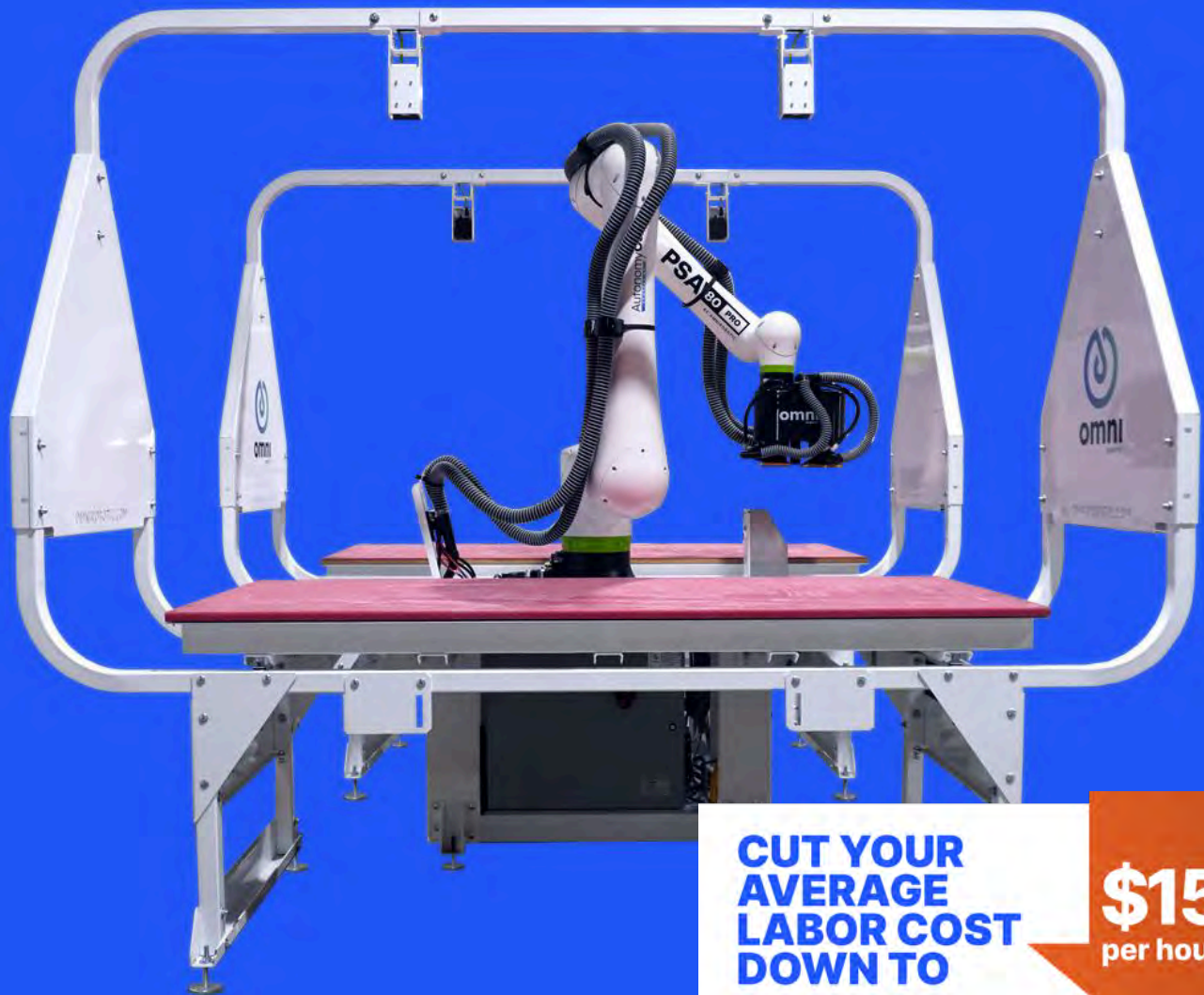# PSA 80 PRO
BY OMNIROBOTIC

✔ **Boost Productivity.**
✔ **Ensure Quality.**
✔ **Maximize ROI.**

**CUT YOUR AVERAGE LABOR COST DOWN TO** **$15 per hour***

The PSA-80 PRO stands out as the fastest, most user-friendly, and highest-quality sanding solution available on the market. Its ability to handle multiple panels simultaneously, combined with its pendulum cycle, **results in higher throughput and lower labor costs.**

* By Financing the equipment over a 5-year term. Amount shown in US dollars.

FC-40™

THE FASTEST SANDING ROBOT ON THE MARKET

- Fastest panel sanding: 13 seconds to complete one sanding pass on a 20"x14" raised panel
- Fastest switching time between panels: 5 seconds
- Fastest switching time between tools: 2 seconds
- Fastest loading/unloading time: 0 seconds, thanks to the pendulum cycle.
- No break for the robot: Give your team a well-deserved break. Enjoy up to 20 minutes of hands-free productivity!
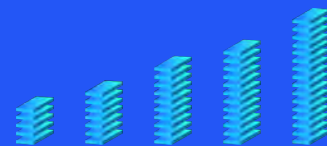
The PSA-80 PRO sands 30% more panels a day than any other robotic sander on the market

Watch Video

Click the button or scan the QR code to watch the video.

THE EASIEST SANDING ROBOT ON THE MARKET

One setup for all types of doors

Watch Video

- Easiest to operate: No screen. One Button operation. Anyone can use it.
- Easiest to adjust: Self tools registration.
- Easiest to turn on: Just flip a switch.
- Easiest to work with: One setup for any type of door (slab, frame, shaker, multi-panels...)

Click the button or scan the QR code to watch the video.

FC-40™
PRECISION FORCE CONTROL FOR FLAWLESS SANDING
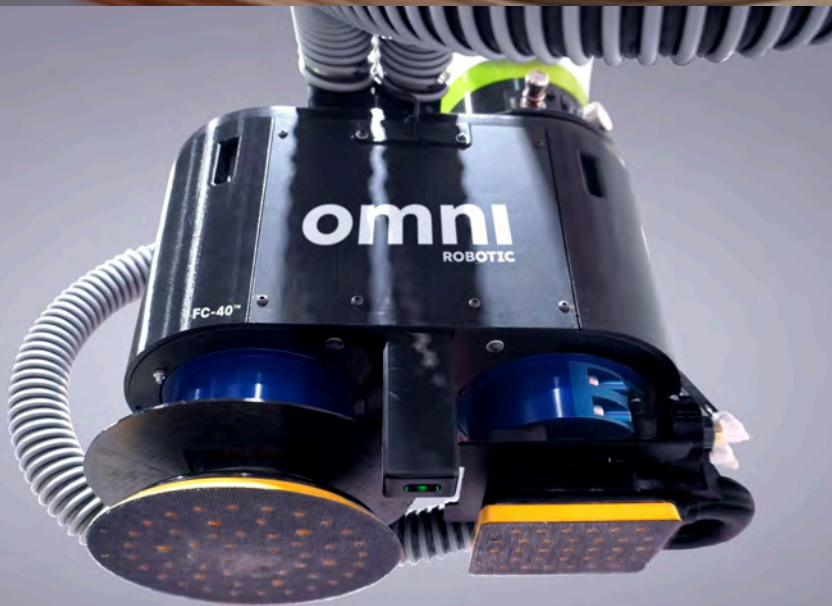
The PSA-80 PRO carries Omnirobotic's best force controller, the FC-40™

Watch Video

- Ultimate sensibility (+ /- 1 Newton control (0.2 lb-f)) ensuring superhuman sanding consistency
- Best Linear response
- Best Dynamic response
- Best Accuracy (0.1 mm from edges)
- Minimal tool inertia (lowest suspended mass for super smooth sander landing)
- Smooth pad landing trajectory
- Precise speed control
- Omnirobotic's proprietary APC™ feature (Active Pitch Control)

Click the button or scan the QR code to watch the video.

With sophisticated sanding patterns, the PSA-80 PRO can uniformly sand each area of the panels.

- Automatically alternates between tools to access cavities in panels
- Criss-cross pattern optimizes sanding toolpath for MDF/HDF sanding
- Raster pattern, ideal for hardwood panels
- Butterfly external corner sanding allows for perfect sanding of corners without burning through the thin lacquer of primer coat
- Butterfly internal corner sanding is ideal for putty removal on 5 piece doors.

The PSA-80 PRO is the only product on the market that ensures a constant parallelism control with the tool sanding pad and panel.
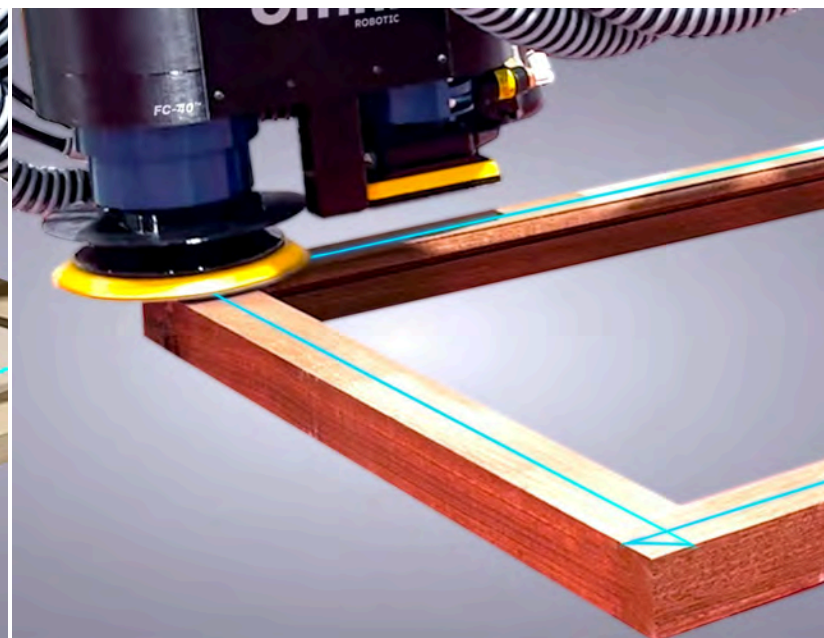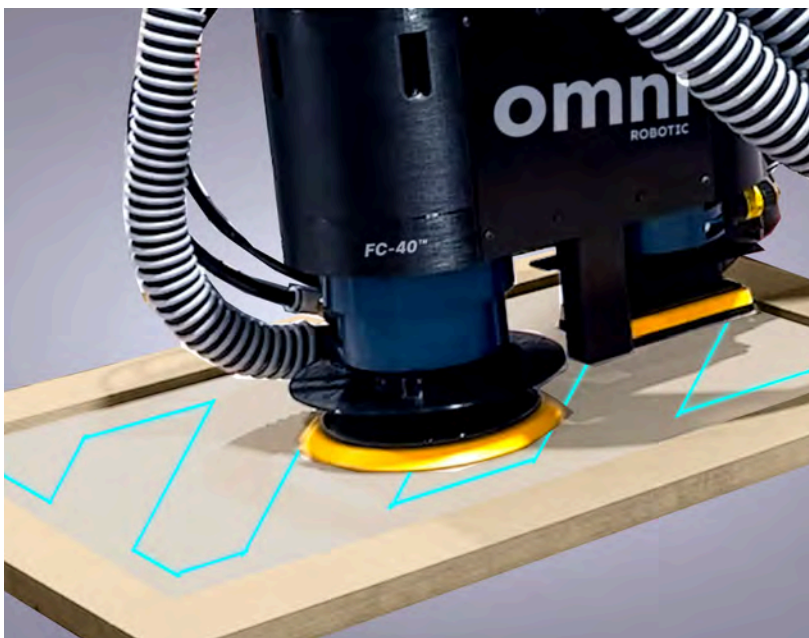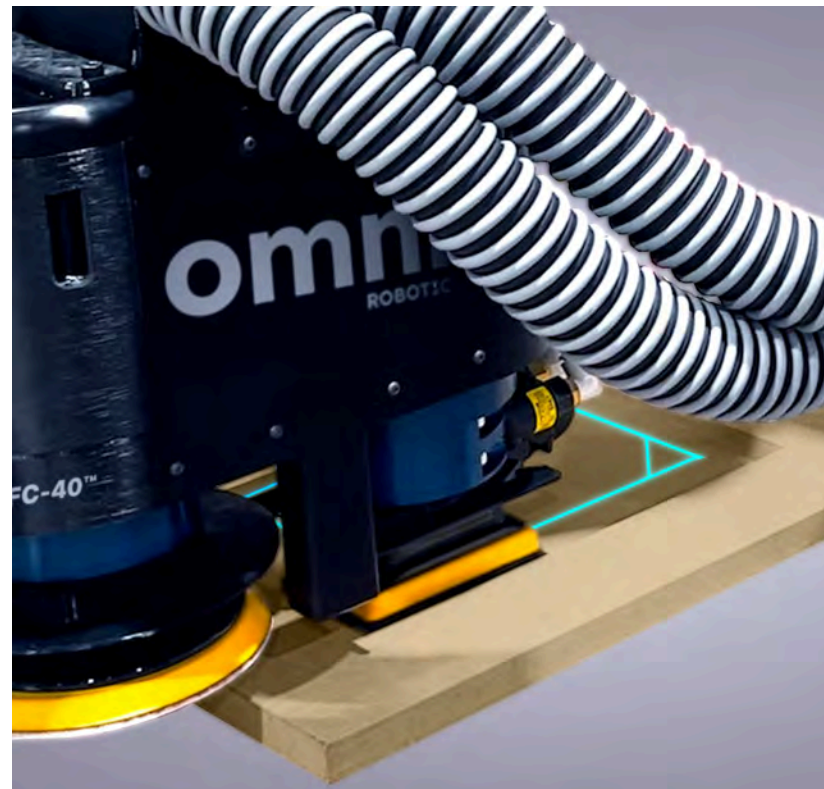
Avantages

Powered by AutonomyOS™,
The PSA-80 PRO operates autonomously. Simply place panels anywhere on the table, and the system will automatically detect, analyze, and execute the required tasks without manual input.

- **The fastest sanding robot on the market.** Sands 30% more panels a day than any other robotic system.
- **Best sanding quality on the market:** Don't take our word for it, bring your doors and experience it firsthand.
- **Omnirobotic's FC-40™, our best force controller,** combined with the APC™ feature, ensures every panel is sanded to perfection with optimal pressure.
- **The easiest to operate:** with just 2 minutes of training, anyone can run the PSA-80 PRO, regardless of the door geometry.
- **Easy installation:** No need for an air duct, comes with vacuum and dust extraction system.
- **Eight (8) years, Zero (0) maintenance** on the robotic arm
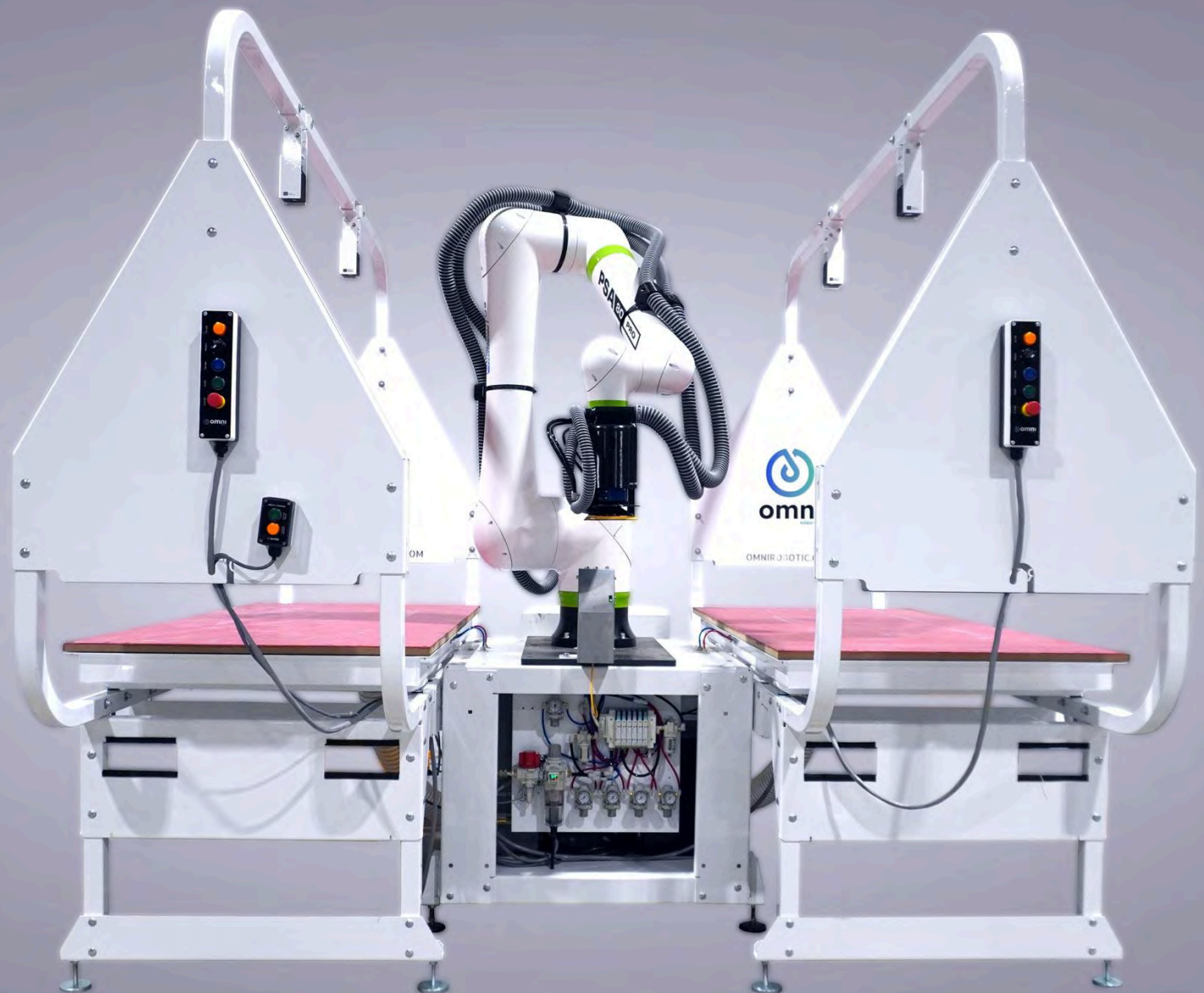
Key Features

- **Run on AutonomyOS™:** The machine sees in 3D and self-determines each door style (slab, frame, shaker, multi-panels), so anyone can use it without training.
- **Simple operator interface**: simple mechanical buttons operator interface (2 minutes training) reducing operating cost
- **Pendulum cycle boosts productivity:** by maintaining the robot working during loading time, the pendulum principle boosts productivity by minimizing downtime.
- **Large Dual Table design**: Enjoy up to 20 minutes of hands-free productivity!
- **Dual-Tool with Force Control**: Maximize productivity and versatility by automatically selecting the best sander head for the job.
- **Automatic Registration** Autonomous machine Registration eliminating the need for costly mechanical adjustments.
- **8 Years, Zero Maintenance** Robust and low maintenance IP67 Robot (0 Maintenance for the first 8 years) reducing operating cost.

Adjustable Sanding Parameters

- Adjustable sanding speed @ +/- 1 mm/s and sanding overlap @ +/- 1mm
- Custom Sanding Presets for each panel section (Slab, Panel, Cavities, Raised Panel and Rail and Style) for impeccable sanding.
- Adjustable force compensator allowing to set two sanding forces from 15 to 40 Newtons for each sander head, ensuring super human sanding consistency.
- Automatically selecting the best tool to access cavities in panels.
- Criss-cross pattern optimizes the sanding toolpath for MDF and HDF doors.
- Raster pattern, ideal for hardwood panels.
- Ultra-consistent scratch pattern, perfect for stain preparation.
- Butterfly external corner sanding allows for perfect sanding of corners without burning through the thin lacquer or primer coat.
- Butterfly internal corner sanding is ideal for removing putty on 5 pieces doors

- **Collision prevention** using 3D perception avoiding downtime and reducing operating cost
- **Media wear timer** Media wear timer reduces operating cost by maximizing media usage.
- **1 Year Warranty**
- **1 Year included Remote Support** *requires an internet connection.*

Specifications

Capacity

Suitable for	MDF, HDF, Hardwood, Solid Panels, and Wood Veneer
Available Sanding Presets	Hardwood, Raw MDF/HDF, Raw Veneer, Primer, Stain Preparation, Sealer, Lacquer.
Door size	The largest panel that can be made in a single cycle is 914 mm x 2032 mm (36″ x 80″). Larger doors can be processed in multiple cycles.
Center Panel Size	Min. size : 92 mm x 116 mm (3.6″ x 4.5″)
Door Type / Part	Mullions, Multi-Panel, Multi-Width Rails and Stiles, Open Frames, Raised Panels, Recessed Panels, Slabs, Shakers and even Face Frames.
Productivity	Up to 500 panels per 8h, 135m^2 (1458 ft^2). Depending on the sanding parameters and loading conditions.
Motion Precision	0.1 mm accuracy from detected edges
Unsupported Doors Examples	Crown Molding, Louvered, Arched Doors, Shallow Multi-Panel. Test your doors for free before you buy!

General Properties

Tool	3″ x 4″ pneumatic orbital sander 6″ dual action pneumatic orbital sander
Media Type	Dust-free net abrasive
Machine Footprint	3 m x 3 m (120″ x 120″)
Required # of Operators	From 1/2 to 1 person per machine
Warranty	1 year on main components

Admin Adjustable Parameters

Total Speed	1 to 250 mm/s (0.04 à 9.8 ″/s)
Force Compensation	15 to 40 Newtons (3,4 à 11,2 lb-f)
Passes Overlap	0 to 90%
Number of Passes	Single or Multiple
Sanding Pattern	Raster, Alternate Raster or Criss-Cross

Power Requirements

Electrical	240 VAC @ 30A single phase
Pneumatic (min.)	4.1 bar @ 480 lpm (60 psi @ 17 cfm)
Environment	Temperature : 0 - 45°C (32 - 113°F) Humidity : 0% to 90% non-condensing

We train robots to be the best workers around.

Using AI embedded in robotics creates affordable, easy-to-use, proven solutions. We've developed AutonomyOS™, our proprietary AI platform for industrial robots. All our machines support:

- Self-calibration: no need for technical expertise to adjust the machine
- Dual workspace: robots can work while loading-unloading operations
- Web configuration interface: intuitive parameters that can be adjusted from your PC, Tablet, or Phone.
- Remote Support: fast and convenient support when you need it
- 3D Perception: no jigs or placement rules avoiding production losses
- Motion Planning: collision-free motion computation on the fly
- Task Planning: Task ordering optimization to achieve the goal in the shortest possible time.

About d'Omnirobotic

Founded in 2016, Omnirobotic's team is motivated by the design of autonomous industrial equipment. Our goal is to solve the labor shortage with smart and affordable machines that anyone can use. Our team is mainly composed of AI and robotics engineers. Some of us have been developing and manufacturing robotic systems for the last 25 years. Omnirobotic is all about balancing industrial experience and cutting-edge technology.

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