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Mixed Reality Intelligence

Retail Edition

December 2020

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Background

As companies across the world begin employing immersive technologies to drive efficiencies, Mixed Reality is poised to change the way businesses operate. Mixed Reality blends the digital and physical world by overlaying 3D digital objects onto the user's physical world, offering a way for users to interact organically using head-mounted devices (HMDs). Located at the center of the virtuality continuum, the capabilities of Mixed Reality render it uniquely positioned to transform the workplace as we know it.

Microsoft has been at the forefront of the immersive technology market and a trailblazer in Mixed Reality, innovating in both hardware and software to offer cross-platform Mixed Reality solutions. With the introduction of HoloLens, the first untethered Mixed Reality headset designed with business use cases in mind, Microsoft established itself as a leader in the Mixed Reality space and validated the enterprise value of this nascent industry by partnering with prominent entities in contracts worth up to half a billion dollars.

In October 2020, Microsoft and Hypothesis embarked on an initiative to hear from IT and Business Decision Makers across three countries with the goal of developing a deeper understanding of how Mixed Reality is being utilized across three key industries: manufacturing, retail, and healthcare. This paper deep dives into how retail organizations are using and considering Mixed Reality technologies. While the primary data collected are quantitative, this report also illuminates customer stories that bring said data to life, providing a comprehensive picture of Mixed Reality use in the market today.

Furthermore, this report also aims to uncover the ways in which Mixed Reality may evolve in the future.

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Methodology

Microsoft commissioned Hypothesis Group, an insights, design, and strategy agency, to execute the Mixed Reality Intelligence research.

The Mixed Reality Intelligence Research occurred in October 2020, when a 15-minute online survey was conducted with over 700 decision makers involved in mixed reality decisions at mid-market and enterprise companies from a range of manufacturing, healthcare, and retail companies across the US, Germany, and Japan.

In addition, the research deep dives into customer stories from interviews between Microsoft and mixed reality decision makers at enterprise companies around the world that use HoloLens 2.
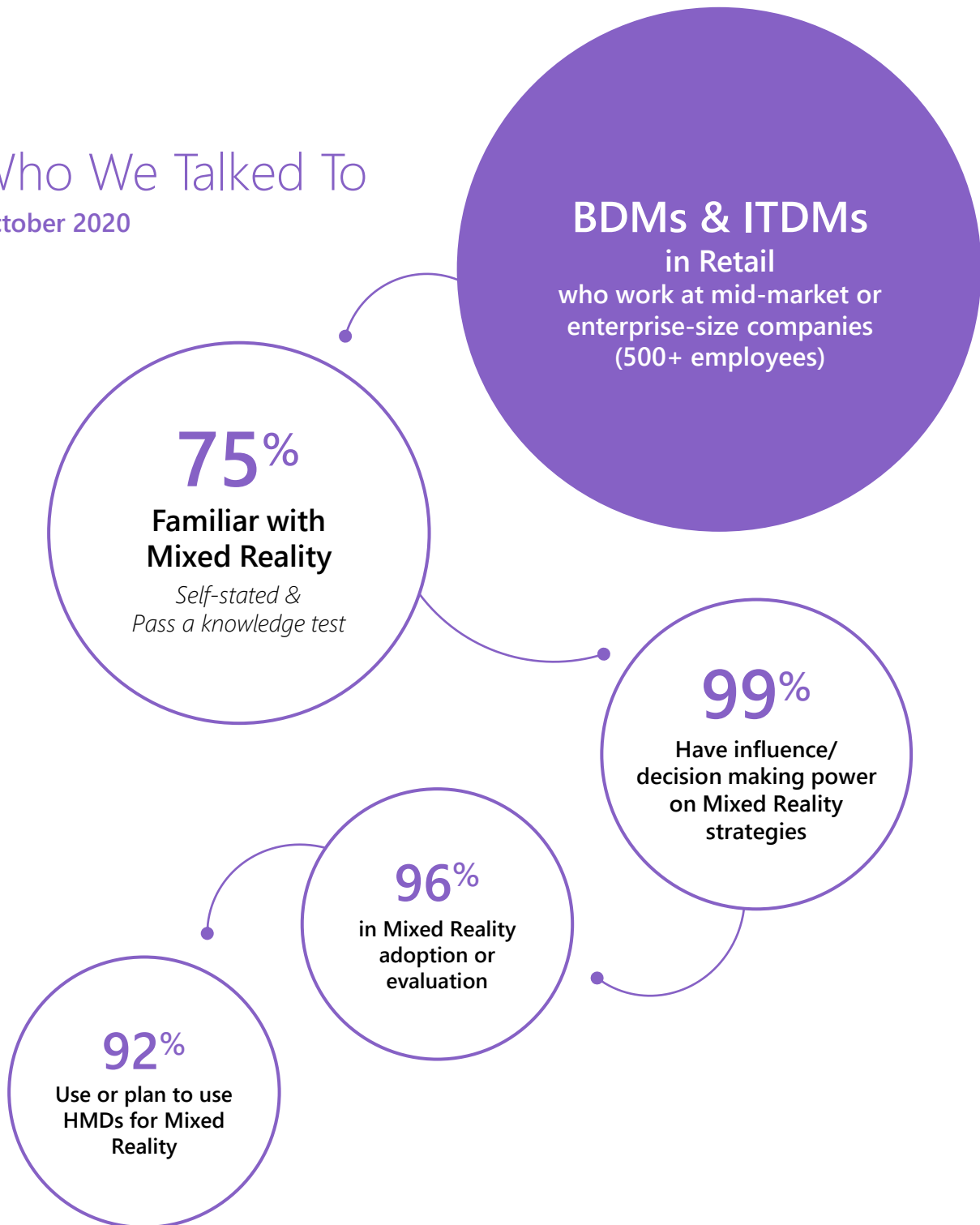
Retail Customer Stories

Walgreens | küchen quelle | Salvatore Ferragamo

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Who We Talked To

BDMs & ITDMs
in Retail
who work at mid-market or
enterprise-size companies
(500+ employees)

75%
**Familiar with
Mixed Reality**
*Self-stated &
Pass a knowledge test*

99%
**Have influence/
decision making power
on Mixed Reality
strategies**

96%
**in Mixed Reality
adoption or
evaluation**

92%
**Use or plan to use
HMDs for Mixed
Reality**

Final Audience

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Things To Know About Mixed Reality

1   Today, most retail organizations we spoke with are currently using Mixed Reality solutions via HMDs, and in the next 12-24 months usage is expected to increase even more. Mixed Reality is universally seen as a critical asset to retail organizations (100% agreement) among those who are currently using it or considering it for the near future.

2   Retail current and prospective users alike are hesitant about storing more data in the cloud, likely due to sensitive information they collect and store on their customers (payment info, billing address, etc.) Current users are also held back due to compatibility and implementation issues, while prospective users are inhibited by a lack of deployment training and budget worries.

3   Top applications of Mixed Reality within retail include Training & Simulation and Design, Prototyping, & Layout Optimization. Mixed Reality is not as commonly used for Sales Assistance today, as around one-in-three aren't considering this application at all.

4   The majority (over 3-in-5) of retail organizations that use Mixed Reality estimate improvements of 15% or more from their investment across Training & Simulation, Design, Prototyping & Layout Optimization, and Sales Assistance solutions. Customer success stories from Walgreens, Küchen Quelle, and Salvatore Ferragamo demonstrate how Mixed Reality solutions meet and exceed these industry expectations.
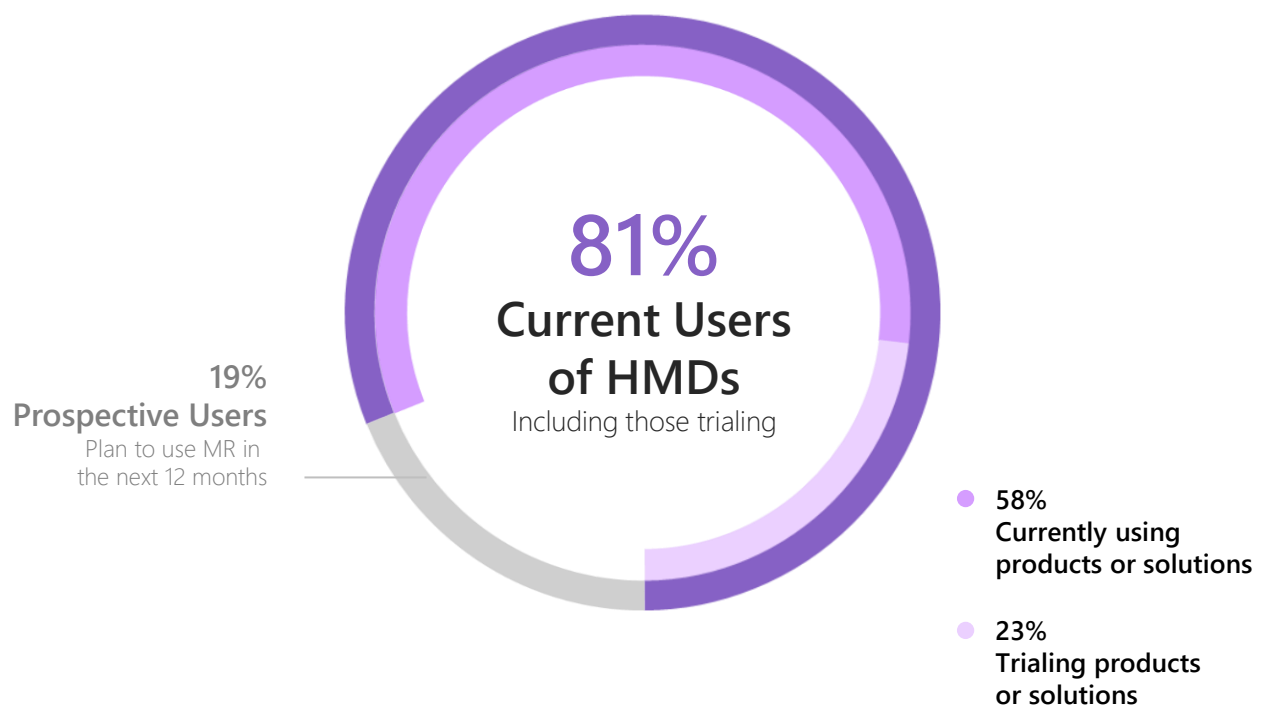
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Mixed Reality in
Retail

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The Big Picture

Across the three industries surveyed, Retail boasts the highest number of companies currently using Mixed Reality overall (58%). Akin to Manufacturing, the vast majority (81%) of Retail organizations surveyed are current users of Mixed Reality technology, but slightly more are current adopters of HMDs (58% Retail vs. 56% Manufacturing). Nevertheless, implementation is growing: more than 2-in-3 Retail organizations have been using Mixed Reality for less than two years. Mixed Reality usage in Retail is comparable across markets, with current users comprising approximately 80% of those surveyed in the United States, Germany, and Japan. **(Exhibit 1)**

EXHIBIT 1. CURRENT VS. PROSPECTIVE USERS OF MIXED REALITY

81%
**Current Users
of HMDs**
Including those trialing

**19%
Prospective Users**
Plan to use MR in
the next 12 months

● **58%
Currently using
products or solutions**

● **23%
Trialing products
or solutions**
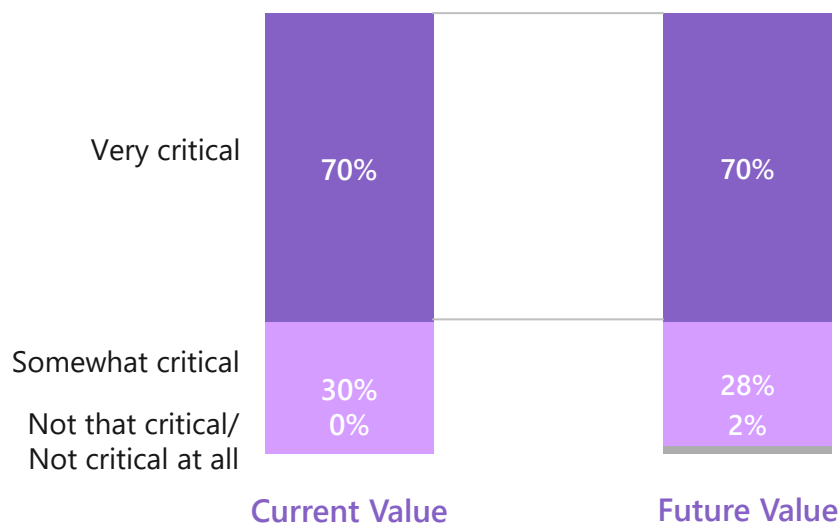
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Retail organizations universally agree that Mixed Reality is paramount in their success. Moreover, retailers expect the preeminence of Mixed Reality to endure, rating its future value almost identical to its current value. **(Exhibit 2)** With 98% of organizations confident that Mixed Reality solutions will remain indispensable in the future, it is unsurprising that they unanimously plan to invest either the same (42%) or more (58%) in coming years. As one Mixed Reality IT Decision Maker put it, "Mixed Reality is vital for an innovative, profitable, and productive work environment."

Growth in HMD volume is poised to be highest among large enterprises. However, medium-sized companies are not far behind: organizations with between 1,000 and 5,000 employees anticipate that the volume of HMDs will grow approximately 119% over the next 12 months. This finding reflects the ubiquity of Mixed Reality in Retail and the emergence of vCommerce, a trend that exemplifies the versatility of Mixed Reality solutions in improving employee and customer experiences alike.

EXHIBIT 2. MIXED REALITY CURRENT VS. FUTURE VALUE

	Current Value	Future Value
Very critical	70%	70%
Somewhat critical	30%	28%
Not that critical/ Not critical at all	0%	2%

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Mixed Reality Barriers

When it comes to using Mixed Reality, implementation issues represent important barriers for both prospective and current users. Most salient are compatibility concerns, with at least 1-in-4 organizations from each group reporting that Mixed Reality solutions are incompatible with existing software.

Retailers are also concerned about data security: 23% and 26% of current and prospective users respectively cite concerns with storing more data in the cloud as a top barrier. Retail is reliant on customer relationships, and trust is a key ingredient when retailers are collecting and storing sensitive data such as payment information and billing addresses.

Beyond implementation and data security, current and prospective users diverge in other top barriers. While current users are impeded by the desire to work out existing Mixed Reality solutions before adopting additional ones, prospective users cite educational and budgetary concerns as key roadblocks. When comparing barriers across markets, budgetary limitations are particularly salient among Japanese and German Mixed Reality users. **(Exhibits 3 & 4)**

EXHIBIT 3. BARRIERS TO USING MIXED REALITY MORE (TOP 5)

Top 5 Barriers For Current Users	
Incompatible with existing software solutions	25%
Still in the process of implementing current MR solutions	24%
Want to work out existing MR challenges	23%
Concerned about storing more data in a public cloud	23%
Issues with timing and deployment	20%

EXHIBIT 4. BARRIERS TO CURRENTLY USING MIXED REALITY (TOP 5)

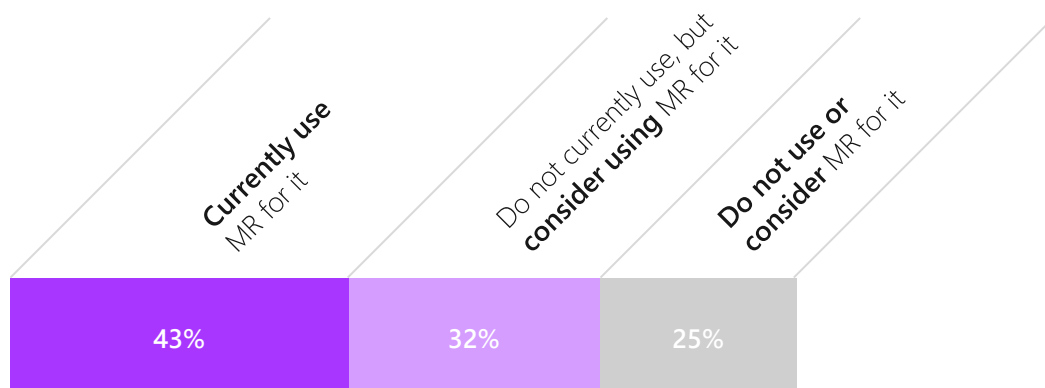| Top 5 Barriers For Prospective Users	
Don't have enough deployment training	32%
Incompatible with existing software solutions	30%
Concerned about storing data in a public cloud	26%
Too many compliance/ regulatory challenges	23%
Don't have the budget	23%

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Training and Simulation

Deep Dive into *Walgreens*

Customer-facing industries like Retail require employees to be able to competently perform key tasks as soon as they step onto the floor, yet traditional training mechanisms have struggled to replicate this hands-on experience. Faced with this challenge, retailers have begun employing Mixed Reality to provide hands-on education and training for employees. In this use case, holographic simulations of real-life scenarios are created to educate and train employees at all levels, including sales personnel, on routine and critical tasks. Almost half of Retail organizations surveyed currently use Mixed Reality for Training and Simulation, and another third are prospective users. **(Exhibit 5)**

The drugstore giant Walgreens is at the forefront of this trend. In early 2020, Walgreens was looking for fast and effective ways to train its employees to handle over 2,500 novel food items at its newly-imagined Kroger Express section in Walgreens stores. With new products and an unfamiliar store layout, employees needed to be trained on multiple fronts, from assisting customers to quality-checking grocery items. Walgreens partnered with Microsoft to utilize HoloLens 2 to create 3D models of the reconfigured stores and play-out various scenarios to train employees on various scenarios, such as restocking products, coupon redemption, and unfamiliar customer service situations.

EXHIBIT 5. USAGE VS. CONSIDERATION OF MIXED REALITY FOR TRAINING & SIMULATION

Currently use MR for it	Do not currently use, but consider using MR for it	Do not use or consider MR for it
43%	32%	25%

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Among retailers currently using Mixed Reality for Training and Simulation, 3-in-5 estimate an ROI of at least 15% and, more specifically, report an average 16% reduction in training time. Walgreens in particular has also been able to cut back on travel costs as employees receive the full curriculum of the training at their locations, using the simulated environments on HoloLens 2. Beyond time and money savings, Walgreens employees that receive their training on HoloLens 2 are able to complete new tasks with increased accuracy and eliminate potential mistakes. This improvement is key, as Retail organizations rank the reduction of human error as the most desirable outcome of implementing Mixed Reality for Training and Simulation.

"We feel that this very immersive, interactive technology helps team members grasp new ways of learning beyond what I'll call the paper exercise."

Steven Lamontagne
Vice President of Physical Design and Formats
Walgreens Boots Alliance

USING HOLOLENS 2 FOR TRAINING & SIMULATION

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Furthermore, HoloLens 2 has offered Walgreens a solution for an issue unique to the rollout of their Kroger Express stores: how to train employees to navigate a space that doesn't yet exist. With the Training and Simulation app on HoloLens 2, Walgreens employees can learn how to navigate the new store experience before the physical transformation happens. "HoloLens 2 gives our team members the ability to experience what the store will look and feel like before it's even converted, using a 3-D model built at Walgreens," explains Lamontagne. "This gives them more time to get excited, learn and feel confident about some of the brand new elements--what good looks like when dealing with a package of fresh meat, for example."

USING HOLOLENS 2 FOR TRAINING & SIMULATION

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Design, Prototyping, and Layout Optimization

Deep Dive into küchen quelle
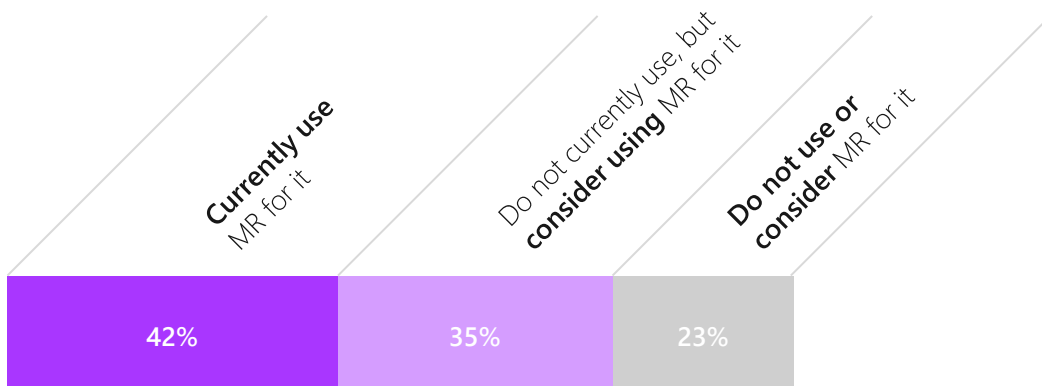
The Retail industry has identified a key use case for Mixed Reality in Design, Prototyping, and Layout Optimization. Bringing designs to life, Mixed Reality technologies allow teams to engage with product iterations and layout placement by converting computer aided 2D design modeling files to high quality 3D digital replications. More than 2-in-5 Retail organizations are currently using Mixed Reality for Design, Prototyping, and Layout Optimization, with almost as many considering doing so in the future. **(Exhibit 6)**

German home construction company Küchen Quelle has pioneered this use case, showing how Mixed Reality can create revolutionary new visions for interior design. To increase its market share and stay relevant, the company searched for new and innovative ways to collaborate with their customers more intimately and effectively. Thus, they adopted the rooms solution built on HoloLens 2, which allows sales consultants and architects to build out interior spaces to customers' specific needs and collaborate in this immersive world, before making purchase decisions. Using Mixed Reality technologies, Küchen Quelle turned what was previously a high-stakes and stressful endeavor into an experience that is enjoyable and instills confidence in customers as they move through the buying process.

EXHIBIT 6. USAGE VS. CONSIDERATION OF MIXED REALITY FOR DESIGN, PROTOTYPING & LAYOUT OPTIMIZATION

Currently use MR for it	Do not currently use, but consider using MR for it	Do not use or consider MR for it
42%	35%	23%

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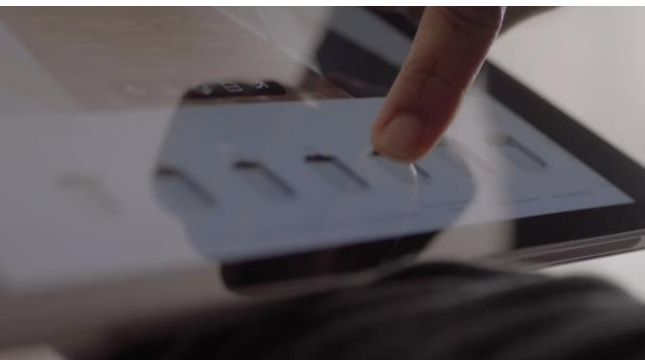## USING HOLOLENS 2 FOR DESIGN, PROTOTYPING & LAYOUT OPTIMIZATION

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"We wanted a cutting-edge tool to make our design and sales processes more efficient and effective. We also wanted to make the process of planning and buying a new built-in kitchen a fun, even joyful, experience for our clients"

Andreas Rode
CEO
Küchen Quelle

Küchen Quelle's success story is no anomaly: more than two-thirds of retailers currently using Mixed Reality for Design, Prototyping, and Layout Optimization have increased an average of 16% since implementing Mixed Reality solutions for this use case. According to Andreas Rode, Mixed Reality solutions have the potential to push Küchen Quelle over the 50% customer conversion rate, boosting this metric from 40% to 55-60% on average. By collaborating with customers on custom designs and product iterations, sales consultants are able to help customers gain confidence in the products and ultimately make a purchase.

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Beyond converting more customers to buyers, Küchen Quelle also expects this revolutionary buying process facilitated by HoloLens 2 to increase its average sales price by 20%, paving the way for increased market share in Germany and a potential expansion into Austria. Küchen Quelle's success in implementing Mixed Reality for Design, Prototyping, and Layout Optimization bodes well for the rest of the Retail industry, which ranks accelerated sales cycles and increased customer satisfaction as the two most desirable outcomes for this use case.

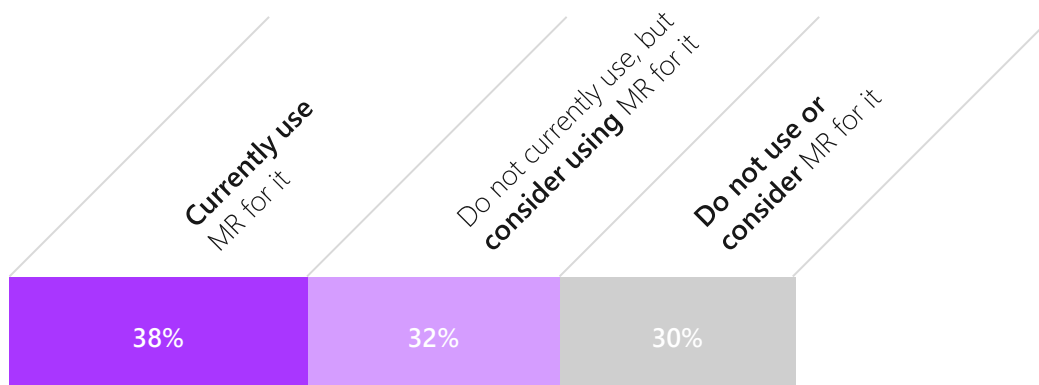USING HOLOLENS 2 FOR DESIGN, PROTOTYPING & LAYOUT OPTIMIZATION

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Sales Assistance

Deep Dive into *Salvatore Ferragamo*

As members of an industry whose success is defined in large part by customer perceptions, Retail organizations have been implementing Mixed Reality solutions in an effort to simplify and improve the shopping experience. Similar to Design, Prototyping, and Layout Optimization, Mixed Reality Sales Assistance allows customers to demo any product configuration or customization in 3D to support purchase decisions, leading to better collaboration between the end customer and the sales consultant. Nearly 2-in-5 Retail organizations are currently using Mixed Reality for Sales Assistance. **(Exhibit 7)**

Italian luxury goods brand Salvatore Ferragamo is leading the charge by tapping into HoloLens 2 to introduce an interactive, guided, and custom shopping experience. With excellent customer service at the core of its values, Ferragamo adopted HoloLens 2 with a custom solution from Hevolus to introduce an immersive customization and sales assistance platform for the Tramezza men's footwear collection, which can be used both in-store and online. The service allows customers to choose from various materials and customize to their preferences, all while visualizing the digital twin of the shoes on their screen and interacting with this 3D reproduction. For clients shopping online, Ferragamo's Made-to-Order Tramezza program allows human sales associates to join the client in their virtual shopping session to provide choice and sales support akin to that expected in brick-and-mortar stores.

EXHIBIT 7. USAGE VS. CONSIDERATION OF MIXED REALITY FOR SALES ASSISTANCE

| **Currently use** MR for it	Do not currently use, but **consider using** MR for it	**Do not use or** consider MR for it
38%	32%	30%

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> *"Thanks to the collaboration with Microsoft and Hevolus, we will be able to assist our customers even more effectively, offering highly immersive and tailor-made experiences."*

Micaela le Divelec Lemmi
CEO
Salvatore Ferragamo

In implementing Mixed Reality for Sales Assistance, the top priority reported among Retail organizations is increasing sales. Indeed, after only a few short months, Ferragamo is already seeing improvements in sales conversion. Ferragamo CEO Divelec Lemmi explains, however, that the outcomes of integrating Sales Assistance via HoloLens 2 are much more far-reaching: "The Tramezza - Future Of Craft project is part of our digital transformation journey aimed at constantly innovating the services to our customers, and it's already offering significant benefits in various areas: from the optimization of customer journey in an omnichannel perspective to better space management in physical stores, from the simplification of purchase methods to better customer service, up to a rise in conversion rates." The new Ferragamo experience is also expected to improve customer loyalty and help the brand stay relevant as the high-end fashion industry becomes more fragmented and increasingly digital.

USING HOLOLENS 2 FOR SALES ASSISTANCE

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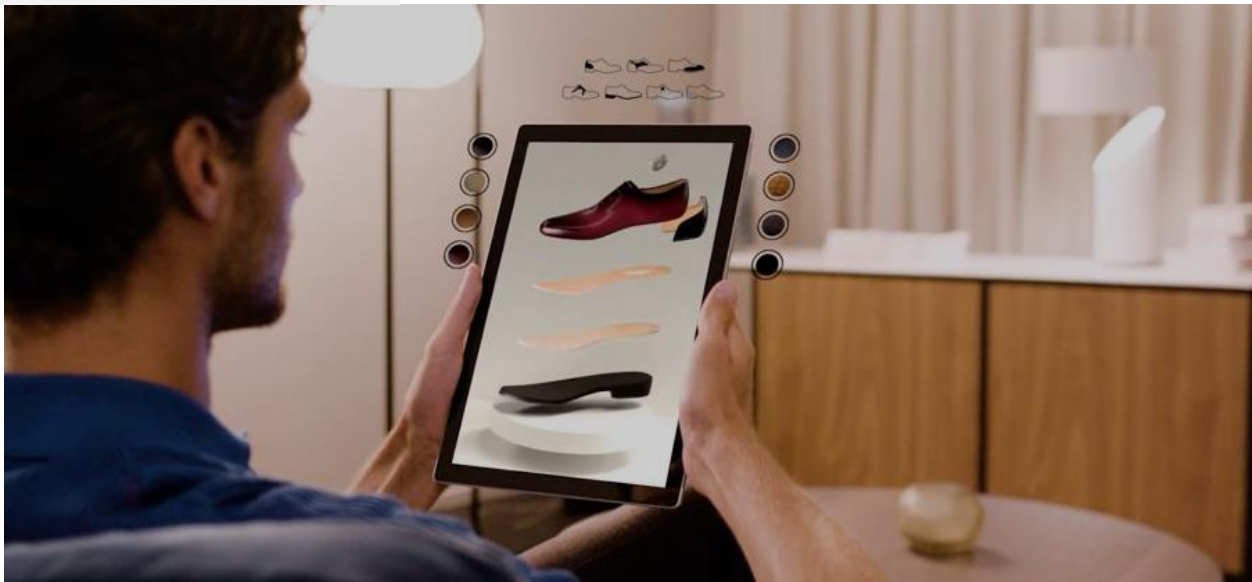
USING HOLOLENS 2 FOR SALES ASSISTANCE

While Italian Ferragamo is an obvious leader in integrating Mixed Reality solutions for Sales Assistance, U.S. retailers have embraced this use case most fervently, and are more likely than their Japanese or German counterparts to be current users (46% vs. 38% overall). Of those organizations not yet utilizing Mixed Reality for Sales Assistance, a little more than half (52%) identify as prospective users, signaling that this use case will continue to propagate as its benefits become increasingly clear.

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Final Thoughts

As immersive technologies continue to transform reality as we know it, Mixed Reality has emerged not as a VR-light but as a business tool in its own right. With its unique ability to blend the real and the digital, Mixed Reality offers solutions that are as diverse as they are innovative, boasting use cases ranging from supporting customers in their purchase decisions to enhanced product and layout configurations. Ideas that felt like science fiction just a decade ago are now quite literally at our fingertips, and bold companies must think creatively about how they can use Mixed Reality to differentiate themselves in an increasingly competitive digital marketplace.

Across markets and industries, the benefits of implementing Mixed Reality technologies are vast, and three major themes emerge. First, by integrating digital elements into real spaces, Mixed Reality reduces the constraints imposed by toggling between our physical environments and our screens. Second, Mixed Reality solutions offer distinctive advantages for education--be it corporate or academic--by allowing students and trainees to develop hands-on experience performing tasks that could be detrimental or costly if executed by novices in a real-world context. Finally, Mixed Reality allows us to do something that was previously unthinkable: be two places at once. Infinitely more sophisticated than video calling, Mixed Reality technologies can transport individuals who are miles apart into the same digital space, allowing them to interact with their surroundings and with one another as if the space between them had all but vanished. Particularly in the context of a global pandemic, this ability to emulate togetherness feels indispensable.

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Detailed Research Objectives
& Audience Recruit

The objectives of the research included:

1. Understand the current Mixed Reality landscape including adoption, challenges, and outcomes

2. Explore current Mixed Reality projects, including how Mixed Reality is being used within key industries and customer stories

3. Quantify ROI expectations of decision-makers and demonstrate how ROI is realized through customer stories

4. Uncover the ways in which Mixed Reality may evolve in the future

To meet the screening criteria, Mixed Reality professionals needed to be:

A business decision maker or IT decision maker at their company

Employed full-time at a mid-market or enterprise-level company (500 employees or more)

Ages 25-64

Familiar with Mixed Reality

Involved in decision making for Mixed Reality technologies

Adopting or evaluating Mixed Reality technologies

Work in Manufacturing, Healthcare, or Retail industries

Of the 244 retail Mixed Reality professionals interviewed for the research wave in October 2020:

100 Mixed Reality Professionals were interviewed in the US

71 Mixed Reality Professionals were interviewed in Germany

73 Mixed Reality Professionals were interviewed in Japan

Note: Research was conducted during the global COVID-19 pandemic, which was at varying stages of escalation/containment

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