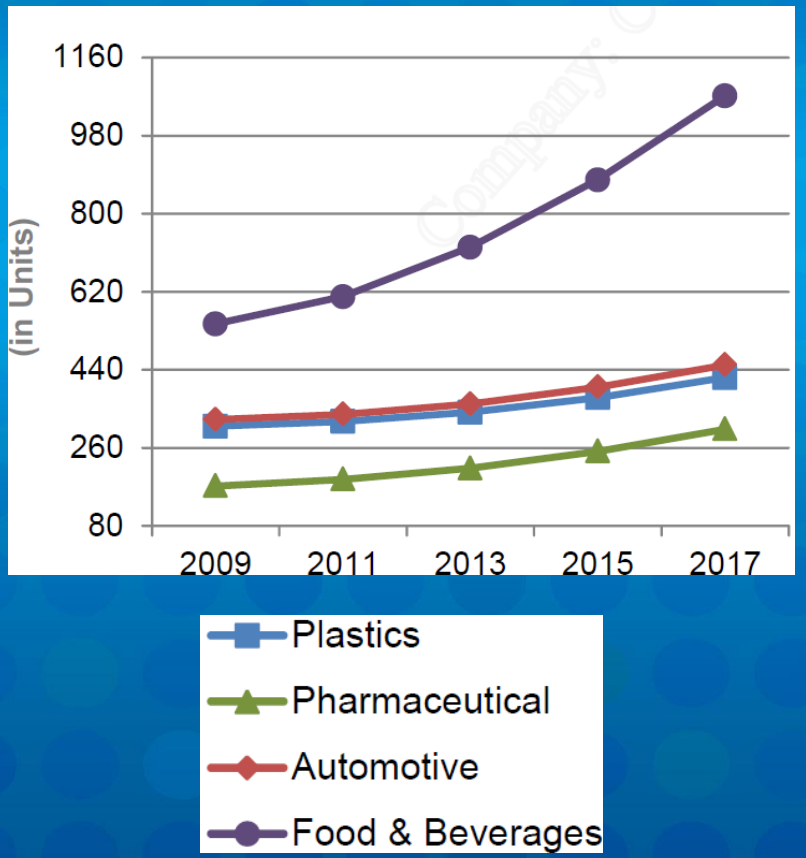
One example: Coesia has introduced new capabilities on an existing architecture, learning fast from a new technology → In feed system for a cartoner machine

Customer needs → Coesia solutions → Robotics



Robotic palletizers in Europe

End-Use Industry	2009	2010	2011	2012	2013	2014	2015	2016	2017	% CAGR
Plastics	310	314	321	330	342	357	376	398	422	3.93
Pharmaceutical	172	178	187	198	213	231	252	276	303	7.33
Automotive	325	330	337	347	361	379	400	424	451	4.18
Food & Beverages	546	571	609	660	723	796	878	970	1072	8.80
Others*	268	271	275	280	287	297	312	330	350	3.39
Total	**1621**	**1664**	**1729**	**1815**	**1926**	**2060**	**2218**	**2398**	**2598**	**6.07**



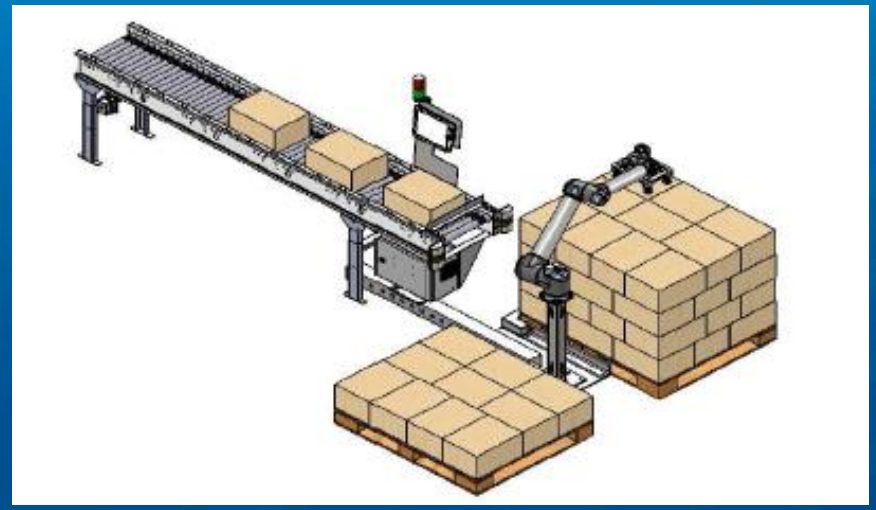
In the future, End users will install palletizers based on:

- traditional robot → to maximize performances (speed etc)
- collaborative robot → to maximize, flexibility, footprint, healthier working environment, ergonomics

Source: PALLETIZING MACHINERY A Global Strategic Business Report – Global Industry Analysts, Inc.

External Connections > Technology adoption accelerator

- Increase scale beyond P&G volumes
- Leverage partners' expertise to drive innovation
- EU subsidies to focus on technology development
- Adopt safety's best practices from the Industry



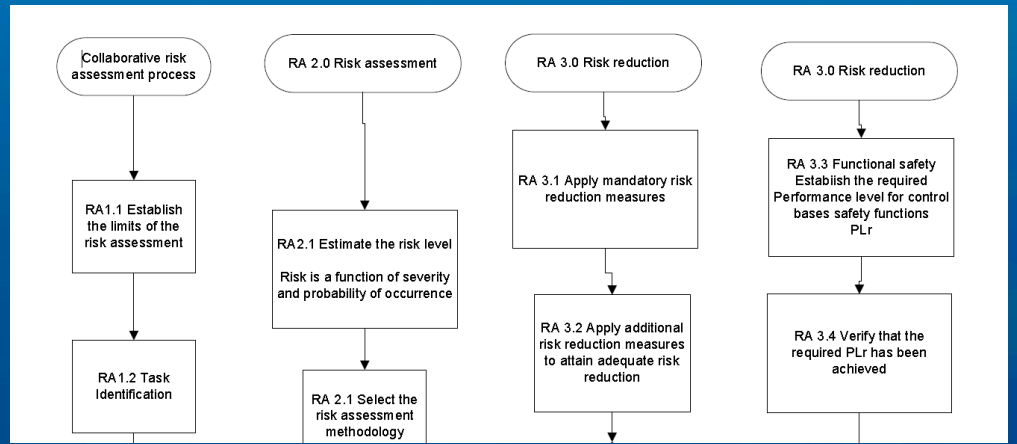
Operational Challenge > 100% Safety

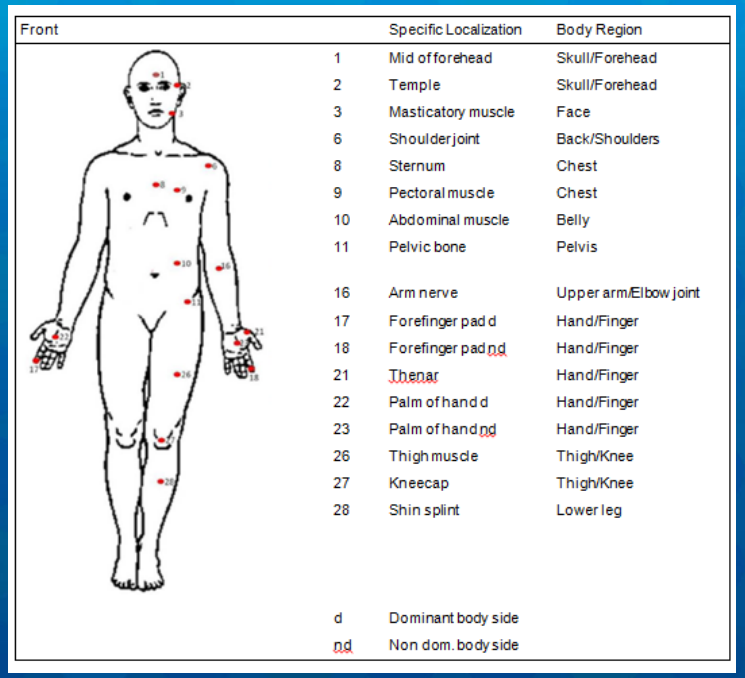
Key Needs

- Industry Standards that:
  - Globally Harmonized and Consistently Applied
  - Do not limit innovation and development
  - Do not add unnecessary or unreasonable requirements

- Easy to use Systems and Tools for Robot Safety
  - Risk Assessment
  - Force Measurement

The Pilz Safety-Eye umbrella, courtesy Pilz Automation Safety L.P.





	Specific Localization	Body Region
1	Mid of forehead	Skull/Forehead
2	Temple	Skull/Forehead
3	Masticatory muscle	Face
6	Shoulder joint	Back/Shoulders
8	Sternum	Chest
9	Pectoral muscle	Chest
10	Abdominal muscle	Belly
11	Pelvic bone	Pelvis
16	Arm nerve	Upper arm/Elbow joint
17	Forefinger pad d	Hand/Finger
18	Forefinger pad nd	Hand/Finger
21	Thenar	Hand/Finger
22	Palm of hand d	Hand/Finger
23	Palm of hand nd	Hand/Finger
26	Thigh muscle	Thigh/Knee
27	Kneecap	Thigh/Knee
28	Shin splint	Lower leg
d	Dominant body side	
nd	Non dom. body side	

Innovation Challenge > deliver breakthroughs needed

Key Needs for Industry

- Speed, Payload, & Accuracy
- Floor Space, Delivery Time, New Formats
- Lower Cost – Not just robot hardware
  - Engineering/Program/Test
  - Purchased Parts
- Safety
  - Integrated
  - Simple

Contact Information

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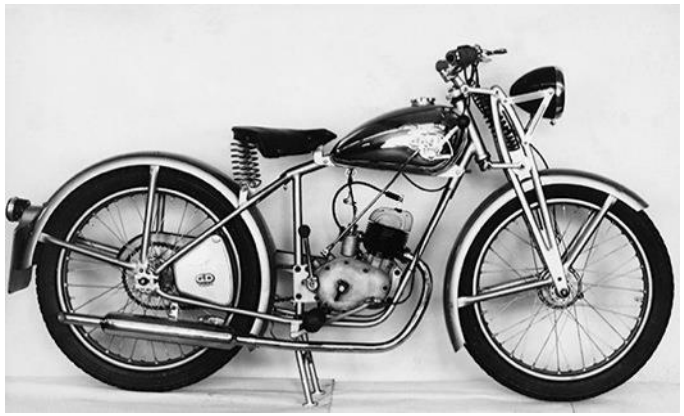
Additonal Information

(not part of presentation)

One century in the industry

Is a **group of innovation-based industrial solutions companies** operating **globally**, headquartered in Bologna, Italy and fully owned by **Isabella Seràgnoli**.



5% **in R&D** of turnover each year

1 400 highly specialized designers + engineers + technicians in **R&D**

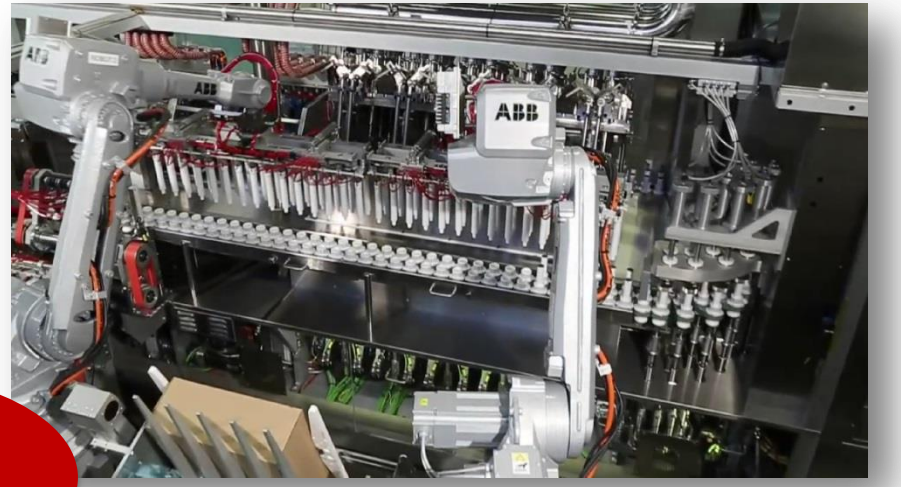
INNOVATION AS A PART OF
HUMAN EVOLUTION

Some robotics applications in the industry

Cobot

CoPal

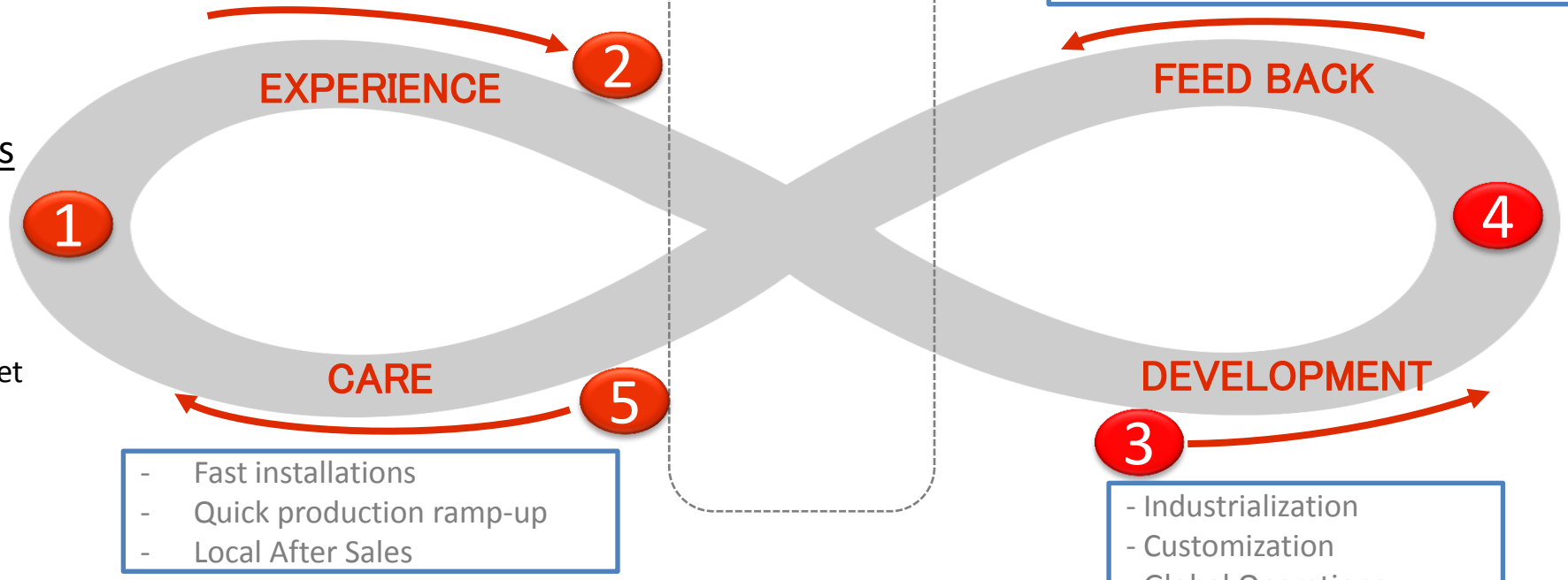
Traditional



Robotics to help User's business expansion

- Worldwide installed base
- Technologies from different segments

- Centralized R&D
- Synergies
- Knowledge from different Business
- Breakthrough technologies



Customer needs

- OEE
- Speed,
- Change over time
- Affordability
- Fast time to market

Solutions:

Robotics applications

- Fast installations
- Quick production ramp-up
- Local After Sales

- Industrialization
- Customization
- Global Operations

coesia

Coesia Robotics Expertise

	COE 1	COE 2	COE 3	COE 4
Food		●	●	
Beverage\Dairy		●	●	
Pharma	●	●	●	
Personal care	●	●	●	
Home care	●	●	●	
Cosmetic	●	●	●	
Tissue and hygiene		●	●	
Tobacco		●		●
Automotive		●	●	
Electronics		●	●	

Managing > hundreds of industrial robotics applications every year

coesia