

# ApartmentComplex UtilityApp

A web application for tenants and building staff/managers to communicate about issues regarding the building, as well as to provide handy tools for amenities in the building.

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Context of use: Education  
Level of education: Bachelor

# Technology Impact Cycle Tool

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## Impact on society

What impact is expected from your technology?

*This category is only partial filled.*

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

Tenants don't have a platform to communicate their repair requests to building staff/managers and must resort to sending emails, which can be overwhelming and messy, or they do have a platform, but it is clunky to use. Shared amenities in the building might be in use by others, causing frustrations with tenants who keep having to look if an amenity is free to use.

### **Are you sure that this technology is solving the RIGHT problem?**

*This question has not been answered yet.*

### **How is this technology going to solve the problem?**

*This question has not been answered yet.*

### **What negative effects do you expect from this technology?**

*This question has not been answered yet.*

### **In what way is this technology contributing to a world you want to live in?**

*This question has not been answered yet.*

### **Now that you have thought hard about the impact of this technology on society (by filling out the questions above), what improvements would you like to make to the technology? List them below.**

*This question has not been answered yet.*

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## Hateful and criminal actors

What can bad actors do with your technology?

*This category is only partial filled.*

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

People could sign up using a fake name, or pretend to live in the apartment complex while in fact they do not. This could be solved by requiring an invite code from a building manager. On the other hand, no identifying information of other users will be shown to tenants.

### **Can fakers, thieves or scammers abuse the technology?**

*This question has not been answered yet.*

### **Can the technology be used against certain (ethnic) groups or (social) classes?**

*This question has not been answered yet.*

### **In which way can bad actors use this technology to pit certain groups against each other? These groups can be, but are not constrained to, ethnic, social, political or religious groups.**

*This question has not been answered yet.*

### **How could bad actors use this technology to subvert or attack the truth?**

*This question has not been answered yet.*

### **Now that you have thought hard about how bad actors can impact this technology, what improvements would you like to make? List them below.**

*This question has not been answered yet.*

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## Privacy

Are you considering the privacy & personal data of the users of your technology?

*This category is only partial filled.*

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

Name, apartment number, cohabitants/relationships (if multiple people sign up on the same apartment number), apartment complex location (through the apartment complex name), address (apartment number + apartment complex location), email address (sign up/service emails), job title (if building staff/building manager). IP addresses (in order to serve the content) and device identifiers (for notifications).

### **Do you think the technology invades the privacy of the stakeholders? If yes, in what way?**

*This question has not been answered yet.*

### **Is the technology is compliant with prevailing privacy and data protection law? Can you indicate why?**

*This question has not been answered yet.*

### **Does the technology mitigate privacy and data protection risks/concerns (privacy by design)? Please indicate how.**

*This question has not been answered yet.*

### **In which way can you imagine a future impact of the collection of personal data?**

*This question has not been answered yet.*

### **Now that you have thought hard about privacy and data protection, what improvements would you like to make? List them below.**

*This question has not been answered yet.*

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## Human values

How does the technology affect your human values?

*This category is only partial filled.*

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

The application allows tenants to file repair requests directly to building staff, taking out the "middle man" of having to send an email which has to be filtered by the building manager. It also allows tenants to make reservations for building amenities, which replaces the "normal" process of asking other tenants nicely and hoping they stick to the rules/agreements.

### **How does the technology influence the users' autonomy?**

*This question has not been answered yet.*

### **What is the effect of the technology on the health and/or well-being of users?**

*This question has not been answered yet.*

### **Now that you have thought hard about the impact of your technology on human values, what improvements would you like to make to the technology? List them below.**

*This question has not been answered yet.*

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## Stakeholders

Have you considered all stakeholders?

*This category is only partial filled.*

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

**Name of the stakeholder**

Tenant

**How is this stakeholder affected?**

-

**Did you consult the stakeholder?**

No

**Are you going to take this stakeholder into account?**

No

**Name of the stakeholder**

Building manager

**How is this stakeholder affected?**

-

**Did you consult the stakeholder?**

No

**Are you going to take this stakeholder into account?**

No

**Name of the stakeholder**

Building staff

**How is this stakeholder affected?**

-

**Did you consult the stakeholder?**

No

**Are you going to take this stakeholder into account?**

No

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**Did you consider all stakeholders, even the ones that might not be a user or target group, but still might be of interest?**

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**Now that you have thought hard about all stakeholders, what improvements would you like to make? List them below.**

*This question has not been answered yet.*

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## Data

Is data in your technology properly used?

*This category is only partial filled.*

### **Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into account in the technology?**

The application does not, in its current (proposed) form do any data processing in the sense of machine learning/AI. It only serves as a tool to facilitate interaction between tenants, and between tenants and building staff/building managers.

### **How does the technology organize continuous improvement when it comes to the use of data?**

*This question has not been answered yet.*

### **How will the technology keep the insights that it identifies with data sustainable over time?**

*This question has not been answered yet.*

### **In what way do you consider the fact that data is collected from the users?**

*This question has not been answered yet.*

### **Now that you have thought hard about the impact of data on this technology, what improvements would you like to make? List them below.**

*This question has not been answered yet.*



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## Inclusivity

Is your technology fair for everyone?

*This category is only partial filled.*

## Will everyone have access to the technology?

*This question has not been answered yet.*

## Does this technology have a built-in bias?

While the design of the application does its best to make it as user friendly as possible, it is biased towards users that have basic computer literacy, i.e., knowing how to interact with a web application with clearly labeled input fields and buttons. This makes it more suitable for an apartment complex with younger people (students, young professionals) rather than an apartment complex focusing on elder care.

## Does this technology make automatic decisions and how do you account for them?

*This question has not been answered yet.*

## Is everyone benefitting from the technology or only a a small group?

**Do you see this as a problem? Why/why not?**

*This question has not been answered yet.*

## Does the team that creates the technology represent the diversity of our society?

*This question has not been answered yet.*

**Now that you have thought hard about the inclusivity of the technology, what improvements would you like to make? List them below.**

*This question has not been answered yet.*

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## Transparency

Are you transparent about how your technology works?

*This category is only partial filled.*

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

An on-boarding tutorial can be given to new users in the application itself, and documentation will be provided to (prospective) customers on how the application works and how it is to be used.

### **If the technology makes an (algorithmic) decision, is it explained to the users/stakeholders how the decision was reached?**

*This question has not been answered yet.*

### **Is it possible to file a complaint or ask questions/get answers about this technology?**

*This question has not been answered yet.*

### **Is the technology (company) clear about possible negative consequences or shortcomings of the technology?**

*This question has not been answered yet.*

### **Now that you have thought hard about the transparency of this technology, what improvements would you like to make? List them below.**

*This question has not been answered yet.*

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## Sustainability

Is your technology environmentally sustainable?

*This category is only partial filled.*

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

The energy use of the application could be reduced by automatically scaling down the running parts of the application if there is no demand. A data centre/ cloud provider could be selected based on their commitment to using green energy to power their servers.

### **Do you think alternative materials could have been considered in the technology?**

*This question has not been answered yet.*

### **Do you think the lifespan of the technology is realistic?**

*This question has not been answered yet.*

### **What is the hidden impact of the technology in the whole chain?**

*This question has not been answered yet.*

### **Now that you have thought hard about the sustainability of this technology, what improvements would you like to make? List them below.**

*This question has not been answered yet.*

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## Future

Did you consider future impact?

*This category is only partial filled.*

### **What could possibly happen with this technology in the future?**

People could interact less with each other directly when it comes to setting schedules for shared amenities. It could be that, due to mismanagement, it feels like screaming at a wall when filing repair requests that do not get picked up by the building manager/building staff.

**Sketch a or some future scenario (s) (20-50 years up front) regarding the technology with the help of storytelling. Start with at least one utopian scenario.**

*This question has not been answered yet.*

**Sketch a or some future scenario (s) (20-50 years up front) regarding the technology with the help of storytelling. Start with at least one dystopian scenario.**

*This question has not been answered yet.*

**Would you like to live in one of this scenario's? Why? Why not?**

*This question has not been answered yet.*

**What happens if the technology (which you have thought of as ethically well-considered) is bought or taken over by another party?**

*This question has not been answered yet.*

**Impact Improvement: Now that you have thought hard about the future impact of the technology, what improvements would you like to make? List them below.**

*This question has not been answered yet.*