



The Augmented Kitchen

How Augmented Reality Will Build the Kitchen of the Future

KitchenPlan

“The camera is not just answering questions, but putting the answers right where the questions are.”

– Aparna Chennapragada, Google Vice President of AR & Google Lens

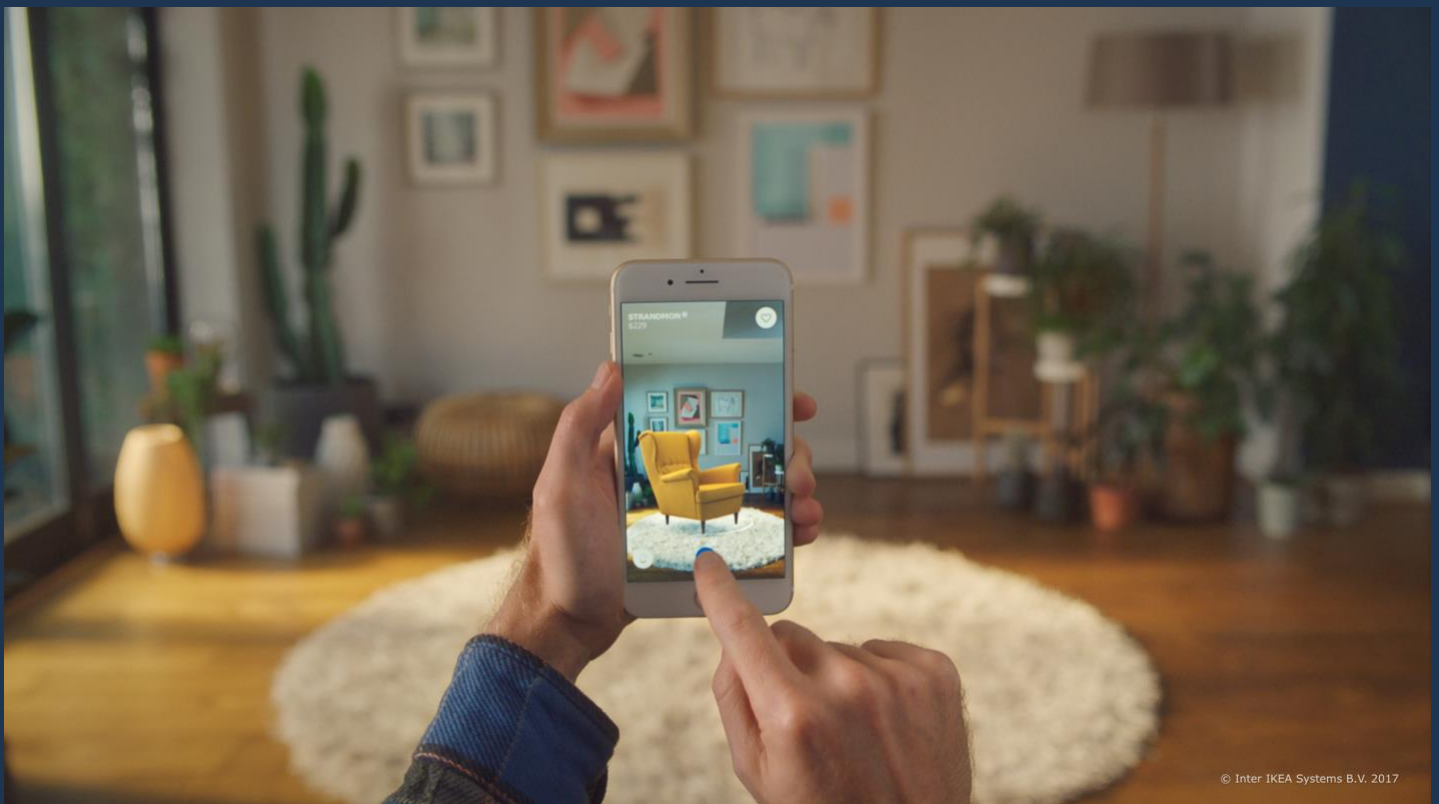
A Visual Future

Our future will be visual. There’s unanimous agreement among tech analysts that we’ll move from text-based information to immersive visual content that’s all around us. This includes technologies that let us visualize digital information that’s spatially anchored to relevant points in the real world.

We currently search for information through text queries on our devices, then look up to translate that info to the world around us – everything from navigation to products we want to buy. But our visual future will make those interactions more intuitive by pinning information directly to the physical world.

Otherwise known as Augmented Reality (AR), this involves digital overlays that inform us of our surroundings. The eventual vision is for glasses to do this job, but that’s years away due to technical and cultural barriers. Meanwhile, the technology takes root in the smartphones we already carry.

In fact, the AR opportunity lies in its widescale availability. **One billion** global smartphones are currently AR-compatible according to ARtillery Intelligence, growing to **3.5 billion** devices by 2022.¹ And development kits from Apple (ARkit) and Google (ARCore) make it easy to build AR apps.



© Inter IKEA Systems B.V. 2017

Not Just Fun & Games

You may have already heard of or even used AR. Some of its early forms have reached mainstream use through Pokémon Go and Snapchat selfie filters. If you've ever put virtual dog ears on yourself through Snapchat, you know what we're talking about.

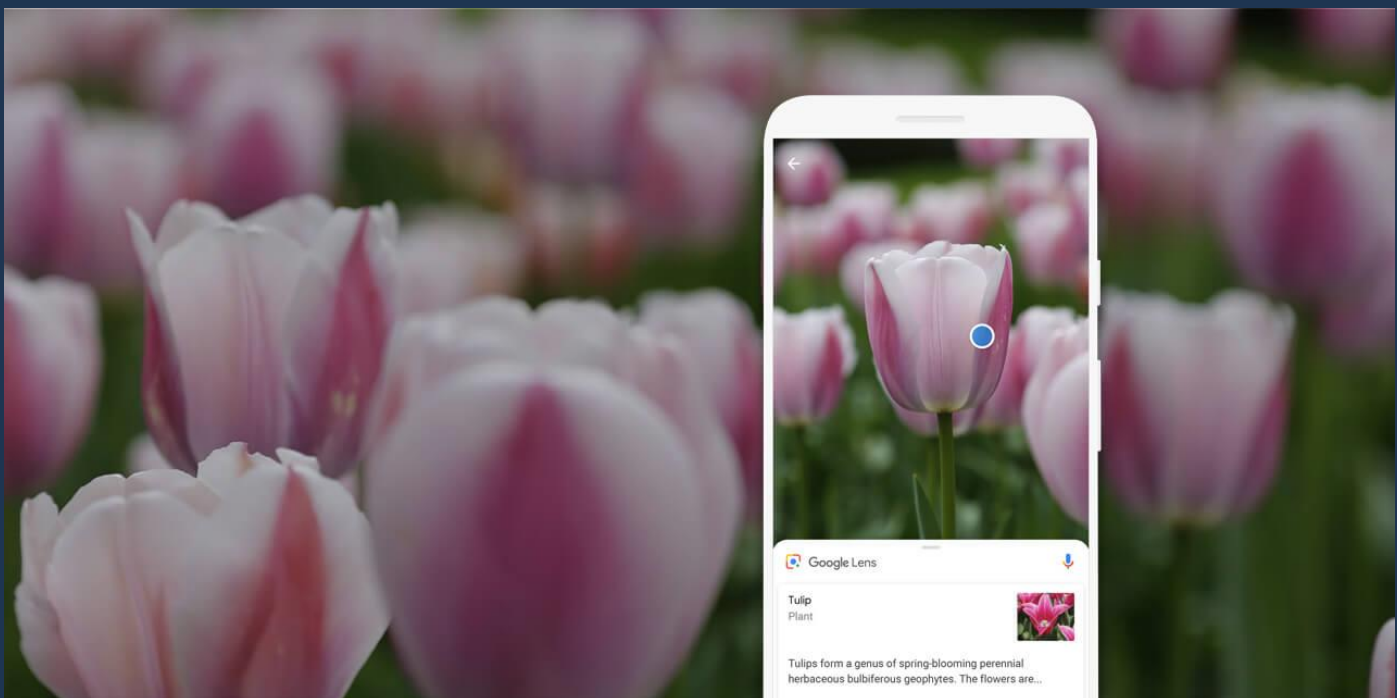
But these applications are the tip of the iceberg for AR's true potential. Like many technologies, AR has incubated through games and social apps. But as history tells us, it will grow into several other ways to improve our lives and work. That includes everything from workplace productivity and consumer commerce.

One way that AR is already colliding with commerce is through product visualization. Retailers like IKEA and car manufacturers like BMW let shoppers superimpose products in their homes and driveways to contextualize them. As you can imagine, this works best with big expensive items.

And it's already working. Furniture goods and home services company Houzz reports that consumers are **11x more likely** to purchase goods when given this AR home-visualization option.ⁱⁱ And they spend **3x** as much.

This new visual paradigm also applies to the way we've gathered information for the past 15 years: search. Extending from Google's mission to "organize the world's" information, the camera will be the new search box. Point your phone at objects to identify an them. For example, Google Lens accomplishes this with **computer vision** and **artificial intelligence** – key ingredients for our AR future.

And just like desktop and mobile search, this will be a free utility for us to find out about items that surround us. But the real business case will be the smaller share of commercial-intent searches. This will be the launch point for the way we **buy products** and **facilitate services** with local professionals.



The Gathering Point

One of AR's opportune areas, as indicated by these early usage trends, is home services. And a key subset of that is remodeling, where homeowners can get highly visual and immersive mockups of their spaces. This "spatial planning" provides more dimension and context than previous technologies such as drawings and blueprints.

Drilling down yet another level, a top area of home renovations is the kitchen – a gathering point for families and the source of our sustenance (important stuff!). In the U.S. alone, there are 10 million kitchen renovations per year,ⁱⁱⁱ but the process is mired in decades-old technologies and processes. Today, 8-10 person-hours per project are wasted gathering measurements and securing permits.^{iv}

This is where AR's transformation intersects with the kitchen. In fact, kitchen construction and renovation are even more primed for AR than the furniture and car examples above.

Compared to those fairly standardized products, kitchen components involve bespoke assembly and synthesis of several suppliers and installers. And there are several stages including planning and construction. The combination of AR and AI can create a digital visual thread that ties them all together.

If done right, AR can serve all stakeholders typically involved. Homeowners can make more informed stylistic decisions, while home remodeling pros streamline processes, cut costs and ensure happier customers.



Capture, Create & Collaborate

How can AR solve these problems? It's about three C's: **Capture**, **Create** & **Collaborate**.

Consumers can take reliable measurements for things like cabinet widths and stove depths. This cuts project time and cost. AR solves this with depth sensing – a technology you may have seen in Apple's AR tape measure app.^v

This technology is advancing through evolutions in **computer vision** and **artificial intelligence** similar to Google Lens and other technologies mentioned above. Moreover, this capability is being unlocked through the mobile browser in a mode known as "web AR." This makes it more accessible to average

homeowners, as it only requires a phone and a mobile browser.

With more reliable measurements and informed stylistic decisions, data are then shared electronically with kitchen pros. This cuts several hours from the traditional process of home visits to take measurements. The cost saved can boost pros' profit margin and be passed along to the homeowner.

Last but not least, when the process is automated through AR, there is a database of measurements that can be saved by the consumer – a valuable asset that they can revisit throughout the life of their home.



Do Well by Doing Good

There's another factor that compels AR in kitchen remodeling: Waste. **534 million tons** of construction and demolition materials are deposited into landfills each year.^{vi}

But through the same AR-centric process described above, deconstruction pros can be looped in to the workflow to dispose old kitchen materials. Better yet, it's an opportunity to donate those materials to families in need.

This is accomplished by connecting deconstruction pros, government agencies that offer grants to reduce waste, and nonprofits who put materials to good use. And this isn't just wishful thinking...it's already happening.

Enter **Habitat for Humanity**. The prolific philanthropic organization to house the underprivileged recently put the above ideas in play. Working closely with global technology company EPAM and AR Kitchen startup

KitchenPlan (producer of this report), a program was recently launched.

This program creates a system similar to that described above. **1.** Homeowners measure kitchen components using the magic of AR. **2.** Kitchen pros receive measurements quickly and reliably. **3.** Deconstruction companies are looped in to salvage pre-owned materials. **4.** Government agencies provide economic incentive. **5.** Habitat for Humanity facilitates the deployment of materials to **(6)** those in need.

This makes it a six-sided win.

We'll be back as the program progresses to report its outcomes. Meanwhile, the future is bright for AR to branch into our lives and work. Kitchen renovation is one of those areas, and an opportune one for successes in both business metrics and humanitarian ones.

A background image showing a child's face framed by two hands, with a teal overlay. The child is looking directly at the camera, and the hands are positioned around their face, creating a heart-like shape.

<epam>

KitchenPlan



ReStore

Fulfilling our commitment to the
environment: EPAM + KitchenPlan +
Habitat for Humanity

About KitchenPlan

KitchenPlan is an [Augmented Reality](#)-based tech company with roots in the home renovation industry. Knowing the dynamics and pain points of this massive sector, KitchenPlan has streamlined the process of renovations for all stakeholders involved: [homeowners](#), [pros](#) and [materials providers](#).

It does this by harnessing the power of augmented reality to measure kitchen components, digitally share data with kitchen pros, maintain a database of measurements for the life of the home, and facilitate the philanthropic disposal of pre-owned material. Altogether it [cuts cost](#), [time](#) and [waste](#).

KitchenPlan's unique intellectual property accomplishes this through "[Web AR](#)," an emerging form of augmented reality that tech analysts agree is more accessible and user friendly than downloaded apps. This is especially true for the majority of homeowners who lack advanced technical skills.

About the Author

[Jim Gurule](#) is the founder and CEO of [KitchenPlan](#). Called by analysts in the tech sector a "[triple threat](#)," Jim has technical knowledge, executive sales acumen, and domain expertise in his target market. Jim spent years as a cabinet maker, gaining perspective on the trade's top pain points.

From cabinet making to technology innovator, Jim has created patents for tech that's used throughout the home renovation industry. [KitchenPlan](#) is his next foray into home renovation-based technology, this time integrating [Augmented Reality](#) – the next transformative shift in the trade he knows so well.



Video Companion

(Click URL to Watch)

<https://youtu.be/5JmbaQkhXME>



Contact

Questions and can be submitted at: [Kitchenplan.ai](https://kitchenplan.ai)



References

ⁱ Source: ARtillery Intelligence: Global XR Revenue Forecast Fall Edition, 2019

ⁱⁱ Source: Houzz, company disclosures

ⁱⁱⁱ Source: http://www.remodeling.hw.net/benchmarks/economic-outlook-rri/homeowners-hired-pros-to-remodel-66-of-kitchens-58-of-baths-nkba-survey-finds_o

^{iv} Source: <https://my.matterport.com/>

^v Source: <http://rebuildingexchange.org/>

^{vi} Source: <https://www.irs.gov/pub/irs-pdf/p526.pdf>