IDC Releases Whitepaper on “Embracing AR Technologies”

5th May 2022

The report, shared with *ARPost*, gives a by-the-numbers look at how hundreds of companies are using AR. It also predicts markets going forward and highlights some specific hardware and software options.

Accelerate Your Organization’s Digital Transformation

“Embracing Augmented Reality Technologies to Accelerate Your Organization’s Digital Transformation” was published by IDC and authored by IDC Group Vice President of Device and Consumer Research Tom Mainelli.

The paper was sponsored by Lenovo which has its own AR technology division, ThinkReality. Working on hardware and software for enterprise and education, this group has been interested in long-term trends and solutions for years.

“We think [XR] is a trend that’s going to stay and Lenovo feels like with the customer base that we already have we need to be a leader in this space, so there’s a lot of commitment in our teams to doing that,” Lenovo AR/VR Lead Nathan Pettyjohn told *ARPost* back in 2020.

The report talked about Lenovo ThinkReality solutions in particular, but was by no means an advertisement. The report was rich in insights and predictions backed up by data from a 2021 poll of over 400 enterprise companies with over 1,000 employees. All of these companies either have already employed AR technologies, or have at least started that ball rolling.

AR Technologies in a Post-COVID World

"The COVID-19 pandemic has accelerated the pace of digital transformation for companies around the world," Mainelli wrote in the paper's introduction. *"As the world slowly looks to move beyond lockdowns and quarantines, AR technologies will only become more embedded and important to many companies' future success."*

The paper goes on to present a sentiment that many were predicting this time a year ago: AR isn't just a pandemic solution. XR bloomed during the pandemic out of necessity but the genie isn't going back into the bottle. Work-from-home, distributed workforces, and hybrid meetings are all staying with us as we move into the "new normal", and so is AR.

"IDC continues to forecast substantial growth in the coming years across all areas of AR, including hardware, software, and services. While many companies may initially balk at the perceived cost of entry, most realize that investments in AR pay for themselves," wrote Mainelli. *"AR is no longer a technology that will manifest in a few years: it's here today."*

That growth could lead to $45.6 billion in worldwide spending on AR technologies (AR hardware, software, and services) by 2025, according to the report. Further, that doesn't include spending related to smartphones and tablets – which is still how many people experience AR.

How and Why Enterprises Use AR

That many companies start out using smartphones or mobile devices to get their feet wet in XR was only one of the gems uncovered in the survey. Depending on the AR technologies your company is using, this might sound archaic but even most AR glasses use (or can use) a standard mobile phone or tablet for their computing power.

This approach, used in enterprise as well as entertainment, cuts the cost of the headset for the end-user. It also allows the headsets to focus on display and audio while offloading the computing power to a nearby device. This makes the headsets lighter, comfier, and safer. One Lenovo device, made with Motorola and Verizon, even allows edge computing.

"One of the critical challenges around AR hardware has been the high cost coupled with the fact that most headsets could offer either a comfortable, lightweight form factor or high-end optics, but not both," wrote Mainelli.

Here, the report started discussing Lenovo and ThinkReality hardware, which can pair with a laptop computer as well as a mobile device. While some enterprise tasks require more mobility than a laptop can easily afford, others don't. Using XR devices as "virtual screens" is one of the swiftly rising use cases in enterprise (and entertainment).

Half of the survey respondents use AR technologies for employee training. Forty-eight percent use AR for videoconferencing and collaboration. Further, when asked what they saw as the top benefit to AR technologies, the most common answer was improving collaboration. So, it's no surprise that 80% expressed interest in virtual desktops – including 67% of healthcare respondents.

8 Insightful XR in Manufacturing Case Studies to Read in 2022

5th May 2022

As manufacturing and industrial companies continue to deal with ever-growing demands from their customers, the need for innovative technology in the industry is greater than ever. Capable of assisting with everything with crucial training initiatives to faster prototyping, extended reality represents a phenomenal opportunity for brands in the industrial sector.

Already, we've begun to see a number of leading companies experimenting with new opportunities in the XR space. Whether it's bringing teams together in virtual reality to create and interact with digital twins or products, or supporting collaboration through augmented reality, there are no shortage of options out there.

Today, we're going to be sharing just a few insightful stories from innovators in the XR landscape working with manufacturing and industrial brands.

Microsoft and Airbus

Innovator in the aerospace technology and manufacturing landscape, partnered with Microsoft on their journey into the extended reality landscape. The pioneering company wanted to transform traditional industrial processes involved with the creation of commercial and military aircraft, launch and satellite vehicles through mixed reality.

Using Microsoft's Azure MR environment and HoloLens 2, Airbus has been able to successfully accelerate and enhance the design of aircrafts, while improving the functionality and safety of the

team. Intelligent solutions like Azure Remote Rendering even allows the company to bring team members together for a higher level of collaboration in a mixed reality environment, without compromising on safety and security.

Holo-Light and Thyssenkrupp Marine Systems

In the manufacturing and industrial landscape, the measurement and quality control aspects of dealing with various components can often be a time-consuming process, particularly for companies building submarines. Fortunately, the Thyssenkrupp Marine Systems company discovered a new way to enhance the performance of their teams through augmented reality, with Holo-Light.

The solution from Holo-light gives the Marine manufacturing brand the opportunity to tap into a comprehensive AR package consisting of all the software and hardware required to perform ultra-precise work in an AR environment. According to the case study produced by Holo-Light the new work process is now significantly more streamlined and convenient for the engineers.

Kognitiv Spark and Surepoint

The Surepoint Group, an industrial contractor specializing in construction, manufacturing electrical and instrumentation services, operates in various sectors across the globe. Surepoint has field locations throughout the US and Canada, as well as offering services to client sites on a broader scale. To deliver consistently exceptional support and speed in this space, the Surepoint team decided it was time to upgrade its solution with RemoteSpark.

The RemoteSpark mixed reality remote worker support tool allows subject matter experts and field workers to collaborate and connect securely through an AV connection. Experts can make annotations in the field of view of engineers, share files, and even create animated 3D holograms. All of these tools allow workers to resolve issues faster, while keeping technology hands-free.

RealWear and Total

Total, a leading energy company producing and marketing all manner of fuels, natural gas and low-carbon electricity services across more than 130 countries, engaged with the RealWear team on their strategy for industrial digital transformation. In the past, when complex equipment required repairs or maintenance, Total had to slow its operations to a halt to bring in specialist experts.

Now, RealWear headsets with Microsoft Teams access allow Total to connect their onsite workers to subject matter experts wherever they are, for faster equipment diagnostics and repairs.
The result is eliminated travel costs for visiting experts, improved collaboration for multiple teams, and better equipment maintenance and repair times.

Taqtile and PBC Linear

PBC Linear, a company committed to making linear motion products, decided to work with Taqtile when they discovered new opportunities for digital transformation in their business. For PBC Linear, Taqtile presented an opportunity to create comprehensive training and instruction experiences for manufacturing staff who needed help getting to know difficult pieces of machinery.

The Manifest AR technology from Taqtile allows the company to capture the specific knowledge and machine instructions from seasoned employees to guide newer members of staff in the industry. The result is an 80% reduction int raining time and a significant reduction in the number of errors made within the manufacturing space.

Varjo and Tenstar

Varjo, a market leader in extended reality solutions for the modern landscape, recently partnered with Tenstar to help teach manufacturing and industrial professionals how to use various pieces of heavy machinery in real-life situations. The immersive virtual reality training experience helps professionals to gain new skills at a rapid pace, without putting them at risk.

According to Varjo's case study, the solution means that customers can now spend up to 90% less compared to real-machine training, and trainees can repeat tasks more often, leading to fewer accidents and more experiences. Trainees also get to practice in real-life scenarios that would be dangerous to access in the real world.

Unity and the Manufacturing Technology Center

The Manufacturing Technology Center, or MTC is a research and technology organisation belonging to the High Value Manufacturing Catapult. The company has an impact on a number of industrial sectors worldwide, and like many manufacturing groups, is reliant on rapid transformation to stay ahead of the competition.

With Unity's help, the MTC was able to find cutting-edge solutions for creating high-value manufacturing firm blueprints using innovative real-time 3D projects. The Unity landscape meant MTC could eliminate a host of common project roadblocks, with issue resolution of 24 hours or less.

At the same time, the company also enhanced the product design and development process for clients and opened doors for better collaboration among internal teams.

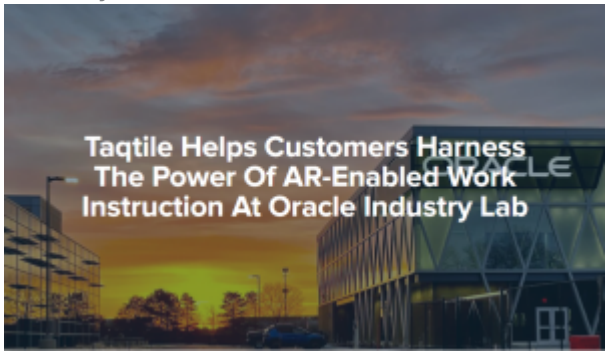
Matterport and SEACOMP

A company committed to supplying manufacturing solutions for customers across the industrial, consumer goods, and medicals industry, SEACOMP has a huge presence worldwide. Unfortunately, during the pandemic, the company's employees were no longer able to visit customers and show clients or prospects product demos.

With Matterport, the company was able to create new digital twins of their offices and manufacturing equipment into a digital world. This means SEACOMP can now give prospects and clients a full 3D walkthrough of the factor's equipment without the time, costs, and risks of travel.

Taqtile Helps Customers Harness The Power Of AR-Enabled Work Instruction At Oracle Industry Lab

5th May 2022



With Manifest, an organization's frontline workers have instant access to work-instruction content ranging from digitized manuals, step-by-step videos, and detailed holograms, enabling them to complete complex tasks more efficiently, more accurately, and more safely.

At the lab, visitors will be able to interact with these advanced functions, as a well as Manifest's unique remote-assistance capabilities. For example, deskless workers requiring additional support can connect with a company's most experienced technicians and trainers anywhere, anytime. With real-time guidance via the Manifest AR environment, including see-what-I-see video, company experts can remotely facilitate problem solving.

"The Oracle Industry Lab provides an unparalleled opportunity to collaborate with enterprise customers and explore new use cases and implementation scenarios for Manifest," explained Joe Clukey, VP of sales and strategic partnerships, Taqtile.

"Leveraging the power of the Manifest system with proven benefits of Oracle Database technology will deliver advanced functionality to our customers, such as the creation of work order systems that seamlessly sync between technicians in the field and headquarters."

The 30,000-square-foot Oracle Industry Lab brings customers, technology partners, and the entire Oracle portfolio of solutions and decades of deep industry expertise together to incubate and demonstrate new solutions across industries. Supported by Verizon 5G Ultra Wideband, the Oracle Industry Lab will first focus on use cases in utilities, construction and engineering, communications, and manufacturing.

"Many industries are at a crossroads as they look to navigate increasing regulatory, environmental, and customer-driven demands," said Burcin Kaplanoglu, vice president, Oracle Industry Labs. "We built the Chicago lab to bring together leading innovators like Taqtile so we can jointly help customers shape bold ideas into powerful solutions that improve productivity, operational

intelligence, and sustainability.”

Top XR Vendors majoring on Manufacturing

5th May 2022

From comprehensive VR environments where people can work together remotely over digital twins of products, to AR solutions which allow professionals to access expertise on the move, there’s something for everyone.

Of course, in the industrial and manufacturing landscape, there are specific requirements to consider when choosing an XR vendor.

Some spaces require headsets to be more durable or capable of withstanding dangerous environments or conditions. Some industrial companies also need their technology to work easily in low-bandwidth environments.

Today, we’re looking at some of the XR vendors delivering the kind of custom experiences industrial and manufacturing leaders need.

Kognitiv Spark

A leader in augmented reality tools for industrial remote support, Kognitiv Spark is the company behind RemoteSpark. The intelligent AR ecosystem provides manufacturing and industrial companies with access to a low-bandwidth and highly secure mixed reality platform, perfect for environments where an excellent internet connection isn’t always available.

RemoteSpark and Kognitiv Spark allow industrial companies to empower their teams whether they’re on the production floor or in the field. The company works with everything from Industrial brands to Aerospace and Defence companies worldwide.

RealWear

Bringing the power of hands-free information to manufacturing and industrial companies, RealWear's solutions are leading the way to a new age of innovation.

Assisted Reality solutions from RealWear make it quick and simple for users in a business environment to access the information they need to make better decisions in the workplace.

RealWear's tools are designed with the unique requirements of industrial environments in mind, giving all the power of a wireless Android tablet to employees in the form of smart glasses with access to multi-media files, collaboration tools, and more.

Holo-Light

An innovator in the XR space, Holo-Light is building an all-in-one environment where users can easily host and stream any XR application on a range of high-performing mobile devices. The ecosystem supports everything from powerful processing speeds to global availability of AR and VR experiences built for the industrial space.

With Holo-Light, companies can gain access to all the technology they need for endless processing power and high security. Flexible infrastructure and reduced development costs have earned Holo-Light the attention of many leading brands already, like BMW and Danfoss.

Microsoft

Leaders in the world of mixed reality, Microsoft is changing the way we look at manufacturing forever. With Microsoft Mixed Reality software and headsets like the HoloLens 2, companies in the industrial landscape can rapidly transform their workforce, building more agile and collaborative factories, and improving the speed to market for new products.

According to Microsoft, manufacturers can improve revenue by up to 5% with the power of mixed reality, and save an average of 75% on training time when bringing new people into the staff mix. With HoloLens, companies can easily provide their team members with access to subject matter experts and support wherever they are, while ensuring they remain hands-free with their technology.

Taqtile

Taqtile is a leader in the extended reality space for employees on the move. With this innovative company, brands can access a more immersive environment for harnessing information in the industrial landscape and sharing it on a better scale. Tools like the Manifest platform ensure companies can distribute information to deskless and virtual workers wherever they are.

With Taqtile, brands can build more effective training environments for new members of staff, but they can also provide existing team members with more support as they work.

The technology supports real-time streaming of crucial information and guidance from experienced technicians and subject-matter experts anywhere.

Varjo

Offering a range of ways for industrial and manufacturing companies to embrace the world of extended reality, Varjo can support both mixed reality and virtual reality case studies.

With mixed reality, employees in a manufacturing company can leverage real-time guidance, annotations and information from subject matter experts when they're working in the field or remotely.

With virtual reality, companies can bring entire teams of innovators together to work cohesively on digital twin products, design new ideas, and accelerate the go-to-market process. Varjo's ease of use combined with the flexibility of the technology makes it an excellent pick for a lot of brands.

Lenovo

Lenovo has stood ahead in the technology landscape for a number of years, providing a wide range of innovative tools and cutting-edge devices to all kinds of industries. In the manufacturing and industrial landscape, companies can now access Lenovo's extended reality innovations to enhance productivity and enable collaboration on a new scale.

Lenovo is unique in the XR market in its ability to offer technology for virtually all kinds of employees in the industrial space, from developers and product designers to production engineers and testing engineers. If you're looking for technology to empower your entire workforce, Lenovo has you covered.

Arvizio

Committed to building augmented and mixed reality experiences specifically for enterprise environments, Arvizio is a market leader in the industrial space.

The company offers highly scalable and customizable augmented and mixed reality technologies to help with everything from training, to helping employees accomplish more when they're on the job.

The Immersive 3D enterprise technology from Arvizio can integrate with a wide range of tools and empower business leaders to create a range of training and upskilling experiences for business leaders. If you're hoping to bring more of the digital world into the real world in manufacturing, Arvizio could be the right partner.

Matterport

A leader in 3D technology, Matterport is ideal for companies who want to provide virtual tours and experiences to both manufacturing clients, and members of staff. In the industrial environment, Matterport's solutions can allow business leaders to design and implement digital twins of their facilities for other professionals to explore at a distance.

The Matterport environment is perfect for building engagement, whether you're trying to train and onboard a new member of staff, or you're looking for a way to build trust with a prospect.

$77 Billion Augmented Reality Market is Expected to Grow at a CAGR of over 29.8% During 2022-2028 – Vantage Market Research

5th May 2022

The primary driver is found to be rising adoption of IoT, the total Global Augmented Reality (AR) Market is estimated to reach USD 78.0 Billion by 2028.

The Market stood at a revenue of USD 16.3 Billion in 2021, and is expected to exhibit a Compound Annual Growth Rate (CAGR) of 29.8%.

Furthermore, the growing adoption of artificial intelligence and blockchain technology for risk analytics is also anticipated to augment the growth of the Global Augmented Reality (AR) Market, states Vantage Market Research.

The other Market Dynamics reported upon include increase in adoption of AR technology in healthcare sector to fuel global Augmented Reality market

The increasing adoption of AR technology is expected to fuel the growth of the Augmented Reality (AR) Market during the forecast period. Augmented reality has great potential in the healthcare industry.

With this technology, healthcare can become more affordable and can be extent to millions of individuals. The technology can address health awareness, diagnosis, patient monitoring, patient care, disease outbreak and preventions, medical equipment upkeep and training, treatment and

therapy planning, and lifestyle improvement.

Further, with augmented reality, medical professionals can get better at drawing blood, using a handheld scanner that projects over the skin and shows nurses and doctors where the veins are present in the bodies of patients. Thus, AR can be used for wide range of applications in the healthcare sector which has increased its overall demand across this industry.

The AREA does not sponsor such market research – for further details and to request a sample copy direct from the research organization please see the original press release.

Rokid enters strategic alliance with ARM China in developing AR chips for Metaverse total solutions

5th May 2022

Augmented reality is a key connection to the Metaverse era. To meet the specific needs of a new Metaverse generation, Rokid actively enhances the ability of backend computing power. In terms of the agreement, Rokid will create an all-inclusive customized design, verification, and testing solution based on ARM China's core power XPU intelligent data-stream convergence computing platform, optimizing related software and algorithms.

Mr. Misa Zhu, CEO of Rokid enthusiastically stated: "The evolution of AR glasses is determined by the support of core components and ecosystems, including optics and chips.

Different from the computer and mobile phone chips, AR chips have a higher requirement for computing power and involve high deployment costs and technical thresholds.

ARM China is the one of largest chip design IP development and service providers. We are very thrilled to cooperate with ARM China to build a well-rounded AR ecosystem moving forward." Mr. Xiongang Wu, Chairman and General Manager of ARM China stated: "A major feature of the Metaverse is its interactivity, which spreads the 'digitalization' more comprehensively; and the extended reality technology is one of the core technologies for providing an immersive metaverse

experience.

Rokid is an important partner of ARM China in the AR field. We are very pleased to have a strategic cooperation agreement with Rokid. We will fully support Rokid's product development and joint expansion to the ecological experience of the Metaverse."

Read Rokid's AREA member profile

Visit Rokid's website

Zoom for Smart Glasses by Vuzix now Supported by the Zoom App Marketplace

5th May 2022

As the only Zoom for smart glasses application listed on the Zoom App Marketplace, the app allows Vuzix smart glasses users to start or join a meeting with face-to-face or see-what-I-see video, screen sharing and more. Zoom for Smart Glasses by Vuzix brings video conferencing, online meetings and other features of the Zoom service into one easy-to-use application on your Vuzix smart glasses.

Zoom is one of the fastest growing cloud video conferencing applications for end-to-end enterprise communications and has more than 191,000 enterprise customers that have at least 10 users. Vuzix has deployed Zoom's HIPAA/PIPEDA-compliant conferencing application with Vuzix smart glasses in numerous hospitals and healthcare organizations to help streamline their day-to-day business operations.

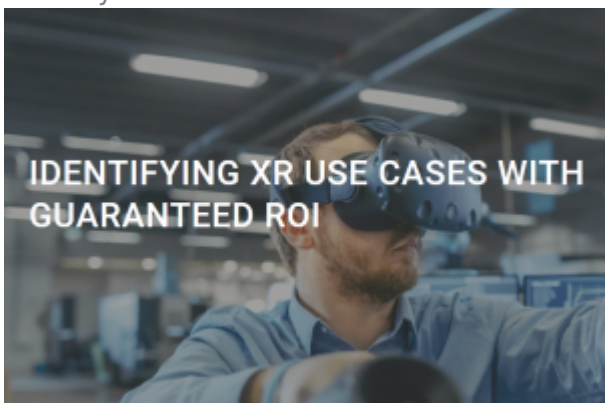
Interested Zoom users can simply search for 'smart glasses' on the Zoom App Marketplace https://marketplace.zoom.us/ or shortcut the following

URL: https://marketplace.zoom.us/apps/exz7FlBxQg-Q1M9GFMsLAw.

“After months of collaboration with the Zoom team, it is great to see Zoom for Smart Glasses app being added to the Zoom app marketplace to enhance the overall awareness and distribution of Vuzix smart glasses to Zoom’s enterprise customers,” said Paul Travers, President and Chief Executive Officer at Vuzix.

How to select an XR use case that guarantees the best ROI

5th May 2022



But before we get into that, let’s take a look into how the technology is being used by engineering and manufacturing companies across the world.

How are engineering companies utilising XR?

As the technologies continue to evolve, users of Augmented (AR), Mixed (MR) and Virtual Reality (VR) – collectively known as Extended Reality (XR), are discovering new and more efficient ways to enhance their engineering processes.

Companies are seeing huge reductions in time spent and travel costs, and are using the technologies on a day-to-day basis.

Learn how Valiant TMS and Medtronic got started with their Enterprise-XR journey’s

So, where to start?

Identify your use case

Having the intention to introduce AR, MR or VR into your organisation is fine, but the starting point can often be the trickiest hurdle to jump over.

Before you even think about investing in hardware or software, you should be identifying your use case. After that, you should try to understand how to get the most value from it, and which devices and applications you may require.

Look for challenges and pain points

One of the best approaches is to take a look at your current design cycle. If you've already released a product, here are a few questions that you could be asking yourself:

- What challenges were identified?
  - Were there any late design changes in a particular area or department?
  - Were there any recalls? If so, why?
  - Were there limited or out of date physical prototypes?
  - Did you not get chance to test enough?
  - Was there a lack of communication or collaboration between teams?

Try to look at your business cycle, look at where the challenges lie, and understand the pain points. That's where you'll want to be focusing on utilizing XR because that's where you're going to get the most ROI.

Accepted benefits of XR

For some insight, here are some of the most common benefits that engineering and manufacturing companies are seeing from Augmented, Mixed and Virtual Reality technologies:

Improved inspections – By taking the virtual model and placing it over the physical model, engineers can perform more accurate quality checks by inspecting the tooling and components prior to being shipped. It ensures that the parts are being shipped as they were designed. Some companies have even reduced inspection time by up to 60%.

Reduced travel – By working collaboratively and remotely with colleagues from other locations, engineers can look at a prototype and interrogate it in real time. By simply removing the need to travel (and the costs associated), some companies have seen clear ROIs within months.

De-risking – By seeing your 3D designs in detail, at full scale and in-context, you can be confident that your designs will be going to production as complete as you can possibly make them.

Speed of change – In the majority of cases, there will be a last-minute change to your design, causing delays of weeks or even months. With the ability to simply put on your headset and host a collaborative session, you can get your team together within 10 minutes to iron out the issue.

Here are some useful tools to help understand the value of XR:

AREA ROI Calculator – An easy-to-use tool to understand potential cost savings and other business benefits when deploying AR, MR and/or VR.

Microsoft HoloLens 2 Estimator – Instantly calculate and receive a high-level estimate of the total economic impact of the Microsoft HoloLens 2, including cost savings, productivity hours saved, and more.

Summary

Having a use case with a strong ROI will vastly increase the likelihood of getting your executive buy-in to really kickstart your XR journey. For more advice on the topic, you can listen to the full discussion from Theorem specialists on How to Prepare for Your XR Use Case [On-Demand Webinar].

How AR Helps Plant Management And Factory Production

5th May 2022

Augmented Reality (AR) is a subset of Virtual Reality (VR) that is implemented in manufacturing and plant management. The global AR market has experienced tremendous growth in recent years because it relies on existing user environments and displays virtual content over it. These technologies are designed using 3D software programs that allow developers to display digital content over the real world.

Goldman Sachs predicts that AR has “the potential to evolve into the next big computing technology. We expect existing markets to be disrupted and new markets to be created.” What exactly does this mean for automobile manufacturers and other production plants?

It means there are five new ways that you can use augmented reality technologies or machine learning in plant management and manufacturing factories.

How Augmented Reality Tech Helps Improve Plant Management

1. Factory Design

Auto manufacturers looking to expand or set up a factory have plenty to benefit from augmented reality. The planning phase can be time-consuming and costly. Owners must plan to the last details, from the tiniest light switches to the largest pieces of equipment. AR allows them to preview every detail in real-time by offering them the ability to assess their proposed factories. Various builders, engineers, architects and more can make vital contributions to the proposed designs.

Instead of relying on 2D models and other old-fashioned blueprints, augmented reality allows for a greater level of collaboration by allowing designers to make suggestions, as well as express concerns should a problem be identified. AR also offers many other benefits in the design phase, including the ability for owners to view how their production processes will take place in the new factory.

2. Automation

Repetitive tasks are crucial in manufacturing, but it’s not mandatory to have actual people perform these tasks. Manufacturers have become aware of augmented reality solutions that can adjust, monitor, and program industrial robots to do many complex and repetitive tasks. Users can program robots to perform a wide variety of tasks from various points of view. On top of this, some of these tasks can be risky, which makes automation a sensible option.

Benefits include generation of detailed reports on remaining and accomplished tasks, reduced risk to workers, ability to operate factories 24/7, and many others. These machines can then all be monitored and managed via AR. Systems such as Aircada allow for AR plant management via Scada / HMI – saving you time, effort and making your place of work safer and more efficient.

3. Automotive Assembly

A virtual auto plant goes beyond Computer Aided Design to assist engineers make crucial decisions about designs through detailed visualizations, thereby eradicating the need for a physical prototype. On top of this, AR can be employed as a tool to find and solve potential issues in assembly. This can all be implemented before the assembly has been completed, or any production process has started.

Benefits of augmented reality in auto assemblies include automated task assessment, easy testing of designs, ability to actualize the assembly process from start to finish, and many others.

4. Training On Augmented Reality

AR provides a convenient way for workers to learn new manufacturing skills without risk to individuals or property. This type of training allows workers to do everything from welding to disassembling an entire engine, all while the augmented reality system records data including, but not limited to; power used, weld quality, time for assembly, and many others.

Benefits of training using augmented reality include ability to training new workers on existing processes to allow them to learn new skills and assess how safe they are working according to information found here.

5. Car Maintenance

Augmented reality provides unique benefits to car maintenance applications. Maintenance for an entire assembly line can be simulated and planned well in advance of the set date. Workers can be familiarized with existing or new equipment before the task. Virtual car maintenance can even be done in virtual factories to evaluate its effects on normal operations.

Other benefits include offering a unique perspective, enabling trial runs, and familiarizing employees with maintenance tasks, all while being risk-free to the factory.

AR Advantages

As you can see, augmented reality technology can make a major impact at plants and factories. As time goes on AR, VR, and machine learning will take manufacturing to the next level. It's time you master your manufacturing with this new top tech!

Norwegian Agricultural Heavy Machinery Manufacturer Orkel Grows with RealWear Assisted Reality Devices

5th May 2022

The company's initial purchase of 40 units through RealWear's Gold partner Allegra AS, will be used for remote after-sales maintenance, remote servicing and remote commissioning of all its heavy agricultural machinery products. Orkel's research and development team tested a variety of smart glasses before standardising on RealWear's HMT-1® head-mounted displays. According to Orkel, RealWear's rugged form factor, safety features, noise cancellation and long battery life were deciding factors.

How the Solution Works

The innovative solution allows Orkel to connect its customers to its service technicians without the

need for unnecessary travel. As part of Orkel's after-sales support offering, each customer in need of commissioning or a technical service receives a kit consisting of the HMT-1, a branded Orkel hardhat, and mounting clips. The customer simply puts on the device, contacts the Orkel technician using voice commands and, after connecting, the technician can immediately see exactly what the customer sees through the head-mounted camera and easy to use software – VSight. The technician then solves the issue. Once resolved, the customer may then choose to purchase the RealWear device for their own use or return it to Orkel.

The solution solved a number of pain points for Orkel. For instance, typically its service technicians were required to make an in-person customer trip, which involves travel time and environmental costs. A delay in fixing the equipment also has the potential to impact the customers' businesses.

"Our customers really appreciate the value of the system because we are able to provide a much faster level of support when an issue arises. All too often, our service technicians would travel for what turned out to be a quick fix. Now, with RealWear, many hours of time and CO_2 emissions are saved, and most importantly customers' machines are operational again quickly, which is imperative during the harvest season," commented Svein Erik Syrstad, Technician, Orkel.

Headquartered in Fannrem, Norway, Orkel Group is an established supplier of compactors, round balers and transport equipment. With a presence in more than 50 countries across the globe, its biggest market currently is mainland China. As the farming and agriculture sectors are heavily dependent on the harvest season, Orkel's customer base requires maximum uptime from their Orkel machinery, especially during the busy season.

On the device, Orkel is using RealWear partner VSight Remote, a remote service and collaboration platform powered by AR that helps manufacturing companies conduct maintenance operations remotely with Augmented Reality. The Orkel machine's telemetry system ensures that details about every aspect of the machine's operation is sent securely to the cloud, enabling Orkel's service technicians to read the data and guide their customers to the next step in the procedure. This information enables Orkel to target the specific error more efficiently, and then guide the operator remotely to resolution.

"We really adore this technology because as a research & development engineer, I can watch the work being done," said Magnus Nordås Lervik, Project Engineer, Orkel. "I'm quickly learning better ways to design future machinery as I've seen first-hand the common issues that arise, and how they are fixed." Lervik continued, "Using this technology enables our research and development team to look ahead to how we might design products in the future from an operator's perspective."

"Orkel and its customers are achieving a number of benefits since deploying RealWear's technology with VSight and Microsoft Teams," added Jon Arnold, Vice President of EMEA, RealWear Inc. "When looking at the agricultural industry as a whole, machine downtime impacts productivity and efficiency, especially in shorter and shorter harvest seasons. Remote assistance with RealWear is becoming a gamechanger for the farming and agriculture industry when every second matters."