Market Guide for Augmented Reality

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Market intelligence managers need to know how augmented reality is evolving as an internal- and external-facing tool. Understanding how AR fits into the technology landscape of digital business, Internet of Things and cognizant computing will help you deliver value with your AR implementation.

Key Findings

- AR is not a strategy within itself. It is a set of technologies used to augment the user’s world view with contextual, relevant and actionable information.

- The AR solution provider market is nascent and highly fragmented due to a quickly changing technology landscape and immature devices and software platforms.

- A nascent market (for both solutions and hardware) has led to AR applications that do not provide a compelling or engaging experience for the user.

Recommendations

Market intelligence managers:

- Decide on your audience for your AR solution. Internal- and external-facing solutions are not transposable.

- Restrict initial trials to a specific task or goal. Set benchmarks versus unaugmented solutions to understand risks and benefits.

- Set the business goal for your AR implementation before choosing a provider. Rich and robust offerings can only bring value if you have a clear intention for the deployment:
  - For external-facing implementations, use AR as an extension of your brand and experience.
  - For internal-facing implementations, use AR as a tool that will enhance employee job function.
Strategic Planning Assumption
By 2018, 50% the incumbent AR solution providers will have been acquired by large consumer platforms, moving technology and innovation to resource-laden firms that have access to more end users.

Market Definition
Augmented Reality (AR) is a technology that bridges the physical and digital world by overlaying information such as text, images and interactive graphics onto real-world objects and is experienced through a display device that can provide either a video feed or a direct view of the real world, such as a head-mounted display (HMD), smartphone or tablet.

We see typical AR implementations falling into two main categories: business versus consumer.

Consumer AR implementations are external-facing solutions intended to be used directly by the consumer. To date, these have been mostly for marketing, advertising, gaming, education and other forms of consumer engagement.

Business AR implementations are typically internal-facing AR solutions. Use cases vary widely depending on the vertical and the specific business goals of the company and unit implementing it.
These solutions include training and maintenance, product and parts visualization, maintenance and repair, and prototyping. Internal-facing AR solutions are best viewed as a tool that helps employees do their jobs better and/or more safely.

We expect both business and consumer AR implementations to mature over time as well intersect (as in they are not mutually exclusive).

In this note, we look at AR technology and solutions providers. We define these as vendors whose primary business or products involve AR, have an internal computer vision (CV) (visional recognition) engine, or otherwise market themselves as AR technology suppliers, so that we can give an understanding of how AR fits into the technology landscape of digital business, Internet of Things (IoT) and cognizant computing. This, in turn, will help you deliver an extraordinary experience for your clients through your AR implementation.

Market Direction

Augmented Reality isn’t a new technology. But given AR’s long history, the technology, products and business around AR are only now becoming accessible to consumers, app developers and businesses.

The strong adoption and quick evolution of mobile technology has allowed AR to become accessible to the public. It has moved away from its early days of using specialized hardware and software. The capabilities and rapid adoption of smartphones was the primary driver that allowed AR to extend beyond its original audience. Google’s introduction of Google Glass in 2012 further raised interest for AR. Since then, AR has enjoyed the media spotlight and significant investment in devices, apps and solutions.

As such, IT leaders have the option to further leverage existing digital content in the context of the physical world while using readily available, mass market hardware and sensors (many of which, such as smartphones and tablets) that are already part of the corporate pool of equipment.

Consumer AR

Because AR leverages widely available technology, consumer-facing solutions are extremely widespread. The proliferation of consumer-facing smartphone- and tablet-based AR campaigns has fueled interest as well as hype in this market. This market is still nascent — as evidenced by a flood of all types of providers with varying levels of knowledge and experience offering to add augmented reality in some form to a client’s marketing strategy. Furthermore, there is also an equivalent number of AR solutions that provide little or no value to consumers. These novelty solutions (such as adding animation to a static image or text, or providing a simple redirect to content such as video or a website that can readily be accessed via other mediums) indicate that the market is still in the experimental phase and has not discovered how to best use AR to engage consumers. We are gradually seeing a small number of solutions that add value beyond the novelty, such as adding elements of e-commerce, or extending content and interaction abilities. For example, an interactive advertisement with a click-to-buy option, such as uView’s app that allowed album preorders of the
Rolling Stones' greatest hits album, or interactive content such as seen in Ikea's recent product catalogs, adding additional features or a dynamic element to traditional toys and board games such as the Lego Fusion line, which allows children to extend the physical experience to a virtual game. Despite this, the number of poor consumer-facing implementations will hinder AR adoption for at least the next two to three years.

Business AR

Internal-facing AR has benefited from the increase in overall awareness driven by consumer-facing solutions. Based on industry discussions and client inquiries, the trend over the past 12 months has been a growing number of organizations looking to use AR as a workplace tool. This number has increased significantly. This is based on industry discussion and client inquiries. The growth in solution providers looking to capitalize on this opportunity provides a proxy for the demand. The broad background and expertise of these vendors also speaks to AR's far-reaching potential. Examples include print and imaging vendors Canon and Epson offering a mixed reality and HMD solution, respectively. SAP is leveraging its ERP and in-memory computing expertise to provide AR for warehouse and logistics applications. Accenture is offering its Digital Merchandising by Accenture CAS to assist consumer packaged goods (CPGs) with retail placement. There is a growing prominence of AR solutions providers that cater to specific segments, applications or vertical (such as APX Labs' coverage across a number of verticals, including manufacturing, logistics, and energy and utility, and NGRAIN's and Augmensys' coverage in industrial and field service AR focus).

Because internal AR is unhindered by the requirement to address varying consumer needs, and is purely focused on tightly defined business goals, we feel that the potential for adoption and innovation will increase significantly in the next 24 to 36 months.

Market Trends

Devices and Applications

Smartphones (primarily Android and iOS, and among other devices, including tablets and HMDs) have the most AR apps available. The wide availability of these devices makes them highly accessible and familiar to developers. Leading AR providers such as Aurasma, Blippar, Metaio (Junaio) and Wikitude provide an openly available and usable AR application. Conversely, AR apps via HMDs are much more limited. These apps (as well as the form factor) tend to be focused for business use. Furthermore, solutions providers such as Daqri, Metaio and Wikitude are either working on in-house hardware, or partnering with existing vendors such as Epson, Kopin and Vuzix to deliver both hardware and software. There are also a number of crowdfunded (HMD) vendors, such as Meta and Optinvent, looking to launch their own hardware.

Despite the popularity and awareness of Google Glass, the available apps are limited and Google has also placed a number of restrictions on app development (such as using the camera or microphone for external identification purposes). Moreover, Google is not making efforts to make this product more widely available.
Consolidation

The AR market is expected to continue to mature in both business- and consumer-facing implementations. Moreover, Gartner expects to see consolidation occur in this space over the next 18 to 24 months. This will occur for both software and hardware. It will be due to interest from vendors in the mobile value chain looking to provide service- and application-related differentiators. A number of news events, acquisitions and product releases within and tangential to the AR space support this trend.

Market Indicators

Google's introduction of Glass last year has significantly raised the profile for augmented reality. Despite limited availability, being a glanceable display and not suited, or intended for AR, Google's foray into the head-mounted display market has piqued interest with both consumers and enterprises. In May 2014, Google also acquired optical character recognition (OCR) vendor Quest Visual. Although this acquisition is positioned as extending Google Translate’s capabilities, the visual recognition component has strong potential applications in the AR space. For example, it can be used to provide real-time text translations (such as street signs) in foreign countries. In a similar vein, Google’s Project Tango is also intended to enhance its indoor positioning efforts. Its goal to improve recognition and mapping of a users’ environment is a natural fit, as this is a key enabler of AR solutions. Other industry events supporting this trend include:

- Magic Leap's AR display solution has recently received substantial funding. In October 2014, a number of companies showed their interest in Magic Leap by providing significant funding. This was led by Google and Qualcomm, underscoring both vendors' continuing interest in the segment.
- Intel's RealSense demo at CES 2014 put a spotlight on 3D mapping of natural environments using consumer cameras.
- Luxottica Group’s announcement in March 2014 to partner with Google to provide stylish frames for Glass.
- Facebook's $1 billion acquisition of crowdsourced virtual reality (VR) HMD vendor Oculus. The recent hype around AR has also extended to the VR space. Oculus is a VR device, but it has interesting ideas such as head-tracking that translate into the AR world. These interesting ideas have spilled from Oculus (VR) into AR, giving AR ideas on how to better leverage the technology for internal and external AR implementations. As of July 2014, Oculus has already sold more than 100,000 of its devices.
- Sony announced its own VR HMD plans, Morpheus, at GDC in March 2014 for use on its PlayStation 4 home console.
- Blippar’s acquisition of Layar. Both companies’ previous background in location-based AR and Layar’s current focus on print-related AR hints at an initial consolidation in this space as well as vendors aligning themselves to target specific market segments.
- Amazon’s introduction of Firefly on its Fire phone is arguably the most recognizable implementation of AR with a strong, consumer-facing value-add with potential for widespread appeal.

- Metaio reached more than 100,000 developers as of the end of 1H14. This is indicative of strong market interest.

- Daqri has had well-publicized interest and success with its Anatomy 4D application. Available on iOS and Android, it has been downloaded more than 250,000 times. The app helps people learn anatomy using visual, AR overlays — allowing users to visualize elements of human anatomy in real time.

- A growing number of crowdfunded projects. The interest in AR and related wearable devices has increased the visibility of a number of vendors with HMD solutions and AR intellectual property. These vendors include Meta, GlassUp, OrCam and Laster Technologies.

**Market Inhibitors**

On the other hand, increased exposure has also included some drawbacks. The popularity of Google Glass produced two main types of perception problems — holding back some level of AR acceptance. The main issue is privacy. In both consumer and business scenarios, people are wary of being tracked as well as watched with an always-on camera. Similar to the initial introduction of camera phones, we expect this heightened sensitivity to decrease as AR devices mature. The second issue is fashion. First-generation head-mounted devices such as Glass have greatly prioritized technology and functionality over aesthetics. This significantly increases the adoption challenge for any wearable devices (especially ones as prominent as HMDs). Similar to the privacy concerns, we expect market maturity to improve on aesthetics and eventually be better able to integrate into existing, fashionable form factors (such as using existing corrective frames).

**Market Analysis**

Regardless of the audience, market intelligence managers will need to bring value using AR. The vendors best positioned to help provide this value should have two or more of the following competencies.

**Tools to Deploy and/or Maintain the AR Solution**

Since AR leverages multiple sensors and technologies, new toolsets will be needed to bring these elements together in a meaningful way; for example, combining location data, computer graphics (virtual worlds) and related content into one package. For specialized AR it means specialized tools purpose-built for those situations. For example, AR for an oil rig versus a factory floor versus a first responder. All applications will use some 3D tools in common with other AR apps, but much of this data will be context-and task-specific, so it will require some degree of tool specialization. Beyond this, additional tools for analytics will also be required to monitor and assess tool performance.
Expertise With Context-Aware and Cognizant Computing

Because AR is a context-based technology, this involves two main components. The first is expertise in leveraging information gathered via hardware sensors such as motion sensors. Many developers are already familiar with processing this data from gyroscopes, accelerometers, GPS and magnetometers. Specialized deployments will also require processing information from additional, need-specific sensors such as barometers, photometers, thermometers and particle detectors. Second is expertise with computer vision. This means experience with solving problems with vision-based search and interactions. Furthermore, AR supplements cognizant computing (see "Market Trends: Cognizant Computing Will Reshape Mobile and App Market Revenue") by using this sensor information ("see me") to help understand the user's needs and deliver this information to help the user interact with the physical world.

Be a Digital Business Enabler

Digital business is the creation of new business designs reached by blurring the digital and physical worlds. AR does this by overlaying digital content on real-world views. For internal-facing AR, this digitalizes the organizations’ physical assets. AR also complements the IoT by extending the reach of physical objects with embedded communication technology. This applies to “things” that are not currently connected or will never be connected, and can benefit from visual or geolocation-based identification.

AR leverages multiple technologies and solutions that will require the right combination of vendors and expertise. Specialized applications will also require vendors with expertise in those areas (such as education, healthcare, manufacturing and media). This includes, but is not limited to, application developers, 3D modelers, content hosting, development and management, digital agencies, and mobile solutions providers.

The current AR market is highly fragmented for two reasons: 1. Its mass market availability has created a flood of inconsistent experiences (even consumers are able to create an augmented experience) 2. It has a long history without a compelling solution. Therefore, businesses and business models are still being explored, hardware technologies are still being developed, and use cases are still being tested. The types of providers that are currently most prominent are focused in the following areas/skillsets:

- **Technology providers** — These are companies whose background has been in visual recognition (either 2D and/or 3D). They provide strong experience with vision-based interactions to providing AR. They have a strong focus on developing and improving underlying computer vision algorithms to enhance the overall capabilities of AR. These vendors are profiled below.

- **Solutions providers** — These are typically companies such as enterprise solutions vendors, system integrators, value-added resellers and consultancies. These companies leverage CV technology and integrate it into their own solutions and applications. They provide AR as part of their portfolio of services and offerings. Examples include SAP and IGATE.

- **Digital agencies** — Similar to solutions providers, digital agencies leverage existing CV technology (either public or licensed from the technology providers). Digital agencies’ strength
is in marketing and advertising. They will typically offer AR as an option to enhance and/or extend campaign efforts. Examples include Trigger and Balance Studios.

Representative Vendors

The vendors listed in this Market Guide do not imply an exhaustive list. This section is intended to provide more understanding of the market and its offerings.

Aurasma

U.S.-based Aurasma is HP's AR solution. This AR platform was originally part of Autonomy, which was originally founded in 1996. Autonomy's strength and primary offering was its search and analysis of unstructured data using the Intelligent Data Operating Layer (IDOL) product. Aurasma's AR platform was launched in 2011 — the same year Autonomy was acquired by HP. Aurasma operates under the HP Software group under the Marketing Optimization pillar. This AR platform works on Android and iOS and includes a mobile app, software development kit (SDK), and a cloud-based content creation and management system, which allows users to create "auras" (augmented experiences). Aurasma offers professional services as well as professional licensing of its AR engine. The solution also includes options to develop an AR solution under its brand, white labeled or using the SDK within your own application. Currently, Aurasma claims 7,000 apps, spanning more than 100 countries and 80,000 customers. The company has launched campaigns with a number of different customers, including Best Western, Office Depot, AMX, Argos, Harrods, Kaiser Permanente, United States Postal Service, Caterpillar, TD Ameritrade, Sage and Disney.

Strengths

As a part of HP, Aurasma potentially has significant resources to fuel its development. Moreover, the Autonomy portfolio has a number of features such as big data analytics, cloud storage, enterprise search and image recognition that Aurasma has leveraged (or potentially can) to deliver an AR experience. Aurasma has primarily focused on and excels at AR media campaigns. This was recently underscored by its announcement at SXSW 2014 — naming 11 preferred digital agency partners.

Challenges

All content is hosted via Aurasma's servers. This may be a concern for clients who are uncomfortable with using a third party, or have sensitive data they prefer to keep local. Aurasma's solution is overshadowed by its parent company. Its strong marketing-based AR focus may hold it back when competing with more technology-focused AR suppliers. Aurasma's relationship within the HP Autonomy group also has room to grow and better leverage the parent company's strengths. For example, the Autonomy portfolio has OCR capabilities, which the Aurasma platform does not currently leverage. The pending split from the parent company also raises concerns about the future of Aurasma when it is spun-off from the hardware division.
Blippar

Blippar is a U.K.-based image recognition company. The company was founded in 2011 and has received seed funding from Qualcomm Ventures. The company specializes in creating "blipps" (AR experiences focused on print, product and display advertising) based on its 3D and moving images image-recognition technology and licenses it via its content creation platform (Blippbuilder). In June 2014, it acquired Layar. Layar was a Dutch-based AR company founded in 2009. It was one of the pioneers of AR when the technology became widely available with the surge in smartphone adoption. As such, its AR roots were focused on motion- and geolocation-based AR. As of mid-2012, Layar had shifted its AR focus to digital print. Blippar has worked with a number of leading brands, including Coca-Cola, Disney, Nike, Sony, Jaguar, IBM and P&G, and claims to work on more 1,000 AR campaigns. The Blippar app works on Android, iOS, Windows and Google Glass. Layar's app currently works on Android, iOS, BlackBerry and Google Glass. The app has been downloaded more than 38 million times and its content management and creation product, Layar Creator, has been used by more than 90,000 publishers, marketers, brands and agencies.

Strengths

Blippar is well known for its experience with digital AR campaigns. Its recent acquisition of Layar complements and extends this experience and customer base. This puts it in a good position to grow its customer base in a popular and fast-growing segment of AR — especially with digital agencies and brands.

Challenges

The company has experience in location-based AR and image-based (3D) recognition. As AR matures, this threatens to marginalize vendors who cannot provide solutions to recognize 3D objects (although it can still serve as complementary technology). Moreover, the company is focused more on providing experiences, rather than licensing the technology. This limits its reach and scale. The company has also gone through a recent merger. As of this writing, both companies still maintain separate Web presences. We expect the company to take at least 12 months to harmonize its assets and capitalize on any potential synergies.

Catchoom

Spain-based Catchoom is a private, venture capital (VC)-funded company and the first spin-off of Telefónica R&D. It was incorporated as of November 2011. Catchoom is a cloud-based image recognition software and solutions provider. The company licenses its recognition engine as well as providing this recognition engine as SaaS. It also offers CraftAR — its Web-based "toolbox" for AR content management, and creation and consumption with its mobile SDKs. Catchoom's platform is compatible with Android, iOS and HMDs such as Google Glass. Catchoom has used its recognition technology to power solutions for other leading AR providers. The company has worked with a number of brands, companies and agencies, including Intel, Condé Nast, TimesMobile, The Daily Tribune, En-Vision America, Adstuck, Almirall and Plandent.
**Strengths**

Prior to providing its own solution and offering, the company has had extensive experience providing an image and object recognition engine for other vendors such as Layar and Metaio. Catchoom also licenses its image recognition software, which allows customers the option of hosting content on their own servers. This is especially useful for clients with sensitive data (such as the government) or that are more comfortable with having their data on-premises together with full customization options and unlimited traffic.

**Challenges**

As the technology partner offering white label solutions for clients and other AR solutions providers, Catchoom is a lesser-known brand. Market awareness for this brand will be a challenge as the company expands its professional services offerings.

**Daqri**

U.S.-based **Daqri** is positioned as a products and professional services company. Founded in 2010, Daqri’s AR solution includes an app, computer-vision SDK, a Web-based content creation and management tool (4D Studio) and professional services (while ramping down its system integrator capabilities). Users have the option to develop an AR solution on iOS and Android within the Daqri app, white labeled or using the SDK within their own application. The company’s tools have been used to develop more than 3,000 experiences (one app may contain multiple experiences tied to it) with some of the world’s largest brands. Daqri is currently focused on the following market segments: advertising, education and industrial. To complement its expansion into the industrial market, the company announced a Smart Helmet offering in September 2014. It is built on its industrial computer vision framework (IntelliTrack). The company has worked with companies and brands such as the Lego Group, General Motors, Maxim and Sony Computer Entertainment, as well as a number of aerospace and defense manufacturing companies.

**Strengths**

Although the company is only four years old, it has received widespread publicity for its Anatomy 4D product. This has rapidly increased the company’s brand awareness in a nascent, but cluttered landscape. The Anatomy 4D app best demonstrates the company’s strength and focus — the ability to produce a narrative framework for its customers. The company is strongly focused on expanding into the industrial market and has attracted high-level talent from leaders in defense aerospace and manufacturing companies to help lead this expansion.

**Challenges**

Daqri is also known to partner with Qualcomm (Vuforia) in some of their products and offerings, which may cause customers to make incorrect assumptions about the breadth of their offerings and cause additional friction in areas where customers are looking exclusively for a technology partner. Relying on a third party for an essential component of AR can limit technology options — especially as the market starts to consolidate. The professional services emphasis will also make it a less
appealing technology partner and a potential competitor as more companies such as solutions providers and agencies integrate augmented reality into their own service offerings.

**Metaio**

Founded in 2003, Germany- and San Francisco-based Metaio is an AR software and solution provider. It offers a mobile browser (Junaio), an SDK for native or cross-platform development, content and creation management tool (Metaio Creator), local and cloud computer vision architecture and hardware intellectual property (AR chipset) solution, as well as project services for vertical markets. Users can create apps using Metaio’s brand, white labeled or using the SDK within their own application. Metaio’s solution is compatible with Android, iOS and native Windows, as well as a number of HMDs, including Epson Moverio, Google Glass and Vuzix products. The company has more than 100,000 developers with more than 1,000 published applications globally, and an extensive list of certified developers and partners. Metaio has also worked with a variety of companies and brands, including Mitsubishi Electric, Audi, Macy’s, McDonalds, the Lego Group, Intel, Kimberly-Clark and Volkswagen.

**Strengths**

Metaio has widespread experience in both consumer and business AR applications. It also has a strong technical background, which benefits development of sensing technologies such as its computer vision platform, thermal imaging and 3D depth-sensing support (announced October 2014). The company has a large developer base (more than 100,000) and partnerships with leading hardware (HMD and semiconductor) vendors. Its widespread involvement in AR has it positioned it as "co-opetition" across a wide number of market segments, including semiconductor companies, HMD vendors, other AR solutions providers and other computer vision technology companies.

**Challenges**

Metaio’s ambitious coverage and quick growth in the AR market threatens its ability to maintain the level of customer support needed for a new market solution that is still establishing business cases and best practices. Its role as a professional services provider also sets an expectation of service level that will be increasingly difficult to maintain for a smaller company.

**Total Immersion**

Total Immersion is a France-based AR software and solution provider. The company was founded in 1999 and offers a design and development platform (D’Fusion, optimized for Android, iOS and PC), as well as an SDK for its image recognition and tracking technology. The company offers white labeling and custom-branded projects to users. The company has an extensive list of partners (more than 120), including resellers, value-added resellers and agencies across the globe. Total Immersion has worked with various companies and brands, including Yahoo, BMW, Disney, AT&T, Unilever, Ray-Ban and Tommy Hilfiger. Under a separate product (TryLive), the company is now focusing on a virtual fitting room solution. This turnkey, cloud-based virtual try-on solution is currently being used by 40 clients globally, including Luxottica Group, Atol, SmartBuyGlasses and Iristocracy. Total Immersion is expanding this solution to other product categories such as furniture,
jewelry and watches. The company claims more 13,000 developers are using D’Fusion Studio and more than 2,500 consumer-facing AR apps.

**Strengths**

Total Immersion has extensive experience with media, marketing and branding campaigns. The company underscores the value of the AR experience by focusing its offerings around professional and consultancy services. The work it has done with numerous leading brands has given it experience and credibility among companies looking to launch AR experiences.

**Challenges**

Total Immersion’s offering is geared toward clients looking for professional services rather than an off-the-shelf solution. This limits its appeal as a technology partner. Therefore, its addressable market will be focused more on companies looking to contract out to fulfill their AR needs.

**Vuforia**

**Vuforia** is the Qualcomm vision-based software platform. Founded in 1985, Qualcomm is best known as a leader in semiconductor wireless telecommunications. The Vuforia platform includes a free image recognition, object recognition and 3D reconstruction SDK on Android and iOS for image recognition and tracking. The company has extended this to a cloud-based image recognition service in 2012 and further with 3D reconstruction in 2014. The Vuforia platform offers enhanced performance on devices with Snapdragon processors. The Vuforia SDK for digital eyewear was announced in September 2014 at Qualcomm’s Uplinq conference. It is currently in beta and expected to be available in 2015. Positioned as an off-the-shelf solution, the Vuforia platform has been used extensively by companies and brands across the globe such as the Lego Group, Gameloft, Maxim, Johnson & Johnson, Disney, Kia and LG as well as by other AR providers such as Daqri and agencies such as Trigger. Vuforia has more than 125,000 registered developers and more than 10,000 apps installed more than 150 million times worldwide.

**Strengths**

The Vuforia platform and SDK is fast and robust. Qualcomm is known for R&D investments and capabilities. For example, in the beginning of 2014, the company acquired image recognition vendor kooaba. In May 2014, it further expanded its vision platform by adding the Smart Terrain tracking feature to its offering. Its SDK support for digital eyewear makes the solution increasingly viable for enterprise (as well as consumer) use. The company also has a strong, vested interest in growing its wireless business by promoting technology enablers such as computer vision.

**Challenges**

The Vuforia solution is focused primarily on enabling AR on mobile devices (such as phones, tablets and wearables) and is catered to the developer community. This raises two potential limitations. As a mobile-specific product, the company is unlikely to and has not expressed any intention of extending its SDK for nonmobile platforms such as traditional PC or PC-based kiosks. The product is also a stand-alone AR engine — more suited for users with programming knowledge that are
looking to build an experience from the ground up. This limits the exposure to groups and individuals who have developer and project development resources available.

**Wikitude**

As one of the pioneers in mobile, consumer-based AR, **Wikitude** is traditionally known for its work with location-based AR. The company was originally launched in 2008 as Mobilizy and renamed to Wikitude in 2011. The products include the Wikitude browser application, a Web-based content creation and management system (Wikitude Studio) and SDK — available via a licensing model. The solution includes an SDK and plug-ins for users to create custom apps as well as providing the Wikitude app for users who don’t have their own app to use. The platform works on Android, iOS and HMDs such as Epson’s Moverio, Google Glass and Vuzix. As of 2013, it launched its own image recognition engine to expand its AR capabilities. Extending beyond its geolocation roots has proved successful, as sales today for its computer vision and 3D licenses (SDK Pro) outstrip the location-based licenses (SDK Lite). In November 2014, Wikitude launched its Cloud Targets API to allow users to use their content management system of choice for target images within the Wikitude SDK. The company has more than 45,000 registered developers and more than 1,500 AR apps with customers in more than 100 countries. Wikitude has experience working with a number of customers, including HarperCollins, Ogilvy & Mather, Ford, Lonely Planet, Hotels.com, BlackBerry and TripAdvisor.

**Strengths**

Wikitude is an established brand in the AR space. As the first application available on smartphones that enables location-based AR experiences, Wikitude’s AR browser is a well-recognized AR provider. In turn, this has further increased its exposure and experience in developing AR experiences — especially for consumer-facing applications.

**Challenges**

The company has limited experience with providing AR solutions as internal, employee tools. Although Wikitude has taken on select projects for both internal and external-facing AR solutions, it is not a professional services company; therefore, is better suited for companies looking for a do-it-yourself solution.

**Market Recommendations**

Market intelligence managers looking to improve their business should first set a business goal to see if AR will help to achieve this goal. Keep in mind that AR for the mass market is relatively new. Because this market is still emerging, case studies and cost analyses remain elusive. The ones that are publicly available are not necessarily representative of the market, or even specific use cases. As such, the offerings are considerably fragmented.

On the other hand, AR has a number of inherent benefits including:
Reuse of existing assets
Integration with your workflow
Ease of use
Scalability
Unlimited deployment

Furthermore, there is a clear bifurcation in the market — internal- and external-facing AR solutions. IT leaders looking to implement AR in their company need to identify the audience they intend to address. Case studies and results for one audience do not translate to another. Regardless of the audience, the underlying idea for using AR to provide value is to provide interesting, relevant and actionable information the user can act on.

Based on this, assess AR candidates that will best help you achieve this goal. For external-facing solutions, AR should be seen as an extension of your brand and experience. This means it should engage your customers in a fashion that is unique to the AR experience — not a duplication of an experience the customer can get better, faster or more conveniently via another medium. For internal-facing AR, it needs to be a tool that will enhance employee job function. This can be in the form of increased productivity, safety and performance. These implementations will be greatly enhanced by hands-free devices such as smartglasses, heads-up displays, head-mounted displays and glanceable displays. Therefore, we expect the most benefit will be gained by employees in the field, or for tasks at hand that require the use of one or both hands and complete attention.

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Innovation Insight: Augmented Reality Will Become an Important Workplace Tool"

"Innovation Insight: Smartglasses Bring Innovation to Workplace Efficiency"

"Business Moment: Wearable Make Life Easier for Mom"

"How CIOs Need to Think About Digital Business Technologies"

"Market Guide: Augmented Reality Vendors"

"Image Recognition: The Intersection of Digital Business and Analytics at the Store Shelf"

"Digital Businesses Will Compete and Seek Opportunity in the Span of a Moment"

"Market Trends: Cognizant Computing Will Reshape Mobile and App Market Revenue"

"Cool Vendors in Digital Business, 2014"

"Cool Vendors in Human-Machine Interface, 2014"