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Critical Steps in Implementing Interactive Floor Plans for University Campus

In the last few years, interactive floor plans and campus maps have become popular with universities worldwide to help students navigate sprawling campuses.

The mobile campus guide app has become a critical tool for smart universities. It makes students' daily life easier, reducing the stress for new students, and it also motivates to promote the university brand. Many universities have a lot of important contextual data to share with many stakeholder groups, and the interactive floor plan and mapping system provides a communication tool to tell stories around these data points; students, parents, faculty members, security teams, facility management, and outside contractors.

While the use of interactive floor plans for campuses have increased, the best practice used for that purpose is still evolving. Some online maps are just static images, some provide nice outdoor 3D views but no visibility inside buildings, and some even offer turn-by-turn indoor navigation.

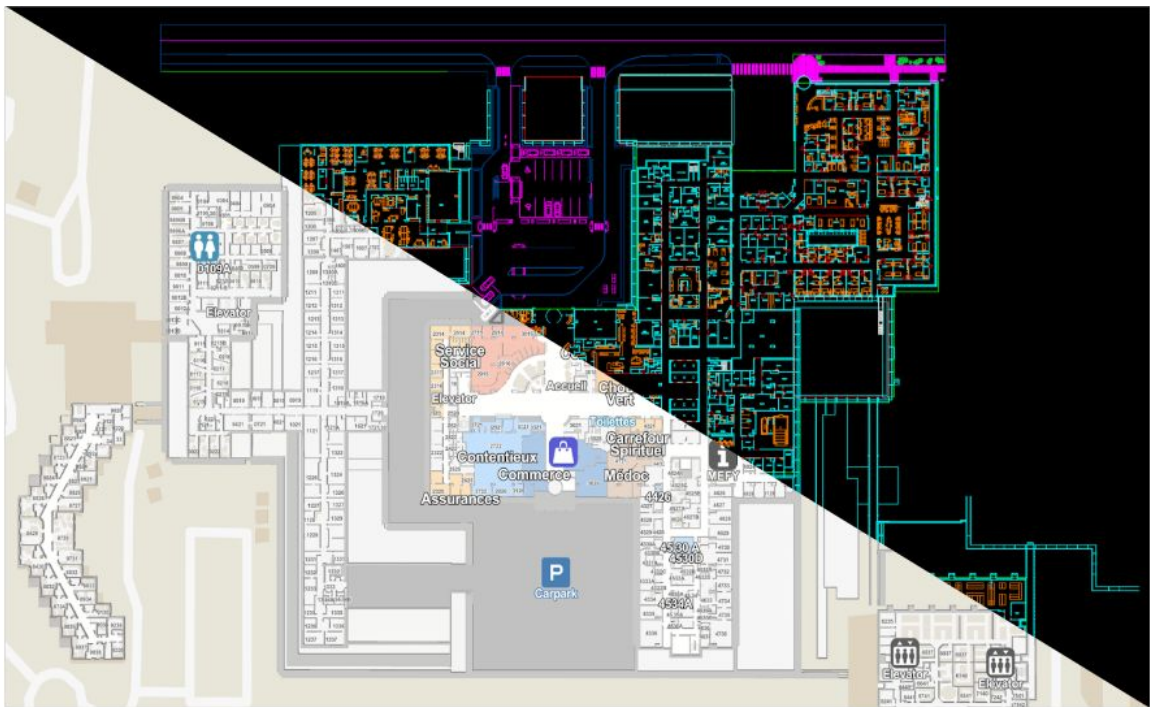
To make the selection of the digital mapping technology easier, in this article, we are pointing out some fundamental questions, critical features, and benefits, that all digital implementation teams should consider before implementation.

Feb 16th 2020

From CAD to interactive Maps

All modern buildings today have maps in the form of CAD drawings. A large university campus can easily have over 20 sets of drawings that cover campus buildings. But even if the illustrations are in electronic AutoCAD format, most of the time, they are not connected but archived in separate folders at the facility management's office.

These separate sets of floor plans cannot be published nor used for wayfinding, searching, or communication - they are just static architectural blueprints. Converting all these different CAD drawings into one interactive digital mapping system, that is easy to maintain and use as a public communication tool, is the first step toward your digital campus.



Feb 16th 2020

User-editable maps make communication easy

Easy to use map editor tools are essential in turning digital maps into an interactive communication platform. Adding and editing points of interest, for online search and find, should be easy and intuitive. Admin teams can use the map editor, for example, to place the following info on the map:

- Lecture room names, with links to schedules
- Event locations, event promotion
- Construction areas,
- Walking paths and accessibility routing for wheelchair-access,
- Campus dining, restrooms, services
- Study rooms and offices with the live availability status
- Facility service/issues locations that can be shared with outside contractors

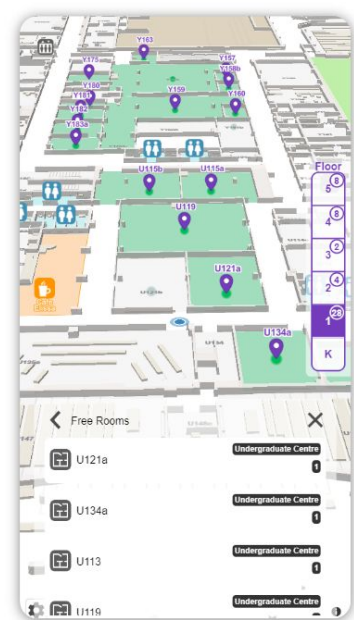
Also, in an emergency, after a storm or flood, for example, user-editable maps make it possible to identify unsafe areas of campus and provide real-time updates to risk levels and routing around the emergency areas.

Wayfinding, navigation, and room booking

Digital map systems can open possibilities for a variety of useful services, such as wayfinding, navigation, and room occupancy reporting.

The most straightforward wayfinding tools will provide you with routing on a map from point A to point B, which may be helpful, especially if walkways between different floors and buildings are complex and changing frequently.

More advanced solutions can also track the precise location of mobile phones inside the building. This “indoor positioning” technology that is made possible with BLE location beacons installed indoors enables navigation and context-aware services and finding the “nearest” anything, like the nearest meeting room or coffee shop.



Feb 16th 2020

In dynamic university campus space, students and faculty members are always in motion, seeking the next lecture room, workspace, or a meeting room. With the latest sensor technology, it is possible to make all workspace and room occupancy status visible on the map. When this data is combined with the reservation status from the university's room booking system, all users will be able to quickly see the availability status of work areas, labs, and rooms, across the campus – and even book them on the fly with the mobile app.

What is a good-enough digital map solution to begin?

When selecting interactive map solutions, it's easy to get carried away by colorful 3D rendered map images that many vendors promote. However, if the underlying technology does not support the basic interactive functionalities and only gives you static images, your digital investment may lead to disappointing results.

Here's what you need to make sure your new digital mapping solution includes, to make sure it enables a positive experience for all user groups:

1. Campus-wide indoor and outdoor views, with point A to B wayfinding
2. User editable points of interests, events and contextual data
3. Easy to maintain and synch map data with original facility CAD drawings
4. Search & find function at room level
5. Map sharing through text message links and QR-codes
6. Optional indoor navigation turn-by-turn
7. Optional live occupancy status for rooms and work areas

There is no turning back – it's all digital in the future

It's become evident by now, that those foldable paper maps handed out at university orientation are the thing of the past. The new generations of first-year students require instant access to all this information - in their pocket, in a connected, mobile format. With the higher ed tuitions at an all-time high, and universities competing fiercely for the top talent and students, enabling positive student experience has become mandatory for all universities - including digital maps and tools for daily campus life.