



NAME: IoT
DATE: May 12, 2025 1:08 AM
DESCRIPTION OF TECHNOLOGY




12cu delivers cloud-based dashboards and visualizes space usage both real-time and historically. This provides (management) information to educational institutions with which they can offer students education more safely and while retaining educational quality in times of COVID....

HUMAN VALUES




User could experience the information being shown as 'being tracked' while this isn't the case. This could result in the user missing out on the 'bigger' point of the technology: improvement of the core business of the institution.

TRANSPARENCY




After implementation of the technology, key users are being given instructions on how to use the software and how it can be used to their advantage.

IMPACT ON SOCIETY




On the long run, this technology has positive influence on the problem that students will experience study delay or that they will dropout.

STAKEHOLDERS




- Facility mangement
- IT
- Education development

SUSTAINABILITY




The technology uses energy that is already being used to serve other goals; like being online. Theoretically, we could use sensors to create the same output. Although, this would use more direct and indirect energy because of the batteries.

HATEFUL AND CRIMINAL ACTORS




This technology could break the law on privacy aspects if the data/information is used with wrong intentions.

DATA




Yes. The information that is being shown is shown as static but could be perceived different per user. This is why we don't want users to experience the information as single point of truth.

FUTURE




People could become or behave dependent on the output of the technology.

PRIVACY



No personal data is registered. Only group data.

INCLUSIVITY



Yes. Input is being collected by WiFi only. While theoretically you could use different input technologies to create roughly the same output. Other than that; information is being shown in a certain way. Which leaves it open for perception. Although, the information being shown is considered (for the software it self) as single and only truth.

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HUMAN VALUES

How is the identity of the (intended) users affected by the technology?

To help you answer this question think about sub questions like:

- If two friends use your product, how could it enhance or detract from their relationship?
- Does your product create new ways for people to interact?...

TRANSPARENCY

Is it explained to the users/stakeholders how the technology works and how the business model works?

- Is it easy for users to find out how the technology works?
- Can a user understand or find out why your technology behaves in a certain way?
- Are the goals explained?
- Is the idea of the technology explained?
- Is the technology company transparent about the way their...

IMPACT ON SOCIETY

What is exactly the problem? Is it really a problem? Are you sure?

Can you exactly define what the challenge is? What problem (what 'pain') does this technology want to solve? Can you make a clear definition of the problem? What 'pain' does this technology want to ease? Whose pain? Is it really a problem? For who? Will solving the problem make the world better? Are you sure? The problem definition will help you to determine...

STAKEHOLDERS

Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by...

When thinking about the stakeholders, the most obvious one are of course the intended users, so start there. Next, list the stakeholders that are directly affected. Listing the users and directly affected stakeholders also gives an impression of the intended context of the technology.
...

SUSTAINABILITY

In what way is the direct and indirect energy use of this technology taken into account?

One of the most prominent impacts on sustainability is energy efficiency. Consider what service you want this technology to provide and how this could be achieved with a minimal use of energy. Are improvements possible?

HATEFUL AND CRIMINAL ACTORS

In which way can the technology be used to break the law or avoid the consequences of breaking the law?

Can you imagine ways that the technology can or will be used to break the law? Think about invading someone's privacy. Spying. Hurting people. Harassment. Steal things. Fraud/identity theft and so on. Or will people use the technology to avoid facing the consequences of breaking the law (using trackers to evade speed radars or using bitcoins to launder...

DATA

Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into...

There are fundamental issues with data. For example:

- Data is always subjective;
- Data collections are never complete;
- Correlation and causation are tricky concepts;
- Data collections are often biased;...

FUTURE

What could possibly happen with this technology in the future?

Discuss this quickly and note your first thoughts here. Think about what happens when 100 million people use your product. How could communities, habits and norms change?

PRIVACY

Does the technology register personal data? If yes, what personal data?

If this technology registers personal data you have to be aware of privacy legislation and the concept of privacy. Think hard about this question. Remember: personal data can be interpreted in a broad way. Maybe this technology does not collect personal data, but can be used to assemble personal data. If the technology collects special personal data (like...

INCLUSIVITY

Does this technology have a built-in bias?

Do a brainstorm. Can you find a built-in bias in this technology? Maybe because of the way the data was collected, either by personal bias, historical bias, political bias or a lack of diversity in the people responsible for the design of the technology? How do you know this is not the case? Be critical. Be aware of your own biases....

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