Beyond the Factory Floor



XR's critical role in manufacturing and workforce development

To understand the impact of immersive technology on manufacturing, XRA and RXN Group surveyed 600 manufacturing CEOs and decision makers across the country on the use of XR technology.

81% of manufacturing decision makers believe that **XR technology is good for manufacturing.**



73% of manufacturing decision makers believe that **the state of the manufacturing industry is positive** compared to other industries.

In Manufacturing, XR is used for:

- WORKFORCE DEVELOPMENT
- 3D MODELING/ PROTOTYPING
- QUALITY ASSURANCE

...and more!

Against this backdrop, it's important to understand that manufacturers are struggling to attract and effectively train entry-level employees while simultaneously losing skilled employees to retirement.



77% **of manufacturers anticipate there will be ongoing difficulties in attracting and retaining workers.**[1]

- **68%** REPORT A SKILLS SHORTAGE
- **34%** STRUGGLE WITH THE LOSS OF SKILLED RETIREES
- **30%** NOTE THE LACK OF EFFECTIVE JOB TRAINING PROGRAMS

Decision makers understand that XR technologies offer powerful solutions

37% **of decision makers believe that XR can address workforce skill gaps by significantly reducing skill acquisition.**

31% **of decision makers say that XR can improve new hire training.**

30% **say it can help employee recruitment.**

47% **believe XR will create new career advancement opportunities.**



Nearly 40% of decision makers say XR can improve training and education for their employees.

New hire training and ongoing education is expensive. Manufacturers believe that XR will deliver a positive ROI for a fraction of the cost of traditional methods by improving:

- **72%** EMPLOYEE TRAINING
- **68%** EMPLOYEE RECRUITMENT
- **62%** EMPLOYEE RETENTION

> *Transfr has revolutionized education with immersive technology, guiding learners to explore career paths and gain skills for seamless transitions to the workforce. They extend these solutions to enterprises, offering immersive experiences for employees to upskill confidently in risk-free virtual environments, enhancing performance and job confidence.*
>
> **BHARANI RAJAKUMAR, CEO, TRANSFR**

Beyond workforce issues, companies believe XR technology can be used in all phases of the manufacturing workstream, including:

QUALITY CONTROL	DESIGN AND PROTOTYPE PRODUCTS	ENCOURAGING REMOTE COLLABORATION	IMPROVING CUSTOMER ENGAGEMENT AND SALES
40%	39%	35%	33%

And facilities management through digital twins, which are precise virtual models of physical assets, are used in many ways in manufacturing, including to improve sustainability.[2]

Reduce building emissions by
50%

Improve building operating efficiency by
35%

Increase human productivity in those buildings by
20%



According to decision makers XR is already or will deliver a positive ROI when:

- **75%** DESIGNING PRODUCTS
- **72%** MACHINING EFFICIENCIES
- **71%** PROTOTYPING

There is clear optimism about the future of XR technology in the manufacturing sector



53% **of manufacturing decision makers are already using XR once a week or more.**

71% **of manufacturing decision makers report that workers positively receive XR technology.**

Respondents identified the following challenges to address when adopting XR technologies.

- DATA PRIVACY AND SECURITY — **34%**
- TOO EXPENSIVE TO ADOPT — **29%**
- LOGISTIC CHALLENGES — **22%**

In the face of these challenges, at least 6 in 10 decision makers believe that XR is currently delivering or will deliver a positive ROI across the industry.

To learn more about XR in manufacturing workforce - check out our manufacturing use cases.

To better understand how XR is impacting your favorite industries click here.

References:

1. Manufacturing industry diversity | Deloitte Insights
2. The engineering industrial metaverse | Siemens Global