Introduction to Altoura
& The New Reality of Work

Increase Productivity and Lower Costs Using
Spatial Computing for Remote Collaboration

THE NEW REALITY OF WORK

The transition to a more distributed, mobile, and collaborative workforce had begun before the coronavirus struck. The pandemic accelerated the need for organizations to build new processes and establish standards for remote work that will likely become permanent. Organizations now face the challenge of empowering workers—including the two billion frontline workers that make up seventy five percent of the global workforce—with the tools they need to collaborate and be productive in the virtual world.

The Problem With Traditional Collaboration Tools

However, traditional collaboration tools (Outlook, Zoom, Teams, Slack, etc.) were never designed with frontline workers in mind. So, the assemblers, technicians, warehouse workers, and healthcare workers instead rely on paper documentation, training classes, and peer-to-peer mentors to onboard, train, and work. None of these methods are very effective at helping workers to learn or do their jobs remotely, nor do they provide a way for them to remotely interact with their peers, workspace, or equipment.

Manufacturers and operators	Retail and warehouse workers	Service/repair technicians
Healthcare practitioners and workers	Construction & real estate planners	Educators and instructors

For most organizations that are practicing social distancing, this lack of empowerment and skilling raises fundamental questions about how to build and maintain a productive frontline workforce:

- How do you remotely onboard and train new employees to use machines and equipment?
- How do you facilitate collaboration between an expert knowledge worker such as a manufacturing engineer and a front-line worker such as an assembly worker in the factory?
- How do you empower assemblers to complete tasks in real-time and reduce errors?

- How do you enable people to collaborate in a shared workspace (a "digital twin" of their traditional work environment and equipment) rather than a 2D background in Zoom?

The answer to each of these questions is straightforward: **you use spatial computing**.

Spatial Computing Stokes Collaborative Work

Spatial computing improves collaboration and business productivity in fundamental ways:

- It makes is easy for remote workers collaborate in shared spaces, acquire knowledge, perform tasks, and digitally interact with equipment, buildings, and machines.

- It helps organizations upskill workers by supplementing—and often replacing—traditional training and guidance techniques with much more effective, immersive experiences.

- It empowers organizations to deliver digital content and expert guidance, training, etc. into the context of the frontline workers' physical environment.

J.P. Gownder
Principal Analyst
Forrester Research

" Spatial computing will change the way people interact with machines and each other, just as the mouse-based interface did in the 1990s and touch interfaces did with the adoption of the smart phone."

INTRODUCTION TO ALTOURA

Altoura is a scalable spatial computing platform for remote collaboration (think 3D Zoom with spatial awareness). It is the most **complete, photorealistic,** and **flexible** spatial computing software on the market.

Complete Solution

Out-of-the-box solutions with a wide-ranging set of features to light up various use cases based on customer and industry needs.

High Fidelity (Photorealistic)

Highly realistic and immersive experiences enabled by industry-best renderings of 3D objects and environments.
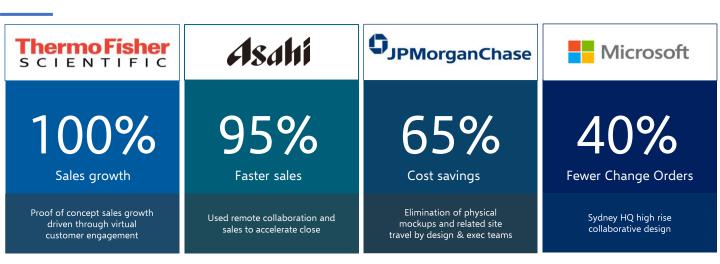
Flexible & Extensible

Powerful tool for building custom spatial experiences using a low-code interface—no development skills needed.

Proven Business Impact

Altoura is used by Fortune 500 organizations in manufacturing, retail, healthcare, real estate, technology, and service industries to successfully harness the power of spatial computing to improve productivity and lower costs.

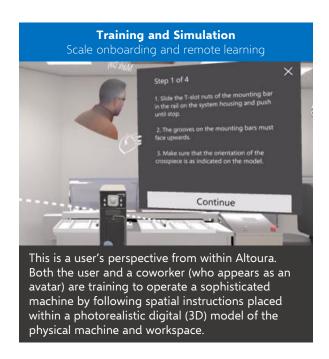| **Thermo Fisher SCIENTIFIC**	**Asahi**	**JPMorganChase**	**Microsoft**
100%	**95%**	**65%**	**40%**
Sales growth	Faster sales	Cost savings	Fewer Change Orders
Proof of concept sales growth driven through virtual customer engagement	Used remote collaboration and sales to accelerate close	Elimination of physical mockups and related site travel by design & exec teams	Sydney HQ high rise collaborative design

One Solution, Numerous Use Cases

Altoura is used by organizations to improve business processes and empower workers to complete tasks remotely such as virtual trainings, step-by-step on-the-job task guidance, virtual product sales presentations, and real-time collaborative design and prototyping—all built into the platform. These are just some of the spatial computing use cases Altoura lights up for collaborative work:

Training and Simulation

Organizations use Altoura to build collaborative and immersive training and simulation experiences to remotely onboard new workers and train existing workers on new products and business processes.

Using Altoura, workers can teleport to a shared space with their coworkers (who appear as avatars), see a photorealistic rendering (hologram) of their work environment and equipment, and complete training where instructional content is delivered via a 3D experience. Organizations have flexibility to implement a fully digital training simulation, or one where workers use physical equipment and follow spatial instruction presented as digital overlays.

Training and Simulation
Scale onboarding and remote learning

This is a user's perspective from within Altoura. Both the user and a coworker (who appears as an avatar) are training to operate a sophisticated machine by following spatial instructions placed within a photorealistic digital (3D) model of the physical machine and workspace.

Real-Time Task Guidance

Altoura empowers workers to complete tasks in real-time, while on the job to dramatically improve the likelihood that jobs are completed correctly the first time. Long considered the holy grail of work assistance, spatial computing is now a cost effective and extremely powerful work aid.

Organizations use Altoura Experience Builder or Microsoft Dynamics 365 Guides to build installation instructions, repair procedures, etc.. Frontline workers can then view the guides and work aids (like video) with a spatial computing headset or device to advance through the procedures. Altoura is the first and only company authorized to integrate Dynamics 365 Guides user interfaces.

Real-Time Task Guidance
Deliver instructions & videos to guide tasks

This factory worker is wearing a Microsoft HoloLens and being guided through a set of procedures in Altoura while performing on-the-job tasks.

Design and Prototyping

Organizations use Altoura to improve design and prototyping processes, accelerate decision making, and reduce costs associated with creating physical models. Users can upload existing 3D models into Altoura to enable an immersive virtual tour of the project/product details and features. This enables users to navigate the model details and invite other users to view and interact with a simple and convenient online portal where they can provide comments and feedback, driving deeper engagement with customers or employees.

Organizations also use Altoura to evaluate layouts by conducting spatial mapping of floors, walls, and ceilings. Users then import 3D models, drag, drop, and rotate models as 3D holograms to determine placement within their environment before investing in new equipment.

Design and Prototyping
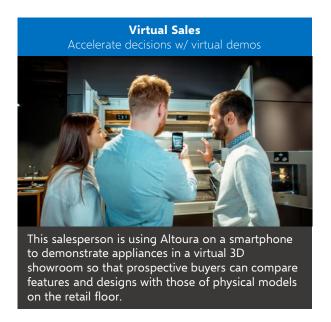Visualize, plan, and review designs and layouts

These users are in Altoura and are reviewing the planned design for a new building. A photorealistic model of the building design allows the users to get a 360-degree view of features and layout, and to post comments and documents that persist across multiple sessions.
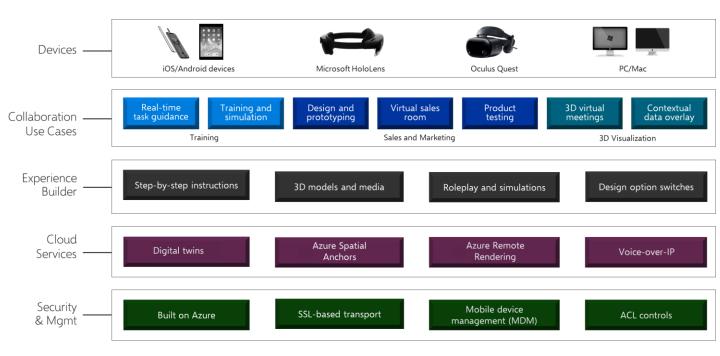
Virtual Sales

Organizations use Altoura to create interactive sales and marketing experiences that grow revenue. Sellers and marketers can easily import 3D models of products into Altoura and create a virtual online product showroom where customers can view and manipulate detailed product "digital twins."

Spatial selling answers customer questions quickly and naturally through full scale product visualization and interaction. In Altoura, sellers can explain complex mechanics or specialized product features with simple product animations, customized spatial computing experiences, and text or rich media annotations. And these conversations can take place with anyone, from anywhere using Altoura's sophisticated VoIP and 3D avatars.

Virtual Sales
Accelerate decisions w/ virtual demos

This salesperson is using Altoura on a smartphone to demonstrate appliances in a virtual 3D showroom so that prospective buyers can compare features and designs with those of physical models on the retail floor.

A Complete Technology Stack

Altoura offers more use cases and custom experiences on more devices—built on a secure and manageable foundation—than any other spatial computing company in the world.

Devices
- iOS/Android devices
- Microsoft HoloLens
- Oculus Quest
- PC/Mac

Collaboration Use Cases

Training		Sales and Marketing		3D Visualization	
Real-time task guidance	Training and simulation	Design and prototyping	Virtual sales room	Product testing	3D virtual meetings	Contextual data overlay

Experience Builder
- Step-by-step instructions
- 3D models and media
- Roleplay and simulations
- Design option switches

Cloud Services
- Digital twins
- Azure Spatial Anchors
- Azure Remote Rendering
- Voice-over-IP

Security & Mgmt
- Built on Azure
- SSL-based transport
- Mobile device management (MDM)
- ACL controls

Devices

Altoura runs on the most popular and proven devices to give organizations flexibility in selecting their hardware platform, and to give users flexibility in how they collaborate, train, and interact with people and their surroundings. 3D content is packaged and managed differently based on the specific device computational limitations.

Collaboration Use Cases

Altoura powers the largest number of collaboration use cases to help organizations collaborate effectively and maximize return on their investment. While some vendors charge by the module for every use case, all collaboration use cases are built into the Altoura platform for a single price.

Experience Builder

Altoura's Experience Builder is a no-code development platform for creating custom spatial computing workflows. You can link multiple workflows to create experiences like step-by-step training, product testing, etc., and to collect data from user activity in the virtual space, without having to engage developers or courseware designers.

Cloud Services

Altoura can run purely on-premise, or it can be configured to integrate Azure cloud services to allow for spatial awareness for certain use cases, like 3D training, predictive equipment maintenance, and design review, all in the context of our users' environments. For example, by implementing Azure Remote Rendering and diverting the rendering workload to high-end GPUs in the cloud, Altoura is able to stream a high-fidelity image directly to the target device. And by implementing Azure Spatial Anchors, Altoura can map, persist, and share holographic content across multiple devices at real-world scale.

Security and Management

Altoura is built on an Azure-based cloud infrastructure that provides enterprise-grade authentication, security, and manageability via mobile device management (MDM).

Altoura Has The Resources To Help You Succeed

Altoura Studios

To accelerate ROI, Altoura customers have the option to work with Altoura Studios. Formerly known as Studio 216, Altoura Studios is an award-winning in-house 3D studio team that can build, deploy, integrate, and customize collaboration solutions to meet our customers' specific industry needs.

Strategic Partnership with Microsoft

As a member of Microsoft's elite Mixed Reality Partner Program, Altoura partners closely with the Microsoft Sales, Marketing, Engineering, and Consulting Services teams to support customer engagements, pilots, and deployments—and to shape future innovations in spatial computing.

International Presence

The Altoura teams in Shanghai, Bangalore, and Seattle provide our customers 24x7 availability and service.

Get Started: It's Easier Than You Think

Getting up and running with spatial computing is fast and easy. The best way to get started is to put spatial computing to work in a limited trial (one or two use cases) so you can see the immediate improvements to the way you do business.

Let us know how we can support your journey.

Schedule a demo

Send an email to info@altoura.com to request a demo of Altoura

Attend a webinar

Register for an on-demand webinar featuring Altoura customers discussing the *New Reality of Work*

Contact an expert

Send an email to us at sales@altoura.com and let us know how we can help