

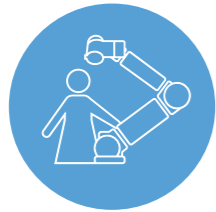
ARE YOU TOO SMALL FOR ROBOTICS?

Answer 5 questions to find out



MAKE SURE YOU'RE ASKING THE RIGHT QUESTIONS

If you're a small or mid-sized manufacturer, or are facing the challenges of low-volume, high-mix production, you may be wondering if robots are right for you. But if you've resigned yourself to manual production just because you're not a big national manufacturer, then maybe you're not asking the right questions.



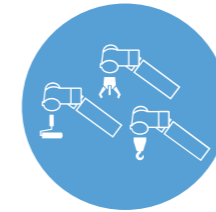
Do I need to automate?



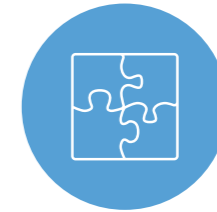
What are my robot options?



Can I afford to automate?

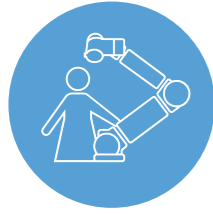


What processes can I automate?



Are cobots right for me?

OUR SHORT WORKBOOK WILL GUIDE YOU THROUGH THE MOST IMPORTANT CONSIDERATIONS FOR ROBOTICS IN SMALL AND MID-SIZED MANUFACTURING.



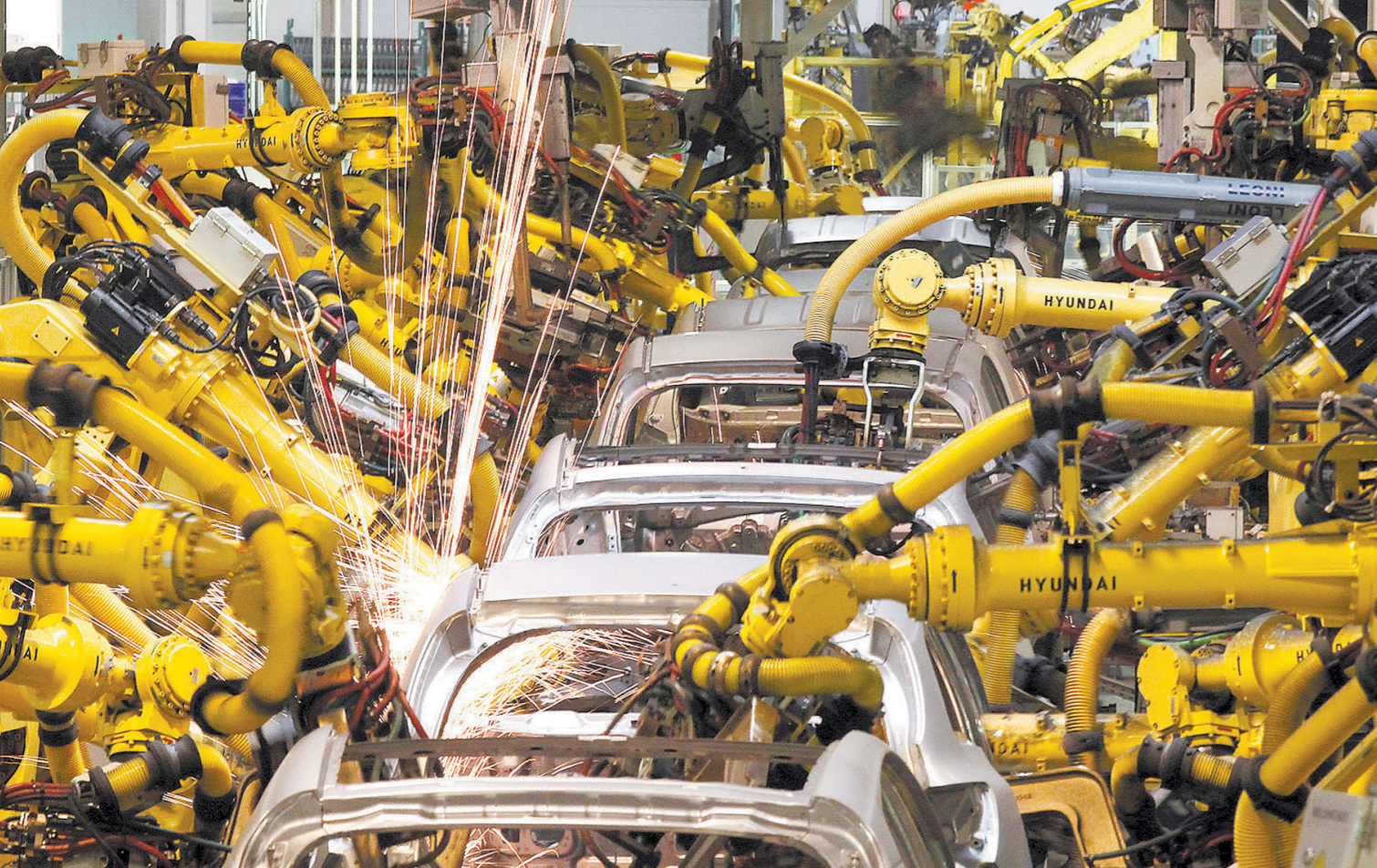
DO I NEED TO AUTOMATE?

Start by putting aside any pre-existing ideas about the cost or complexity of robotics. Now take an impartial look at whether your business challenges can be addressed by automating manufacturing processes.

Possible business challenges:	Yes	No
Competition is stiff and I need new ways to cut costs		
I need to improve product quality		
I need to reduce waste – in time, materials, or both		
I need more flexibility to adapt to changing product demand		
I'm struggling to fill positions for repetitive manual jobs		
Temporary workers aren't reliable or take too much time to learn our processes		
Repetitive or dangerous processes are impacting my workers' health and safety		
I need to grow my business without overextending		

IF YOU ANSWERED YES TO ONE OR MORE OF THESE ISSUES, THEN AUTOMATION IS DEFINITELY WORTH CONSIDERING.





WHAT ARE MY ROBOT OPTIONS?

Robotics for manufacturing typically falls into one of two categories: industrial robots and collaborative robots (or cobots). Check off the elements that most closely meet your needs.

Industrial robots	✓	Collaborative robots	✓
I have space for large, fixed equipment		I have limited space on my floor	
I need high-volume, high-speed, extremely accurate production		I need to automate processes that take place alongside human workers	
I need to automate dangerous or high-speed processes that require a safety cage to protect workers		My processes and volume requirements can be accomplished at about the same speed as a human worker	
I don't need flexibility to change processes or product line automation		I need flexibility to automate a variety of processes with minimal downtime for changes	
I have programming and integration expertise in-house		Robot must be easy to teach and use with little or no experience	

For many small and mid-sized manufacturers, cobots offer an ideal option.



CAN I AFFORD TO AUTOMATE?

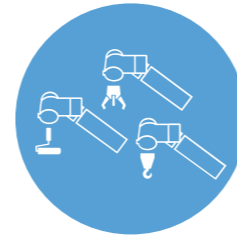
While the upfront cost of both types of robot is similar, what's below the surface defines how much your total automation solution will cost. Calculate how fast your investment will pay for itself by comparing total annual expenses.

Robot	\$*	Manual	\$*	Cobot	\$*
Hardware cost		Worker Salary		Hardware Cost	
3-Phase Power Infrastructure		Benefits		Plugs into 110V Outlet	0
Integration / Programming		Training		Free Online Training	0
End-of-Arm Tooling		Downtime		End-of-Arm Tooling	
Fencing & Guarding		Overtime			
Light Curtain		Material Waste			
Safety Scanner		Product Scrap			
Software License					
Maintenance / Repair Services				Onsite Maintenance	
Total Robot Cost		Total Manual Labor Cost		Total Cobot Cost	

* Estimated Cost in Dollars

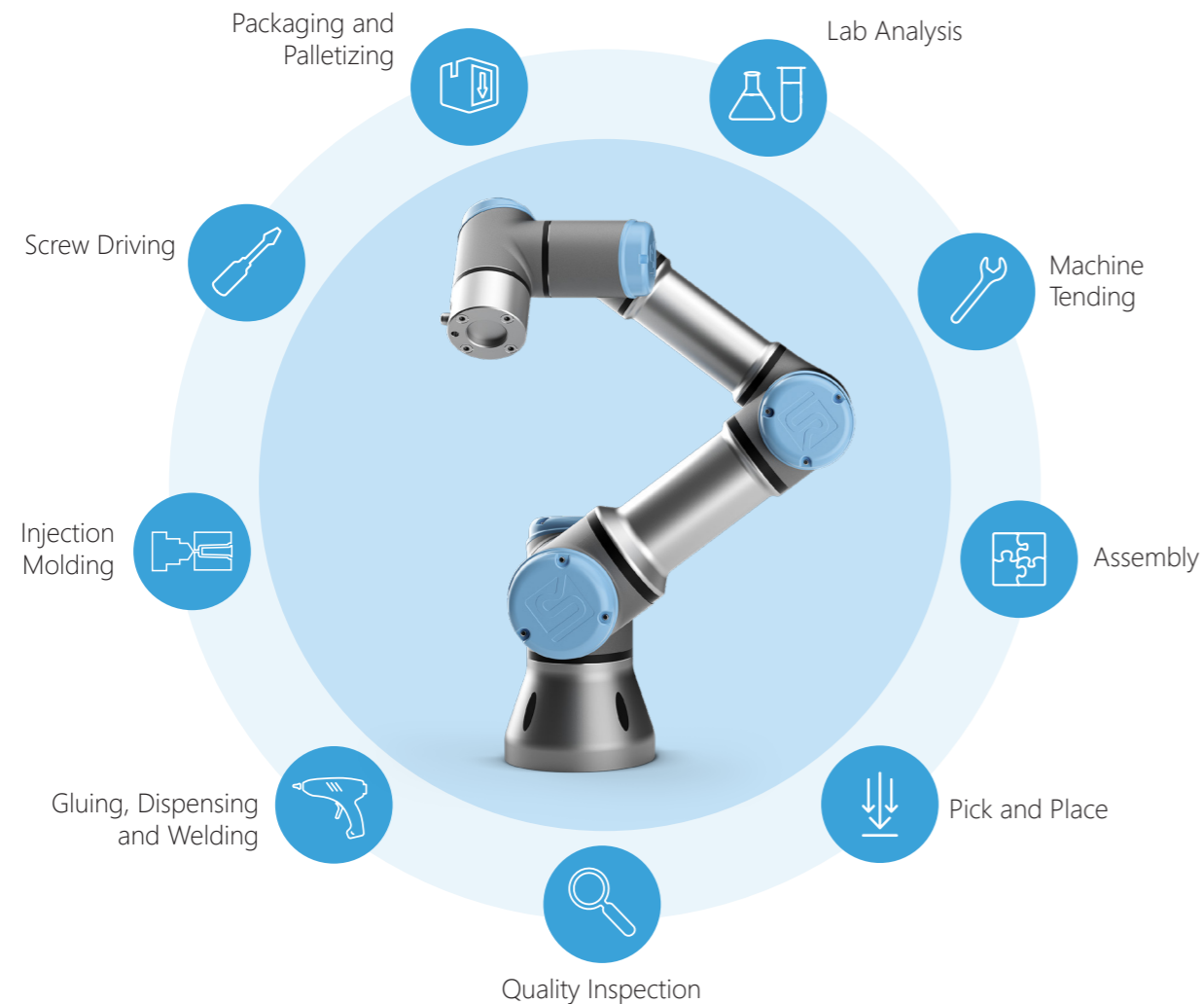
Click to see the UR+ ecosystem of cost-effective end effectors and other accessories.





WHAT PROCESSES CAN I AUTOMATE?

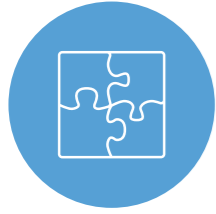
Cobots can automate many different applications. They're small and lightweight, so they can be easily moved around your shop floor to different processes. They're easy to program, and you can save programs to reuse.



What can I automate?	✓		✓
Pick and place		Mounting	
Packaging and palletizing		CNC loading/unloading	
Polishing		Assembly	
Analysis and testing		Screw-driving	
Repetitive, manual processes		Gluing and dispensing	
Injection molding		Dangerous or injury-prone jobs	
Quality inspection		Jobs that don't need human dexterity, critical thinking, or on-the-spot decisions	
Machine tending			

Cobots are ultra-flexible tools that can perform a similar range of applications as the human arm. But the cobot has a wider range of motion, doesn't get tired, and can perform dangerous tasks without risk of injury.

Click to see cobots in action in a wide range of applications.



ARE COBOTS RIGHT FOR ME?

I need a robot that ...	✓
Is affordable, with minimal extra costs	
Will fit on my shop floor without bulky safety fencing	
Is easy for existing employees to set up and teach	
Can be quickly moved to new processes or product lines	
Can replace human workers in high-turnover, hard-to-fill positions	
Can fulfill undesirable jobs in today's tight labor market	
Lets me move employees from low- to high-value activities	
Will pay for itself within months – not years	
Will provide savings I can reinvest into new products and channels	
Will support new processes and more advanced applications in the future	

ULTIMATELY, THE BEST WAY TO FIND OUT IF COBOTS ARE RIGHT FOR YOU IS TO CONTACT A DISTRIBUTOR AND SCHEDULE A DEMONSTRATION.



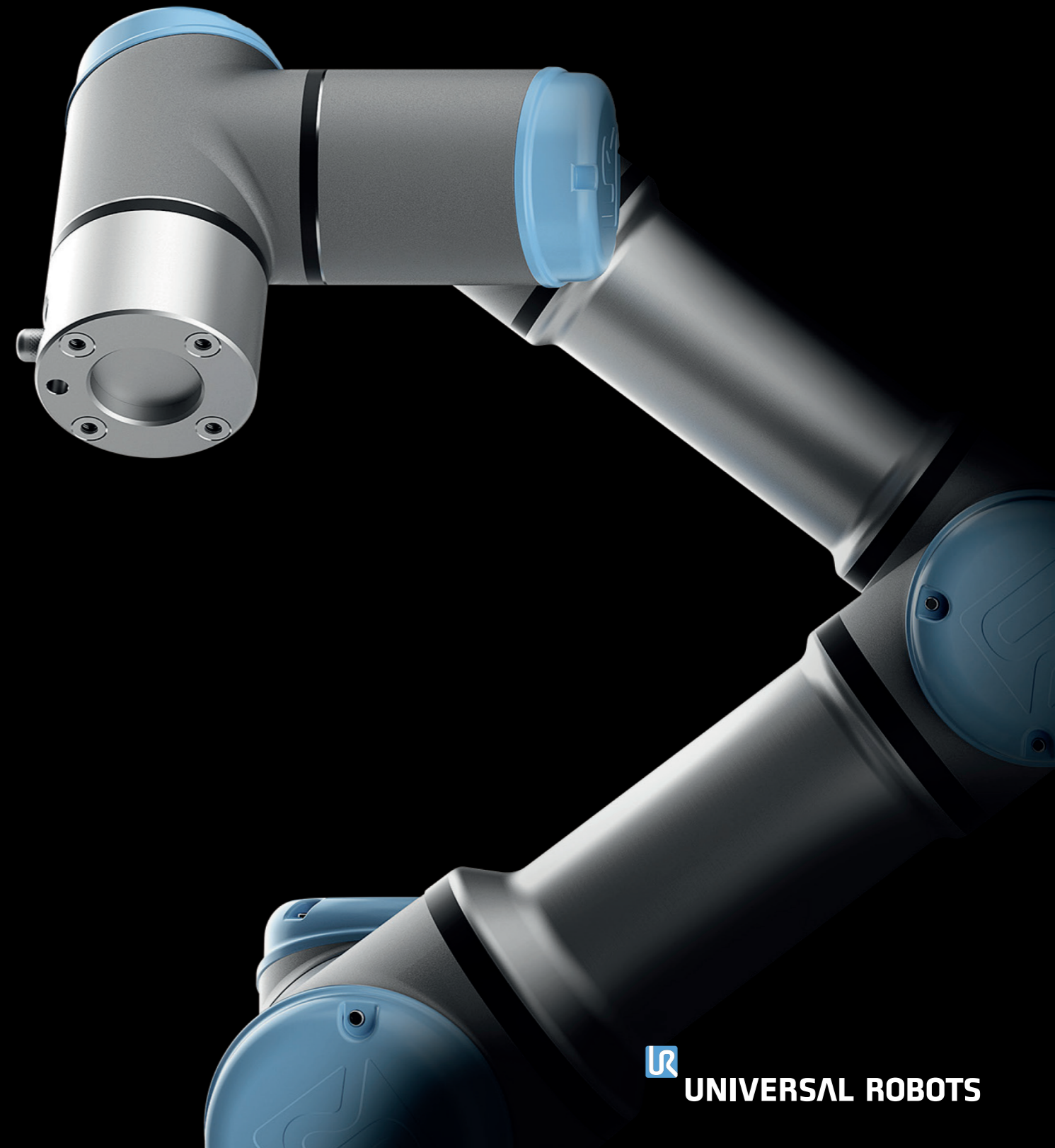
Click to access the free, online UR Academy
and see how easy programming can be.



YOU ARE NOT TOO SMALL FOR COBOTS!

REQUEST
a cobot demo

Cobots are an ideal option for small and mid-sized manufacturers of almost any type. Find out more about how you can grow your business, improve productivity and quality, and provide better and safer working conditions for your employees. Contact a distributor to get a Universal Robots cobot demonstration today.



 **UNIVERSAL ROBOTS**

Universal Robots was co-founded in 2005 by the company's CTO, Esben Østergaard, who wanted to make robot technology accessible to all by developing small, user-friendly, reasonably priced, flexible industrial robots that are safe to work with. Since the first robot was launched in 2008, the company has experienced considerable growth with the user-friendly robots now sold in more than 50 countries worldwide. The company, which is a part of Teradyne Inc., is headquartered in Odense, Denmark, and has subsidiaries and regional offices in the USA, Spain, Germany, Italy, Czech Republic, China, Singapore, India, Japan, Taiwan and South Korea. For more information, please visit www.universal-robots.com

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