

# API Redesign - Containers - Automation

We are trying to implement determine new infrastructure that is compatible with the current environment but also makes new developments such as hosting containers

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# 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?

The current problem of the virtual network is the occasional bad performance and cluster of unused machines created by students in SecLab that can create difficulties for other students when using the network. Another problem is the slow rollout of new functionality for the network. All of this also makes the lab's performance unpredictable and difficult to manage. Lecturers and students would benefit the most of this problem solution.

## 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?**

If a team that works on the problem with unethical intentions gains access to the administrative rights of SecLab , they could potentially disrupt students performance in there , or worse they can try to track down theyr public ip address and invade their privacy, also any information that is stored in the SecLab database can be then used for harmful purposes

### **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?**

No, this technology doesnt use personal data at all. The users are only required to enter a username and password provided for them by Fontys. I am not aware of any implications that can happen regarding privacy legislation, the only possible invasion of privacy is if the administrators are able to directly monitor the activity of the students on the site.

### **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 technology doesn't affect the identity of the user to my knowledge.

## 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

Donovan van Hout - network manager lab environment

### How is this stakeholder affected?

-

### Did you consult the stakeholder?

Yes

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

Yes

### Name of the stakeholder

Casper Schellekens - innovation owner of ICT & Cyber Security

### How is this stakeholder affected?

-

### Did you consult the stakeholder?

Yes

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

Yes

### Name of the stakeholder

Stefan Beekwilder - network manager lab environment

### How is this stakeholder affected?

-

### Did you consult the stakeholder?

Yes

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

Yes

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Name of the stakeholder

Kea Klaassen-ten Wolde - operational team leader II&A

**How is this stakeholder affected?**

-

**Did you consult the stakeholder?**

Yes

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

Yes

**Name of the stakeholder**

Stefan Roijers - coordinator cybersecurity semester 4.

**How is this stakeholder affected?**

-

**Did you consult the stakeholder?**

Yes

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

Yes

**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?**

Unfortunately, container images aren't without security risks. Container images may sometimes suffer from vulnerabilities. Malicious actors could abuse a vulnerability in sqlite3 3.26.0 to send a malicious SQL command via remote code execution. Also they can create lookalike images public containers to prey upon your organization. In this type of attack, a user pulls a container image that secretly contains malicious code from a registry.

### **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?**

I suppose the groups of people that are working on this technology are quite diverse, because Google is one of the biggest international companies in the world and i havent heard of political or ethnical bias in their work. There are rumors for privacy invasion from them, but nothing is confirmed yet.

### **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?**

The user can have little understanding of how virtual machines works and with a little bit of research, mainly using googles documentation and videos in order to understand the basic functionality.

### **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?**

Containers are like virtual machines, but unlike them they operate are much faster and not that taxing on machines. They require less resources because they dont include operating system images.

### **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?**

Because of how fast and lightweight containers are their participation in cloud computing and new apps would continue to increase. They will become an essential part of cloud computing.

**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.*