

Treedis + Matterport

EBOOK

# The growing gap in industrial training

How to move beyond legacy methods and future proof the heart of your organization: your people.

THE CHALLENGE

# The ‘time warp’ challenge

**When training can’t keep pace with technology.**

What happens when the precision of a modern manufacturing floor outpaces the limited scope of a faded training manual?

This isn’t a rhetorical question — it’s the very dynamic fueling the skills gap in industrial sectors, and it all comes back to the basic demand of innovation: **continuous, adaptive learning** that evolves with technology.

As AI, IoT, and automation reshape the factory floor, training programs built a decade ago are producing workers who are outdated before they even start. The gap isn’t closing — it’s accelerating.



THE CORE TENSION

Technology VS Training

evolves exponentially — evolves incrementally

This mismatch is costing industries trillions annually — and the gap is only widening.

THE MISSING LINK

# Digital transformation's missing link.

## The human factor.

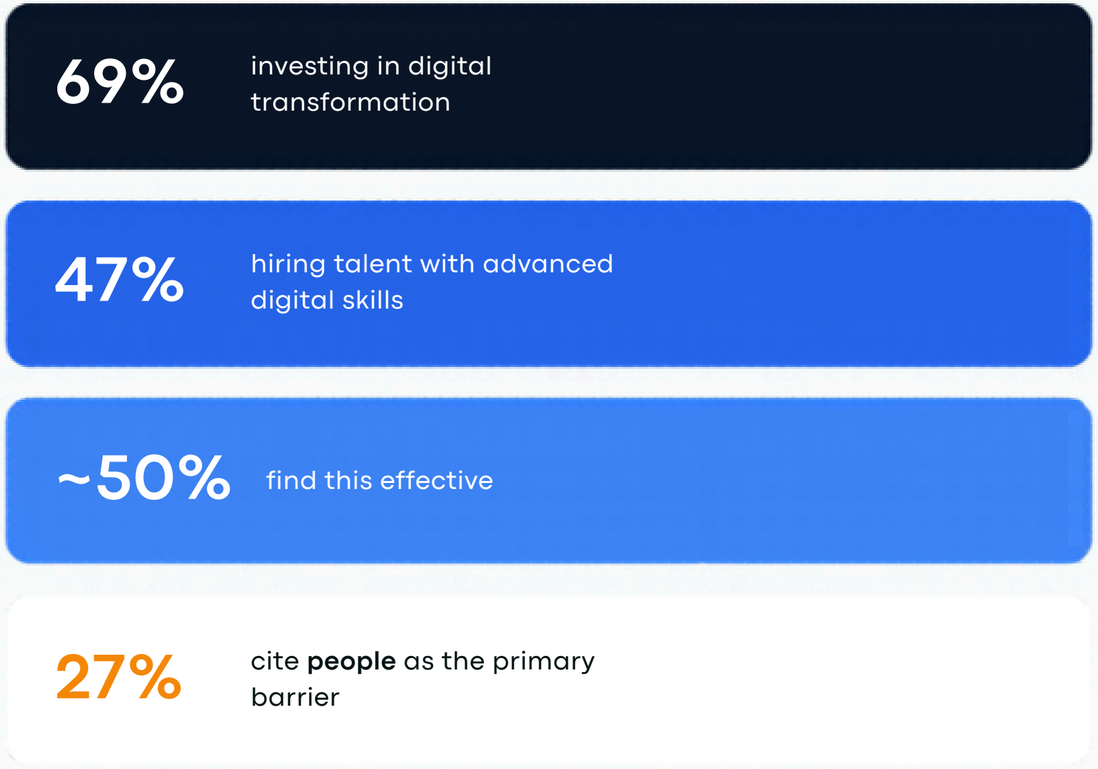
While 69% of manufacturing-focused leaders are actively engaged in digital transformation, these significant investments in operations technology often haven't fully delivered expected results.

Crucially, 27% of these leaders report that **people, not technology**, are the primary reason their investments haven't come to fruition.

True transformation is about more than just tools — it's about aligning people, processes, and ways of working.

Source: PWC Global Digital Operations Study

INVESTMENT VS. EFFECTIVENESS



THE IMPACT

# The alarming impact.

## Skills obsolescence & unfilled jobs.

The consequences of this disconnect are clear:

**83%** of frontline workers report not having the technology needed for productivity.
Siemens

**65%** of skills needed for manufacturing jobs are changing faster than the workforce.
EY / Manufacturing Institute

**39%** of workers' existing skill sets expected to be outdated between 2025–2030.
World Economic Forum

**1.9M**

manufacturing jobs could go unfilled through 2033

Estimated economic cost

**$1 Trillion**

in 2030 alone

Deloite & The Manufacturing Institute

THE COST

# The hidden drain.

## Quantifying the cost of outdated training.

Escalating skills gaps and reliance on outdated training methods have far-reaching ripple effects: safety declines, productivity drops, and top talent leaves.

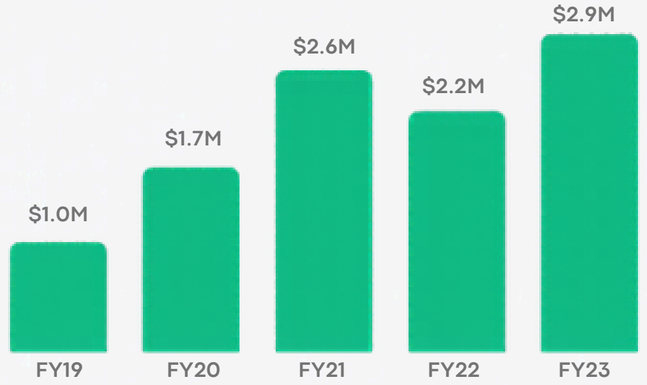
When technicians rely on outdated resources to troubleshoot complex machinery, costly errors, increased safety risks, and operational delays invariably follow.

**11%** of annual revenue is lost to unplanned downtime, costing global companies **$1.4 Trillion** — the size of Spain's GDP.

**With demands changing this quickly, and costing this much, finding faster, smarter ways to train is imperative.**

**Automotive: Cost of One Hour Unplanned Plant Downtime**

Large OEM plants, USD




In automotive, idle production line costs reached **$695M/year** at large plants — 1.5x higher than five years prior.

Source: Siemens

THE SOLUTION

# Enter XR: The new frontier of learning.

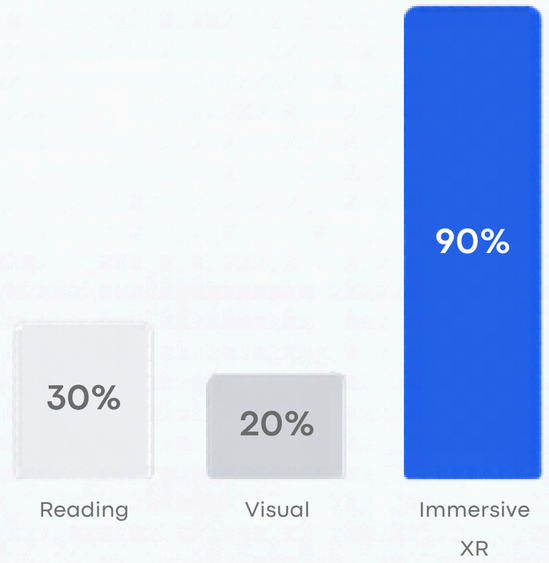
Extended Reality (XR) — the umbrella term for VR, AR, and MR — is fundamentally transforming skill development. These technologies create immersive, hands-on learning environments previously impossible to deliver at scale.

With 5G enabling sub-20ms latency, AI personalizing training content, and hardware becoming lighter and more affordable, XR has crossed from experimental to enterprise-essential.

**Enterprise XR Market: $44.6B in 2026**
Growing at ~32% CAGR | Mordor Intelligence

**Over 72% of Fortune 500 companies now implementXR technologies for training, collaboration, and product development.**

**Knowledge Retention by Learning Method**




Source: XR Today / National Training Laboratories

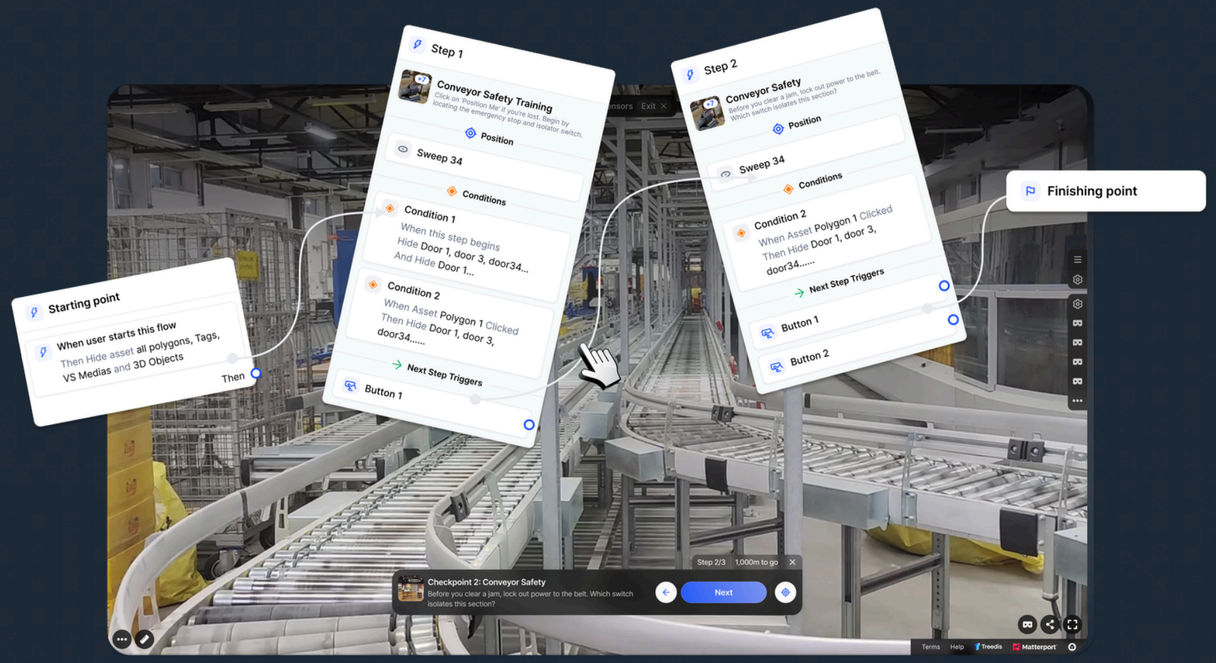
MATTERPORT + TREEDIS

# The game changer.

## Immersive industrial training with Matterport + Treedis.

The combined force of Matterport and Treedis offers a uniquely powerful solution for industrial training. Matterport captures **photorealistic 3D digital twins** of real-world environments. Treedis layers advanced interactivity, dynamic workflows, and **AI-powered intelligence** directly within these digital replicas.

This combination allows you to seamlessly digitize and deliver impactful training — significantly improving engagement, safety, and knowledge retention across your entire workforce.




KEY CAPABILITIES

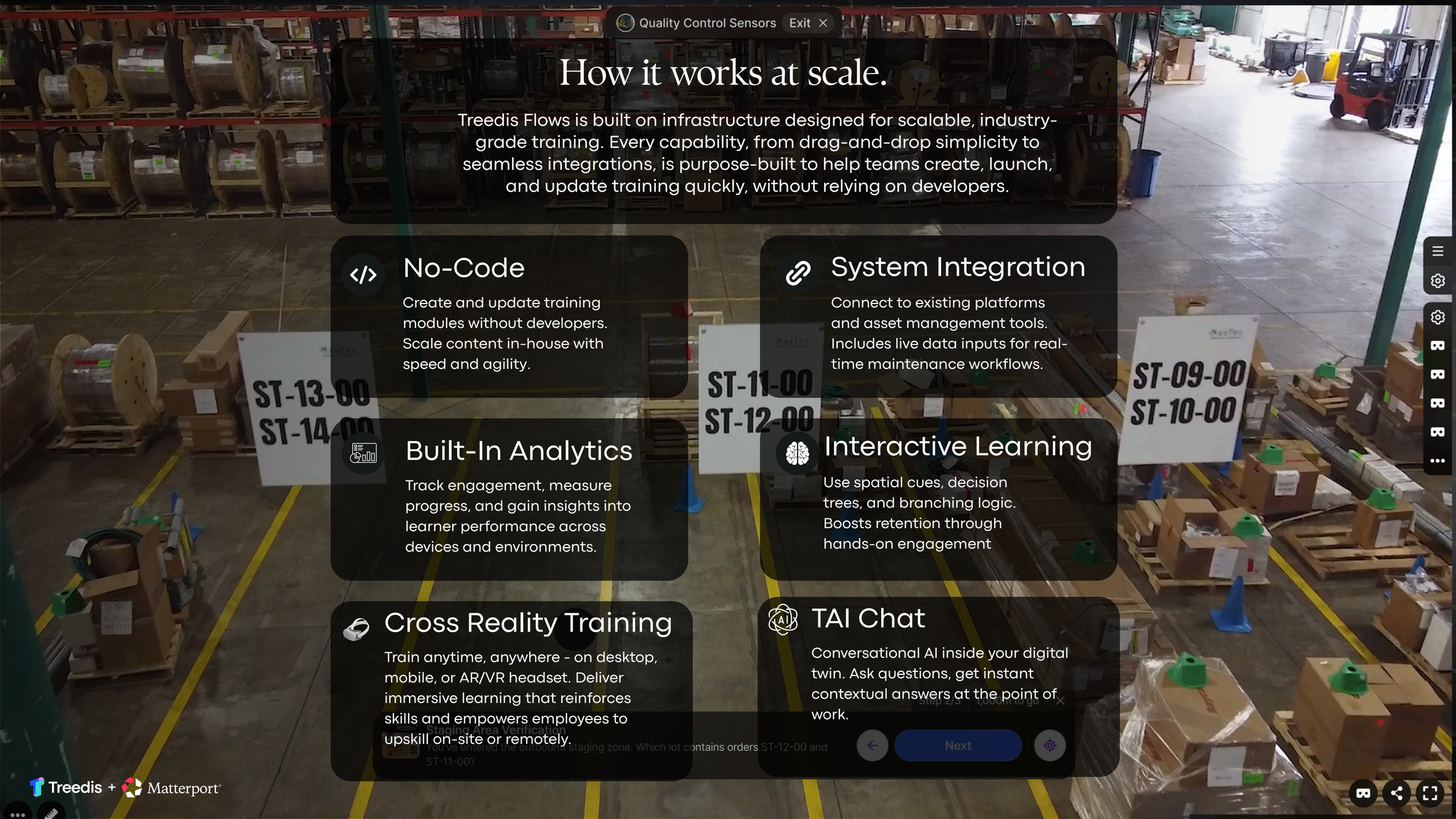
**AI-Powered Flows**
Intelligent branching and auto-generated training sequences from your SOPs and maintenance manuals.
NEW IN 2026

**TAI Chat**
On-demand conversational AI inside your digital twin. Ask questions, get instant contextual answers.
NEW IN 2026

**Cross-Reality Training**
Desktop, mobile, or AR/VR headset — deliver immersive learning that reinforces skills anywhere.

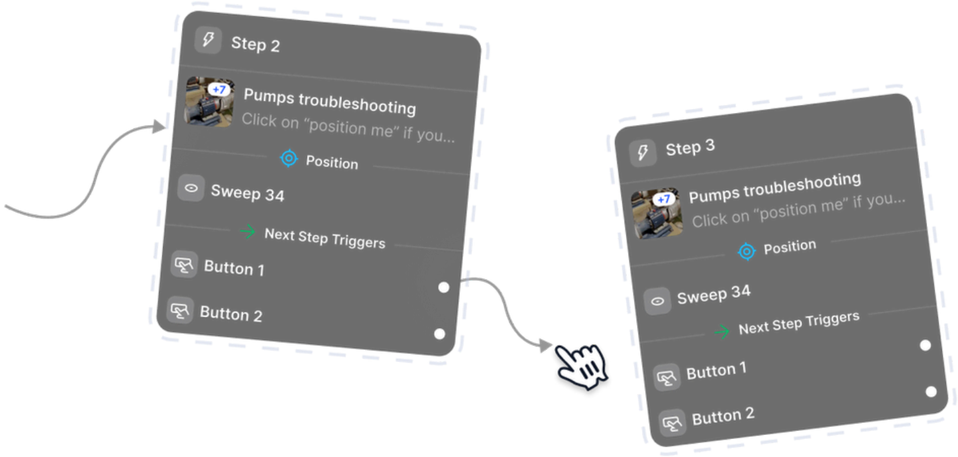
**Live Data Integration**
Real-time sensor feeds from digital twins or IoT devices embedded directly in training modules.

Treedis + Matterport


Quality Control Sensors
Exit
How it works at scale.
Treedis Flows is built on infrastructure designed for scalable, industry-grade training. Every capability, from drag-and-drop simplicity to seamless integrations, is purpose-built to help teams create, launch, and update training quickly, without relying on developers.
No-Code
Create and update training modules without developers. Scale content in-house with speed and agility.
System Integration
Connect to existing platforms and asset management tools. Includes live data inputs for real-time maintenance workflows.
Built-In Analytics
Track engagement, measure progress, and gain insights into learner performance across devices and environments.
Interactive Learning
Use spatial cues, decision trees, and branching logic. Boosts retention through hands-on engagement
Cross Reality Training
Train anytime, anywhere - on desktop, mobile, or AR/VR headset. Deliver immersive learning that reinforces skills and empowers employees to upskill on-site or remotely.
TAI Chat
Conversational AI inside your digital twin. Ask questions, get instant contextual answers at the point of work.
Staging Area Verification
You've entered the outbound staging zone. Which lot contains orders ST-12-00 and ST-11-00?
Next
ST-13-00
ST-14-00
ST-11-00
ST-12-00
ST-09-00
ST-10-00
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DIFFERENTIATORS

# What sets it apart.




Go beyond training with Flows. By embedding interactive, measurable workflows directly into Matterport spaces, Treedis empowers teams to standardize procedures, accelerate onboarding, and maintain compliance — all within their actual environments.

| Capability | What it Does | Real-World Impact |
|---|---|---|
| **Accelerated Onboarding** | Guides new hires through live facility models with embedded instruction. | 4x faster time to productivity |
| **Operational Standardization** | Delivers consistent, high-quality training to every site and shift. | Global consistency in hours |
| **Digital Twin Integration** | Connects training directly to a live, interactive replica of the physical environment. | Training mirrors real-time conditions |
| **AI-Powered Learning** | TAI Chat provides instant contextual answers. AI Flows auto-generate training paths from SOPs. | Faster resolution; reduced training costs |
| **Real-time Contextual Data** | Integrates live operational data from IoT sensors directly into training modules. | Instant, precise guidance on the floor |

USE CASES

# Built for complex industrial environments.

Flows adapts to a wide range of training challenges — from logistics to manufacturing to safety compliance. By transforming physical spaces into immersive learning environments, the real world becomes your most effective training ground.

### Heavy Equipment Operation

Simulate machinery usage and emergency stops in realistic 3D. **AI Flows** guide technicians through step-by-step procedures.



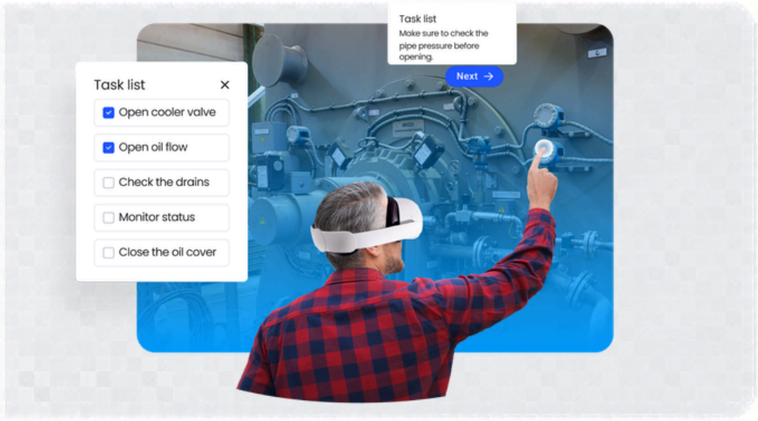

### Warehouse Safety

Teach hazard spotting: PPE protocols, and emergency routes. **TAI Chat** answers safety questions in real time.



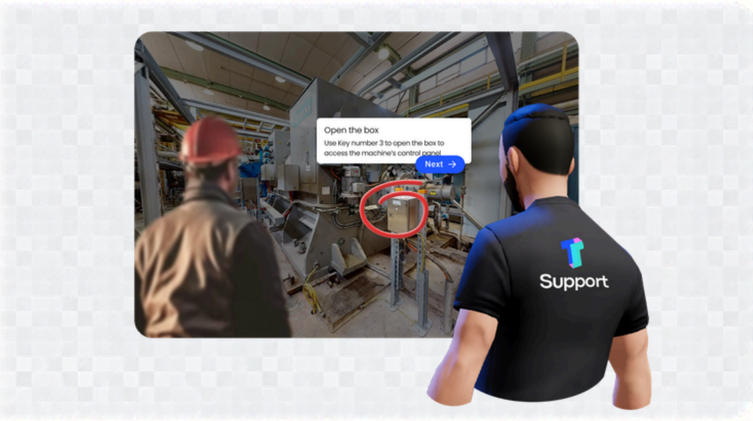

### Preventive Maintenance

Walk through inspection using live hotspots. **IOT sensor data** feeds directly into the training environment.




### Emergency Response & Compliance

Practice drills virtually — record interactions, export proof of completion for auditors and regulatory bodies.



CASE STUDY

# Granite Construction provides immersive training with Matterport and Treedis.

From slideshows to scalable safety training




| Challenge | What Digital Twins Deliver |
|---|---|
| Oudated methods lacked engagement and realism. | Gamified, interactive training tailored to real site environments. |
| Safety risks made on-site training difficult. | Risk-free virtual walktrhoughs with immersive, focused learning. |
| Non-technical staff couldn't scale content quickly. | No-code tools enabled fast creation and scalable modules. |
| One-size-fits-all didn't suit diverse experience levels | Supports role-based modules (e.g., technician vs supervisor). |

GRANITE®

**"There are probably a thousand different ways to die on an asphalt site."**

— Daniel Mekis, CI Project Manager

In high-risk construction environments, a safety-first training approach is essential. Using Treedis and Matterport, Granite introduced virtual training that reduced onsite risks and helped workers safely learn site layouts, equipment, and procedures — before ever setting foot onsite.

**3** new training programs built in-house

**30** minutes to master the platform

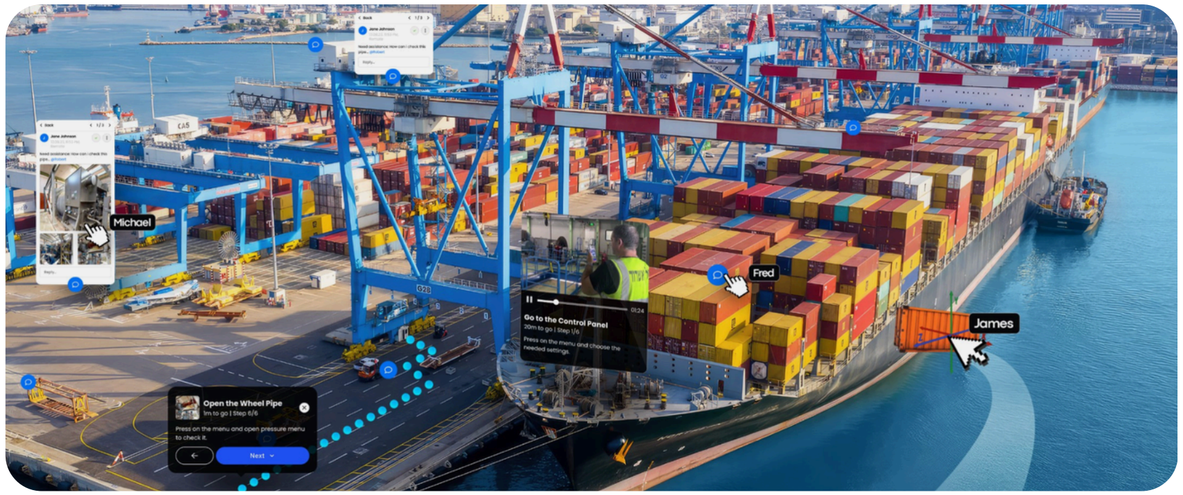
**300** engineers onboarded annually

[Read the full case study >]

CASE STUDY

# Port of Ashdod transforms crane maintenance with connected workers.

From scattered knowledge to a spatial intelligence hub




| Challenge | What Digital Twins Deliver |
|---|---|
| Veterian knowledge at risk as experienced workers retire. | Digital institutional knowledge preserved spatially in 30 twins. |
| Maintenance info scattered across legacy systems. | Unified, searchable knowledge hub inside the digital twin. |
| Troubleshooting stolen when key personnel unavailable. | AR overlays and TAI Chat for instant contextual answers. |
| No standardized processes across shifts and teams. | Standardized workflows with Notes for shift continuity. |

ASHDOD PORT

"After proving its value in the pilot, Treedis became a must-have operational standard in the port."

— Nisan Levy, CEO, Port of Ashdod

At one of Israel's busiest cargo ports, critical maintenance knowledge was trapped in silos — scattered across legacy systems, paper manuals, and veteran employees nearing retirement. Using Treedis Connected Worker and Matterport digital twins, Ashdod built a real-time knowledge hub at the point of work.

**84%** faster troubleshooting for new technicians

**50%** faster troubleshooting for veteran workers

**100%** workflow standardization across all crane teams

Read the full case study >

GETTING STARTED

# Your roadmap to transformation.

Getting started is simple — and scalable. With minimal friction, you can begin transforming just one training use case and expand from there.

1

### Identify a High-Impact Use Case

Start with onboarding, safety, or maintenance.

2

### Capture Your Environment

Scan your space with Matterport.

3

### Build Interactive Flows

Use Treedis to map out tasks, logic, and training content.

4

### Launch & Expand

Share with teams. Track performance. Iterate and scale.

**Most teams are live within days — not months.**

Granite Construction mastered the platform in 30 minutes. No developers required.

# Turn your facilities into learning engines.

Equip your teams with scalable, interactive training directly inside your own environments.

**Reach out to Treedis or Matterport to begin.**