

**NAME:** Enterprise blockchain solution 

**DATE:** May 17, 2025 6:42 AM

**DESCRIPTION OF TECHNOLOGY**  
 We need to research and implement a blockchain that allows customers to verify the data the company provides. This also includes private channels which are uncommon for blockchain.

**HUMAN VALUES** 

The technology is in line with our ideals and is used to make the whole process of showing that Engie delivers their products more transparent and less prone to manipulation. Thus improving the overall quality of the product delivered. This is ofcourse in line with our ideals.

**TRANSPARENCY** 

Our users, the ones that need to verify the data, are already blockchain experts and therefore we dont need to explain our technology. We will include documentation on how to implement our specific blockchain.

**IMPACT ON SOCIETY** 

Proving the data provided by Engie is valid and legit is a long and costly process. Therefore Engie wants us to implement a solution using blockchain which can automate this.

**STAKEHOLDERS** 

- Engie
- Fontys
- Project team
- Engie Clients

**SUSTAINABILITY** 

Blockchain is a new and rapidly growing technology and therefore we expect it to sustain for a long time. Our technology is also supposed to reduce the costs of validating data.

**HATEFUL AND CRIMINAL ACTORS** 

The only way to use our technology to break the law is either alter the data, changing the measured amount of energy used or to use the saved data to determine when there will be no people at a certain location. By using a blockchain we guarantee that the data is immutable and by using private channels we guarantee only the consumers and Engie have access to the data.

**DATA** 

The data used in our project isnt subjective because theyre factual and come straight from hardware sensors. The biggest limitation of our data is that because it will get stored on a blockchain, all data will be persistent and thus increase the size of the blockchain.

**FUTURE** 

**PRIVACY** 

Our technology does not directly register personal data only the data of energy consumed in a space. Which is in no way connectable to a single person.

**INCLUSIVITY** 

Technically the system has a bias for Engie itself, because theyre the ones putting the data in the blockchain but also the ones maintaining the data in a traditional database. Thus if they wish to manipulate the data before putting it on the blockchain, it would still pass as validate data.

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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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