

How 2D maps constrain the AR gaming market

Where can you find a Tauros in the wild?

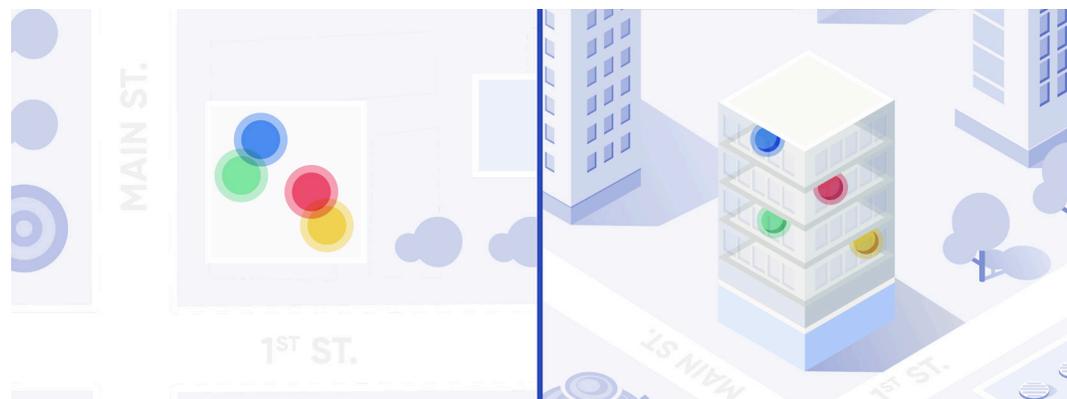
The answer depends on where you live. Tauros is one of the rarest Pokémon in the world – it can only be found in North America, and even then it can be hard to come by. **If you live in a dense urban area, a Tauros is even rarer. Why? Basic lack of space.**



The urban AR challenge

Multi-story buildings represent an enormous built-in limitation to every augmented reality game on the market. If the game you're playing requires any sort of movement in the physical world, it's probably constrained to public spaces or geo-fenced areas designated for specific gaming environments.

In suburban or rural areas, this is rarely an issue. When everything is a one-story building or open space, a simple X and Y axis location will suffice. There are plenty of places to find a Tauros.



Current state: 2D (X/Y)

With NextNav: 3D (X/Y/Z)

Yet approximately 84% of the U.S. population lives in urban areas where multistory buildings make up most of the landscape. In places like midtown Manhattan, Chicago's Loop, or San Francisco's Financial District, there aren't a whole lot of open, public spaces for a Tauros to lurk.

Even the public space that does exist in urban areas often appears in multistory buildings where current geolocation technology faces significant functionality issues. Multi-story malls and shopping centers are often difficult to navigate with current two-dimensional location technology.

→ Even as cities mandate areas for public recreation inside large buildings (aka privately owned public space), these are usually on the first floor, where 2D location information and maps conflate open space with every privately owned office above it.



Missed opportunities of urban AR gaming

The inability to experience AR games in multistory buildings is more than a bummer for Tauros hunters. It's a missed business opportunity.

Think about it: Manhattan alone has 568 million square feet of office space that is currently inaccessible for AR applications simply because current geolocation services don't account for the z-axis. While a lot of that office space is private property that should be off limits, a significant proportion is mixed in with public space that is prime territory for gaming.

Even more, much of the advertising which fuels AR gaming comes from retailers hoping to lure shoppers into urban locations. If an AR game can't distinguish between different floors in a shopping center, it won't be able to display targeted ads and offers in the right place. That makes it distinctly less valuable for advertisers.

Multistory buildings also offer a golden opportunity as gaming venues for public or private events. Think about a team building exercise where participants find clues on different floors of a skyscraper.

→ The escape room industry, which plateaued in 2019, could expand into entire "escape buildings" – a new market just waiting to be exploited.



The power of 3D geolocation

Adding “floor level” z-axis to geolocation services would open up significant new markets for AR and gaming applications in the exact locations where most customers actually live. Gaming is the most popular type of AR content, yet current technology essentially limits the reach and applicability of AR games to the small footprint of public spaces in urban areas.

To be clear, this is not a simple fix. While “floor level” z-axis geolocation will be available in most urban markets by the end of the year, incorporating that new dimension into complex AR applications will require an entire ecosystem of mapping applications and survey data. That ecosystem is emerging quickly, yet it still requires a strong demand pull from end-user applications.

This is where AR gaming can play a constructive role in bringing z-axis functionality to life. The demand for more precise, targeted AR experiences in urban areas is already proven. Niantic (creators of Pokémon Go), Facebook, and others have already recognized the potential of 3D AR, investing in the space through a series of acquisitions. Apple, Microsoft, Google, and others are building out the back-end technology needed to bring AR worlds to life in 3D. AR gaming companies (and consumers!) can use the growing business case to drive innovation and adoption of the supporting technology stack.

→ **‘Floor level’ Z-axis geolocation has the potential to significantly expand the AR gaming market. The rush is on to map the world and provide a whole new level of gaming experiences. Who will be the first to capture the huge potential of this market?**

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