

Ivanti

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Context of use: Education
Level of education: Bachelor

Technology Impact Cycle Tool

Ivanti

Impact on society

What impact is expected from your technology?

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

We are developing an application website for a client. They want to be able to keep track of different upcoming exams. makes it more efficient to keep track of students, staff, exams, rooms, and equipment. This is specifically a problem that the company currently has and needs a solution to.

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

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How is this technology going to solve the problem?

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What negative effects do you expect from this technology?

It is merely an exam scheduling application, there are no possible major negative effects.

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

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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.

- Have a better review system going through, where users can give a full review on a package they downloaded.
- a blog where people can discuss their innovative though related to the content of the application.

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Hateful and criminal actors

What can bad actors do with your technology?

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

The technology can be used to break the law if someone posts a package with malware with intention to steal personal data, or take control over the infected machine. The "hacker" can use VPN and similar techniques to hide his real location and remain unharmed of the consequences when the package is found to be a malware

Can fakers, thieves or scammers abuse the technology?

scammers and thieves can post fake packages with spyware or malware inside to steal sensitive data or take control over the infected machine.

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

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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.

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

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

- A better security when it comes to what exactly can the content creator uploads into the website, to avoid any possible malicious package.

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Privacy

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

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

This technology does register basic personal data to identify and differentiate a user : Name and email

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

This tool doesn't really seem to invade the privacy of the stakeholders.

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

The application is compliant with prevailing privacy and data protection law. Due to it only being an exam scheduler there is not much information the application is dealing with the user other than their email and name.

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

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

It is a simple system created to solve a minor problem, and the information about the users(Students) will be carried with for the duration of their study/work in the company.

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

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Human values

How does the technology affect your human values?

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

No there is not a possibility that a user can be affected by the technology, for the reason that it is built around the user of application packages rather than the users themselves.

How does the technology influence the users' autonomy?

There is not much interaction with other users in this application, the users have the right to download any package they find fit for their situation.

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

No effect.

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.

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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

Normal users

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

Content creators

How is this stakeholder affected?

Possibility with creating different packages and publishing it on the website

Did you consult the stakeholder?

Yes

Are you going to take this stakeholder into account?

Yes

Name of the stakeholder

Nicole Zuurbier-Munneke

How is this stakeholder affected?

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Did you consult the stakeholder?

Yes

Are you going to take this stakeholder into account?

Yes

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Name of the stakeholder

Dennis Smits

How is this stakeholder affected?

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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.

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Data

Is data in your technology properly used?

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

Like any application, our application uses a database to store data. We're storing information on software packages and users can rate each package. Overall data regarding these ratings could be interpreted differently and we should be aware of that.

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

It's important to make sure data is stored is save. This means the application using it, also has to be saved.

We're trying to ensure this by implementing a Continues Integration pipeline that runs Tests and a static code analysis and we'll be notified when anything is wrong.

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

This is not applicable to our project because we don't store sensitive data.

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

We don't need a lot of data from a user. They are free to fill in some personal information like a first/last name, etc. However, this data won't be sold or be used for any other purpose but to identify a user on the platform.

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

Although we don't store sensitive data, we do store passwords. To ensure the safety of our users, we will hash these passwords with BCrypt to ensure a bad actor won't be able to abuse unauthorized database access.

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Inclusivity

Is your technology fair for everyone?

Will everyone have access to the technology?

Yes, anyone has access to the application if they find benefit in it.

Does this technology have a built-in bias?

No, there is not

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

The only possible automatic decision we can think of, is the listing of the packages. the packages with higher/better reviews would be easier to find compared to new and low-rated ones.

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

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

The application was created for the sole purpose of helping developers find packages easier, it could be accessed by everyone but not beneficial to everyone.

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

Our team consists of people from different cultural backgrounds, this in itself allows each one of us to tackle the creation of the application from different aspects that each finds important.

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

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Transparency

Are you transparent about how your technology works?

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

There is not much algorithmic depth in the application, that users would not be able to know about.

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

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

Currently, the only way you could complain about the website is through Ivanticompany, but not the website itself.

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

There is not any possible consequences that can clash back to the user.

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

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Sustainability

Is your technology environmentally sustainable?

This category is not applicable for this technology.

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Future

Did you consider future impact?

What could possibly happen with this technology in the future?

There would a possible growth in the number of users, which leads to much more package content on the website. Giving a high chance of finding a solution a developer could be looking for..

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.

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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.

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

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

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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.

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