FORRESTER

Planning For Adoption Success Of Mixed Reality Using Microsoft HoloLens 2

A Five-Step Checklist

Mixed reality (MR) is the virtual overlay of contextual digital information onto the real world using 3D holographic objects, anchoring points, and "heads-up, hands-free" movement. Mixed reality allows the interaction of real-world environments with three-dimensional digital objects, instructions, data, and virtual collaborators.

Microsoft HoloLens 2 is an untethered, self-contained holographic headset that allows users to leverage enterprise-ready mixed reality applications while working heads-up and hands-free. An immense breadth of MR use cases across industries and roles are possible with HoloLens 2, powered by a comprehensive ecosystem of applications and services from Microsoft and myriad third-party partners. MR on HoloLens 2 is broadly extensible: Its support for custom code and cloud services has led to a growing market of customers and partners that continually expand the bounds of possibility.

The barriers to entry for investing in MR have drastically declined in the past several years. Applications from Microsoft and partners have developed considerably in their stability and breadth of capabilities. Many more use cases continue to be standardized and tested, both by application vendors and by customers themselves. As the path becomes increasingly traversed with ever-better prebuilt offerings, new organizations can progressively adopt mixed reality at lower cost, labor, and risk and generate business value faster. And as common use cases and their business impact become increasingly stable and accepted, organizations can increasingly expand the realm of possibility for use cases across industries.

Today, mixed reality is a crucial part of organizations' arsenals to survive and thrive in the face of systemic risks. MR can apply to almost any industry with value-producing scenarios including: 1) training and education; 2) task instructions and visualization; 3)

Summary of results from the Total Economic Impact™ Of Microsoft HoloLens 2

METHODOLOGY

Microsoft commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential ROI enterprises may realize by deploying HoloLens 2.

To achieve these objectives, Forrester interviewed 23 decision-makers with experience using HoloLens 2. The benefit frameworks presented have been simplified and condensed. For the full financial framework to estimate how Microsoft HoloLens 2 can impact your organization, please see the full study.

remote collaboration; 4) onsite and field support; 5) operations; 6) design and decision-making; and 7) sales and customer enablement.

This checklist is designed to help organizations increase adoption and successful usage of HoloLens 2. By following the five key steps in this document, decision-makers can effectively plan for and execute their organization's HoloLens 2 deployment to realize the growing benefits of mixed reality.

1 **Plan your business strategy for HoloLens 2.**

Decision-makers must first evaluate current challenges and opportunities to determine which use cases offer the greatest potential value with the lowest-possible barriers. In doing so, it is critical to involve diverse stakeholders such as managers and end users to evaluate opportunities and secure support. Most organizations today will be best suited to start with prebuilt apps, which enable faster deployment with lower costs and risks to quickly deliver value and prove the concept. Early business value justification drives adoption, as well as growing expertise and understanding of MR for technical teams, end users, and leaders.

Decision-makers can later look to add more use cases and increase scale. They may add additional apps or functionality, and when gaps are identified in the available solutions, they may also pursue customization and custom development. Given the higher cost, time, and labor requirements of custom development, it is typically best reserved for high-value internal opportunities or those that could be monetized in the long term through packaged offerings or IP licensing. Custom development efforts are more likely to succeed after first surmounting simpler mixed reality opportunities and gaining internal expertise and leadership support.

"We saw HoloLens as a game-changing technology that had an ecosystem built around it to go places. We took a leap of faith with Microsoft and very quickly confirmed it was the right decision."

IT X-REALITY LEADER, AUTOMOTIVE MANUFACTURING

Learn to justify mixed reality investments with a business case using Forrester's Total Economic Impact case study.

Use Forrester's online TEI calculator to estimate the impact of mixed reality using HoloLens 2 for your organization.

2   Prepare for your HoloLens 2 deployment.

After identifying and demonstrating the business opportunity, decision-makers must determine which HoloLens 2 devices and solutions will best fit their needs and evaluate their technical environment and ability to adopt mixed reality within those considerations. Decision-makers must take the following steps to prepare for a successful deployment:

- **Identify HoloLens 2 device needs, solutions requirements, and procurement logistics.** HoloLens 2 offers a variety of options to meet different practical needs, supported by a growing breadth of mixed reality services. This includes remote assist and guides as well as solutions for industry-specific use cases offered across a robust partner ecosystem. Decision-makers must review HoloLens 2 device offerings and consider which devices and solutions will best fit their unique work environment, regulatory standards, use case requirements, and logistics for device procurement within their organization's region.

- **Obtain appropriate sponsorship.** HoloLens 2 devices share capabilities with both Windows 10 and 11 PC devices, as well as mobile devices such as Android and iOS. However, they are a new device class and may require separate policies and mindsets about how the devices are used within the organization. Having appropriate sponsorship and collaboration between both business users and the IT department responsible for implementation can accelerate a deployment and provide a path for success.

- **Prepare for modern mobile device management.** HoloLens 2 requires mobile device management (MDM) to manage devices, deploy and maintain apps, and apply compliance and security policies in line with organizational needs. MDM providers can be Microsoft Intune or a third-party provider. Devices can be connected to either a corporate Wi-Fi infrastructure or a public Wi-Fi network, but decision-makers must ensure that their IT infrastructure, network, and personnel are equipped to support MDM requirements.

Forrester developed a composite organization based on data gathered from customer interviews to reflect the Total Economic Impact that Microsoft HoloLens 2 could have on an organization and concluded that HoloLens 2 has the following three-year financial impact.

ROI
177%

BENEFITS PV
$11.9 million

NPV
$7.6 million

PAYBACK
13 months

- **Set up identity and access management capabilities.** Like other Windows devices, HoloLens 2 operates under a user identity context. Integrating Azure AD for identity and access management provides optimal capabilities for managing HoloLens 2 devices and building on an existing Microsoft 365 investment. Decision-makers should review identity and access management resources for further guidance.

- **Prepare user guidance for device usage, active use policies, and tutorials.** It's imperative to prepare guidance that will enable end users to become confident in effective and safe usage of HoloLens 2 devices. To accomplish this, an impactful user guide should leverage the wealth of existing documentation from Microsoft and take into account the specific work environment that devices will be used in with instruction across: 1) first-time usage, including device setup and interaction with holograms and mixed reality; 2) daily usage, including menu, application, and file navigation; and 3) environmental considerations, such as spatial mapping, lighting, and hologram quality.

- **Plan your network infrastructure.** At its core, HoloLens 2 is a Windows mobile device integrated with Azure. It works best in commercial environments with Wi-Fi availability and access to Microsoft services. However, it does support a limited set of cloud-disconnected experiences. Decision-makers should review network infrastructure guidelines and requirements to ensure a stable user experience across devices, applications, and features.

- **Build or accelarate Windows modern management.** For organizations that have deployed modern management for Windows, HoloLens 2 devices will fit right in. Alternatively, decision-makers who are starting to explore this new method of Windows device management can deploy HoloLens 2 alongside an existing client architecture and use the learnings from HoloLens 2 deployment to catalyze PC deployments in the future.

3 **Configure HoloLens 2.**

Once the foundational elements of device procurement, applications, MDM, identify and access management, and user guidance have been examined and prepared, decision-makers need to evaluate the following considerations for effectively configuring devices:

- **Deploy at scale with automatic enrollment into MDM.** When it comes to deploying and managing devices, working with one or two devices can be simple. However, with hundreds or thousands of devices, automatic enrollment is a must. As such, decision-makers planning for widespread device adoption can simplify the process of setting up HoloLens 2 devices for both IT and end users through automated enrollment.

- **Purchase the appropriate licenses to manage devices and enable scheduling and use of services.** Identifying the right number and ratio of licenses for MDM, applications such as Dynamics 365 Remote Assist and Dynamics 365 Guides, and third-party applications is key to successfully empowering workforces with HoloLens 2's capabilities. Decision-makers should assess how applications and devices will be used across employees and consult Microsoft's guidance on device and licensing requirements to determine the appropriate licenses for their organization's intended users.

- **Create groups to assign configurations and licenses.** Azure and MDM solutions utilize users and groups to help assign configurations and licenses. Admins can configure groups to organize users or devices by location, department, or other characteristics to suit organizational needs and manage tasks and policies at scale.

4 **Deploy HoloLens 2.**

To ensure a successful deployment and smooth user experience, decision-makers must properly set up and test devices. Once configuration steps are complete, devices are ready to be distributed. At this point, it's critical for organizations to validate device setup across Azure AD enrollment, certificates, and app deployment:

- **Validate Azure AD enrollment and Wi-Fi certificates.** To validate that devices have been set up correctly, first verify that devices have properly joined Azure AD from the device settings or the Azure Portal. Then confirm that Wi-Fi certificates have been distributed appropriately.

- **Consider how apps will be deployed and validate app installation.** There are several paths for deploying applications to devices, including installation through mobile device management, the Microsoft Store for Business, the Microsoft Store, or provisioning. Decision-makers should evaluate [app management guidelines](#) and their organization's device management needs and IT environment to choose the most efficient and appropriate installation path. Validation of app installation can be verified through device settings.

5 **Maintain and expand HoloLens 2 deployments.**

Following the initial planning, preparation, configuration, and deployment stages, organizations must maintain their HoloLens 2 devices to: 1) take advantage of new features and capabilities; 2) stay up to date with essential updates; and 3) build a support function and user resources. Decision-makers should take the following steps to maintain and expand the value of their HoloLens 2 deployment:

- **Stay informed on release notes and upcoming releases.** Like other Windows 10 devices, HoloLens 2 uses Windows Update to download and install new updates automatically or on a scheduled basis. Microsoft releases feature and quality updates several times a year to maintain security and quality and deliver new or improved features for users. For HoloLens 2, these updates can change functionality and may require configuration changes. It is important for device management teams to [review the latest release notes](#) for new builds and test Windows Insider builds to recognize these changes.

- **Prepare a plan for updates.** Decision-makers should establish a regular process to test updates and be prepared to adopt new or improved features and capabilities. By setting up deferral

policies within Windows Update, organizations can execute a staged rollout strategy. Different groups can receive updates on a varied schedule, allowing them to validate that new updates are operating effectively and to adapt to new changes across functional groups. Typically, staggered updates should start with IT staff, then early adopters, followed by strategic groups.

- **Build a support plan.** Having a support team or individuals trained on troubleshooting the enrollment process and the general use of HoloLens 2 devices within an organization is key to minimizing issues and enabling faster resolution to create a productive user experience and minimize downtime. Additionally, decision-makers should help users understand where they can go to access support and help, provide feedback, and report bugs. Microsoft's HoloLens 2 resources and documentation provide up-to-date guidance on device usage, deployment, troubleshooting, and upcoming releases.

For additional resources, view the HoloLens 2 Documentation.

To read the full results of this study, please refer to the Total Economic Impact™ study commissioned by Microsoft.

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